

Senate Agenda

Friday, March 11, 2022

2:30 p.m.

Zoom Conference:

<https://us02web.zoom.us/j/88092461985?pwd=U0lreXJHWEk2NkphTzR6MFdmL1ZZUT09>

Meeting ID: 880 9246 1985

Passcode: 194317

1. Acknowledgement of the Traditional Territory

As we begin this Nipissing University Senate meeting, I would like to acknowledge that we are in the territory of the Robinson-Huron Treaty of 1850 and that the land on which we gather is the Nipissing First Nation Traditional Territory and the traditional territory of the Anishnabek. We respect and are grateful to hold this event on these lands with our relations.

2. Approval of the Agenda

3. Adoption of the Minutes of the Senate Meeting of: February 11, 2022

4. Business Arising From the Minutes

5. Reading and Disposing of Communications

6. Reports From Other Bodies

- A.
 - (1) President
 - (2) Provost and Vice-President Academic and Research
 - (3) Vice-President Finance and Administration
 - (4) Board of Governors
 - (5) Alumni Advisory Board
 - (6) Council of Ontario Universities (Academic Colleague)
 - (7) Joint Board/Senate Committee on Governance
 - (8) NUSU
 - (9) Others
- B. Reports from Senate members

7. Question Period

8. Reports of Standing Committees and Faculty Councils

Senate Executive Committee

Motion 1: That the Report of the Senate Executive Committee dated March 3, 2022 be received.

Academic Curriculum Committee

Motion 1: That the Report of the Academic Curriculum Committee dated December 9, 2021 be received.

December 9, 2021 ACC Report

Faculty of Arts and Science

Mathematics

Motion 2: That Senate approve that the hours for MATH-1257 “Technical Statistics” be changed from “Three hours of lecture and two hours of laboratory work per week for one term.” to “Three hours of lecture per week for one term.”

Rationale:

In the past we had been offering two versions of MATH 1257: an onsite version intended primarily for students in the collaborative nursing program with 3 hour lecture + 2 hour lab, and an online prepackaged version restricted to RPN bridging students with 3 hour lecture only (no lab). The calendar description of MATH 1257 is consistent with the onsite version. With this change we are making both versions of the course to be consistent. We will continue to offer Math 1257 onsite until the BScN collaborative program ends, and after that MATH 1257 will be offered only online. A recently approved new course MATH 1267 has been developed for the new NU nursing program, which will replace the onsite version of MATH 1257.

Child & Family Studies and Psychology

Non-substantive:

The revision of the course title for CHFS-3036/PSYC-3036 “Ethics & Professional Standards” to “Ethics in Practice” and the course description as follows:

New Description

Students learn ethics/ethical decision-making and consider professional standards in practice and policy, for front-line responder and service provider teams, across institutional or community-based settings. They review codes of professional conduct and relevant standards for applied behaviour sciences professionals, and discuss the ethics of trans-professional conduct with relevance to individual clients, support agencies, and workplace settings. Students consider the importance of ethical decision-making for individuals, systems/organizations, and policy.

This course is also offered as PSYC 3036.

Old Description

Students are introduced to ethical issues and professional standards as they relate to applied and/or clinical settings, including applied behavior interventions and supports. Students are exposed to national and provincial codes of professional conduct, including the CPA, CASW,

BACB, and other relevant Professional Disciplinary and Ethical Codes and Standards. The ethics of interprofessional conduct are discussed with relevance to both individual clients and support agencies. This course is also offered as PSYC 3036.

Non-substantive:

The course prerequisites for CHFS-3036/PSYC-3036 “Ethics & Professional Standards” from “CHFS-2106/PSYC-2006” to “Any 24 credits or permission of the instructor”.

Motion 3: That Senate approve the revision to the course learning outcomes for CHFS-3036/PSYC-3036 “Ethics & Professional Standards” as follows:

Proposed:

1. Describe the history of ethical frameworks for applied behavioural sciences.
2. Apply ethical analysis across disciplines and identify similarities and differences.
3. Analyze various codes of conduct, including Canadian Psychological Association, Canadian Association of Social Workers, Behavior Analyst Certification Board, and other relevant provincial and national codes.
4. Apply ethical considerations and maintain adherence to ethical principles when working with other professionals, supervisors, and supervisees.
5. Analyze ethical considerations when working with vulnerable people and communities.
6. Evaluate guidelines for cultural responsiveness and diversity, including non-discrimination practices that support equitable and inclusive service, in keeping with equity, diversity, inclusion, decolonization frameworks.
7. Evaluate effective use of ethical decision-making models, including how moral codes and values lend strength and provide challenges in a chosen career.
8. Create a plan of action for a variety of ethical scenarios, including ethical decision-making frameworks for organizational decision-making.

Current:

1. Recognize the history of an ethical framework of ABA and the importance of this to people working in this field now.
2. Be able to describe the importance of assessment and intervention as related to the ethical framework.
3. Examine ethics across disciplines and identify similarities and differences.
4. Be familiar with the Behaviour Analyst Certification Board professional and ethical code of conduct.
5. Identify special ethical considerations when working with vulnerable people.
6. Prepare to share ethical considerations and maintain adherence to ethical principles when working with other professionals, supervisors, and supervisees.
7. Demonstrate effective use of an ethical decision making model to create a plan of action for a variety of ethical scenarios.
8. Describe how their own moral code and values will lend them strength and provide challenges in following the ethical code in their chosen career.

Non-substantive:

The course title for CHFS-3116/PSYC-3117 “Autism Spectrum Disorders” to “Perspectives in Autism” and the course description as follows:

New Description

Students explore the nature of Autism and related neurodiversity including epidemiology, screening/assessment, and treatment/intervention, across a broad range of topics (e.g., historical considerations, diagnosis, prevalence/incidence, genetics, environment). Students consider evidence-informed principles for developing successful programs for children, youth,

and adults, as well as models for transitioning to adult care and supportive services. Principles of child/family centered care and culturally responsive approaches are considered throughout the course, including values of equity, diversity, inclusion, and decolonization.

This course is also offered as PSYC 3117.

Old Description

This course will explore the nature of Autism Spectrum Disorders, including epidemiology, screening and assessment, and treatment and interventions. A lifespan approach will be applied to a broad range of topics, including historical considerations, diagnostic issues, prevalence/incidence, profile of ASD including the triad of impairments, genetic linkages, cognitive processing and executive functioning, and evidence-informed interventions including an introduction to applied behavioural analysis and positive behavioural support models. Students will consider evidence-informed principles for the development of successful programs for children and adolescents with ASD, as well as explore best-practice models for youth transition into adult care and supportive services. Principles of child/family centered care and support will be studied throughout the course. This course is also offered as PSYC 3117.

Non-substantive:

The course prerequisites for CHFS-3116/PSYC-3117 “Autism Spectrum Disorders” from “CHFS 2106/PSYC 2006” to “Any 24 credits or permission of the instructor”.

Motion 4: That Senate approve the revision to the course learning outcomes for CHFS-3116/PSYC-3117 “Autism Spectrum Disorders” as follows:

Proposed:

As relevant to Autism and related neurodiversity, students will:

1. Recognize typical and atypical development.
2. Describe the history and dominant theories
3. Explain screening, assessment, and diagnostic frameworks.
4. Examine epidemiology, developmental considerations, and co-morbidities
5. Evaluate biopsychosocial and spiritual characteristics and implications
6. Interpret the cognitive, socio-emotional, and behavioural characteristics, and implications for the real world from the individual perspective as well as that of family, community, and/or society at large.
7. Analyze evidence informed interventions and principles/values of successful programs for individuals and families.
8. Examine established strategies and supports, and related considerations around equity, diversity, inclusion, and decolonization

Current:

1. Describe typical and atypical development as it relates to ASDs
2. Show an appreciation of the history and dominant theories of ASDs.
3. Demonstrate knowledge of diagnostic frameworks, criteria, and considerations for ASDs.
4. Differentiate between screening and assessment frameworks.
5. Describe epidemiology, developmental considerations, and co-morbidities of ASDs.
6. Discuss biopsychosocial characteristics and implications of ASDs.
7. Show an appreciation for the cognitive, socio-emotional, and behavioural characteristics of ASDs.
8. Discuss established strategies and supports for ASDs
9. Identify evidence informed interventions and principles of successful programs/programming for ASDs.

Non-substantive:

The revision of the course title for CHFS-3127/PSYC-3127 “Fetal Alcohol Spectrum Disorders” to “Alcohol Related Neurodevelopmental Disorders” and the course description as follows:

New Description

Students explore Alcohol Related Neurodevelopmental Disorders (ARND) across the lifespan by considering social determinants of health and wellbeing, along with values of equity, diversity, inclusion, and decolonization. Diagnosis, epidemiology, cognitive, behavioural, and mental health profile including primary and secondary disabilities, prevention, treatment, management, and policy issues are discussed. Implications are explored from several perspectives, including individual development and learning, child and family well-being, and impact on and responsibility of community and society.

This course is also offered as PSYC 3127.

Old Description

Fetal Alcohol Spectrum Disorders will be explored through a lifespan development and determinants of health framework. Diagnosis, epidemiology, cognitive, behavioural, and mental health profile including primary and secondary disabilities, prevention, treatment, management, and policy issues will be discussed. Implications will be explored from several perspectives, including individual development and learning, child and family well-being, and impact on and responsibility of community and society. This course is also offered as PSYC 3127.

Non-substantive:

The course prerequisites for CHFS 3127/PSYC 3127 “Fetal Alcohol Spectrum Disorders” from “CHFS-2106/PSYC-2006” to “Any 24 credits or permission of the instructor”.

Motion 5: That Senate approve the revision to the course learning outcomes for CHFS-3127/PSYC-3127 “Fetal Alcohol Spectrum Disorders” as follows:

Proposed:

As relevant to prenatal alcohol exposure and associated neurodiversity, students will:

1. Recognize foundations (e.g., historical, biomedical, clinical background and related disorders).
2. Recognize screening & brief intervention issues, with a view to preventing alcohol-exposed pregnancies in women of childbearing age, and supporting children, women, and families.
3. Compare and contrast models of addiction, including concepts related to addiction in women of childbearing age/or those who are pregnant (e.g., appropriate prevention services, referral, and case management).
4. Analyze the effects of prenatal alcohol, including primary and secondary effects on individuals/families.
5. Review research on screening, diagnosis, and assessment of neurodiversity including issues related to the screening, diagnosis, and assessment of infants, children, adolescents, and adults.
6. Analyze models of treatment and support across the lifespan for persons and families, including issues, treatment and supports across the continuum of care and management, and newly emerging intervention research in the areas of social skills, behavioural, and cognitive rehabilitation/remediation.
7. Summarize ethical, legal, and policy considerations and related issues.
8. Evaluate the complexities of prenatal alcohol exposure and associated neurodiversity in consideration of principles of equity, diversity, inclusion, and decolonization, and a Determinants of Health/Wellbeing framework.

Current:

1. Demonstrate knowledge of FASD Foundations (e.g., historical, biomedical, clinical background and related disorders)
2. Consider FASD Screening & Brief Interventions issues, with a view to preventing alcohol-exposed pregnancies in women of childbearing age
3. Demonstrate knowledge Models of Addiction, including concepts related to addiction in women of childbearing age, including those who are pregnant (e.g., appropriate prevention services, referral, and case management)
4. Critically consider the Effects of Prenatal Alcohol, including primary and secondary effects on individuals/families
5. Synthesize research on Screening, Diagnosis, and Assessment of FASDs, including issues related to the screening, diagnosis, and assessment of infants, children, adolescents, and adults
6. Discuss models of Treatment and Support Across the Lifespan for Persons with FASDs, including issues, treatment and supports across the continuum of care and management such as newly emerging intervention research in the areas of social skills, behavioural, and cognitive rehabilitation/remediation
7. Integrate knowledge of FASD Ethical, Legal, and Policy Considerations and related issues

Non-substantive:

The revision of the course title for CHFS-3136/PSYC-3136 “ABA I: Introduction to Applied Behaviour Analysis” to “ABS I: Introduction to Applied Behavioural Sciences” and the course description as follows:

New Description

Students learn principles of applied behavioural sciences, including cross-sector applications like positive behaviour support (PBS), applied behaviour analysis (ABA), and organizational behaviour management (OBM), and review topics like dimensions and principles of ABA, functional assessment, goal selection and outcomes planning, skill teaching, adaptive behaviour, and maintenance/generalization of skills. Students review inclusive and culturally responsive frameworks of practice, and evaluate strategies of interest for educators, front-line responders, or cross-sector service providers across institutional or community-based settings.

This course is also offered as PSYC 3136.

Old Description

This course provides an introduction to fundamentals of learning and applied behaviour analysis (ABA). Students are exposed to an overview of theories and basic principles of behaviour, features and characteristics of ABA, preference assessment, functional assessment and selection of target behaviours, outcomes planning, and defining, recording and charting of behaviour. This course is the first of two ABA courses that focuses on the application of behaviour analytic principles and strategies/methods in a variety of applied settings, service and workplace environments, and sectors. This course is also offered as PSYC 3136.

Non-substantive:

The course prerequisites for CHFS- 3136/PSYC-3136 “ABA I: Introduction to Applied Behaviour Analysis” from “CHFS-2106/PSYC-2006” to “Any 24 credits or permission of the instructor”.

Motion 6: That Senate approve the revision to the course learning outcomes for CHFS-3136/PSYC-3136 “ABA I: Introduction to Applied Behaviour Analysis” as follows:

Proposed:

1. Recognize the empirical, scientific, and critical-thinking process, as the foundation upon which behavioural science and analysis is built.
2. Apply fundamental theories and principles of learning/behaviour, and applications across various settings, including frameworks such as Positive Behaviour Support (PBS), Applied Behaviour Analysis (ABA), and Organizational Behaviour Management (OBM).
3. Analyze characteristics and core values of applied behavioural sciences, including the Dimensions and Principles of ABA.
4. Apply knowledge of behavioural assessment and measurement (e.g., preference, motivational, and functional assessment).
5. Evaluate commonly used strategies and procedures in applied behavioural sciences and an ability to integrate such knowledge into support planning for individuals, including goal setting & selection of target behavior.
6. Evaluate issues of individual and cultural diversity, equity, and inclusion, as related to the application of behavioural sciences.
7. Define, record, and display behavioural data, including the importance and application of data to real-world settings.
8. Evaluate applied behavioural science and its relevancy across sectors and the lifespan.

Current:

1. Understand the empirical, scientific, critical-thinking process as the foundation upon which behaviour analysis is built
2. Show an understanding of fundamental theories and principles of learning/behaviour
3. Identify principles, characteristics, and core values of ABA
4. Begin to demonstrate knowledge of behavioural assessment and measurement (e.g., preference assessment, motivational assessment, functional assessment)
5. Demonstrate a basic understanding of the assessment of basic language and learning
6. Show an ability to carry out outcomes planning & goal setting, including selection of target behaviour
7. Be able to define, record, and display behavioural data
8. Show an understanding of the ethical considerations and ethical decision-making processes in ABA settings/for ABA practitioners
9. Begin to understand ABA research methods and techniques
10. Be able to critically evaluate ABA and its relevancy across sectors, life-span developmental stages, and varying service and workplace settings.

Non-substantive:

The revision of the course title for CHFS-3137/PSYC-3137 “ABA II: Advanced Topics in Applied Behaviour Analysis” to “ABS II: Advanced Topics in Applied Behavioural Sciences” and the course description as follows:

New Description

Students undertake advanced coverage of Applied Behavioural Science topics, including communication, environmental strategies and situational management, maintenance and generalization of skills, and ethical and social issues. They evaluate least-restrictive and strengths-based approaches across the field, while integrating individually and culturally responsive values and frameworks of practice. Educators, front-line responders, or service providers interested in working with children/adults across institutional and community-based settings, or staffing teams across the non-profit or business sectors will benefit from this course. This course is also offered as PSYC 3137.

Old Description

This course expands on fundamental principles including advanced coverage of topics such as learning, communication, and behaviour assessment; direct training programs; skill teaching

and adaptive behaviour; environmental strategies; situational management; generalization; and ethical and social issues. A least-restrictive, lifespan developmental, and integrative ABA framework is considered across sectors and diverse client groups. This course is also offered as PSYC 3137.

Motion 7: That Senate approve the revision to the course learning outcomes for CHFS-3137/PSYC-3137 “ABA II: Advanced Topics in Applied Behaviour Analysis” as follows:

Proposed:

1. Examine advanced principles, strategies, and applications of learning and behaviour, including analytic skills.
2. Outline ethical decision-making processes in applied settings and competence for individual and cultural diversity in planning and goal setting.
3. Integrate theoretical and applied frameworks for addressing diversity considerations across various fields, including responsive and nondiscriminatory practices, as related for example, to neurodiversity, mental health, trauma, language, ethnicity, race, gender, religion, culture, social economic status, and others.
4. Evaluate individual-centered strategies across school, youth/adult institutional facilities, community settings, or private/corporate settings.
5. Generate strategies mindful of least-restrictive, lifespan developmental, and individual strengths and needs principles, in developing integrative plans.
6. Analyze outcomes planning & goal setting, including outcomes data and its application/integration to individualized program planning.

Current:

1. Articulate an understanding of advanced principles, strategies, and applications of learning and behaviour, including advanced analytic skills
2. Demonstrate knowledge of advanced and commonly used skills and procedures in ABA and an ability to integrate such knowledge into the assessment and intervention planning for clients
3. Demonstrate an understanding of client-centered responsibilities and their relevant application across settings and clients
4. Integrate least-restrictive, life-span developmental, and individual strengths and needs principles, in developing integrative ABA plans
5. Be able to identify client strengths and needs and develop suitable programs and/or interventions
6. Demonstrate advanced knowledge of behaviour assessment and measurement, including language and learning assessment
7. Demonstrate skills in outcomes planning & goal setting, including in the analysis of outcomes data and its application/integration to individualized program planning.

Non-substantive:

The revision of the course title for CHFS-4106/PSYC-4106 “Assessment and Intervention Planning” to “Intervention: Planning for Neurodivergence” and the course description as follows:

New Description

Students explore intervention planning for neurodivergence with children, youth, and adults, including select assessments and evidence-based treatments. Key principles of effective planning are reviewed, including culturally sensitive and responsive practices. Students integrate the biopsychosocial-spiritual model with equity, diversity, inclusion, and decolonization values in supporting individual strengths and needs, achieving successful outcomes, and guiding decisions. Students understand relational practice as a foundation of successful

outcomes, across emotional, cognitive, behavioural, communications, and mental health domains. This course is also offered as PSYC 4106.

Old Description

This course focuses on prevention and intervention in the context of developmental and emotional-behavioural disorders of childhood and adolescence. Cognitive, cognitive-behavioural, and behavioural strategies are covered for supporting children and adolescents with exceptionalities. Particularly effective and model international programs are reviewed. A holistic, evidence-based, individual strengths- and needs framework is applied for informing decisions regarding suitable interventions and practices. The course highlights the importance of the therapeutic alliance as a foundation of successful approaches. This course is also offered as PSYC 4106.

Non-substantive:

The Arts & Science Executive recommend to the ACC to approve the course prerequisites for CHFS-4106/PSYC-4106 "Assessment and Intervention Planning" from "CHFS-2106/PSYC-2006" to "CHFS- 2106/PSYC-2006 or equivalent".

Motion 8: That Senate approve the revision to the course learning outcomes for CHFS-4106/PSYC-4106 "Assessment & Intervention Planning" as follows:

Proposed:

1. Describe the scope of various broad- and narrow-band assessments for intervention planning, and be able to differentiate these from diagnostic assessments.
2. Apply individual strengths/needs and individual and cultural diversity in goal-selection, in identifying suitable interventions, and in planning for effective outcomes.
3. Identify neurodevelopmental processes that can often subserve various behavioural challenges, such as self-regulatory mechanisms (emotional, behavioural, and cognitive self-regulation).
4. Evaluate relational practice in understanding individuals within complex contexts (considering factors such as age, gender, SES, culture, race, history, geography, determinants of health/social well-being) and demonstrate an understanding of cultural sensitivity and responsiveness in supporting effective and meaningful outcomes at an individual level.
5. Apply evidence-based strategies and appropriateness of use.
6. Evaluate for critical clinical issues (e.g., depression, suicidality, neglect, abuse, and others) and relevant follow-up.
7. Analyze emotional-behavioural, developmental, and other related issues (e.g., addictive behavior, psychopathology, neglect and abuse, violence, situational and environmental factors) that may impact academic, personal/social, and workplace success, as well as overall development.
8. Summarize principles supporting equity, diversity, inclusion, and decolonization in their importance for intervention planning and outcomes success.

Current:

1. Identify, develop, and implement different types of interventions at the individual and small group levels
2. Identify suitable cognitive, cognitive-behavioural, and behavioural interventions for diverse challenges
3. Demonstrate an understanding of evidence based practices and identify empirically based interventions appropriate for use
4. Differentiate amongst primary, secondary, and tertiary prevention and appropriate strategies for each

5. Demonstrate awareness of critical clinical issues (e.g., depression, suicidality, neglect, abuse, and others) and relevant follow-up
6. Identify emotional-behavioural, developmental, and other related issues (e.g., addictive behavior, psychopathology, neglect and abuse, violence, situational and environmental factors) that may impact academic, personal/social, and career success, as well as overall development
7. Demonstrate an understanding of the referral process and be able to identify appropriate pathways for referral for individuals with special needs
8. Demonstrate an understanding of and be able to apply professional and ethical guidelines of conduct

Non-substantive:

The revision of the course title for CHFS-4205/PSYC-4225 “Practicum in ABA Lifespan” to “Practicum in Applied Behavioural Sciences” and the course description as follows:

New Description

Students gain experience across various sectors and fields of practice (e.g., PBS, ABA, OBM), in front-line responder or service provision settings or team-based organizational settings. Students engage in blended experiential learning, including seminar, module, case-based pedagogy, and institutional or community-based experience, as applicable. Settings may include schools, intervention/treatment centres, justice/correctional settings, long-term care facilities, traumatic brain injury/rehabilitation centers. Hours must be completed within teams proficient in applied behavioural science principles and strategies. This course is also offered as PSYC 4225.

Old Description

Students gain experience in designing and implementing Applied Behaviour Analysis (ABA) programs with individuals with emotional/behavioural and/or developmental needs. Placements, placement protocols, and field supervisors must be approved beforehand. Placements may be secured in schools, clinical settings, justice settings, long-term care facilities, traumatic brain injury or rehabilitation centers, and others, and must be in completed within teams proficient in ABA strategies and program development. A student and field supervisor's report must be submitted to the Department upon completion of the placement. This course is also offered as PSYC 4225.

Non-substantive:

The course prerequisites for CHFS-4205/PSYC-4225 “Practicum in ABA-Lifespan” be changed from [CHFS-3036 or PSYC-3036; 80% in either CHFS-3136 or PSYC-3136 and 80% in either CHFS-3137 or PSYC-3137 and approval of the Department. Valid Criminal Record Check required prior to course start] to [CHFS-3036 or PSYC-3036; CHFS-3137 or PSYC-3137; and with approval of the Department].

Motion 9: That Senate approve the revision to the course learning outcomes for CHFS-4205/PSYC-4225 “Practicum in ABA Lifespan” as follows:

Proposed:

1. Engage with theories, principles, and practices of applied behavioural science across respective fields and frameworks of practice, such as positive behaviour support (PBS), applied behaviour analysis (ABA), and organizational behaviour management (OBM) as applicable.
2. Integrate ethical decision-making processes in applied settings, taking into account strengths and needs along the neurodiversity continuum.

3. Observe and engage in competent planning and goal setting, including theoretical and applied frameworks for addressing diversity considerations in the field (e.g., responsive and nondiscriminatory practices, as related to neurodiversity, mental health, trauma, language, ethnicity, race, gender, sexual orientation, religion, culture, social economic status).
4. Practice individual-centered strategies and their application across various sectors/settings.
5. Choose least-restrictive, lifespan developmental, and individual strengths and needs approaches, for developing integrative plans.
6. Explain outcomes planning & goal setting, including the relevance of outcomes data in the development of individualized programming.
7. Explain sector-based values and practices in synthesizing behavioural science knowledge.

Current:

1. Apply theories, principles, and practices learned in ABA I and ABA II
2. Gain experience in developing and implementing ABA programs in an IBI supervised environment while working with individuals with ASDs
3. Gain experience in measuring and evaluating individual and program success
4. Utilize collaborative professional and communication skills in agency settings
5. Demonstrate an ability to work within ethical guidelines
6. Articulate the clinical approach and standards of practice of the organization and/or respective program
7. Identify resources available to meet the needs of clients and team members

Non-substantive:

The revision to the course hours for CHFS-4205/PSYC-4225 “Practicum in ABA Lifespan” be changed from “180hrs” to “180hrs of blended experiential learning”.

Non-substantive:

The revision of the course title for CHFS-4305/PSYC-4335 “Practicum in EIBI/ASD” to “Practicum in EBI-ASD/ND” and the course description as follows:

New Description

Students gain experience in designing and implementing Applied Behaviour Analysis (ABA) programs in Early Behaviour Intervention (EBI) settings, and working with children with Autism Spectrum and other Neurodevelopmental Disorders (ASD/ND). Community placement hours may be secured in clinical or community-based treatment programs providing ABA to children with ASD/ND, and must be completed within teams proficient in ABA strategies and program development. This course is also offered as PSYC 4235.

Old Description

Students gain experience in designing and implementing Applied Behaviour Analysis (ABA) programs in Early Intensive Behaviour Intervention (EIBI) settings, and working with children with Autism Spectrum Disorders (ASD). Students are expected to follow agency guidelines for volunteers and/or employees. Placements, placement protocols, and field supervisors must be approved beforehand. Placements must be completed within EIBI centers, under Clinical Psychology and BACB supervision. A student and field supervisor's report must be submitted to the Department upon completion of the placement. This course is also offered as PSYC 4235.

Non-substantive:

The course prerequisites for CHFS-4305/PSYC-4325 “Practicum in EIBI-ASD” be changed from [CHFS-3036 or PSYC- 3036; 80% in either CHFS-3136 or PSYC-3136 and 80% in either CHFS-3137 or PSYC-3137 and approval of the Department. Valid Criminal Record Check

required prior to course start] to CHFS-3036 or PSYC-3036; CHFS-3137 or PSYC-3137 and with approval of the Department.

Motion 10: That Senate approve the revision to the course learning outcomes for CHFS-4305/PSYC-4325 “Practicum in EIBI-ASD” as follows:

Proposed:

1. Apply theories, principles, and practices of applied behavioural science as applicable to early behaviour intervention for children with ASD or other neurodevelopmental disorders.
2. Apply ethical decision-making processes in applied settings, taking into account individual strength and needs.
3. Apply competent planning and goal setting, including theoretical and clinical frameworks for addressing diversity considerations across the field (e.g., responsive and nondiscriminatory practices, as related to neurodiversity, mental health, trauma, language, ethnicity, race, gender, sexual orientation, religion, culture, socio-economic status).
4. Apply individual-centered strategies ~~and their application~~ across **various** early intensive intervention settings.
5. Apply least-restrictive, lifespan developmental, and individual strengths and needs principles, in developing integrative plans.
6. Analyze ~~for~~ outcomes planning & goal setting, including in the analysis of outcomes data and its application/integration to individualized program planning.
7. Analyze sector-based values and practices in synthesizing behavioural science knowledge within EBI-ASD/ND settings.

Current:

1. Apply theories, principles, and practices learned in ABA I and ABA II
2. Gain experience in developing and implementing ABA programs while working with children with ASD in EIBI settings
3. Gain experience in measuring and evaluating individual and program success
4. Utilize collaborative professional and communication skills in agency settings
5. Demonstrate an ability to work within ethical guidelines
6. Articulate the clinical approach and standards of practice of the organization and/or respective program
7. Identify resources available to meet the needs of clients and team members

Non-substantive:

The revision to the course hours for CHFS-4305/PSYC-4325 “Practicum in EIBI-ASD” be changed from “180hrs” to “180hrs of blended experiential learning.”

Motion 11: That Senate approve the removal of the clause “Available to students in an Honours Specialization, Specialization, or Major in Child and Family Studies or Psychology” from the Graduation Requirements of the ABA-Lifespan and EIBI-ASD Certificates.

The Provost and Vice-President, Academic and Research, acknowledged the amount of work involved in the Child & Family Studies and Psychology program revisions, and thanked all those involved.

Environmental Science

The Academic Curriculum Committee approved the revised Stage II Program Proposal for the Bachelor of Science Honours Specialization, Specialization, Major, and Minor in Environmental Science as outlined in the attached template. The Stage II Program Proposal will be forwarded

to the Academic Quality Assurance and Planning Committee and External Reviewers will be selected.

The Provost and Vice-President, Academic and Research, acknowledged the amount of work and time faculty dedicated to the development of the Stage II Program Proposal for Environmental Science and congratulated all those involved.

Faculty of Education and Professional Studies

Non-substantive:

The course title for EDUC 5326 be changed from Organizational Management to Organizational Leadership.

Rationale:

The original title came from a different time and ethos; leadership concepts have changed since this course was originally designed and named and a name change from Management to Leadership would have broader appeal to those in leadership roles within and outside Education.

Motion 1: That the Report of the Academic Curriculum Committee dated February 25, 2022 be received.

February 25, 2022 ACC Report

Faculty of Arts and Science

Sociology

Non-substantive:

The course title for SOCI-2036 be changed from “Introduction to Social Gerontology” to “Gerontology: Aging and Society” as outlined in attached document.

Non-substantive:

The course title for SOCI-2037 be changed from “Sociology of Family and Household Relationships” to “Sociology of the Family” as outlined in attached document.

Non-substantive:

The course title for SOCI-2046 be changed from “Minority Groups in Canada” to “Ethnicity and Racialization” as outlined in attached document.

Non-substantive:

The course title for SOCI-2066 be changed from “Social Stratification” to “Social Inequality” as outlined in attached document.

Non-substantive:

The course title for SOCI-2076 be changed from “Deviance and Conformity” to “Deviance, Crime & Social Control” as outlined in attached document.

Non-substantive:

The course title for SOCI-2096 be changed from “Sociology of Education: Social Theory and Education” to “Sociology of Education” as outlined in attached document.

Non-substantive:

The course title for SOCI-2097 be changed from “Sociology of Education: Social Issues in Education” to “Social Issues in Education” as outlined in attached document.

Non-substantive:

The course title for SOCI-2236 be changed from “Sociology of Human Sexual Behaviour I: Love, Sex and Intimacy” to “Love, Sex and Intimacy” as outlined in attached document.

Non-substantive:

The course title for SOCI-2237 be changed from “Sociology of Human Sexual Behaviour II: Varieties of Human Sexual Behaviour” to “Human Sexual Behaviour” as outlined in attached document.

Non-substantive:

The course title for SOCI-3006 be changed from “The Sociology of Collective Behaviour” to “Social Movements and Moral Panics” as outlined in attached document.

Non-substantive:

The course title for SOCI-3026 be changed from “The Sociology of Work” to “Work, Employment and Society” as outlined in attached document

Non-substantive:

The course title for SOCI-3057 be changed from “Demography: Introduction to Population Studies” to “Population and Society” as outlined in attached document.

Non-substantive:

The course title for SOCI-3076 be changed from “Mass Culture and Mass Media I: Journalism and Mass Communication” to “Digital Media and Society” as outlined in attached document.

Non-substantive:

The course title for SOCI-4137 be changed from “Selected Topics in Aging” to “Topics in Aging and Health” as outlined in attached document.

Non-substantive:

The course title for SOCI-4016 be changed from “Advanced Sociological Theory” to “Social Processes and Social Structure” as outlined in attached document.

Non-substantive:

The course title for ANTH-2056 be changed from “The Anthropocene” to “The Anthropocene: Environment & Globalization” as outlined in attached document.

Non-substantive:

The course title for ANTH-2006 be changed from “The Ethnographer’s Craft” to “Ethnographic Imagination” as outlined in attached document.

Non-substantive:

The course title for ANTH-2027 be changed from “Archaeology II” to “Applied Archaeological Excavation” as outlined in attached document.

Non-substantive:

The course title for ANTH-3407 be changed from “Anthropological Theory” to “Contested Concepts: Power & Perspective” as outlined in attached document.

Non-substantive:

The revision of the course description for ANTH-3407 Anthropological Theory as outlined in attached document.

Motion 2: That Senate approve that ANTH-3027: Indigenous Peoples and the State be cross-listed with Sociology.

Rationale: The Department of Sociology and Anthropology is a combined Department, with some faculty trained in both Sociological and Anthropological theories and methods. Cross-listing the course ANTH 3027 will allow for the Department to make use of faculty resources across programs, and will fill an important gap in course offerings in Sociology.

Non-substantive:

The course SOCI-3156: Women and Age be banked as outlined in attached document.

Non-substantive:

The course SOCI-3176: Age, Health, and Work I be banked as outlined in attached document.

Non-substantive:

That the course SOCI-3177: Age, Health, and Work II be banked as outlined in attached document.

Motion 3: That Senate approve the creation of SOCI-3167: Society and Mental Disorder as outlined in the attached template.

Rationale: This proposed course was piloted as a Special Topics course in the Fall 2021, with great success. The addition of SOCI 3167: Society and Mental Disorder fits with the Department's thematic expertise in Health Studies and can serve as an elective course in the Certificate in Health Studies and Gerontology. The addition of SOCI 3167 will also provide Sociology students with an additional elective option for course selection as part of their degree program.

Motion 4: That Senate approve that the 3-credit course SOCI-3167 Society and Mental Disorder be added as program requirements for the Certificate in Health Studies and Gerontology as outlined in the attached document.

Rationale: The course content for SOCI 3167: Society and Mental Disorder directly aligns with the Certificate in Health Studies and Gerontology. Adding this course to the list of elective courses for the Certificate in Health Studies and Gerontology will allow students more options for course selection and will allow for greater flexibility in course planning. The following chart outlines the program structure for the Certificate in Health Studies and Gerontology with the removal of SOCI 3156, SOCI 3176, SOCI 3177 and the addition of SOCI 3167.:

Non-substantive:

The prerequisite for SOCI-2016: Classical Sociological Theory be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-2017: Contemporary Sociological Theory be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-2027: Sociology of Nursing be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-2036: Introduction to Social Gerontology be changed as outlined in attached document:

Non-substantive:

The prerequisite for SOCI-2037: Sociology of Family and Household Relationships, SOCI-2046: Minority Groups in Canada, SOCI-2066: Social Stratification, SOCI-2076: Deviance and Conformity, SOCI-2196: Sociology of Medicine, SOCI-2236: Sociology of Human Sexual Behaviour I: Love, Sex and Intimacy, and SOCI-2237: Sociology of Human Sexual Behaviour II: Varieties of Human Sexual Behaviour be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-3006: The Sociology of Collective Behaviour, SOCI-3007: Consumer Culture, SOCI-3026: Sociology of Work, SOCI-3036: Qualitative Research Methods, SOCI-3076: Mass Culture and Mass Media I: Journalism and Mass Communication, SOCI-3166: The Social Determinants of Health, SOCI-3256: Globalization and Development, and SOCI-3506: Social Problems be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-3016: Critical Perspectives on Social Theory be changed as outlined in attached document.

Non-substantive:

The prerequisite for ANTH-3036: Qualitative Research Methods be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-3057: Demography: Introduction to Population Studies be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-3186: Health and the Family be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-3226: Survey Research be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-3956: Special Topics in Sociology and ANTH 3407: Anthropological Theory be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-4016: Advanced Sociological Theory be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-4127: Advanced Social Data Analysis be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-4137: Selected Topics in Aging be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-4206: Determinants of Population Change be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-4227: Science, Technology and Environment be changed as outlined in attached document.

Non-substantive:

The prerequisite for ANTH-4106: Multispecies Ethnography be changed as outlined in attached document.

Motion 5: That Senate approve the creation of SOCI-3957: Special Topics in Sociology II as outlined in the attached template.

Rationale: Sociology currently only has one special topics course. The addition of a second special topics course in Sociology will allow for greater flexibility in course planning and will allow the Department to pilot new thematic courses to assess student interest. The addition of a second special topics course in Sociology will also provide Sociology students with an additional elective option for course selection.

Motion 6: That Senate approve that the creation of SOCI-3187: Gaming Subcultures as outlined in the attached template.

Rationale: This course provides a focused discussion of group formation and behavior within the context of gaming in popular culture. While these are issues embedded in and across the curriculum in SOCI/ANTH, there is a need for increasing our course offerings which focus primarily on emerging contemporary social phenomena within the 21st century. SOCI 3187 will also enhance the breadth and number of electives available for students.

Motion 7: That Senate approve the creation of ANTH-2066 Language and Culture as outlined in the attached template.

Rationale: Currently, the Anthropology program is primarily focused on the sub-field of Cultural Anthropology, with some course offerings in Archaeology. The addition of ANTH 2066 will provide students with increased exposure to the sub-field of Linguistic Anthropology at the second-year level, and will contribute to the delivery of a four-field Anthropology program. The addition of ANTH 2066 will expand second year course offerings in Anthropology and may be of interest to students in cognate disciplines such as Classical Studies and Modern Languages, History, English, Indigenous Studies, and Gender Equality and Social Justice.

Motion 8: That Senate approve the creation of ANTH-2076 Biology and Culture as outlined in the attached template.

Rationale: The Department of Anthropology presently lacks a lower-level course exploring the impact of biological perspectives in Anthropology. Since Biological Anthropology is a core Anthropological subfield and this is an area of considerable demand for many Nipissing students in other programs, we believe this course would both fill an important gap in the Anthropology program and may be of interest to students in cognate disciplines such as Biology, Physical Health and Education, Psychology, Sociology, and History.

Non-substantive:

The revision of the course description for SOCI-3226: Survey Research as outlined in attached document.

History

Motion 9: That Senate approve the creation of the certificate Societies in Transition: Relationship, Reciprocity, and Reconciliation Histories as outlined in the attached document.

Rationale:

SIT deepens the Faculty of Arts & Science and Nipissing University's commitment to indigenization and decolonization. It responds to the Truth and Reconciliation Commission's Calls to Action (# 10, 24, 28, 62) and University's Canada Principles and Commitments to Action in Indigenous Education (#2, 3, 4, 5, 6, 8, 10, 11, 12) by centering Indigenous histories and ways of knowing and being, including enacting reciprocity and building relationships in a good way, in support of reconciliation. Please see attached Departmental Approval forms.

Motion 10: That Senate approve the addition of a Note in the Academic Calendar for History Students completing an honours double major, as outlined below:

Note:

History students completing an Honours Double Major may count 3 credits from a 6 credit 4000 level HIST course towards the 3000 level HIST requirement for the Major in History.

Rationale:

In the fourth year, double major students require "at least 3 credits at fourth year"; however, we do not offer 3 credit fourth-year courses and students have requested this option. To ensure that students are not required to take 3 extra credits, we propose this solution after consultation with Academic Advising and the Registrar's Office. We submitted a global petition for the 2021-22 academic year but want to formalize this in the academic calendar.

Indigenous Studies

Non-Substantive:

The revision of the course description for LEAD-2006 Indigenous Political Culture as outlined in attached document.

Motion 11: That Senate approve the addition of learning outcomes for LEAD-2006 Indigenous Political Culture as outlined below:

Learning Outcomes

- Explore critical facets of current political systems that intersect with Indigenous communities
- Describe key features of Indigenous political structures
- Discuss Indigenous customary governance as emergent discourse and practices
- Distinguish culturally-specific leadership practices, particularly in local First Nations
- Analyze urban Indigenous political trends in provincial and federal contexts
- Articulate the intersections of Indigenous and settler political concepts and values

Rationale:

When LEAD-2006 was created, there were no learning outcomes included with the curriculum proposal.

Motion 12: That Senate approve to cross-list LEAD-2006 Indigenous Political Culture with Indigenous Studies.

Rationale:

The Department of Indigenous Studies would like to make this course count towards the Indigenous Studies degree requirements.

Motion 13: That Senate approve the change to the expected delivery mode for LEAD-2006 Indigenous Political Culture as outlined below:

New Expected Contact Time

3 hours of lecture per week

Old Expected Contact Time

2 hours of lecture and 1 hour of lab per week.

Rationale:

LEAD-2006 may include a service learning component within the course, it will be at select times throughout the term, not on a weekly basis.

Non-substantive:

The revision of the course description for LEAD-1006 Indigenous Political Culture as outlined in attached document.

Motion 14: That Senate approve the addition of learning outcomes for LEAD-1006 Concepts and Ethics of Indigenous Leadership as outlined below:

Learning Outcomes

- Describe key cultural values in the context of leadership responsibilities
- Analyze the intersection of Indigenous leadership ethics and contemporary socio-political issues
- Identify customary Indigenous conflict resolution practices
- Express through community-based learning experiences basic relational practices, reciprocity,
- Engage in self-reflective learning
- Articulate and demonstrate protocols and ethics that are central to Indigenous leadership responsibilities

Rationale:

There were no learning outcomes submitted with the curriculum proposal to create LEAD-1006.

Motion 15: That Senate approve to cross-list LEAD-1006 Concepts and Ethics of Indigenous Leadership with the Indigenous Studies.

Rationale:

The Department of Indigenous Studies would like to make this course count towards the Indigenous Studies degree requirements.

Motion 16: That Senate approve to change the expected delivery mode for LEAD-1006 Concepts and Ethics of Indigenous Leadership as outlined in the attached document.

New Expected Contact Time

3 hours of lecture per week

Old Expected Contact Time

2 hours of lecture and 1 hour of lab per week.

Rationale:

LEAD-1006 may include a service learning component within the course, it will be at select times throughout the term, not on a weekly basis.

Motion 17: That Senate approve the creation of INDG-3107 Indigenous Research Methodologies as outlined in the attached document.

Rationale:

To add to the current third year course options for Indigenous Studies majors, as well as to increase the diversity of Indigenous-focused streams. This course will become a core requirement for the program when Indigenous Studies becomes an Honours program.

Motion 18: That Senate approve the creation of INDG-4706 Indigenous Knowledge Seminar – Special Topics as outlined in the attached template.

Rationale:

To create 4th year course options to meet the requirements to offer Honours level courses, consistent with the growth of the department to offer an Hons. B.A. level of study.

Gender Equality and Social Justice**Non-substantive:**

The course title for GEND-2147 be changed from Bodies, Borders and Belonging to Forced Migration as outlined in attached document.

Non-substantive:

The course title for GEND-2246 be changed from Transforming Harm: Case Studies in Transformative Justice to Transformative Justice: Case Studies as outlined in attached document.

Motion 19: That Senate approve the deletion of GEND-3127 Gender, Globalization and Human Rights.

Rationale:

This course is being replaced (below) by an updated version attached GEND 3137 Re-Imagining Globalization.

Motion 20: That Senate approve the creation of GEND-3137 Re-Imagining Globalization to be added to Group 3 Human Rights and Social Justice as outlined in the attached template.

Rationale:

This course replaces Gender, Globalization and Human Rights with an updated and newly re-designed curriculum. Much has changed in the more than ten years since the course was initially put on the books and revisions to the curriculum now exceed the existing description. It is effectively a different course, hence we are deleting 3127 and replacing it with 3137.

Motion 21: That Senate approve the creation of GEND-3216 Testimony and Witness to be added to the GESJ curriculum in Group 3 Human Rights and Social Justice and

to the 9-credit option in the Human Rights Minor as outlined in the attached template.

Rationale:

This course was offered as a special topic in 2020-21 under the title Narrating Human Rights. The course is grounded in the instructor's (R. Nagy) current research interests and represents a timely intervention in the current context of the politics of reconciliation, digital witnessing technologies, the #MeToo movement, and the ways in which the "Empire of Trauma" risks the pathologisation of victims of human rights abuse (Fassin and Rechtman 2009; Million 2013). A significant section of the course engages Indigenous storytelling, residential school survivor testimony, and settler witnessing, thereby contributing to the University's commitment to decolonizing and Indigenizing the curriculum.

Motion 22: That Senate approve the creation of GEND-2326 Pets to be added to the GESJ curriculum in Group 2 Power and Inequality as outlined in the attached template.

Rationale:

This course is the 4th in a series of courses focused on animals as part of GESJ's developing environmental justice focus. It will be regularly cycled with Animal Rites, Religion Justice and Animals and Virtual Animals.

Motion 23: That Senate approve the creation of GEND-3357 The Opioid Crisis to be added to the GESJ curriculum in Group 3 Human Rights and Social Justice and to the 9 credit option in the Human Rights Minor as outlined in the attached template.

Rationale:

This course has been offered twice now under a special topics code and has enrolled with waitlists. It's very popular as an elective with Nursing students and is contributing to an emerging concentration in health related courses in GESJ. It is taught by a part-time faculty member who works directly with this population, The AIDS Committee of North Bay which also provides placement opportunities to students from a range of programs across the university.

Non-substantive:

The revision of the course description for GEND-4205 Honours Seminar as outlined in attached document.

Non-substantive:

The prerequisites for GEND-4205 Honours Seminar be changed as outlined in attached document.

Non-substantive:

Rename Gender Equality & Social Justice's Group 2, Power and Inequality to Power, Justice and Transformation as outlined in attached document.

Motion 24: That Senate approve that the program requirements for the Gender Equality and Social Justice Honours Degree, Specialization, and Major be revised to allow students to count a maximum of 6 credits of 1000 level courses as outlined in the attached document.

Rationale: When GESJ changed its first year course from 6 credits to 3 credits we revised the program requirements to allow for a 3 credit progression. However, we failed to recognize that many students would take both our first year courses GEND 1006 and GEND 1007 and it was

never our intention to prevent them from doing that. We currently have to deal with petitions addressing this issue. The changes will allow them to take up to 6 credits of 1000 level courses.

Motion 25: That Senate approve that the program requirements for the Minor in Gender Equality and Social Justice be revised as outlined in the attached document.

Rationale: When GESJ changed its first year course from 6 credits to 3 credits we revised the program requirements to allow for a 3 credit progression. However, we failed to recognize that many students would take both our first year courses GEND 1006 and GEND 1007. It was never our intention to prevent them from doing that, hence the revision to allow up to 6 credits at the 1000 level. We also want to allow students to count at least part of INTD classes towards a minor, including INTD 2005 (6 credits) which are cross-listed for all other GESJ degree options.

Faculty of Education and Professional Studies

School of Criminology and Criminal Justice

Non substantive:

The prerequisite for CRJS 3506 Criminology of Serial Murder be changed as outlined in the attached document:

Motion 26: That Senate approve the creation of CRJS 2127 Interpreting Criminal Justice Research as outlined in the attached template.

Rationale: (1) Students enrolled in the newly approved 2 years college/2 years Nipissing Policing and Corrections streams, and those currently enrolled in the pre-existing Policing, Corrections and general Criminal Justice streams will complete their degrees and seek employment in their chosen policing, correctional services and allied fields: they do not proceed on to graduate programs. (2) Consequently, students enrolled in the newly approved 2 years college/2 years Nipissing Policing and Corrections streams, and those currently enrolled in the pre-existing Policing, Corrections and general Criminal Justice streams will not make use of the skills currently acquired in the required courses SOCI 2126 Sociological Research Methods and SOCI 2127 Quantitative Research Methods, as police officers, correctional workers and probation/parole officers, and others directly seeking employment in the criminal justice field do not conduct research studies as part of their employment positions. (3) The proposed course CRJS 2127 Interpreting Criminal Justice Research will expose Policing, Corrections and the general Criminal Justice stream students to the kinds of research methods, analysis and reporting found in use in the criminal justice field, including academic research and government reports, and will provide students with basic skills to interpret both qualitative and quantitative presentation of research results.

Motion 27: That Senate approve the creation of CRJS 3046 – Interpersonal Communications in Criminal Justice as outlined in the attached template.

Rationale: Interpersonal Communications in Criminal Justice has been taught for 3 academic years as a Special Topics in Criminal Justice Course (CRJS 3927). This course has been very well received by students and provides Criminal Justice students, as well as anyone who hopes to work with the public or vulnerable populations practical communication skills. It would be beneficial for this course to be added to the School of Criminology and Criminal Justice elective course offerings, as it fits with the applied nature of our program and every major functional job analysis conducted on the job of police officer recognizes communication as an essential competency.

Motion 28: The Senate approve that the program requirements for the Bachelor of Arts Criminal Justice, School of Criminology and Criminal Justice be changed as outlined in the attached document.

Non substantive: The School of Criminology & Criminal Justice be renamed as the School of Criminal Justice as outlined in attached document.

School of Nursing

Motion 29: That Senate approve the following learning outcomes for NSGD 3336 Culture and Nursing Practice be added:

Students who successfully complete this course will:

- describe assumptions, values, and beliefs of themselves personally and professionally as they develop awareness of culture and diversity among people
- assess how evidence is constructed and legitimized as knowledge among differing worldviews
- develop awareness of cultural variables that influence health and health care delivery such as social class, gender, age, ability, race/ethnicity, and health care systems
- critique theoretical perspectives and conceptual models for nursing care in relation to other ways of being and knowing
- discuss potentially uncomfortable/challenging health care experiences of patients and identify strategies for intercultural development among nurses, healthcare teams, and health systems
- integrate elements of cultural awareness that reflect new ways of being and knowing in professional nursing practice.

Rationale: There are currently no approved learning outcomes for this course.

Non-substantive:

The restrictions for NSGD 3336 Culture and Nursing Practice are changed as outlined in the attached document.

Non-substantive:

The restrictions for NURS 1006, NURS 1016, NURS 1037 be changed as outlined in the attached document:

Non-substantive:

The restrictions for NURS 2037 be changed as outlined in the attached document:

Non-substantive:

The restrictions for NURS 2016, NURS 2047, NURS 2036 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 2016 be changed as outlined in the attached document:

Non-substantive:

The corequisites for NURS 2016 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 2706 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 2037 be changed as outline in the attached document.

Non-substantive:

The prerequisites for NURS 2517 and NURS 2707 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 2036 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 2047 be changed as outlined in the attached document.

Non-substantive:

The restrictions for NURS 3017, NURS 3116, NURS 3117, NURS 3007 be changed as outlined in the attached document.

Non-substantive:

The restrictions for NURS 3036 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 3017 be changed as outlined in the attached document.

Non-substantive:

The corequisites for NURS 3017 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 3116 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 3117 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 3036 be changed as outlined in the attached document.

Non-substantive:

The antirequisites for NURS 3036 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 3007 be changed as outlined in the attached document.

Non-substantive:

The corequisites for NURS 3007 be changed as outlined in the attached document.

Non-substantive:

The restrictions for NURS 4036, NURS 4436, NURS 4067, NURS 4126 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 4036 be changed as outlined in the attached document.

Non-substantive:

The corequisites for NURS 4036 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 4436 be changed as outlined in the attached document.

Non-substantive:

The corequisites for NURS 4436 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 4067 be changed as outlined in the attached document.

Non-substantive:

The corequisites for NURS 4067 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 4126 be changed as outlined in the attached document.

Non-substantive:

The corequisites for NURS 4126 be changed as outlined in the attached document.

Non-substantive:

The corequisites for NURS 4704 be changed as outlined in the attached document.

Schulich School of Education**Non-substantive:**

The course title for EDUC 1535 be changed from English as a Second Language, Part I to Teaching English Language Learners, Part I as outlined in the attached document.

Non-substantive:

The course title for EDUC 2535 be changed from English as a Second Language, Part II to Teaching English Language Learners, Part II as outlined in the attached document.

Non-substantive:

The course title for EDUC 3535 be changed from English as a Second Language, Part III (Specialist) to Teaching English Language Learners, Part III (Specialist) as outlined in the attached document.

Motion 30: That Senate approve that the course EDUC 1585 International Languages, Portuguese, Part I be added to the list of In-Service offerings.

Rationale: To provide candidates the opportunity to enhance their professional practice, pedagogies and knowledge and skills in International Language, Portuguese teaching. Nipissing University continues to be the only AQ provider of International Languages. (Spanish, German, Italian and Portuguese)

School of Business

Motion 31: That Senate approve the creation of ADMN 1007: Business Economics course as outlined in the attached template.

Rationale:

CPA Ontario requires a series of steps to become a chartered professional accountant. The first two steps are the CPA-PREP (prerequisite and preparatory courses) and CPA-PEP (professional education program. Currently, Nipissing University is a CPA-recognized post-secondary institution that provides the necessary courses and degree requirements for students

to be exempted from the CPA-PREP portion of the certification and to be able to directly enter into the second step -- the CPA-PEP.

The CPA periodically changes and updates the course requirements for its recognized post-secondary institutions (e.g., Nipissing University), and these institutions are required to update their curriculum to remain recognized. The addition of the following course helps accommodate recent changes to the CPA requirements.

In the Nipissing University School of Business, 90-95% of accounting students seek to secure the CPA designation. Recently the CPA mandated the requirement of data analytics. In order to keep the course workload of business students pursuing the CPA designation from becoming overwhelming, the CPA often balances the competencies required. Thus, the addition of the required data analytics is offset by the CPA allowing post-secondary institutions to combine the two economics courses into a single course to meet the required CPA competencies.

Motion 32: That Senate approve the change of wording in the Academic Calendar as listed below: *(changes in strikethrough)*

New Requirements:

To graduate with a Bachelor of Business Administration (Honours) or a Bachelor of Business Administration (four-year), students must complete 120 credits, including ~~66 credits~~ of core requirements as outlined below. Students may also complete a concentration, along with their core BBA requirements. Available Concentrations are as follows: Accounting, Entrepreneurship and Innovation Leadership, Finance, Human Resource Management, Marketing, and International Business.

Old Requirements:

To graduate with a Bachelor of Business Administration (Honours) or a Bachelor of Business Administration (four-year), students must complete 120 credits, including 66 credits of core requirements as outlined below. Students may also complete a concentration, along with their core BBA requirements. Available Concentrations are as follows: Accounting, Entrepreneurship and Innovation Leadership, Finance, Human Resource Management, Marketing, and International Business.

Rationale: CPA Ontario requires a series of steps to become a chartered professional accountant. The first two steps are the CPA-PREP (prerequisite and preparatory courses) and CPA-PEP (professional education program. Currently, Nipissing University is a CPA-recognized post-secondary institution that provides the necessary courses and degree requirements for students to be exempted from the CPA-PREP portion of the certification and to be able to directly enter into the second step -- the CPA-PEP.

The CPA periodically changes and updates the course requirements for its recognized post-secondary institutions (e.g., Nipissing University), and these institutions are required to update their curriculum to remain recognized. The addition of the following course helps accommodate recent changes to the CPA requirements.

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Motion 33: That Senate approve the creation of ACCT 3906: Data Analytics for Accounting as outlined in the attached template.

Rationale: CPA Ontario requires a series of steps to become a chartered professional accountant. The first two steps are the CPA-PREP (prerequisite and preparatory courses) and CPA-PEP (professional education program). Currently, Nipissing University is a CPA-recognized post-secondary institution that provides the necessary courses and degree requirements for students to be exempted from the CPA-PREP portion of the certification and to be able to directly enter into the second step -- the CPA-PEP.

The CPA periodically changes and updates the course requirements for its recognized post-secondary institutions (e.g., Nipissing University), and these institutions are required to update their curriculum to remain recognized. The addition of the following course helps accommodate recent changes to the CPA requirements.

In the Nipissing University School of Business, 90-95% of accounting students seek to secure the CPA designation. Recently the CPA mandated the requirement of data analytics. In order to keep the course workload of business students pursuing the CPA designation from becoming overwhelming, the CPA often balances the competencies required. CPA requires data analytics to be adopted to continue as a recognized post-secondary institution.

Motion 34: That Senate approve that an optional Coop be offered to Post Baccalaureate Diploma students as outlined in the attached document.

Co-op Internship Option for Post Baccalaureate program

During their program, Post Baccalaureate students can take part in one optional Co-op Internship. Co-op Internship will be 4 months in length. Co-op Internship will be of minimum 12 weeks duration (minimum 420 hours), in work placements. Entry into Co-op Internship is NOT automatic. **In order to be eligible to enter Co-op Internship, students must have completed 24 credits with a minimum average of 70%.** To select the Co-op Internship option, students must apply by the end their first academic year of the Post Baccalaureate program. Students cannot take any courses during Co-op Internship.

The aim of the work term is to provide Canadian work experience to students and the credits for this course will not be counted towards the graduation.

Academic Quality Assurance and Planning Committee (AQAPC)

Motion 1: That the Report of the Academic Quality Assurance and Planning Committee dated February 18, 2022 be received.

Motion 2: That Senate approve the attached Business IQAP 2-Year Follow-up Report.

Motion 3: That Senate approve the attached MSc Mathematics IQAP 2-Year Follow-up Report.

Motion 4: That Senate approve the attached Nursing IQAP 2-Year Follow-up Report.

Motion 5: That Senate approve the attached Sociology IQAP 2-Year Follow-up Report.

- Motion 6: That Senate approve the attached Education IQAP 2-Year Follow-up Report.
- Motion 7: That Senate approve the attached MES MEd Environment IQAP 2-Year Follow-up Report.
- Motion 8: That Senate approve the attached Geography IQAP 2-Year Follow-up Report.

Teaching and Learning Committee

- Motion 1: That the Report of the Teaching and Learning Committee dated January 13, 2022 be received.

9. **Other Business**

10. **Amendment of By-Laws**

- Motion 1: That Senate By-laws, Article 6.0 Regular Senate Meetings, be amended as outlined below:

6.0 Regular Senate Meetings

- (a) Unless otherwise determined and announced by the Senate Executive Committee, regular meetings of Senate shall normally be held once a month.
- (b) Once finalized, the dates of all regular Senate meetings for any given year shall be published on the University website.
- (c) Unless otherwise determined and announced by the Senate Executive Committee, regular Senate meetings shall normally commence at 2:30 PM.
- (d) Regular Senate meetings shall normally end no later than 5:30 PM.
- (e) All those responsible for the timetabling of University classes shall be instructed to make every effort to ensure that faculty Senators are not scheduled to teach during regular Senate meetings.
- (f) At the discretion of the Senate Executive Committee, a regular meeting of Senate may be cancelled if:
 - (i) the volume of business submitted for inclusion in the agenda is insufficient to warrant holding the meeting; and
 - (ii) there is no urgent or time-sensitive business requiring disposition prior to the next regular meeting.
- (g) At the discretion of the Senate Executive Committee, a regular meeting of Senate may be held in-person, virtually, or by a hybrid of both (in which case each senator attends either in-person or virtually, but not both).

- Motion 2: That Senate By-laws, Article 6.3(b) Order of Business, be amended as outlined below:

6.3 Order of Business

- (b) Business items submitted too late to be placed on the Senate agenda must be circulated electronically at the meeting for introduction under new business, and shall require the passage of a motion to consider before any further motions may be proposed.

Motion 3: That Senate By-laws, Article 7.4(d) Debate and Decorum, be amended as outlined below:

7.4 Debate and Decorum

- (d) Senators shall be expected to observe appropriate decorum during any debate. Online attendees are to refrain from using any 'chat' options to respect the principle of one speaker at a time as identified by the speaker.

Motion 4: That Senate By-laws, Article 7.5, Voting on Senate Motions, be amended as outlined below:

7.5 Voting on Senate Motions

- (a) Except as otherwise specified in 7.3(c), Senate motions shall be carried by a simple plurality of votes in favour over votes against, with abstentions not being called or recorded.
- (b) Voting on Senate motions shall normally be conducted by a simple show of hands for in-person attendees, and electronic voting for virtual attendees, with the Speaker declaring the motion to be carried or defeated. Should any member request that such a vote be recorded, Senators may be asked to stand or keep their hands in the air until the count is taken.
- (c) Notwithstanding (b), any Senator may, on a question of privilege, move that the vote on the motion before Senate be conducted by secret ballot (including anonymous electronic voting for online attendees). A motion to hold a secret ballot, once seconded, is not debatable and shall be put to an immediate vote.
- (d) Notwithstanding (b), any Senator may likewise, on a question of privilege, move that the vote on the motion before Senate be conducted by roll-call. A motion to conduct a vote by roll-call is debatable as to the need for such a vote.
- (e) Whether a vote is conducted by show of hands, secret ballot or roll-call, the Speaker or Deputy Speaker (whoever is conducting the vote) shall retain the right, as an elected Senator, to vote on the motion. Should the vote on any motion end in a tie, the motion shall be declared defeated.
- (f) Voting by proxy shall not be permitted.

Motion 5: That Senate By-laws, Article 12.0 General Responsibilities, be amended as outlined below:

12.0 General Responsibilities

As in other deliberative or legislative bodies, the general responsibilities of Senators shall include:

- (a) the responsibility to attend Senate meetings regularly;
- (b) the responsibilities when attending virtually: having their identity provided through their online name, following protocol principles of one speaker at a time as identified by the speaker, and, unless it is not feasible, using their camera and microphone when speaking;
- (c) the responsibility to become familiar with the Senate By-Laws, as well as with other relevant Senate policies and procedures;
- (d) the responsibility to keep informed regarding the issues which come before Senate;
- (e) the responsibility to read published Senate agendas and other related materials beforehand, and to come to the meetings prepared;
- (f) the responsibility to endeavour to vote in accordance with the long-term academic interests of the University;

- (g) where they have been chosen or elected by and from specific constituencies, the responsibility to represent the interests of their respective constituent groups by informing constituents as necessary when Senate matters of direct concern or impact are pending, by reporting to or meeting with constituents as appropriate or when called upon to do so, and by endeavouring to convey the views and concerns of their constituents to Senate to the best of their ability.

Motion 6: That Senate By-laws, Article 6.2(g) Senate Agenda and Senate Minutes, be amended as outlined below:

6.2 Senate Agenda and Senate Minutes

- (g) A copy of all approved Senate minutes shall be signed by the Chair of Senate and kept as the official, permanent record of Senate proceedings. The Senate Secretary shall ensure reasonable access to archived minutes.

11. **Elections**

12. **New Business**

Motion 4: That Senate move in camera.

Motion 5: That Senate consider the granting of a posthumous degree.

Motion 6: That Senate move out of camera.

13. **Announcements**

14. **Adjournment**

Nipissing University
Minutes of the Academic Senate Meeting
February 11, 2022
2:30 p.m.
Zoom Videoconference

Members Present:

K. Wamsley (Chair), C. Sutton, P. Maher, J. McAuliffe, J. Nadeau, P. Radia, D. Iafrate, N. Black

A. Burk, N. Colborne (Speaker), S. Connor, J. Dech, H. Earl, R. Gendron, L. Hoehn, M. Litalien, K. Lucas, C. McFarlane, J. Murton, G. Phillips, M. Saari, S. Srigley, M. Tuncali, R. Vernescu, S. Winters

J. Allison, C. Anyinam, A. Armenakyan, G. Brown, B. Elliott, C. Greco, A. Kociolek, J. Muterera, L. Peachey, P. Ravi, G. Raymer, A. Schinkel-Ivy, T. Sibbald, A. Wagner

C. Irwin, O. Pokorny

J. Smith, K. Wilcox

J. McIntosh, S. Pecoskie-Schweir, M. Taylor, M. Murray, M. Fichaud

Absent With Regrets:

D. Campbell, A. Hatef, S. Renshaw

K. Ferguson, R. Hoffman, T. McParland

A. Parolin

E. Wilson

Approval of the Agenda of the Senate Meeting of: February 11, 2022

Motion 1: Moved by N. Black, seconded by C. McFarlane that the agenda of the Senate meeting of February 11, 2022 be approved.
Carried

Adoption of the Minutes of the Senate Meeting of: December 10, 2021

Motion 2: Moved by M. Tuncali, seconded by S. Srigley that the minutes of the Senate meeting of December 10, 2021 be adopted.
Carried

The Speaker opened the meeting with a welcome to the traditional territory:
As we begin this Nipissing University Senate meeting, I would like to acknowledge that we are in the territory of the Robinson-Huron Treaty of 1850 and that the land on which we gather is the Nipissing First Nation Traditional Territory and the traditional territory of the Anishnabek. We respect and are grateful to hold this event on these lands with all our relatives.

Reports From Other Bodies

The President provided a report. Highlights of the report included, Black History Month, the International Day of Women and Girls in Science, and Indigenous Week. He provided updates on the upcoming meeting with the Ministry regarding a response to our requests for funding, the strategic planning framework, the development of a comprehensive calendar of events, and he announced and congratulated faculty members that were awarded tenure and/or promotion. He also spoke to items included in the report of the Provost and Vice-President, Academic and Research. The full reports are attached to the minutes.

The President gave an update on the reappointment of the Provost and Vice-President, Academic and Research, advising that the steps in the reappointment process have now been completed according to the Search/Appointment/Reappointment of Senior Academic Administrative Officers Policy. He advised that Dr. Vainio-Mattila was not reappointed to the position for a second term, but following an administrative leave, will be joining the Faculty of Arts and Science as a tenured Professor. An Interim PVPAR shall be appointed, and the process of initiating a national search for a replacement will begin as soon as possible. Further information will be provided as soon as it becomes available, and the NU community will be kept apprised of the ongoing situation. The President thanked the Reappointment Committee for their extensive work, consideration, and time.

On behalf of Senate, he thanked Dr. Vainio-Mattila for her many contributions as Provost and Vice-President, Academic and Research, and wished her well over the course of her very well-deserved administrative leave and for her return to the faculty.

Motion 3: Moved by J. Murton, seconded, M. Saari that Senate formally recognize and thank Dr. Vainio-Mattila for her many years of service and particularly for her leadership during the recent pandemic.
Carried

The Vice-President Finance and Administration provided a report noting that over the past few weeks several employees have had to self-isolate and revert to remote work which has left some departments short staffed. She reminded that we exercise patience as we deal with this latest wave of the Omicron virus. She advised that our COVID-19 Illness Policy was recently reviewed by the Health Unit. In follow up to reports that some employees have received contradictory information from the Health Unit as opposed to our policy, she reported that Michelle Banks has been in contact with the Health Unit to ensure information is consistent.

The VPFA advised that budget submissions are being worked on and meetings will be set up with budget holders beginning next week. She recognizes that many are waiting to hear the results and patience is appreciated while the process is worked through. Work on the budget is on track to be presented to the Audit and Finance Committee in April.

As it is tax time again, the Finance Department will be sending out additional information regarding the claiming of home-based work expenses and T2200's next week. In response to the following questions submitted in advance by Senator Winters from faculty members regarding returning to campus, the VPFA provided the following responses: Sanitation of classrooms, have there been any changes to wiping down services considering that the virus is airborne? The rules have not changed. Disinfectant products are available in all classrooms. If you need any clarification on protocols, please contact your Dean's office or Michelle Banks. These guidelines are provided by Public Health.

Why has the time between classes been shortened? Last Fall, classes were required to be a minimum of 30 minutes apart in accordance with Public Health guidelines. This year with the lifting of some of the restrictions in classrooms such as capacity and physical distancing, the course session times are permitted to go back-to-back. We are still obligated to ensure that

cleaning strategies are in place before the next class comes in and cleaning products are available in the classroom.

Will N95 masks be made available to faculty teaching in classrooms? The decision was made not to provide N95 masks because they require a professional fit, and they aren't being supplied by most universities due to global supply shortage. The COU has advised that many faculty members find it difficult to lecture or teach through an N95 mask. At this point of time N95 masks will not be required. Paper masks are provided, and cloth masks are not allowed.

Are rapid tests available through the University? Rapid tests are now being distributed through pharmacies and grocery stores in North Bay. We do provide tests for those who require a rapid test post isolation to return to work. They are available from Michelle Banks.

Can air purifiers in classrooms be turned down if they are interfering with the quality of teaching and learning? Air purifiers set on high are the safest but is up to faculty member to make this determination. The units have been installed in the back of the classrooms so that they won't interfere, but faculty members should use their judgement.

The Senate representative on the Board of Governors, Kathy Wilcox, provided a report. She advised that the Board met virtually for their first meeting of the year on January 13. Dr. Mary Patricia Sullivan gave an excellent and informative presentation on Rare Dementia Support which was well received and appreciated by the Board.

The Board approved the recommendation of the Governance Committee to renew the Election of Board Officers Policy for 5 years, as well as approving the recommendation of the Audit and Finance Committee to increase international student tuition rates.

The Board is looking forward to welcoming its newest member, Ms. Cindy Karugia, to her first meeting in March. Ms. Karugia is a Nipissing University graduate who was also the inaugural recipient of the Philanthropy Alumni Award in 2020.

The next Board meeting in March will follow a Board training session with Cheryl Foy, a governance professional with extensive experience working in the university sector.

On behalf of the Board, Senator Wilcox congratulated the faculty members who were granted tenure and/or promotion.

The Alumni Advisory Board representative, Bridgette Perron, provided a report. The report is attached to the minutes.

The NUSU VP Advocacy and Awareness, provided a report. The report is attached to the minutes.

Question Period

In follow up to a letter that was sent to and received by the Board of Governors almost a year ago, as well as requests for follow up and discussion at the Joint Board/Senate Committee on Governance regarding members of the University community being allowed to attend the open session of Board of Governors meetings via Zoom conference instead of via livestream, the President advised that the Board of Governors has agreed that the next Board meeting will be held via Zoom conference.

In response to a question regarding the timeline of appointing an interim Provost and Vice-President, Academic and Research, the President advised that it is very important for the stability of the institution to move quickly and he expects that an appointment will be announced in the next few days.

Questions were raised regarding the Special Request for Publication Support fund, and an application made to the fund. Following receipt of a response indicating that the request was denied because there was no budget for this fund in F22, questions were asked as to why there were no funds for publication support for this fiscal year, why this was not communicated, and will the fund be reinstated next year?

The Dean of Graduate Studies and Research thanked the Senator for providing the question in advance. He advised that \$1500 was budgeted to support the costs associated with publication and knowledge mobilization, and that the awards are a maximum of \$500 per applicant. The budget line was cut for F22 as decisions had to be made based on priorities. There is very little unrestricted money in the research budget and this item could be cut as it was not restricted. It was an oversight that the fund was not removed from Romeo. Moving forward, funds will be removed from Romeo if they are not supported by the budget. \$1500 has been included for publication support in the F23 budget submission.

Concerns were raised regarding increased cases of academic dishonesty resulting from an increase in virtual learning and the use of online programs that allow students to upload papers that automatically change every fifth word in their work. Does the University have a plan for online learning to assist faculty and students to address this challenge and will there be repercussions for students that are uploading to this site?

The Dean of Teaching reported that for the past several months the Senate Teaching and Learning Committee and the Registrar's Office have been working to revise the Academic Integrity Policy. He advised that the Registrar's Office is finalizing the policy, and the Teaching Hub is fully committed to rolling out faculty training when the new policy is in place. We do already subscribe to Safe Assign, a tool to catch this sort of issue, which can be found in faculty Blackboard shells. Please contact the Teaching Hub if assistance with training is required.

The Registrar advised that work on the Academic Integrity Policy has been ongoing for some time and is in the final stages of approval with the intention to have it included in the April Senate agenda for approval for the next academic year. The new Policy will include information to educate students on academic integrity in the courses that they take and the supports that are available to them.

In response to a question as to whether the Registrar's Office will keep a database of students with consistent violations of the Academic Integrity Policy, the Registrar advised that a database would continue to be maintained and reminded of the importance of sharing this information.

The NUSU VP Advocacy and Awareness and the A&S student Senate representative also reminded of the importance of educating students on academic dishonesty and provided reference to the Academic Integrity website at: nipissingu.ca/academicintegrity. It was also noted that as the pandemic has progressed, students have struggled with virtual learning with less support, feedback and available resources.

Further discussion included opportunities to include additional information on academic dishonesty and integrity in the Student Code of Conduct, advising students of available resources, and a suggestion for a mandatory synchronous element, especially for first-year students.

Senator Stewart acknowledged the recent petition and presentation to the AQAPC by Indigenous Studies and GESJ student, Nicole Quast, regarding the creation of a mandatory Indigenous breadth requirement. Senator Stewart expressed his gratitude for the work undertaken. Ms. Quast's dedication to improving Indigenous Education at the institution and her activism around this issue have been admirable. In response to the petition, Senator Tyson, with the support of several faculty members, introduced the following two motions that directly

address this matter. Senator Stewart advised that NUICE Chair, Maurice Switzer, and the Director of Indigenous Initiatives, Romeo Fournier, support the motions.

The Speaker provided background advising that the slides from the presentation are included in the Senate Agenda.

Motion 4: T. Stewart, seconded by M. Saari that Senate affirm in principle the creation of an Indigenous breadth requirement. In keeping with Nipissing University's commitment to build meaningful relationships with Indigenous communities and its responsibilities to increase inclusion of Indigenous scholarship through research and pedagogy, the University Senate will move to create an Indigenous breadth requirement for all undergrads pursuing a degree at Nipissing University utilizing Indigenous pedagogies, languages, perspectives, methodologies and teachings, aligning with the ~~post~~-Truth and Reconciliation Commission's (TRC) Calls to Action regarding education and training in a Canadian context where the TRC has completed its work and to be made available ~~in the 2022-23 calendar year~~ once finalized.
Carried

*See the TRC Calls to Action on the issue of educating Canadians about Indigenous peoples and history: Education 6-10 and 62-65; Language 16; Health Care 23 and 24; Media/Journalism 84-86; Business 92; New Canadians 93.

A concern was expressed that the timeline included in the wording of the motion for the creation of an Indigenous breadth requirement to be made available in the 2022-23 calendar year would not provide enough time to be finalized for the upcoming year.

The Speaker proposed a friendly amendment to amend the timeline. The mover and seconder were amenable to revising the wording of the motion to, "once finalized". Following a suggestion, the Speaker proposed a friendly amendment to amend the motion to remove "post-", prior to the Truth and Reconciliation Commission's Calls to Action. The mover and seconder were amenable to revising the wording of the motion.

A thorough discussion took place. The following is a summary of questions and views expressed:

- Could the breadth requirement be broader and include other groups in other situations?
- As an institution we need to have a definition of Indigenous knowledge and a geographic focus. What will be our vetting process to determine what information will be properly included in these courses and how will we ensure that we can do this in a respectful way and that we are tapping into the appropriate communities and people?
- Are we talking about a specific form of knowledge, trying to get a sense of how we do this considering the different Indigenous groups? For example, Criminology is very broad, how are we going to specifically ensure that we are addressing what needs to be addressed and to ensure that we aren't doing these things in other courses? It was also noted that some of the EPS programs are highly prescribed and there needs to be some reflection on how we do this effectively.
- The importance that NUICE is thoroughly included in these important next steps was noted.
- The desire is coming from the students, they want to see action taken on this matter, they see an education system that has failed them on this topic for far too long. We must broadly think about what our strategy is as a University. The student's intention when drafting this presentation was to go as slow as needed to ensure it was done properly with effective consultation.
- When it comes to Indigenous history, we have many faculty members that are already engaged with these matters and do a stellar job of reflecting Indigenous concerns by having guest speakers and traditional knowledge holders to be a part of their pedagogy.

We will build on our strengths, but there will be a need for more resources, training and changing of minds on Indigenous methodologies.

- It was noted that not all programs have breadth requirements, so this would be a change to our degree requirements which would have program implications.
- To start the process, Senate is being asked to direct the initiative to ACC in consultation with community and NUICE to develop a strategy. A discussion took place as to whether the ACC is the appropriate committee or whether it should start with the AQAPC so that a policy can be developed. It was noted that the ACC can't approve motions without the approval of the departments, Faculty Councils or ARCC. The Speaker clarified that it is a motion asking that the ACC investigate a certain proposal, and it is not up to Senate to anticipate how ACC will go about doing this. The ACC will have its own consultation processes and we don't want to try and do the work of the ACC.
- It was agreed that the ACC would be appropriate as the academic future of the university is being discussed. The terms of reference of the ACC include program and degree requirements.
- It was noted that programs are already responding to the TRC, so to avoid overlap there needs to be a comprehensive approach where the ACC may first need to do some consultation to see what is happening currently in response to the TRC.
- On similar paths, wouldn't want to have to unnecessarily double up on content, for the rest of the house is still good work that can be done at a level where the university is taking a stance in an active way to pursue reconciliation, is a more visible strategy.
- The distinction between a breadth requirement and a degree requirement is that a breadth requirement is a series of choices you can make to fulfill the requirements, whereas a degree requirement you must take specific courses in to graduate, is this a degree requirement that everyone would have to take or is it something that people might chose or not chose, there is an array of breadth requirements. If you want everyone to take the course, then it would be a degree requirement. Some degrees have breadth requirements, and some degrees don't have breadth requirements. Does every student need to take an approved Indigenous course, or does it become an option that every student has?
- For clarity it was suggested that the motion in principle to support Indigenous ways of knowing at NU and to respond to the TRC calls to action is a principled motion. It was suggested that the motion be approved in principle but allow Faculty Councils to have further consultation with the Ad Hoc Indigenous Committee, the Indigenous Steering Committee and NUICE, and then bring it through the regular curriculum development process.
- Several Senators voiced their support of the motions.

Motion 5: Moved by T. Stewart, seconded by M. Tuncali that Senate direct the Academic Curriculum Committee (ACC) to develop, in consultation with NUICE, an Indigenous breadth requirement for all undergrads pursuing a degree at Nipissing University.
Carried

Reports of Standing Committees and Faculty or University Councils

Senate Executive Committee

Motion 6: Moved by K. Wamsley, seconded by M. Litalien that the Report of the Senate Executive Committee dated January 6, 2022 be received.
Carried

Motion 7: Moved by K. Wamsley, seconded by M. Litalien that the Report of the Senate Executive Committee dated February 3, 2022 be received.
Carried

Academic Curriculum Committee

Motion 8: Moved by P. Radia, seconded by C. McFarlane that the Report of the Academic Curriculum Committee dated January 27, 2022 be received.
Carried

Faculty of Arts and Science**Classical Studies & Modern Languages**

Motion 9: Moved by N. Black, seconded by P. Radia that Senate recommend the program requirements for the Honours Specialization in Classical Studies be changed as outlined in the attached document.
Carried

Non-substantive:

The prerequisites for CLAS-4427 – Honours Seminar in History and Culture be changed as outlined in the attached document.

Motion 10: Moved by N. Black, seconded by S. Srigley that Senate recommend the creation of CLAS-3246 – Digital Reception of the Ancient World as outlined in the attached document.
Carried

Motion 11: Moved by N. Black, seconded by C. McFarlane that Senate recommend the creation of CLAS-2707 – The Ancient World in Digital Gaming Culture as outlined in the attached document.
Carried

Non-substantive:

The prerequisites for FREN 1106 – Introductory French I be changed as outlined in the attached document. **The Registrar requested that the following friendly amendment be added:*
FREN 1106 - The motion states the new prerequisites as "Grade 12 Core French or equivalent". It would be best if it could be changed to "Grade 12 university preparation Core French or equivalent". There is more than one stream offered in grade 12 core French, so we want to make sure we are referencing the correct one.

Non-substantive:

The prerequisites for FREN 1107 – Introductory French II be changed as outlined in the attached document.

Non-substantive:

The prerequisites for FREN-2006 - Français intermédiaire I be changed as outlined in the attached document. **The Registrar requested that the following friendly amendment be added:*
FREN 2006 - The motion states the new prerequisites as "Grade 12 French Immersion or equivalent". It would be best if it could be changed to "Grade 12 university preparation French Immersion or equivalent". There is more than one stream offered in grade 12 French Immersion, so we want to make sure we are referencing the correct one.

Non-substantive:

The prerequisites for FREN 2007 - Français intermédiaire II be changed as outlined in the attached document.

Non-substantive:

The prerequisites for the list of courses be changed as outlined in the attached document.

Non-substantive:

The prerequisites for FREN-3007 - Français avancé II be changed as outlined in the attached document.

Non-substantive:

The prerequisites for FREN-3107 - Grammaire appliquée du français oral et écrit II be changed as outlined in the attached document.

Motion 12: Moved by N. Black, seconded by D. Iafrate that Senate recommend that the program requirements for the French Minor be changed as outlined in the attached document.
Carried

Non-substantive:

The Note which appears under the French Minor Program Requirements in the Nipissing University Academic Calendar should be changed as outlined in the attached document.

English Studies

Motion 13: Moved by N. Black, seconded by K. Lucas that Senate consider Motions 14 to 21 as an omnibus motion.
Carried

Motion 14: Moved by N. Black, seconded by K. Lucas that Senate approve Motions 14 to 21 as an omnibus motion.
Carried

Motion 15: Moved by N. Black, seconded by K. Lucas that Senate recommend the creation of ENGL-1126 "Literature on the Land", as outlined in the attached document.
**A friendly amendment was accepted from the floor to cross-list ENGL-1126 with Indigenous Studies.*

Motion 16: Moved by N. Black, seconded by K. Lucas that Senate recommend the creation of ENGL-2026 "Scary Monsters and Super Creeps" as outlined in the attached document.

Motion 17: Moved by N. Black, seconded by K. Lucas that Senate recommend the creation of ENGL-2077 "Graphic Novels", as outlined in the attached document.

Motion 18: Moved by N. Black, seconded by K. Lucas that Senate recommend the creation of ENGL-2366 "Pygmalion Remixed" as outlined in the attached document.

Motion 19: Moved by N. Black, seconded by K. Lucas that Senate recommend the creation of ENGL-2717 "Here Be Dragons? Anglo-Saxon and Medieval Literature in Translation" and added in addition to the Group I Literary History group as outlined in the attached document.

Motion 20: Moved by N. Black, seconded by K. Lucas that Senate recommend the creation of ENGL-3436 "The Dying Teenager in Young Adult Literature", as outlined in the attached document.

Motion 21: Moved by N. Black, seconded by K. Lucas that Senate recommend the creation of ENGL-3086 "Disney and the Fairy Tale", as outlined in the attached document.
Motions 14-21, as omnibus, Carried

History

Non-substantive:

The course title for HIST-3526 be changed from Spooks: the Rise of the Secret Security State in the 20th Century to Spies: the Rise of the Secret Security State in the 20th Century.

Indigenous Studies & Political Science

Motion 22: Moved by N. Black, seconded by P. Radia that Senate recommend the creation of LEAD-3716 – Indigenous Leadership on the Land, as outlined in the attached document.
Carried

Mathematics

Non-substantive:

The prerequisites for PHYS-3007 Computational Physics be changed as outlined in the attached document.

Motion 23: Moved by N. Black, seconded by M. Tuncali that Senate recommend that PHYS-3007 Computational Physics be included In Group II Applied Mathematics courses.
Carried

Philosophy

Motion 24: Moved by N. Black, seconded by M. Litalien that Senate recommend the creation of PHIL-2816 – Digital Ethics, as outlined in the attached document.
Carried

Psychology

Motion 25: Moved by N. Black, seconded by M. Litalien that Senate recommend the following change in degree requirements for the B.A. Honours Specialization in Psychology. That the following line at the end of the list of required courses be removed '*Students may substitute CHFS- 2026/PSYC-2026 and CHFS-3035 for PSYC-2126, PSYC-2127, and PSYC-3356.'
Carried

Non-substantive:

The prerequisites for PSYC-2706 Evolutionary Psychology be changed as outlined in the attached document.

Motion 26: Moved by N. Black, seconded by T. Stewart that Senate recommend that the learning outcomes for PSYC-2706 Evolutionary Psychology be revised as outlined in the attached document.
Carried

Non-substantive:

The revision of the course description for PSYC-3506 – Neuropharmacology.

Motion 27: Moved by N. Black, seconded by P. Radia that Senate recommend the learning outcomes for PSYC-3506 – Neuropharmacology be revised as outlined in the attached document.
Carried

Non-substantive:

Unbank PSYC-2806 - Sports Psychology.

- Motion 28: Moved by N. Black, seconded by C. McFarlane that Senate recommend that the learning outcomes for PSYC-2806 - Sports Psychology be added as outlined in the attached document.
Carried

Faculty of Education and Professional Studies

School of Business

- Motion 29: Moved by N. Black, seconded by J. Muterera that Senate recommend that the current requirement in the Co-op section of the Academic Calendar be revised as outlined in the attached document.
Carried
- Motion 30: Moved by N. Black, seconded by A. Armenakyan that Senate recommend that the current requirement in the Co-op section of the Academic Calendar be revised as outlined in the attached document.
Carried
- Motion 31: Moved by N. Black, seconded by A. Armenakyan that Senate recommend that the three one credit courses ADMN 1011, ADMN 2011, ADMN 3011, Academic Workshops be dropped from the BBA program.
Carried
- Motion 32: Moved by N. Black, seconded by J. Muterera that Senate recommend that the current paragraph in the Program Requirements section of the Academic Calendar be changed as outlined in the attached document.
Carried
- Motion 33: Moved by N. Black, seconded by J. Muterera that Senate recommend that the current requirement in the BBA (Hons) section be changed as outlined in the attached document.
Carried

School of Criminal Justice and Criminology

- Motion 34: Moved by N. Black, seconded by M. Litalien that Senate recommend the creation of CRJS 3436 Racialization and the Politics of Judicial Typecasting.
Carried

Schulich School of Education

- Motion 35: Moved by N. Black, seconded by A. Wagner that Senate recommend the creation of EDUC 4814 ITEP Practicum II as outlined in the attached document.
Carried
- Motion 36: Moved by N. Black, seconded by J. Muterera that Senate recommend the creation of EDUC 4914 ITEP Practicum III as outlined in the attached course template.
Carried
- Motion 37: Moved by N. Black, seconded by T. Stewart that Senate recommend that the Teacher of Indigenous Language as a Second Language Program be changed as outlined in the attached document.
Carried

- Motion 38: Moved by N. Black, seconded by M. Litalien that Senate recommend that the Indigenous Teacher Education Program be changed as outlined in the attached document.
Carried

Academic Quality Assurance and Planning Committee (AQAPC)

- Motion 39: Moved by D. Iafrate, seconded by C. McFarlane that the Report of the Academic Quality Assurance and Planning Committee dated January 28, 2022 be received.
Carried
- Motion 40: Moved by D. Iafrate, seconded by T. Stewart that Senate approve the attached BPHE IQAP 2-Year Follow-up Report.
Carried

By-Laws and Elections Committee

- Motion 41: Moved by T. Sibbald, seconded by A. Wagner that the Report of the By-Laws and Elections Committee dated January 18, 2022 be received.
Carried

Research Committee

- Motion 42: Moved by J. McAuliffe, seconded by M. Litalien that the Report of the Research Committee dated December 15, 2021 be received.
Carried
- Motion 43: Moved by J. McAuliffe, seconded by A. Kociolek that the Report of the Research Committee dated January 26, 2022 be received.
Carried
- Motion 44: Moved by J. McAuliffe, seconded by M. Litalien that Senate receive the Statement on Undergraduate Research Support at Nipissing University.
Carried

Amendment of By-Laws

- Motion 45: That Senate By-Laws, Article 9.1 Academic Appeals and Petitions Committee, be amended as outlined below:

9.1 Academic Appeals and Petitions Committee

- (a) *Ex Officio* Members:
 - (i) the Registrar, who shall be Chair;
 - (ii) the NUSU VP Advocacy and Awareness, or designate;
 - (iii) two (2) undergraduate student representatives, one elected from each Faculty by NUSU;
 - (iv) one (1) graduate student representative elected by NUSU.
- (b) Members Elected by Senate, Faculty Council:
 - (i) four (4) Faculty Senators, with at least one from each Faculty, one of whom shall be elected by the Committee to serve as Vice-Chair;
 - (ii) two (2) non-Senator Faculty; one elected from each Faculty;
- (c) Terms of Reference:
 - (i) to consider and rule on petitions and appeals by undergraduate and graduate students for exceptions to University academic regulations;
 - (ii) to convene appropriate ad hoc committees to ensure compliance with regulations and responsibilities respecting awards, appeals, and petitions;

- (iii) to recommend to Senate, as deemed by the Chair in consultation with the Vice-Chair, revisions to academic regulations;
- (iv) to deal with such other matters as may be assigned from time to time by Senate.

Carried

Motion 46: That Senate By-Laws, Article 9.2 Academic Awards Committee, be amended as outlined below:

9.2 Academic Awards Committee

- (a) *Ex Officio* Members:
 - (i) the Registrar, who shall be Chair;
 - (ii) the NUSU President, or designate from the NUSU Executive;
 - (iii) Student Senator;
 - (iv) the Assistant Vice-President, Students;
 - (v) the Director, Office of Indigenous Initiatives;
 - (vi) the Manager, Financial Aid and Financial Services, or designate;
 - (vii) the Manager, University Advancement.
- (b) Members Elected by Senate or Faculty Council:
 - (i) two (2) Faculty Senators, one from each Faculty;
 - (ii) two (2) non-Senator Faculty; one elected from each Faculty.
- (c) Terms of Reference:
 - (i) to consider and recommend undergraduate and graduate awards for those that require the committee review;
 - (ii) to convene appropriate ad hoc committees to ensure compliance with regulations and responsibilities respecting awards;
 - (iii) to consider and rule on petitions by undergraduate and graduate students for exemptions to University academic scholarships and awards.

Carried

Motion 47: That Senate By-Laws, Article 9.1 Academic Appeals and Petitions Committee, be amended as outlined below:

9.1 Academic Appeals and Petitions Committee

- (b) Members Elected by Senate, Faculty Council:
 - (i) four (4) Faculty Senators, with at least one (1) from each Faculty, one of whom shall be elected by the Committee to serve as Vice-Chair;

Carried

Motion 48: That Senate By-Laws, Article 9.2 Academic Curriculum Committee, be amended as outlined below:

9.2 Academic Curriculum Committee

- (b) Members Elected by Senate, Faculty Council:
 - (i) four (4) faculty Senators*, with at least one (1) from each Faculty elected by Senate;

Carried

Motion 49: That Senate By-Laws, Article 9.10 Teaching and Learning Committee, be amended as outlined below:

9.10 Teaching and Learning Committee

- (b) Members Elected by Senate, Faculty Council:
 - (i) four (4) Faculty Senators, with at least one (1) from each Faculty, one of whom shall be elected by the Committee to serve, on an annual basis, as Chair and one of whom shall be elected to serve as Vice-Chair;

Carried

Rationale: The following revisions to the Senate By-laws are proposed to regularize the process for handling hybrid and online senate meetings. These changes are, effectively, an extension of Robert's Rules of Order to address the needs for these meetings.

- **Notice of Motion that Senate By-laws, Article 6.0 Regular Senate Meetings, be amended as outlined below (revisions in bold):**

Rationale: The last bracketed part is to avoid anyone having the opportunity to vote in-person and virtually at the same time.

6.0 Regular Senate Meetings

- Unless otherwise determined and announced by the Senate Executive Committee, regular meetings of Senate shall normally be held once a month.
- Once finalized, the dates of all regular Senate meetings for any given year shall be published on the University website.
- Unless otherwise determined and announced by the Senate Executive Committee, regular Senate meetings shall normally commence at 2:30 PM.
- Regular Senate meetings shall normally end no later than 5:30 PM.
- All those responsible for the timetabling of University classes shall be instructed to make every effort to ensure that faculty Senators are not scheduled to teach during regular Senate meetings.
- At the discretion of the Senate Executive Committee, a regular meeting of Senate may be cancelled if:
 - the volume of business submitted for inclusion in the agenda is insufficient to warrant holding the meeting; and
 - there is no urgent or time-sensitive business requiring disposition prior to the next regular meeting.
- At the discretion of the Senate Executive Committee, a regular meeting of Senate may be held in-person, virtually, or by a hybrid of both (in which case each senator attends either in-person or virtually, but not both).**

- **Notice of Motion that Senate By-laws, Article 6.3(b) Order of Business, be amended as outlined below (revisions in strikethrough and bold):**

Rationale: This is necessary for hybrid meetings and has been a common practice for some time.

6.3 Order of Business

- Business items submitted too late to be placed on the Senate agenda must be circulated ~~in hard copy~~ **electronically** at the meeting for introduction under new business, and shall require the passage of a motion to consider before any further motions may be proposed.

- **Notice of Motion that Senate By-laws, Article 7.4(d) Debate and Decorum, be amended as outlined below (revisions in bold):**

Rationale: Sequential organization of speakers is necessary for the orderly conduct and management of the meeting. In hybrid meetings the chat is also not necessarily visible to in-person attendees.

7.4 Debate and Decorum

- Senators shall be expected to observe appropriate decorum during any debate. **Online attendees are to refrain from using any 'chat' options to respect the principle of one speaker at a time as identified by the speaker.**

- **Notice of Motion that Senate By-laws, Article 7.5, Voting on Senate Motions, be amended as outlined below (revisions in bold):**

Rationale: A detail for secret ballots is that Microsoft Forms, the intended platform, allows anonymous voting with one vote per Nipissing email address. Therefore, all electronic attendees will need to register a Nipissing email address. This does not impact many members of Senate, but for some, such as NUSU they need to be aware that they will be required to use a Nipissing email address for secret ballots if they are attending virtually.

7.5 Voting on Senate Motions

- Except as otherwise specified in 7.3(c), Senate motions shall be carried by a simple plurality of votes in favour over votes against, with abstentions not being called or recorded.
- Voting on Senate motions shall normally be conducted by a simple show of hands **for in-person attendees, and electronic voting for virtual attendees**, with the Speaker declaring the motion to be carried or defeated. Should any member request that such a vote be recorded, Senators may be asked to stand or keep their hands in the air until the count is taken.
- Notwithstanding (b), any Senator may, on a question of privilege, move that the vote on the motion before Senate be conducted by secret ballot (**including anonymous electronic voting for online attendees**). A motion to hold a secret ballot, once seconded, is not debatable and shall be put to an immediate vote.
- Notwithstanding (b), any Senator may likewise, on a question of privilege, move that the vote on the motion before Senate be conducted by roll-call. A motion to conduct a vote by roll-call is debatable as to the need for such a vote.
- Whether a vote is conducted by show of hands, secret ballot or roll-call, the Speaker or Deputy Speaker (whoever is conducting the vote) shall retain the right, as an elected Senator, to vote on the motion. Should the vote on any motion end in a tie, the motion shall be declared defeated.
- Voting by proxy shall not be permitted.

- **Notice of Motion that Senate By-laws, Article 12.0 General Responsibilities, be amended as outlined below (revisions in strikethrough and bold):**

12.0 General Responsibilities

As in other deliberative or legislative bodies, the general responsibilities of Senators shall include:

- the responsibility to attend Senate meetings regularly;
- the responsibilities when attending virtually: having their identity provided through their online name, following protocol principles of one speaker at a time as identified by the speaker, and, unless it is not feasible, using their camera and microphone when speaking;**
- ~~(b)~~(c) the responsibility to become familiar with the Senate By-Laws, as well as with other relevant Senate policies and procedures;
- ~~(c)~~(d) the responsibility to keep informed regarding the issues which come before Senate;
- ~~(d)~~(e) the responsibility to read published Senate agendas and other related materials beforehand, and to come to the meetings prepared;
- ~~(e)~~(f) the responsibility to endeavour to vote in accordance with the long-term academic interests of the University;
- ~~(f)~~(g) where they have been chosen or elected by and from specific constituencies, the responsibility to represent the interests of their respective constituent groups by informing constituents as necessary when Senate matters of direct concern or impact are pending, by reporting to or meeting with constituents as appropriate or

when called upon to do so, and by endeavouring to convey the views and concerns of their constituents to Senate to the best of their ability.

- **Notice of Motion that Senate By-laws, Article 6.2(g) Senate Agenda and Senate Minutes, be amended as outlined below (revisions in strikethrough):**

6.2 Senate Agenda and Senate Minutes

- (g) A ~~hard~~ copy of all approved Senate minutes shall be signed by the Chair of Senate and kept as the official, permanent record of Senate proceedings. The Senate Secretary shall ensure reasonable access to archived minutes. ~~These proceedings shall be available for consultation in the Office of the President during regular business hours.~~

Elections

- Elect one (1) EPS faculty Senate representative to serve on the By-laws and Elections Committee for a three-year term effective July 1, 2021 to June 30, 2024.
Senator K. Ferguson - Acclaimed
- Elect one (1) A&S or EPS faculty Senate representative to serve on the Senate Budget Advisory Committee for a three-year term effective July 1, 2021 to June 30, 2024.
Senator M. Tuncali - Acclaimed
- Elect one (1) A&S faculty Senate representative to serve on the Senate Teaching and Learning Committee for a three-year term effective July 1, 2021 to June 30, 2024.
Senator S. Srigley - Acclaimed

New Business

Motion 50: Moved by D. Iafrate, seconded by N. Black that Senate consider receipt of the Report on Graduation Applicants dated February 7, 2022.
Carried

Motion 51: Moved by D. Iafrate, seconded by N. Black that Senate receive the Report of Graduation Applicants dated February 7, 2022.
Carried

Motion 52: Moved by D. Iafrate, seconded by C. McFarlane that Senate grant approval to graduate the students listed in the Report on Graduation Applicants dated February 7, 2022.
Carried

The Deans read out the February 7, 2022 graduands by faculty and degree and congratulated the students and faculty on their achievements.

Adjournment

Senate was adjourned at 4:50 p.m.

.....
K. Wamsley (Chair)

.....
S. Landriault (Senate Secretary)

11 February 2022 – President’s Senate Updates

First opportunity to welcome Senators back – term – Reading Week

Time of instability for our students returning – thank you for your guidance to welcome our students back

In February, we celebrate Black History Month, for which I have a few comments below and today we celebrate the International Day of Women and Girls in Science – shout out to all of you who work in any capacity in the Sciences. February 28- March 4th is Indigenous Week

President’s Report and Report of the Office of the Provost and Vice President Academic and Research

As you all are aware the Reappointment Committee for the position of Provost and Vice President Academic and Research finished its deliberations after a great deal of work and made its recommendation to me not to renew Arja’s contract for a second term. I received this recommendation and announced to the Board of Governors that I accepted the recommendation. As a result, I will appoint an Interim Provost very soon and we will begin the process of initiating a national search as soon as possible. On behalf of Senate, I thank Arja for her many contributions to Nipissing University as Provost and Vice President, Academic and Research and wish her well over the course of her well-deserved administrative leave and for her return to the Faculty. **Motion**

I wish to thank the committee for their extensive work and their attention to policy, their careful and thoughtful consideration and for their time in being a part of this important process.

From the President’s office – meeting with the Ministry again next week to ask for a response to our funding requests

Establishing a framework for strategic planning to begin in April; will be looking to establish a community-wide consultation process and will be looking for opinions far and wide on how to achieve effective consultation towards building a strategic plan that we can all get behind

The Office of the President has been working on a comprehensive calendar of events for the coming year, hoping that there is a return to in-person events such as convocation. Will be looking to re-schedule some of the social events for campus that we were forced to cancel.

Library (See Report of the PVPAR)

Teaching Hub (See Report of the PVPAR)

As discussed previously, we are working on developing some revenue-generating activities for the University such as Extended Learning, Ancillary Services which will include conference services, the Book Store, and attention to Food Services – pleased to announce that we have hired Mylae Robson as the Manager of Extended learning and she will be starting next week in her new role. Please look for calls for extended learning ideas as we establish the infrastructure to support this new office. Cheryl’s group is very close to posting the new position, Director of Ancillary Services.

Recruitment and Enrolment (See Report of the PVPAR)

Our congratulations to the Office of the Registrar Staff for their hard work in processing applications for next year at greater rates than ever before seen. Enrollment is one of our top priorities, obviously, and Deb's group has answered the call.

Black History Month

It is Black History month and we have a series of events happening throughout February organized by students, faculty, and staff members – if you haven't been following social media, there are several events happening next week – including two sessions for Faculty members led by students discussing what it's like to be a Black student in the classroom at Nipissing, what micro aggressions are and what we might do to make this a more inclusive university – also next week, a panel hosted by Dr. Charles Anyinam and the Teaching Hub on Anti Racism in the Academy, please check the Nipissing website for more information and please join us for these events.

Arts and Science (See Report of the PVPAR)

Tenure and Promotion

I wish to congratulate the following faculty members, whether for earning tenure, promotion, or both. And I thank our Faculty and Staff who give generously with their time for this most important aspect of university professional life.

The following faculty members were promoted to the rank of Professor:

- Dr. Christine Cho, Education and Professional Studies
- Dr. Julie Corkett, Education and Professional Studies
- Dr. Sandra Goldsworthy, Education and Professional Studies
- Dr. Timothy Sibbald, Education and Professional Studies
- Dr. Ping Zou, Education and Professional Studies

The following faculty members were promoted to Associate Professor:

- Dr. Tammie McParland, Education and Professional Studies

The following faculty members were granted tenure and promotion to the rank of Associate Professor:

- Dr. Laurie Peachey, Education and Professional Studies

February 11, 2022 – Provost's Senate Updates

Library

We're open again for student use Monday to Friday, with virtual and curbside service available on weekends. It's great to have students back in the building and we've been busy assisting students; staff are also actively providing online library instruction sessions for classes - any instructors interested in arranging a session for their classes should contact the Info Desk - advance notice for arranging a session is always appreciated.

Teaching Hub

Jan. 4th, 2022 – Feb. 11th, 2022 We have started to roll out NU's successful Global Skills Opportunity project Transcultural Interdisciplinary Learning Experiences. Members of the Teaching Hub and International Office met with the Arts & Science Faculty Council on January 21st to discuss opportunities; the meeting with EPS is scheduled for late February.

Interviews for the Manager, Extended Learning position were held in early January and the successful candidate is Mylae Robson. Mylae will start in this role on Feb. 14th, 2022

We were proud to nominate Gemma Victor for a 2021 Minister's Award of Excellence and she won! Gemma is the recipient of a Minister's Award of Excellence in the Equality of Opportunity category: for faculty or staff members who have excelled at opening post-secondary education to marginalized and underrepresented groups.

In the second round of funding under the Ontario Government's Virtual Learning Strategy, there were 4 Nipissing-led proposals submitted and at least another 9 where Nipissing faculty and staff are collaborators.

We assisted 3 students and 2 faculty with their respective nomination packages for the 3M National Student Fellow and 3M National Teaching Fellow competitions of the Society for the Teaching and Learning in Higher Education.

Our 7th Professional Learning Committee is starting up. This PLC will focus on the book Transforming Universities in the Midst of a Global Crisis, with discussions happening in March/April. There are still a few spaces available.

A new program, Fika Fridays, has been launched as a social/community space. Join us on the first Friday of the month for a cup of coffee and a treat; no agenda or action items, just an opportunity to build relationships amongst colleagues.

Registrar's Office

Our applications are up 5.9% this year vs. same time last year (4,525 vs. 4,272). We're focusing on getting offers out quicker, 13% more offers have been sent (1,513 vs. 1,333) and we're up 18% on acceptances so far (46 vs. 39).

When looking at this information by faculty; A&S is up in applications, offers and acceptances so far and EPS is also up in applications and offers, however, down in acceptances (-15%) so far.

We're currently preparing for our hybrid House event on March 19th.

Arts and Science

- 1] Arts and Science ad hoc working group on the BSc Environmental Science program proposal (Stage II) was approved by ACC and AQAPC, currently subject to an external review
- 2] Arts and Science ad hoc working group on the BA Environmental Studies program proposal (Stage II) is close to being submitted to the curriculum approval process for review.
- 3] Arts and Science ad hoc working group on the Health Science and Health Studies program/s LOI is in progress.
- 4] the Student Mural Competition (FAPA and Dean's Office) has been extended until the end of the Winter term.
- 5] NU Annual Juried Exhibition February 11, 2022 (W.K.P. Kennedy Gallery)
- 6] Department of History will hold Dr. Anne Clendinning Lecture on March 16th (further information to follow).
- 7] Indigenous Studies and Political Science in collaboration with Temagami First Nation will be offering an ACTUA funded Leadership course LEAD 3716 Leadership on the Land this summer, a course providing students with a land-based experience with an Indigenous community.



Alumni Report – February 2022

NUAAB

The NUAAB met for their general meeting Jan 18. It was a brief meeting, and we will reconvene in March. No major votes or updates to report.

NU Café

New year, new opportunities to engage in career minded conversations with students and alumni on the NU Café mentoring and networking platform. Brought to you by Ten Thousand Coffees and supported by our friends at RBC FutureLaunch, this is an excellent way for members of the Nipissing community to gain support at every stage of their career journey.

This past January Ten Thousand Coffees founder Dave Wilkins hosted a webinar for mentorship month with RBC's Mark Beckles, Vice-President, Social Impact & Innovation. Beckles spoke on the power of relationships in fostering connections and building a career network.

If you haven't joined, now is a great time to come and see what we have to offer. The next round of introductions begins Feb 8, 2022. Sign up or learn more [here](#).

Graduation Photography

After a hiatus due to the ongoing concerns brought on by the pandemic, graduation photography will return in-person on campus for two weeks in March for alumni and students that would like a graduation portrait. Questions can be directed to alumni@nipissingu.ca.



Academic Senate Report
Friday, February 11th, 2022

Spirit Week

Despite everyone being off-campus in January, NUSU held a virtual Spirit Week. This included an involvement fair, trivia, and an art showcase. We featured clubs and societies for students to join or start. We encourage faculty to speak with any club or society that is related to your program to build relationships, host events and activities, and engage with students.

Elections/By-Elections

In January, Harikesh Panchal was voted in as the 2022-2023 VP Advocacy & Awareness position. Harikesh will be NUSU's Head Student Senator next year. NUSU is hosting by-elections in March for the positions of President, VP Finance & Administration and VP Student Life. At the same time, we will also be hosting our Director and Senator elections. If you know of any student who is interested in getting more involved, please let them know we would be more than happy to meet with them.

Let's Talk Olympics

On Wednesday, February 9th NUSU and the Nipissing University Physical Health and Education Society hosted "Let's Talk Olympics" which featured Dr. Kevin Wamsley, Dr. Barb Olmsted and Nancy Olmsted. This event will also be shown on Cogeco. Thank you to all three speakers.

Black History Month

We would like to recognize this month as Black History Month. The Nipissing University Black Association for Student Expression (NUBASE) and the Nipissing University Nursing Society (NUNS) are hosting a talk about "The Black Health Experience" on February 15th at 9pm. To register, please go to nusu.com/blackhealth. This will feature Dr. Charles Anyinam with a live Q & A period. This will also be recorded and shown on Cogeco.

Eating Disorders

NUSU shared information on our social media for Eating Disorders Awareness Week. The graphics posted were created by the National Eating Disorder Information Centre (NEDIC). This organization, along with Nipissing University Counselling Services, are hosting a session on Thursday, February 24th from 10:30 am-12 pm on Zoom to talk about spotting the signs and



NUSU Student Centre

221 College Drive, North Bay, ON P1B 0G1

Tel: (705) 474-3450 ext. 4801 Fax: (705) 474-7732

Web: www.nusu.com

supporting someone affected by eating disorders. For more information, please contact the Counselling Department.

Night Owls

NUSU is hosting Night Owls extended hours in our Student Centre on the following nights:

February 15th and March 1st until 10 pm.

March 28th, 29th and 30th, April 5th, 6th and 7th until midnight.

This event allows students to be able to study individually or with their groups. We give out free coffee, tea, snacks and school supplies to students as they study.

Snowshoes

NUSU has recently purchased snowshoes for students, faculty and staff to rent and use at their leisure. The snowshoes and campus trail maps are available at the NUSU front desk. We are also encouraging everyone to download the AllTrails App to get access to popular trails across North Bay & Ontario.

Skiing

NUSU will also be hosting a night at Laurentian Ski Hill for students to ski and snowboard for free at the end of this month.

Food Bank

Thank you to everyone who donated to our student food bank through the Human Resources office for jean day. We appreciate the continued support of our students.

Academic Week: March 14th-18th

After the success of last semester's Academic Week, we are in the process of planning a second one this March. Academic Week will occur from March 14th-18th, with more details to come.

Women and Girls In Science

Today is the International Day of Women and Girls in Science. We honour and celebrate our faculty and students in the STEM disciplines. NUSU collaborated with the Biology Society to highlight students in these courses. This can be seen on our Facebook and Instagram pages.

COU Update to Academic Colleagues – February 15 & 16

International

- In December, the British Council IELTS released a report showing that there is rapidly increasing competition from European and Asian markets for international students in high-demand programs: <https://studyportals.com/wp-content/uploads/2021/12/British-Council-Studyportals-The-changing-landscape-of-English-taught-programmes-in-2021.pdf>
- This is a significant risk for Ontario institutions. COU will be exploring options for a sector approach.

Pre-Election Strategy

- COU's advocacy is focused on the vital role the sector has to play in helping the province rebuild after COVID-19 and drive a robust economic recovery, framed around four key pillars: helping rebuild a world-class healthcare system; developing job-ready graduates; driving regional economic development and supporting a globally competitive economy. The fifth pillar then outlines how in order to continue supporting the province, universities need support.
- **Internal Government Advocacy:** Based on advice from affiliates and committees, working groups and economic research, COU is proposing a three-pronged strategy for internal government relations:
 - o Tuition Flexibility
 - o Increases in Operating Grant Funding
 - o Increases in University Capacity
- **Public-facing Communications:** To further support internal government advocacy, COU recently launched its public-facing campaign. The campaign leverages communications and government relations to influence the government, as well as build relationships with candidates and the other major political parties. This campaign will run from January until April.

Strategic Mandate Agreements (SMA3)

- Performance-based funding for Ontario universities is scheduled to be activated for 2022-23. This is after the government delayed activation for the first two years of SMA3 to mitigate the impacts of COVID on performance evaluation. On December 17, COU sent a letter to the ministry expressing the sector's concerns regarding the timing of recoupling performance funding given the impact of COVID-19, and the impact of the Delta and Omicron variants.
- The Faculty Activity and Faculty Compensation reporting metrics are scheduled to be implemented for 2022-23. These metrics are not tied to performance but will be made public. The ministry has started a consultation process with the sector on the proposed reporting template. The sector has formed a working group with representatives from OCAV, CUPA and GRO to develop recommendations for MCU.

Micro-credentials

- The results of the Microcredential Challenge Fund were communicated to institutions on December 9.

- COU is working with the Ontario Council of Ontario Lifelong Learning (OCULL) to collect data on universities' continuing education offerings to supplement advocacy around microcredentials and the established role of universities in upskilling/reskilling for the labour market. A two-phase data request (February/May) is being developed in consultation with OCAV.

eCampusOntario

- The microcredential portal (listing OSAP-approved college, university and Indigenous Institute microcredentials) was launched on December 15. <https://micro.ecampusontario.ca/>

Math Proficiency Test for Teacher Candidates

- On December 17, 2021 the Ontario Superior Court of Justice Divisional Court found the Math Proficiency Test (MPT) requirement infringes on the Canadian Charter of Rights and Freedoms.
- The court found that the MPT had an adverse impact on entry to the teaching profession for racialized teacher candidates and other reasonable alternatives should have been implemented.
- They ruled that Ontario College of Teachers (OCT) shall grant certification to teacher candidates who have not yet passed the MPT but who have otherwise met all other teacher certification requirements
- While the government has filed a motion to appeal, the MPT will not be a requirement in the interim.

NIPISSING UNIVERSITY

REPORT OF THE SENATE EXECUTIVE COMMITTEE

March 3, 2022

There was a meeting of the Senate Executive Committee on March 3, 2022. The meeting took place by Zoom conference.

The following members participated:

C. Richardson (Vice-Chair), N. Colborne (Speaker), P. Maher, J. McAuliffe, D. Iafrate, J. Allison, T. McParland, T. Sibbald, S. Pecoskie-Schweir, S. Landriault (Recording Secretary, n-v)

Regrets: K. Wamsley, J. Nadeau, P. Radia, M. Litalien

The purpose of the meeting was to set the agenda for the March 11, 2022 Senate meeting.

The Vice-Chair advised that she would respond to questions should they arise regarding the mandatory Indigenous breadth requirement motions that were introduced and approved at the February 11 Senate meeting.

Several motions are included in the Senate Agenda to approve IQAP 2-Year Follow-up Reports. Members discussed the use of correct language when receiving, accepting, and approving motions. It was noted that some ambiguity exists in the terms of reference of the Senate Standing Committees and their role in making recommendations to Senate. It was suggested that the By-laws and Elections Committee review Robert's Rules of Order to ensure that the correct language is being used in the terms of reference.

The Chair of the By-laws and Elections Committee advised that feedback and recommendations from committees on how to make their terms of reference clearer are appreciated. Reports are received at Senate as Senate does not have the authority or the responsibility to make changes to reports completed by other bodies.

In response to a request for clarification of Senate By-laws, Article 5.2, and the election procedures of student Senators, the Vice-Chair requested that concerns be forwarded to the Senate Secretary to be addressed at the next meeting of the By-laws and Elections Committee.

The reports of the Academic Curriculum Committee (it was noted that the December 9, 2021 ACC report was inadvertently left out of the February 11, 2022 Senate Agenda), Academic Quality Assurance and Planning Committee and the Teaching and Learning Committee were provided to the Senate Executive Committee for inclusion in the Senate agenda.

Under New Business, a request will be made to move in camera to consider the granting of a posthumous degree. The Registrar will speak to the motions.

The Vice-Chair confirmed that the March 11 Senate meeting will be held via Zoom conference.

Moved by T. McParland, seconded by D. Iafrate that the Senate Executive Committee approves the March 11, 2022 Senate Agenda.

CARRIED

Respectfully submitted,

C. Richardson
Vice-Chair
Senate Executive Committee

Motion 1: That Senate receive the Report of the Senate Executive dated March 3, 2022.

**Report of the
Academic Curriculum Committee**

December 9, 2021

Members Present:

Arja Vainio-Mattila
Pavlina Radia
Douglas Gosse
Debra Iafrate

Darren Campbell
James Murton
Charles Anyinam
Chris Greco

Julie Corkett
Alexandre Karassev
Sarah Pecoskie-Schweir

Regrets:

Nancy Black, Rosemary Nagy, Blaine Hatt, Madalyn Murray, Mercedes Parsons

Guests:

April James, Murat Tuncali, Roxana Vernescu, Heather Brown, Sarah Tedesco

Sandy Landriault, Recording Secretary

The Academic Curriculum Committee received and discussed changes for the Faculty of Arts and Science and the Faculty of Education and Professional Studies. The outcomes of those discussions are reflected in the recommendations to Senate contained in the motions below. Supporting material is attached.

Respectfully submitted,



Dr. Arja Vainio-Mattila
Provost and Vice-President, Academic and Research

Motion 1: That Senate receive the Report of the Academic Curriculum Committee, dated December 9, 2021.

Faculty of Arts and Science

Mathematics

Motion 2: That Senate approve that the hours for **MATH-1257 “Technical Statistics”** be changed from “Three hours of lecture and two hours of laboratory work per week for one term.” to “Three hours of lecture per week for one term.”

Rationale:

In the past we had been offering two versions of MATH 1257: an onsite version intended primarily for students in the collaborative nursing program with 3 hour lecture + 2 hour lab, and an online prepackaged version restricted to RPN bridging students with 3 hour lecture only (no lab). The calendar description of MATH 1257 is consistent with the onsite version. With this change we are making both versions of the course to be consistent. We will continue to offer Math 1257 onsite until the BScN collaborative program ends, and after that MATH 1257 will be offered only online. A recently approved new course MATH 1267 has been developed for the new NU nursing program, which will replace the onsite version of MATH 1257.

Child & Family Studies and Psychology

Non-substantive:

The revision of the course title for CHFS-3036/PSYC-3036 “Ethics & Professional Standards” to “Ethics in Practice” and the course description as follows:

New Description

Students learn ethics/ethical decision-making and consider professional standards in practice and policy, for front-line responder and service provider teams, across institutional or community-based settings. They review codes of professional conduct and relevant standards for applied behaviour sciences professionals, and discuss the ethics of trans-professional conduct with relevance to individual clients, support agencies, and workplace settings. Students consider the importance of ethical decision-making for individuals, systems/organizations, and policy.

This course is also offered as PSYC 3036.

Old Description

Students are introduced to ethical issues and professional standards as they relate to applied and/or clinical settings, including applied behavior interventions and supports. Students are exposed to national and provincial codes of professional conduct, including the CPA, CASW, BACB, and other relevant Professional Disciplinary and Ethical Codes and Standards. The ethics of interprofessional conduct are discussed with relevance to both individual clients and support agencies. This course is also offered as PSYC 3036.

Non-substantive:

The course prerequisites for CHFS-3036/PSYC-3036 “Ethics & Professional Standards” from “CHFS-2106/PSYC-2006” to “Any 24 credits or permission of the instructor”.

Motion 3: That Senate approve the revision to the course learning outcomes for CHFS-3036/PSYC-3036 “Ethics & Professional Standards” as follows:

Proposed:

1. Describe the history of ethical frameworks for applied behavioural sciences.
2. Apply ethical analysis across disciplines and identify similarities and differences.
3. Analyze various codes of conduct, including Canadian Psychological Association, Canadian Association of Social Workers, Behavior Analyst Certification Board, and other relevant provincial and national codes.
4. Apply ethical considerations and maintain adherence to ethical principles when working with other professionals, supervisors, and supervisees.
5. Analyze ethical considerations when working with vulnerable people and communities.
6. Evaluate guidelines for cultural responsiveness and diversity, including non-discrimination practices that support equitable and inclusive service, in keeping with equity, diversity, inclusion, decolonization frameworks.
7. Evaluate effective use of ethical decision-making models, including how moral codes and values lend strength and provide challenges in a chosen career.
8. Create a plan of action for a variety of ethical scenarios, including ethical decision-making frameworks for organizational decision-making.

Current:

1. Recognize the history of an ethical framework of ABA and the importance of this to people working in this field now.
2. Be able to describe the importance of assessment and intervention as related to the ethical framework.
3. Examine ethics across disciplines and identify similarities and differences.
4. Be familiar with the Behaviour Analyst Certification Board professional and ethical code of conduct.
5. Identify special ethical considerations when working with vulnerable people.

6. Prepare to share ethical considerations and maintain adherence to ethical principles when working with other professionals, supervisors, and supervisees.
7. Demonstrate effective use of an ethical decision making model to create a plan of action for a variety of ethical scenarios.
8. Describe how their own moral code and values will lend them strength and provide challenges in following the ethical code in their chosen career.

Non-substantive:

The course title for CHFS-3116/PSYC-3117 “Autism Spectrum Disorders” to “Perspectives in Autism” and the course description as follows:

New Description

Students explore the nature of Autism and related neurodiversity including epidemiology, screening/assessment, and treatment/intervention, across a broad range of topics (e.g., historical considerations, diagnosis, prevalence/incidence, genetics, environment). Students consider evidence-informed principles for developing successful programs for children, youth, and adults, as well as models for transitioning to adult care and supportive services. Principles of child/family centered care and culturally responsive approaches are considered throughout the course, including values of equity, diversity, inclusion, and decolonization.

This course is also offered as PSYC 3117.

Old Description

This course will explore the nature of Autism Spectrum Disorders, including epidemiology, screening and assessment, and treatment and interventions. A lifespan approach will be applied to a broad range of topics, including historical considerations, diagnostic issues, prevalence/incidence, profile of ASD including the triad of impairments, genetic linkages, cognitive processing and executive functioning, and evidence-informed interventions including an introduction to applied behavioural analysis and positive behavioural support models. Students will consider evidence-informed principles for the development of successful programs for children and adolescents with ASD, as well as explore best-practice models for youth transition into adult care and supportive services. Principles of child/family centered care and support will be studied throughout the course. This course is also offered as PSYC 3117.

Non-substantive:

The course prerequisites for CHFS-3116/PSYC-3117 “Autism Spectrum Disorders” from “CHFS 2106/PSYC 2006” to “Any 24 credits or permission of the instructor”.

Motion 4: That Senate approve the revision to the course learning outcomes for CHFS-3116/PSYC-3117 “Autism Spectrum Disorders” as follows:

Proposed:

As relevant to Autism and related neurodiversity, students will:

1. Recognize typical and atypical development.
2. Describe the history and dominant theories
3. Explain screening, assessment, and diagnostic frameworks.
4. Examine epidemiology, developmental considerations, and co-morbidities
5. Evaluate biopsychosocial and spiritual characteristics and implications
6. Interpret the cognitive, socio-emotional, and behavioural characteristics, and implications for the real world from the individual perspective as well as that of family, community, and/or society at large.
7. Analyze evidence informed interventions and principles/values of successful programs for individuals and families.
8. Examine established strategies and supports, and related considerations around equity, diversity, inclusion, and decolonization

Current:

1. Describe typical and atypical development as it relates to ASDs
2. Show an appreciation of the history and dominant theories of ASDs.
3. Demonstrate knowledge of diagnostic frameworks, criteria, and considerations for ASDs.
4. Differentiate between screening and assessment frameworks.
5. Describe epidemiology, developmental considerations, and co-morbidities of ASDs.
6. Discuss biopsychosocial characteristics and implications of ASDs.
7. Show an appreciation for the cognitive, socio-emotional, and behavioural characteristics of ASDs.
8. Discuss established strategies and supports for ASDs
9. Identify evidence informed interventions and principles of successful programs/programming for ASDs.

Non-substantive:

The revision of the course title for CHFS-3127/PSYC-3127 “Fetal Alcohol Spectrum Disorders” to “Alcohol Related Neurodevelopmental Disorders” and the course description as follows:

New Description

Students explore Alcohol Related Neurodevelopmental Disorders (ARND) across the lifespan by considering social determinants of health and wellbeing, along with values of equity, diversity, inclusion, and decolonization. Diagnosis, epidemiology, cognitive, behavioural, and mental health profile including primary and secondary disabilities, prevention, treatment, management, and policy issues are discussed. Implications are explored from several perspectives, including individual development and learning, child and family well-being, and impact on and responsibility of community and society.

This course is also offered as PSYC 3127.

Old Description

Fetal Alcohol Spectrum Disorders will be explored through a lifespan development and determinants of health framework. Diagnosis, epidemiology, cognitive, behavioural, and mental health profile including primary and secondary disabilities, prevention, treatment, management, and policy issues will be discussed. Implications will be explored from several perspectives, including individual development and learning, child and family well-being, and impact on and responsibility of community and society. This course is also offered as PSYC 3127.

Non-substantive:

The course prerequisites for CHFS 3127/PSYC 3127 “Fetal Alcohol Spectrum Disorders” from “CHFS-2106/PSYC-2006” to “Any 24 credits or permission of the instructor”.

Motion 5: That Senate approve the revision to the course learning outcomes for CHFS-3127/PSYC-3127 “Fetal Alcohol Spectrum Disorders” as follows:

Proposed:

As relevant to prenatal alcohol exposure and associated neurodiversity, students will:

1. Recognize foundations (e.g., historical, biomedical, clinical background and related disorders).
2. Recognize screening & brief intervention issues, with a view to preventing alcohol-exposed pregnancies in women of childbearing age, and supporting children, women, and families.
3. Compare and contrast models of addiction, including concepts related to addiction in women of childbearing age/or those who are pregnant (e.g., appropriate prevention services, referral, and case management).
4. Analyze the effects of prenatal alcohol, including primary and secondary effects on individuals/families.

5. Review research on screening, diagnosis, and assessment of neurodiversity including issues related to the screening, diagnosis, and assessment of infants, children, adolescents, and adults.
6. Analyze models of treatment and support across the lifespan for persons and families, including issues, treatment and supports across the continuum of care and management, and newly emerging intervention research in the areas of social skills, behavioural, and cognitive rehabilitation/remediation.
7. Summarize ethical, legal, and policy considerations and related issues.
8. Evaluate the complexities of prenatal alcohol exposure and associated neurodiversity in consideration of principles of equity, diversity, inclusion, and decolonization, and a Determinants of Health/Wellbeing framework.

Current:

1. Demonstrate knowledge of FASD Foundations (e.g., historical, biomedical, clinical background and related disorders)
2. Consider FASD Screening & Brief Interventions issues, with a view to preventing alcohol-exposed pregnancies in women of childbearing age
3. Demonstrate knowledge Models of Addiction, including concepts related to addiction in women of childbearing age, including those who are pregnant (e.g., appropriate prevention services, referral, and case management)
4. Critically consider the Effects of Prenatal Alcohol, including primary and secondary effects on individuals/families
5. Synthesize research on Screening, Diagnosis, and Assessment of FASDs, including issues related to the screening, diagnosis, and assessment of infants, children, adolescents, and adults
6. Discuss models of Treatment and Support Across the Lifespan for Persons with FASDs, including issues, treatment and supports across the continuum of care and management such as newly emerging intervention research in the areas of social skills, behavioural, and cognitive rehabilitation/remediation
7. Integrate knowledge of FASD Ethical, Legal, and Policy Considerations and related issues

Non-substantive:

The revision of the course title for CHFS-3136/PSYC-3136 “ABA I: Introduction to Applied Behaviour Analysis” to “ABS I: Introduction to Applied Behavioural Sciences” and the course description as follows:

New Description

Students learn principles of applied behavioural sciences, including cross-sector applications like positive behaviour support (PBS), applied behaviour analysis (ABA), and organizational behaviour management (OBM), and review topics like dimensions and principles of ABA, functional assessment, goal selection and outcomes planning, skill teaching, adaptive behaviour, and maintenance/generalization of skills. Students review inclusive and culturally responsive frameworks of practice, and evaluate strategies of interest for educators, front-line responders, or cross-sector service providers across institutional or community-based settings.

This course is also offered as PSYC 3136.

Old Description

This course provides an introduction to fundamentals of learning and applied behaviour analysis (ABA). Students are exposed to an overview of theories and basic principles of behaviour, features and characteristics of ABA, preference assessment, functional assessment and selection of target behaviours, outcomes planning, and defining, recording and charting of behaviour. This course is the first of two ABA courses that focuses on the application of behaviour analytic principles and strategies/methods in a variety of applied settings, service and workplace environments, and sectors. This course is also offered as PSYC 3136.

Non-substantive:

The course prerequisites for CHFS- 3136/PSYC-3136 “ABA I: Introduction to Applied Behaviour Analysis” from “CHFS-2106/PSYC-2006” to “Any 24 credits or permission of the instructor”.

Motion 6: That Senate approve the revision to the course learning outcomes for CHFS-3136/PSYC-3136 “ABA I: Introduction to Applied Behaviour Analysis” as follows:

Proposed:

1. Recognize the empirical, scientific, and critical-thinking process, as the foundation upon which behavioural science and analysis is built.
2. Apply fundamental theories and principles of learning/behaviour, and applications across various settings, including frameworks such as Positive Behaviour Support (PBS), Applied Behaviour Analysis (ABA), and Organizational Behaviour Management (OBM).
3. Analyze characteristics and core values of applied behavioural sciences, including the Dimensions and Principles of ABA.
4. Apply knowledge of behavioural assessment and measurement (e.g., preference, motivational, and functional assessment).
5. Evaluate commonly used strategies and procedures in applied behavioural sciences and an ability to integrate such knowledge into support planning for individuals, including goal setting & selection of target behavior.
6. Evaluate issues of individual and cultural diversity, equity, and inclusion, as related to the application of behavioural sciences.
7. Define, record, and display behavioural data, including the importance and application of data to real-world settings.
8. Evaluate applied behavioural science and its relevancy across sectors and the lifespan.

Current:

1. Understand the empirical, scientific, critical-thinking process as the foundation upon which behaviour analysis is built
2. Show an understanding of fundamental theories and principles of learning/behaviour
3. Identify principles, characteristics, and core values of ABA
4. Begin to demonstrate knowledge of behavioural assessment and measurement (e.g., preference assessment, motivational assessment, functional assessment)
5. Demonstrate a basic understanding of the assessment of basic language and learning
6. Show an ability to carry out outcomes planning & goal setting, including selection of target behaviour
7. Be able to define, record, and display behavioural data
8. Show an understanding of the ethical considerations and ethical decision-making processes in ABA settings/for ABA practitioners
9. Begin to understand ABA research methods and techniques
10. Be able to critically evaluate ABA and its relevancy across sectors, life-span developmental stages, and varying service and workplace settings.

Non-substantive:

The revision of the course title for CHFS-3137/PSYC-3137 “ABA II: Advanced Topics in Applied Behaviour Analysis” to “ABS II: Advanced Topics in Applied Behavioural Sciences” and the course description as follows:

New Description

Students undertake advanced coverage of Applied Behavioural Science topics, including communication, environmental strategies and situational management, maintenance and generalization of skills, and ethical and social issues. They evaluate least-restrictive and strengths-based approaches across the field, while integrating individually and culturally responsive values and frameworks of practice. Educators, front-line responders, or service

providers interested in working with children/adults across institutional and community-based settings, or staffing teams across the non-profit or business sectors will benefit from this course.

This course is also offered as PSYC 3137.

Old Description

This course expands on fundamental principles including advanced coverage of topics such as learning, communication, and behaviour assessment; direct training programs; skill teaching and adaptive behaviour; environmental strategies; situational management; generalization; and ethical and social issues. A least-restrictive, lifespan developmental, and integrative ABA framework is considered across sectors and diverse client groups. This course is also offered as PSYC 3137.

Motion 7: That Senate approve the revision to the course learning outcomes for CHFS-3137/PSYC-3137 “ABA II: Advanced Topics in Applied Behaviour Analysis” as follows:

Proposed:

1. Examine advanced principles, strategies, and applications of learning and behaviour, including analytic skills.
2. Outline ethical decision-making processes in applied settings and competence for individual and cultural diversity in planning and goal setting.
3. Integrate theoretical and applied frameworks for addressing diversity considerations across various fields, including responsive and nondiscriminatory practices, as related for example, to neurodiversity, mental health, trauma, language, ethnicity, race, gender, religion, culture, social economic status, and others.
4. Evaluate individual-centered strategies across school, youth/adult institutional facilities, community settings, or private/corporate settings.
5. Generate strategies mindful of least-restrictive, lifespan developmental, and individual strengths and needs principles, in developing integrative plans.
6. Analyze outcomes planning & goal setting, including outcomes data and its application/integration to individualized program planning.

Current:

1. Articulate an understanding of advanced principles, strategies, and applications of learning and behaviour, including advanced analytic skills
2. Demonstrate knowledge of advanced and commonly used skills and procedures in ABA and an ability to integrate such knowledge into the assessment and intervention planning for clients
3. Demonstrate an understanding of client-centered responsibilities and their relevant application across settings and clients
4. Integrate least-restrictive, life-span developmental, and individual strengths and needs principles, in developing integrative ABA plans
5. Be able to identify client strengths and needs and develop suitable programs and/or interventions
6. Demonstrate advanced knowledge of behaviour assessment and measurement, including language and learning assessment
7. Demonstrate skills in outcomes planning & goal setting, including in the analysis of outcomes data and its application/integration to individualized program planning.

Non-substantive:

The revision of the course title for CHFS-4106/PSYC-4106 “Assessment and Intervention Planning” to “Intervention: Planning for Neurodivergence” and the course description as follows:

New Description

Students explore intervention planning for neurodivergence with children, youth, and adults, including select assessments and evidence-based treatments. Key principles of effective planning are reviewed, including culturally sensitive and responsive practices. Students integrate the biopsychosocial-spiritual model with equity, diversity, inclusion, and decolonization values in supporting individual strengths and needs, achieving successful outcomes, and guiding decisions. Students understand relational practice as a foundation of successful outcomes, across emotional, cognitive, behavioural, communications, and mental health domains.

This course is also offered as PSYC 4106.

Old Description

This course focuses on prevention and intervention in the context of developmental and emotional-behavioural disorders of childhood and adolescence. Cognitive, cognitive-behavioural, and behavioural strategies are covered for supporting children and adolescents with exceptionalities. Particularly effective and model international programs are reviewed. A holistic, evidence-based, individual strengths- and needs framework is applied for informing decisions regarding suitable interventions and practices. The course highlights the importance of the therapeutic alliance as a foundation of successful approaches. This course is also offered as PSYC 4106.

Non-substantive:

The Arts & Science Executive recommend to the ACC to approve the course prerequisites for CHFS-4106/PSYC-4106 "Assessment and Intervention Planning" from "CHFS-2106/PSYC-2006" to "CHFS- 2106/PSYC-2006 or equivalent".

Motion 8: That Senate approve the revision to the course learning outcomes for CHFS-4106/PSYC-4106 "Assessment & Intervention Planning" as follows:

Proposed:

1. Describe the scope of various broad- and narrow-band assessments for intervention planning, and be able to differentiate these from diagnostic assessments.
2. Apply individual strengths/needs and individual and cultural diversity in goal-selection, in identifying suitable interventions, and in planning for effective outcomes.
3. Identify neurodevelopmental processes that can often subserve various behavioural challenges, such as self-regulatory mechanisms (emotional, behavioural, and cognitive self-regulation).
4. Evaluate relational practice in understanding individuals within complex contexts (considering factors such as age, gender, SES, culture, race, history, geography, determinants of health/social well-being) and demonstrate an understanding of cultural sensitivity and responsiveness in supporting effective and meaningful outcomes at an individual level.
5. Apply evidence-based strategies and appropriateness of use.
6. Evaluate for critical clinical issues (e.g., depression, suicidality, neglect, abuse, and others) and relevant follow-up.
7. Analyze emotional-behavioural, developmental, and other related issues (e.g., addictive behavior, psychopathology, neglect and abuse, violence, situational and environmental factors) that may impact academic, personal/social, and workplace success, as well as overall development.
8. Summarize principles supporting equity, diversity, inclusion, and decolonization in their importance for intervention planning and outcomes success.

Current:

1. Identify, develop, and implement different types of interventions at the individual and small group levels

2. Identify suitable cognitive, cognitive-behavioural, and behavioural interventions for diverse challenges
3. Demonstrate an understanding of evidence based practices and identify empirically based interventions appropriate for use
4. Differentiate amongst primary, secondary, and tertiary prevention and appropriate strategies for each
5. Demonstrate awareness of critical clinical issues (e.g., depression, suicidality, neglect, abuse, and others) and relevant follow-up
6. Identify emotional-behavioural, developmental, and other related issues (e.g., addictive behavior, psychopathology, neglect and abuse, violence, situational and environmental factors) that may impact academic, personal/social, and career success, as well as overall development
7. Demonstrate an understanding of the referral process and be able to identify appropriate pathways for referral for individuals with special needs
8. Demonstrate an understanding of and be able to apply professional and ethical guidelines of conduct

Non-substantive:

The revision of the course title for CHFS-4205/PSYC-4225 “Practicum in ABA Lifespan” to “Practicum in Applied Behavioural Sciences” and the course description as follows:

New Description

Students gain experience across various sectors and fields of practice (e.g., PBS, ABA, OBM), in front-line responder or service provision settings or team-based organizational settings. Students engage in blended experiential learning, including seminar, module, case-based pedagogy, and institutional or community-based experience, as applicable. Settings may include schools, intervention/treatment centres, justice/correctional settings, long-term care facilities, traumatic brain injury/rehabilitation centers. Hours must be completed within teams proficient in applied behavioural science principles and strategies. This course is also offered as PSYC 4225.

Old Description

Students gain experience in designing and implementing Applied Behaviour Analysis (ABA) programs with individuals with emotional/behavioural and/or developmental needs. Placements, placement protocols, and field supervisors must be approved beforehand. Placements may be secured in schools, clinical settings, justice settings, long-term care facilities, traumatic brain injury or rehabilitation centers, and others, and must be in completed within teams proficient in ABA strategies and program development. A student and field supervisor's report must be submitted to the Department upon completion of the placement. This course is also offered as PSYC 4225.

Non-substantive:

The course prerequisites for CHFS-4205/PSYC-4225 “Practicum in ABA-Lifespan” be changed from [CHFS-3036 or PSYC-3036; 80% in either CHFS-3136 or PSYC-3136 and 80% in either CHFS-3137 or PSYC-3137 and approval of the Department. Valid Criminal Record Check required prior to course start] to [CHFS-3036 or PSYC-3036; CHFS-3137 or PSYC-3137; and with approval of the Department].

Motion 9: That Senate approve the revision to the course learning outcomes for CHFS-4205/PSYC-4225 “Practicum in ABA Lifespan” as follows:

Proposed:

1. Engage with theories, principles, and practices of applied behavioural science across respective fields and frameworks of practice, such as positive behaviour support (PBS),

- applied behaviour analysis (ABA), and organizational behaviour management (OBM) as applicable.
2. Integrate ethical decision-making processes in applied settings, taking into account strengths and needs along the neurodiversity continuum.
 3. Observe and engage in competent planning and goal setting, including theoretical and applied frameworks for addressing diversity considerations in the field (e.g., responsive and nondiscriminatory practices, as related to neurodiversity, mental health, trauma, language, ethnicity, race, gender, sexual orientation, religion, culture, social economic status).
 4. Practice individual-centered strategies and their application across various sectors/settings.
 5. Choose least-restrictive, lifespan developmental, and individual strengths and needs approaches, for developing integrative plans.
 6. Explain outcomes planning & goal setting, including the relevance of outcomes data in the development of individualized programming.
 7. Explain sector-based values and practices in synthesizing behavioural science knowledge.

Current:

1. Apply theories, principles, and practices learned in ABA I and ABA II
2. Gain experience in developing and implementing ABA programs in an IBI supervised environment while working with individuals with ASDs
3. Gain experience in measuring and evaluating individual and program success
4. Utilize collaborative professional and communication skills in agency settings
5. Demonstrate an ability to work within ethical guidelines
6. Articulate the clinical approach and standards of practice of the organization and/or respective program
7. Identify resources available to meet the needs of clients and team members

Non-substantive:

The revision to the course hours for CHFS-4205/PSYC-4225 “Practicum in ABA Lifespan” be changed from “180hrs” to “180hrs of blended experiential learning”.

Non-substantive:

The revision of the course title for CHFS-4305/PSYC-4335 “Practicum in EIBI/ASD” to “Practicum in EBI-ASD/ND” and the course description as follows:

New Description

Students gain experience in designing and implementing Applied Behaviour Analysis (ABA) programs in Early Behaviour Intervention (EBI) settings, and working with children with Autism Spectrum and other Neurodevelopmental Disorders (ASD/ND). Community placement hours may be secured in clinical or community-based treatment programs providing ABA to children with ASD/ND, and must be completed within teams proficient in ABA strategies and program development.

This course is also offered as PSYC 4235.

Old Description

Students gain experience in designing and implementing Applied Behaviour Analysis (ABA) programs in Early Intensive Behaviour Intervention (EIBI) settings, and working with children with Autism Spectrum Disorders (ASD). Students are expected to follow agency guidelines for volunteers and/or employees. Placements, placement protocols, and field supervisors must be approved beforehand. Placements must be completed within EIBI centers, under Clinical Psychology and BACB supervision. A student and field supervisor's report must be submitted to the Department upon completion of the placement. This course is also offered as PSYC 4235.

Non-substantive:

The course prerequisites for CHFS-4305/PSYC-4325 “Practicum in EIBI-ASD” be changed from [CHFS-3036 or PSYC- 3036; 80% in either CHFS-3136 or PSYC-3136 and 80% in either CHFS-3137 or PSYC-3137 and approval of the Department. Valid Criminal Record Check required prior to course start] to [CHFS-3036 or PSYC-3036; CHFS-3137 or PSYC-3137 and with approval of the Department].

Motion 10: That Senate approve the revision to the course learning outcomes for CHFS-4305/PSYC-4325 “Practicum in EIBI-ASD” as follows:

Friendly amendments highlighted below in bold and strikethrough were suggested and approved by the mover and the seconder:

Proposed:

1. Apply theories, principles, and practices of applied behavioural science as applicable to early behaviour intervention for children with ASD or other neurodevelopmental disorders.
2. Apply ethical decision-making processes in applied settings, taking into account individual strength and needs.
3. Apply competent planning and goal setting, including theoretical and clinical frameworks for addressing diversity considerations across the field (e.g., responsive and nondiscriminatory practices, as related to neurodiversity, mental health, trauma, language, ethnicity, race, gender, sexual orientation, religion, culture, socio-economic status).
4. Apply individual-centered strategies ~~and their application~~ across **various** early intensive intervention settings.
5. Apply least-restrictive, lifespan developmental, and individual strengths and needs principles, in developing integrative plans.
6. Analyze **for** outcomes planning & goal setting, including in the analysis of outcomes data and its application/integration to individualized program planning.
7. Analyze sector-based values and practices in synthesizing behavioural science knowledge within EBI-ASD/ND settings.

Current:

1. Apply theories, principles, and practices learned in ABA I and ABA II
2. Gain experience in developing and implementing ABA programs while working with children with ASD in EIBI settings
3. Gain experience in measuring and evaluating individual and program success
4. Utilize collaborative professional and communication skills in agency settings
5. Demonstrate an ability to work within ethical guidelines
6. Articulate the clinical approach and standards of practice of the organization and/or respective program
7. Identify resources available to meet the needs of clients and team members

Non-substantive:

The revision to the course hours for CHFS-4305/PSYC-4325 “Practicum in EIBI-ASD” be changed from “180hrs” to “180hrs of blended experiential learning.”

Motion 11: That Senate approve the removal of the clause “Available to students in an Honours Specialization, Specialization, or Major in Child and Family Studies or Psychology” from the Graduation Requirements of the ABA-Lifespan and EIBI-ASD Certificates.

The Provost and Vice-President, Academic and Research, acknowledged the amount of work involved in the Child & Family Studies and Psychology program revisions, and thanked all those involved.

Environmental Science

The Academic Curriculum Committee approved the revised Stage II Program Proposal for the Bachelor of Science Honours Specialization, Specialization, Major, and Minor in Environmental Science as outlined in the attached template. The Stage II Program Proposal will be forwarded to the Academic Quality Assurance and Planning Committee and External Reviewers will be selected.

The Provost and Vice-President, Academic and Research, acknowledged the amount of work and time faculty dedicated to the development of the Stage II Program Proposal for Environmental Science and congratulated all those involved.

Faculty of Education and Professional Studies

Non-substantive:

The course title for EDUC 5326 be changed from Organizational Management to Organizational Leadership.

Rationale:

The original title came from a different time and ethos; leadership concepts have changed since this course was originally designed and named and a name change from Management to Leadership would have broader appeal to those in leadership roles within and outside Education.

Child & Family Studies and Psychology

Non-substantive:

The revision of the course title for CHFS-3036/PSYC-3036 “Ethics & Professional Standards” to “Ethics in Practice” and the course description as follows:

New Description

Students learn ethics/ethical decision-making and consider professional standards in practice and policy, for front-line responder and service provider teams, across institutional or community-based settings. They review codes of professional conduct and relevant standards for applied behaviour sciences professionals, and discuss the ethics of trans-professional conduct with relevance to individual clients, support agencies, and workplace settings. Students consider the importance of ethical decision-making for individuals, systems/organizations, and policy.

This course is also offered as PSYC 3036.

Old Description

Students are introduced to ethical issues and professional standards as they relate to applied and/or clinical settings, including applied behavior interventions and supports. Students are exposed to national and provincial codes of professional conduct, including the CPA, CASW, BACB, and other relevant Professional Disciplinary and Ethical Codes and Standards. The ethics of interprofessional conduct are discussed with relevance to both individual clients and support agencies. This course is also offered as PSYC 3036.

Non-substantive:

The course prerequisites for CHFS-3036/PSYC-3036 “Ethics & Professional Standards” from “CHFS-2106/PSYC-2006” to “Any 24 credits or permission of the instructor”.

Motion 3: That the Academic Curriculum Committee recommend to Senate the revision to the course learning outcomes for CHFS-3036/PSYC-3036 “Ethics & Professional Standards” as follows:

Proposed ~~looks good~~

1. Understand/Describe the history of ethical frameworks for applied behavioural sciences.
2. Apply ethical analysis across disciplines and identify similarities and differences.
3. Analyze various codes of conduct, including ~~CPA~~ Canadian Psychological Association, ~~CASW~~ Canadian Association of Social Workers, ~~BACB~~ Behavior Analyst Certification Board, and other relevant provincial and national codes.
4. Apply ethical considerations and maintain adherence to ethical principles when working with other professionals, supervisors, and supervisees.
5. Analyze ethical considerations when working with vulnerable people and communities.
6. Evaluate guidelines for cultural responsiveness and diversity, including non-discrimination practices that support equitable and inclusive service, in keeping with ~~an EDID~~ (equity, diversity, inclusion, decolonization) frameworks.
7. Evaluate effective use of ethical decision-making models, including how moral codes and values lend strength and provide challenges in a chosen career.
8. Create a plan of action for a variety of ethical scenarios, including ethical decision-making frameworks for organizational decision-making.

Current:

1. Understand/Recognize the history of an ethical framework of ABA and the importance of this to people working in this field now.

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2. Be able to describe the importance of assessment and intervention as related to the ethical framework.
3. Examine ethics across disciplines and identify similarities and differences.
4. Be familiar with the Behaviour Analyst Certification Board professional and ethical code of conduct.
5. Identify special ethical considerations when working with vulnerable people.
6. Prepare to share ethical considerations and maintain adherence to ethical principles when working with other professionals, supervisors, and supervisees.
7. Demonstrate effective use of an ethical decision making model to create a plan of action for a variety of ethical scenarios.
8. Describe how their own moral code and values will lend them strength and provide challenges in following the ethical code in their chosen career.

Non-substantive:

The course title for CHFS-3116/PSYC-3117 “Autism Spectrum Disorders” to “Perspectives in Autism” and the course description as follows:

New Description

Students explore the nature of Autism and related neurodiversity, including epidemiology, screening/assessment, and treatment/intervention, across a broad range of topics (e.g., historical considerations, diagnosis, prevalence/incidence, genetics, environment). Students consider evidence-informed principles for developing successful programs for children, youth, and adults, as well as models for transitioning to adult care and supportive services. Principles of child/family centered care and culturally responsive approaches are considered throughout the course, including values of equity, diversity, inclusion, and decolonization ~~(EDID)~~.

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This course is also offered as PSYC 3117.

Old Description

This course will explore the nature of Autism Spectrum Disorders, including epidemiology, screening and assessment, and treatment and interventions. A lifespan approach will be applied to a broad range of topics, including historical considerations, diagnostic issues, prevalence/incidence, profile of ASD including the triad of impairments, genetic linkages, cognitive processing and executive functioning, and evidence-informed interventions including an introduction to applied behavioural analysis and positive behavioural support models. Students will consider evidence-informed principles for the development of successful programs for children and adolescents with ASD, as well as explore best-practice models for youth transition into adult care and supportive services. Principles of child/family centered care and support will be studied throughout the course. This course is also offered as PSYC 3117.

Non-substantive:

The course prerequisites for CHFS- 3116/PSYC-3117 “Autism Spectrum Disorders” from “CHFS 2106/PSYC 2006” to “Any 24 credits or permission of the instructor”.

Motion 4: That the Academic Curriculum Committee recommend to Senate the revision to the course learning outcomes for CHFS-3116/PSYC-3117 “Autism Spectrum Disorders” as follows:

Proposed:

As relevant to Autism and related neurodiversity, students will:

1. ~~Understand/Recognize~~ typical and atypical development ~~as it relates to ASDs.~~
2. ~~Understand/Describe~~ the history and dominant theories ~~of ASDs.~~
3. Explain screening, assessment, and diagnostic frameworks, ~~for ASD.~~
4. ~~Explain/Examine~~ epidemiology, developmental considerations, and co-morbidities ~~of ASDs.~~
5. Evaluate biopsychosocial and spiritual characteristics and implications ~~for ASDs.~~

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6. ~~Evaluate/interpret~~ Interpret the cognitive, socio-emotional, and behavioural characteristics ~~of ASDs~~ and ~~understand~~ implications for the real-world from the individual perspective as well as that of family, community, and/or society at large.
7. Analyze evidence informed interventions and principles/values of successful programs for individuals ~~and families with ASDs~~.
8. ~~Evaluate/construct~~ Examine established strategies and supports ~~for ASDs~~, and related considerations ~~within a around~~ equity, diversity, inclusion, and decolonization ~~(EDID) frameworks~~.

Current:

1. Describe typical and atypical development as it relates to ASDs
2. Show an appreciation of the history and dominant theories of ASDs.
3. Demonstrate knowledge of diagnostic frameworks, criteria, and considerations for ASDs.
4. Differentiate between screening and assessment frameworks.
5. ~~Demonstrate an understanding~~ Describe of epidemiology, developmental considerations, and comorbidities of ASDs.
6. Discuss biopsychosocial characteristics and implications of ASDs.
7. Show an appreciation for the cognitive, socio-emotional, and behavioural characteristics of ASDs.
8. ~~Demonstrate an understanding of~~ Discuss established strategies and supports for ASDs
9. Identify evidence informed interventions and principles of successful programs/programming for ASDs.

Non-substantive:

The revision of the course title for CHFS-3127/PSYC-3127 “Fetal Alcohol Spectrum Disorders” to “Alcohol Related Neurodevelopmental Disorders” and the course description as follows:

New Description

Students explore Alcohol Related Neurodevelopmental Disorders (ARND) across the lifespan ~~through by~~ considering social determinants of health and wellbeing, ~~frameworks and along with in keeping with~~ values of equity, diversity, inclusion, and decolonization. Diagnosis, epidemiology, cognitive, behavioural, and mental health profile including primary and secondary disabilities, prevention, treatment, management, and policy issues are discussed. Implications are explored from several perspectives, including individual development and learning, child and family well-being, and impact on and responsibility of community and society.

This course is also offered as PSYC 3127.

Old Description

Fetal Alcohol Spectrum Disorders will be explored through a lifespan development and determinants of health framework. Diagnosis, epidemiology, cognitive, behavioural, and mental health profile including primary and secondary disabilities, prevention, treatment, management, and policy issues will be discussed. Implications will be explored from several perspectives, including individual development and learning, child and family well-being, and impact on and responsibility of community and society. This course is also offered as PSYC 3127.

Non-substantive:

The course prerequisites for CHFS 3127/PSYC 3127 “Fetal Alcohol Spectrum Disorders” from “CHFS-2106/PSYC-2006” to “Any 24 credits or permission of the instructor”.

Motion 5: That the Academic Curriculum Committee recommend to Senate the revision to the course learning outcomes for CHFS-3127/PSYC-3127 “Fetal Alcohol Spectrum Disorders” ~~SHOULD TITLE BE ARND? WHAY KEEP DETAL?~~ as follows:

Proposed:

As relevant to prenatal alcohol exposure and associated neurodiversity, students will:
Rather than repeating “Evaluate”, use diverse action verbs from the Analyze, Evaluate, and Create categories

1. Understand/Recognize ARND foundations (e.g., historical, biomedical, clinical background and related disorders).
2. Evaluate/Identify/Recognize ARND screening & brief intervention issues, with a view to preventing alcohol-exposed pregnancies in women of childbearing age, and supporting children, women, and families.
3. Evaluate/Compare? Compare and contrast models of addiction, including concepts related to addiction in women of childbearing age/or those who are pregnant (e.g., appropriate prevention services, referral, and case management).
4. Analyze the effects of prenatal alcohol, including primary and secondary effects on individuals/families.
5. Evaluate/differentiate between/Contrast? Review research on screening, diagnosis, and assessment of neurodiversity of ARNDs, including issues related to the screening, diagnosis, and assessment of infants, children, adolescents, and adults.
6. Evaluate/Analyze? models of treatment and support across the lifespan for persons and families with ARNDs, including issues, treatment, and treatment and supports across the continuum of care and management, and newly emerging intervention research in the areas of social skills, behavioural, and cognitive rehabilitation/remediation.
7. Evaluate/Summarize/Distinguish between knowledge of ARND Ethical, Legal, and Policy policy Considerations considerations and related issues.
8. Evaluate the complexities of ARND prenatal alcohol exposure and associated neurodiversity in consideration of principles of equity, diversity, inclusion, and decolonization, within an EDID and determinants a Determinants of Hhealth/Wwellbeing frameworks.

Current:

1. Demonstrate knowledge of FASD Foundations (e.g., historical, biomedical, clinical background and related disorders)
2. Consider FASD Screening & Brief Interventions issues, with a view to preventing alcohol-exposed pregnancies in women of childbearing age
3. Demonstrate knowledge Models of Addiction, including concepts related to addiction in women of childbearing age, including those who are pregnant (e.g., appropriate prevention services, referral, and case management)
4. Critically consider the Effects of Prenatal Alcohol, including primary and secondary effects on individuals/families
5. Synthesize research on Screening, Diagnosis, and Assessment of FASDs, including issues related to the screening, diagnosis, and assessment of infants, children, adolescents, and adults
6. Discuss models of Treatment and Support Across the Lifespan for Persons with FASDs, including issues, treatment and supports across the continuum of care and management such as newly emerging intervention research in the areas of social skills, behavioural, and cognitive rehabilitation/remediation
7. Integrate knowledge of FASD Ethical, Legal, and Policy Considerations and related issues

Non-substantive:

The revision of the course title for CHFS-3136/PSYC-3136 “ABA I: Introduction to Applied Behaviour Analysis” to “ABS I: Introduction to Applied Behavioural Sciences” and the course description as follows:

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Commented [EF1]: Yes, it should be ARND // I think this is just related to the fact that we're still referencing what's currently approve in senate (with the title change motion not yet having been approved).

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New Description

Students learn principles of applied behavioural sciences, including cross-sector applications like positive behaviour support (PBS), applied behaviour analysis (ABA), and organizational behaviour management (OBM), and review topics like dimensions and principles of ABA, functional assessment, goal selection and outcomes planning, skill teaching, adaptive behaviour, and maintenance/generalization of skills. Students review inclusive and culturally responsive frameworks of practice, and evaluate strategies of interest for educators, front-line responders, or cross-sector service providers across institutional or community-based settings.

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This course is also offered as PSYC 3136.

Old Description

This course provides an introduction to fundamentals of learning and applied behaviour analysis (ABA). Students are exposed to an overview of theories and basic principles of behaviour, features and characteristics of ABA, preference assessment, functional assessment and selection of target behaviours, outcomes planning, and defining, recording and charting of behaviour. This course is the first of two ABA courses that focuses on the application of behaviour analytic principles and strategies/methods in a variety of applied settings, service and workplace environments, and sectors. This course is also offered as PSYC 3136.

Non-substantive:

The course prerequisites for CHFS- 3136/PSYC-3136 “ABA I: Introduction to Applied Behaviour Analysis” from “CHFS-2106/PSYC-2006” to “Any 24 credits or permission of the instructor”.

Motion 6: That the Academic Curriculum Committee recommend to Senate the revision to the course learning outcomes for CHFS-3136/PSYC-3136 “ABA I: Introduction to Applied Behaviour Analysis” as follows:

Proposed: Good to go

1. Understand/Recognize the empirical, scientific, and critical-thinking process, as the foundation upon which behavioural science and analysis is built.
2. Apply fundamental theories and principles of learning/behaviour, and applications across various settings, including fields/frameworks such as Positive Behaviour Support (PBS), Applied Behaviour Analysis (ABA), and Organizational Behaviour Management (OBM).
3. Analyze characteristics and core values of applied behavioural sciences, including the Dimensions and Principles of ABA.
4. Apply knowledge of behavioural assessment and measurement (e.g., preference, motivational, and functional assessment).
5. Evaluate commonly used strategies and procedures in applied behavioural sciences and an ability to integrate such knowledge into support planning for individuals, including goal setting & selection of target behavior.
6. Evaluate issues of individual and cultural diversity, equity, and inclusion, as related to the application of behavioural sciences.
7. Define, record, and display behavioural data, including the importance and application of data to real-world settings.
8. Evaluate applied behavioural science and its relevancy across sectors and the lifespan.

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Current:

1. Understand the empirical, scientific, critical-thinking process as the foundation upon which behaviour analysis is built
2. Show an understanding of fundamental theories and principles of learning/behaviour
3. Identify principles, characteristics, and core values of ABA

4. Begin to demonstrate knowledge of behavioural assessment and measurement (e.g., preference assessment, motivational assessment, functional assessment)
5. Demonstrate a basic understanding of the assessment of basic language and learning
6. Show an ability to carry out outcomes planning & goal setting, including selection of target behaviour
7. Be able to define, record, and display behavioural data
8. Show an understanding of the ethical considerations and ethical decision-making processes in ABA settings/for ABA practitioners
9. Begin to understand ABA research methods and techniques
10. Be able to critically evaluate ABA and its relevancy across sectors, life-span developmental stages, and varying service and workplace settings.

Non-substantive:

The revision of the course title for CHFS-3137/PSYC-3137 “ABA II: Advanced Topics in Applied Behaviour Analysis” to “ABS II: Advanced Topics in Applied Behavioural Sciences” and the course description as follows:

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New Description

Students undertake advanced coverage of ~~ABS Applied Behavioural Science~~ topics, including communication, environmental strategies and situational management, maintenance and generalization of skills, and ethical and social issues. They evaluate least-restrictive and strengths-based approaches across the field, while integrating individually and culturally responsive values and frameworks of practice. Educators, front-line responders, or service providers interested in working with children/adults across institutional and community-based settings, or staffing teams across the non-profit or business sectors will benefit from this course.

This course is also offered as PSYC 3137.

Old Description

This course expands on fundamental principles including advanced coverage of topics such as learning, communication, and behaviour assessment; direct training programs; skill teaching and adaptive behaviour; environmental strategies; situational management; generalization; and ethical and social issues. A least-restrictive, life-span developmental, and integrative ABA framework is considered across sectors and diverse client groups. This course is also offered as PSYC 3137.

Motion 7: That the Academic Curriculum Committee recommend to Senate the revision to the course learning outcomes for CHFS-3137/PSYC-3137 “ABA II: Advanced Topics in Applied Behaviour Analysis” as follows:

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Proposed: Lots of “Apply” here. Choose some higher-thinking verbs from Analyze, Evaluate, and Create

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1. ~~Apply~~ Examine advanced principles, strategies, and applications of learning and behaviour, including analytic skills.
2. ~~Apply~~ Outline ethical considerations and ethical decision-making processes in applied settings and ~~demonstrate~~ competence for individual and cultural diversity in planning and goal setting.
3. Integrate theoretical and applied frameworks for addressing diversity considerations across various fields (~~PBS, ABA, OBM~~), including responsive and nondiscriminatory practices, as related for example, to neurodiversity, mental health, trauma, language, ethnicity, race, gender, religion, culture, social economic status, and others.
4. Evaluate individual-centered strategies across school, youth/adult institutional facilities, community settings, or private/corporate settings.
5. ~~Apply~~ Generate strategies mindful of least-restrictive, life-span developmental, and individual strengths and needs principles, in developing integrative plans.

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6. Analyze outcomes planning & goal setting, including outcomes data and its application/ integration to individualized program planning.

Current:

1. Articulate an understanding of advanced principles, strategies, and applications of learning and behaviour, including advanced analytic skills
2. Demonstrate knowledge of advanced and commonly used skills and procedures in ABA and an ability to integrate such knowledge into the assessment and intervention planning for clients
3. Demonstrate an understanding of client-centered responsibilities and their relevant application across settings and clients
4. Integrate least-restrictive, life-span developmental, and individual strengths and needs principles, in developing integrative ABA plans
5. Be able to identifying client strengths and needs and develop suitable programs and/or interventions
6. Demonstrate advanced knowledge of behaviour assessment and measurement, including language and learning assessment
7. Demonstrate skills in outcomes planning & goal setting, including in the analysis of outcomes data and its application/integration to individualized program planning.

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Non-substantive:

The revision of the course title for CHFS-4106/PSYC-4106 “Assessment and Intervention Planning” to “Intervention: Planning for Neurodivergence-” and the course description as follows:

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New Description

Students explore intervention planning for neurodivergence with children, youth, and adults; ~~COMMA NOT SEMI COLON~~, including select assessments and evidence-based treatments. Key principles of effective planning are reviewed, including culturally sensitive and responsive practices. Students integrate the biopsychosocial-spiritual model with equity, diversity, inclusion, and decolonization values in supporting individual strengths and needs, achieving successful outcomes, and guiding decisions. Students understand relational practice as a foundation of successful outcomes, across emotional, cognitive, behavioural, communications, and mental health domains.

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This course is also offered as PSYC 4106.

Old Description

This course focuses on prevention and intervention in the context of developmental and emotional-behavioural disorders of childhood and adolescence. Cognitive, cognitive-behavioural, and behavioural strategies are covered for supporting children and adolescents with exceptionalities. Particularly effective and model international programs are reviewed. A holistic, evidence-based, individual strengths- and needs framework is applied for informing decisions regarding suitable interventions and practices. The course highlights the importance of the therapeutic alliance as a foundation of successful approaches. This course is also offered as PSYC 4106.

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Non-substantive:

The Arts & Science Executive recommend to the ACC to approve the course prerequisites for CHFS-4106/PSYC-4106 “Assessment and Intervention Planning” from “CHFS-2106/PSYC-2006” to “CHFS-2106/PSYC-2006 or equivalent”.

Motion 8: That the Academic Curriculum Committee recommend to Senate the revision to the course learning outcomes for CHFS-4106/PSYC-4106 “Assessment & Intervention Planning” as follows:

Proposed:

1. ~~Understand~~ Describe the scope of various broad- and narrow-band assessments for intervention planning, and be able to differentiate these from diagnostic assessments.
2. Apply individual strengths/needs and individual and cultural diversity in goal-selection, in identifying suitable interventions, and in planning for effective outcomes.
3. ~~Understand~~ Identify neurodevelopmental processes that can often subserve various behavioural challenges, such as self-regulatory mechanisms (emotional, behavioural, and cognitive self-regulation).
4. Evaluate relational practice in understanding individuals within complex contexts (considering factors such as age, gender, SES, culture, race, history, geography, determinants of health/social well-being) and demonstrate an understanding of cultural sensitivity and responsiveness in supporting effective and meaningful outcomes at an individual level.
5. Apply evidence-based strategies and appropriateness of use.
6. Evaluate for critical clinical issues (e.g., depression, suicidality, neglect, abuse, and others) and relevant follow-up.
7. Analyze emotional-behavioural, developmental, and other related issues (e.g., addictive behavior, psychopathology, neglect and abuse, violence, situational and environmental factors) that may impact academic, personal/social, and workplace success, as well as overall development.
8. ~~Apply~~ I think you'd prefer verb at the Analyzing, Evaluating, and Creating stages (higher order thinking, e.g. Analyze/Appraise/Critique) Summarize principles supporting equity, diversity, inclusion, and decolonization ~~and in~~ their importance for intervention planning and outcomes success.

Current:

1. Identify, develop, and implement different types of interventions at the individual and small group levels
2. Identify suitable cognitive, cognitive-behavioural, and behavioural interventions for diverse challenges
3. Demonstrate an understanding of evidence based practices and identify empirically based interventions appropriate for use
4. Differentiate amongst primary, secondary, and tertiary prevention and appropriate strategies for each
5. Demonstrate awareness of critical clinical issues (e.g., depression, suicidality, neglect, abuse, and others) and relevant follow-up
6. Identify emotional-behavioural, developmental, and other related issues (e.g., addictive behavior, psychopathology, neglect and abuse, violence, situational and environmental factors) that may impact academic, personal/social, and career success, as well as overall development
7. Demonstrate an understanding of the referral process and be able to identify appropriate pathways for referral for individuals with special needs
8. Demonstrate an understanding of and be able to apply professional and ethical guidelines of conduct

Non-substantive:

The revision of the course title for CHFS-4205/PSYC-4225 “Practicum in ABA Lifespan” to “Practicum in Applied Behavioural Sciences” and the course description as follows:

New Description

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Students gain experience across various sectors and fields of practice (e.g., PBS, ABA, OBM), in front-line responder or service provision settings or team-based organizational settings. Students engage in blended experiential learning, including seminar, module, case-based pedagogy, and institutional or community community-based add hyphen experience, as applicable. Settings may include schools, intervention/treatment centres, justice/correctional settings, long-term care facilities, traumatic brain injury/rehabilitation centers. Hours must be completed within teams proficient in applied behavioural science principles and strategies.

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This course is also offered as PSYC 4225.

Old Description

Students gain experience in designing and implementing Applied Behaviour Analysis (ABA) programs with individuals with emotional/behavioural and/or developmental needs. Placements, placement protocols, and field supervisors must be approved beforehand. Placements may be secured in schools, clinical settings, justice settings, long-term care facilities, traumatic brain injury or rehabilitation centers, and others, and must be in completed within teams proficient in ABA strategies and program development. A student and field supervisor's report must be submitted to the Department upon completion of the placement. This course is also offered as PSYC 4225.

Non-substantive:

The course prerequisites for CHFS-4205/PSYC-4225 "Practicum in ABA-Lifespan" be changed from [CHFS-3036 or PSYC-3036; 80% in either CHFS-3136 or PSYC-3136 and 80% in either CHFS-3137 or PSYC-3137 and approval of the Department. Valid Criminal Record Check required prior to course start] to [CHFS-3036 or PSYC-3036; CHFS-3137 or PSYC-3137; and with approval of the Department].

Motion 9: That the Academic Curriculum Committee recommend to Senate the revision to the course learning outcomes for CHFS-4205/PSYC-4225 "Practicum in ABA Lifespan" as follows: 4th year, I presume, so I would anticipate verbs of a higher order thinking nature, rather than "Apply"

Proposed:

1. Apply/Engage with theories, principles, and practices of applied behavioural science across respective fields and frameworks of practice, such as positive behaviour support (-PBS), applied behaviour analysis (ABA), and organizational behaviour management (OBM) as applicable.
2. Apply/Question/Critique/Review/Integrate ethical decision-making processes in applied settings, taking into account strengths and needs along the neurodiversity continuum.
3. Apply/Model/Outline/Describe/Observe and engage in competent planning and goal setting, including theoretical and clinical-applied frameworks for addressing diversity considerations aeross-in the field (e.g., responsive and nondiscriminatory practices, as related to neurodiversity, mental health, trauma, language, ethnicity, race, gender, sexual orientation, religion, culture, social economic status).
4. Apply/Practice/Practice individual-centered strategies and their application across various sectors/settings.
5. Apply/Select/Choose least-restrictive, life-span developmental, and individual strengths and needs principle approaches, in-for developing integrative plans.
6. Analyze/ Identify/for/Explain outcomes planning & goal setting, including in-the analysis-relevance of outcomes data and its/their? in the development of application/integration to individualized programming/planning.
7. Analyze/compare/ Explain sector-based values and practices in synthesizing behavioural science knowledge knowledge within PBS, ABA, or OBM fields. Be wary of acronyms — spell them out? Some do not know what they mean

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Current:

1. Apply theories, principles, and practices learned in ABA I and ABA II
2. Gain experience in developing and implementing ABA programs in an IBI supervised environment while working with individuals with ASDs
3. Gain experience in measuring and evaluating individual and program success
4. Utilize collaborative professional and communication skills in agency settings
5. Demonstrate an ability to work within ethical guidelines
6. Articulate the clinical approach and standards of practice of the organization and/or respective program
7. Identify resources available to meet the needs of clients and team members

Non-substantive:

The revision to the course hours for CHFS-4205/PSYC-4225 “Practicum in ABA Lifespan” be changed from “180hrs” to “180hrs of blended experiential learning”.

Non-substantive:

The revision of the course title for CHFS-4305/PSYC-4335 “Practicum in EIBI/ASD” to “Practicum in EBI-ASD/ND” and the course description as follows:

New Description

Students gain experience in designing and implementing Applied Behaviour Analysis (ABA) programs in Early Behaviour Intervention (EBI) settings, and working with children with Autism Spectrum and other Neurodevelopmental Disorders (ASD/ND). Community placement hours may be secured in clinical or community-based treatment programs providing ABA to children with ASD/ND, and must be completed within teams proficient in ABA strategies and program development.

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This course is also offered as PSYC 4235.

Old Description

Students gain experience in designing and implementing Applied Behaviour Analysis (ABA) programs in Early Intensive Behaviour Intervention (EIBI) settings, and working with children with Autism Spectrum Disorders (ASD). Students are expected to follow agency guidelines for volunteers and/or employees. Placements, placement protocols, and field supervisors must be approved beforehand. Placements must be completed within EIBI centers, under Clinical Psychology and BACB supervision. A student and field supervisor's report must be submitted to the Department upon completion of the placement. This course is also offered as PSYC 4235.

Non-substantive:

The course prerequisites for CHFS-4305/PSYC-4325 “Practicum in EIBI-ASD” be changed from [CHFS-3036 or PSYC- 3036; 80% in either CHFS-3136 or PSYC-3136 and 80% in either CHFS-3137 or PSYC-3137 and approval of the Department. Valid Criminal Record Check required prior to course start] to [CHFS-3036 or PSYC-3036; CHFS-3137 or PSYC-3137 and with approval of the Department].

Motion 10: That the Academic Curriculum Committee recommend to Senate the revision to the course learning outcomes for CHFS-4305/PSYC-4325 “Practicum in EIBI-ASD” as follows: ~~4th year, I presume, so I would anticipate verbs of a higher order thinking nature, rather than “Apply”; same as previous motion—add verbs from higher order thinking categories, i.e. Analyse, Evaluate, Create~~

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Proposed:

1. Apply theories, principles, and practices of applied behavioural science as applicable to early behaviour intervention, ~~(EIBI)~~ for children with ASD or other neurodevelopmental disorders.

2. Apply ethical decision-making processes in applied settings, taking into account individual strength and needs.
3. Apply competent planning and goal setting, including theoretical and clinical frameworks for addressing diversity considerations across the field (e.g., responsive and nondiscriminatory practices, as related to neurodiversity, mental health, trauma, language, ethnicity, race, gender, sexual orientation, ~~SEXUAL-ORIENTATION?~~ religion, culture, ~~SOCIO-ECONOMIC~~ social-economic status).
4. Apply individual-centered strategies and their application across early intensive intervention settings.
5. Apply least-restrictive, life-span developmental, and individual strengths and needs principles, in developing integrative plans.
6. Analyze for outcomes planning & goal setting, including in the analysis of outcomes data and its application/integration to individualized program planning.
7. Analyze sector-based values and practices in synthesizing behavioural science knowledge within EBI-ASD/ND settings.

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Current:

1. Apply theories, principles, and practices learned in ABA I and ABA II
2. Gain experience in developing and implementing ABA programs while working with children with ASD in EIBI settings
3. Gain experience in measuring and evaluating individual and program success
4. Utilize collaborative professional and communication skills in agency settings
5. Demonstrate an ability to work within ethical guidelines
6. Articulate the clinical approach and standards of practice of the organization and/or respective program
7. Identify resources available to meet the needs of clients and team members

Non-substantive:

The revision to the course hours for CHFS-4305/PSYC-4325 “Practicum in EIBI-ASD” be changed from “180hrs” to “180hrs of blended experiential learning.”

Motion 11: That the Academic Curriculum Committee recommend to Senate to approve the removal of the clause “Available to students in an Honours Specialization, Specialization, or Major in Child and Family Studies or Psychology” from the Graduation Requirements of the ABA-Lifespan and EIBI-ASD Certificates.

** Do we need a clause that says available to all students? Or is this implied?

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Please find attached a copy of the revised Environmental Science Stage 2 proposal the ad hoc committee would like to submit for consideration at the Dec 9th ACC meeting. A brief description of revisions is included below. I have included a copy with track changes if it is needed (without Appendix 6).

- pg. 5 Additional information provided on 'Sciences on the Land' and 'Interdisciplinary Land-Based Program Design and Experiential Learning'. (in consultation with contributing faculty members across departments)
- pg. 11 Additional consultation with faculty from Indigenous Studies
- pg. 11 Revised admission requirements (in consultation with Heather Brown)
- pg. 11 Additional comment on college pathways (in consultation with Marney Leclerc)
- pg.16 Revision to University Degree requirements beyond program requirements (in consultation with Sarah Tedesco)
- pg. 16 Clarification of content under New and Repurposing course requirements (in consultation with Sarah Tedesco)
- pg.40/41 Additional description of Institutional fit
- pg. 33/33 Additional to Tables 7 and 8 on Faculty expertise, research and supervision
- Appendix 6: CV for all faculty (except 4)

Thanks very much for your consideration.
April James

PROGRAM PROPOSAL
ENVIRONMENTAL SCIENCES
(Honours Specialization; Specialization; Major; Minor)

Date: Revised 29 November 2021

NEW PROGRAM PROPOSAL

For Submission to:

- Academic Quality Assurance and Planning Committee (AQAPC)
- Senate
- Ontario Universities Council on Quality Assurance

NAME OF PROPOSED PROGRAM	Environmental Science
DEGREE TO BE CONFERRED	Bachelor of Science Honours Specialization Bachelor of Science Specialization Bachelor of Science Major Bachelor of Science Minor
SHORT FORM FOR DEGREE TO BE CONFERRED	BSc Honours, BSc
LOCATION OF PROGRAM TO BE OFFERED	North Bay
ACADEMIC UNIT RESPONSIBLE FOR PROGRAM	School of Environment (proposed)
ANTICIPATED START DATE OF NEW PROGRAM	Fall 2022
DEAN(S) REponsible FOR PROPOSAL	Dean of Arts and Science
WORKING GROUP CHAIR & MEMBERS OF WORKING GROUP	April James (MES/MESc Program Coordinator, Geography) Jeff Dech (Chair of Biology and Chemistry) Dave Hackett (Biology) Mukund Jha (Chemistry) John Kovacs (Chair of Geography) Eric Matson (Geography) Mark Wachowiak (Teaching Chair, Math and Computer Science) James Abbott (Geography)
DATE APPROVED BY AQAPC	

Appendices to be Included:

- Appendix 1. Library Services Report
- Appendix 2. Recent Ontario Institutional Enrollments in Environmental Sciences
- Appendix 3. Nipissing University International Agreements and Letters of Support
- Appendix 4. Evidence of Social/Labour Market Need
- Appendix 5. Justifiable Duplication – List of Ontario Environmental Science Programs and comparison to proposed program
- Appendix 6. Faculty CVs

Appendix 7. Course Syllabi

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1.0 Introduction and Overview

1.1. Program Description

COVID-19, flooding, drought, fire, heat domes, polar vortices, unprecedented glacial melting: 2020 and 2021 have been unparalleled in environmental-related challenges brought about by climate and environmental change that have disrupted the physical, social, economic and political fabric of our lives. Communities in northeastern Ontario and Canada’s north have urgent questions and needs related to the impact of climate and environmental change as natural and human landscapes undergo unprecedented change in the North. Northern Ontario communities are typically rural, geographically isolated, with “...limited economic diversity and relatively high dependence on climate-sensitive sectors... “(Barros et al., 2014). This makes them more vulnerable to climate change impacts and more limited in adaptation strategies. Communities not accessible by permanent roads or rail are facing transportation challenges for food, fuel and other critical supplies due to shortened ice-road seasons. Changes to fish and game populations may affect a critical way of life for Indigenous communities reliant on traditional food sources.

Ontario’s northern communities depend heavily on mining, hydropower, forestry, and agriculture and experts predict with high confidence the influence of extreme weather on most sectors with extremes in temperature, frequency and severity of weather events (ice storms, rainfall, heat, drought, wind) all projected for Ontario (ECO, 2012). In the Laurentian Great Lakes Basin, recent predictions are for increases in spring and winter precipitation (Zhang et a. 2019) and flooding during the spring of 2019 on the Ottawa river, Lake Nipissing and in the Muskoka region provide compelling regional examples how extreme events can affect communities. Further, case studies of climate change impacts in the Canadian mining sector include examples of how climate events like low water levels/drought have slowed or stopped production due to lack of water for dust suppression or other water intake requirements, and how power outages due to ice storms and road access due to either thawing under higher temperatures, or flooding under intense rains have translated into large financial losses (Marshall et al, 2009). These environmental problems put at risk food and water security, livelihoods, and profoundly emphasize their complexity. These are the ‘big questions’ of our generation.

Barros et al., 2014. Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects, Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Barros, VR, CB Field, DJ Dokken, MD Madtrandrea, KJ Mach, TE Bilir, M Chatterjee, KL Ebi, YO Estrada, RC Genova, B Girma, ES Kissel, AN Levy, S MacCraken, PR Mastrandrea, LL Whites (eds.)]. Cambridge University Press, Cambridge United Kingdom and New York NY, USA, pp. 688. ; **ECO 2012, READY FOR CHANGE? An assessment of Ontario’s climate change adaptation strategy.** Special Report to the Legislative Assembly of Ontario, [March 2012. 24p.](#) ; **Zhang et al. 2019.** Projected extreme temperature and precipitation of the Laurentian Great Lakes Basin. *Global and Planetary Change.* 172, 325-335; **Marshall et al., 2009.** Climate Change and Canadian Mining: Opportunities for Adaptation. August 2009, David Suzuki Foundation, 160p.

To train the next generation with the skills, creativity and insight to address these critical environmental problems, Nipissing University must respond with programming that draws on existing expertise across the sciences to develop a deliberately interdisciplinary environmental science program rooted in northern community. The most recent labour demand report from Eco Canada (September 2020) estimates 1 in every 30 people employed in Canada are environmental workers and while the environmental job market has been affected by COVID-19, they expect environmental jobs are expected to rebound ahead of others, both because of job creation and anticipated retirement¹. A recent survey by Yale University's program on climate change communication found that Millennials and iGens saw global warming as personally more important and ranked it higher in importance for voting decisions as they approached the 2020 presidential election compared to older generations (Ballew et al. 2019). To attract the iGen generation to study the Environment at Nipissing University, programming and expertise addressing Climate and Environmental Change is no less than foundational in this proposed epoch of the Anthropocene.

The BSc Honours Specialization, Specialization, Major and Minor in Environmental Sciences will provide a multi- and interdisciplinary curriculum, building fundamental scientific knowledge in biology, chemistry, geography, physics and earth sciences, mathematics and data sciences, and supporting advanced scientific and quantitative understanding of the environment, environmental problems and their solutions (Figure 1).

This program aligns with government actions like the Pan-Canadian Framework on Clean Growth and Climate Change, responding to the immediate need for action on climate change and engaging across government, industry and Indigenous communities for meaningful collaboration². The complex nature of many current environmental issues requires development of holistic understanding and skill developments that extend beyond disciplines to tackle what has been termed 'wicked' problems or "Big Questions". This program will provide foundational training for students to think differently about the nature of environmental problems, and how to consider alternative ways of studying and resolving these problems from across the sciences.

Sciences on the Land

With this program, Nipissing will be building on existing science programming rooted in the north, and serving northern communities, including First Nations. First Nation communities are natural partners for programming in environmental sciences. Recent studies such as Wong et al. (2020) and Bozhkov et al. (2020) highlight the common connection to the land that natural scientists and Indigenous communities share while also clearly illustrating the historical limitations and improvement needed for training of natural scientists on Indigenous history, rights, worldviews and ways to ethically conduct environmental research in relation with First Nation communities and traditional territories. At Nipissing University, faculty across both Environmental Sciences and Environmental Studies have built long term community engagement with regional First Nation communities of Dokis and Nipissing First Nations, collaborating in teaching and research. Discussion of environment and indigenous worldviews and practices are embedded in existing courses like GEOG 2226 (Environment & Society) and GEOG 4437 Hazards Geography (e.g. Indigenous fire management). Botany field courses BIOL

2447 (Ecology of Northern Trees and Forests) and BIOL 3066 (Flora of Northern Ontario) highlight intersections of western science with Traditional Ecological Knowledge (TEK) with field assignments on plants important to Indigenous peoples. Courses like GEOG 3066 and 3066 (Remote Sensing of the Environment) showcase collaborative use of applied science with regional First Nation communities (e.g. application of remote sensing with Dokis FN partners. Courses such as BIOL 3066 and BIOL 3007 [Environmental Issues in Forestry]) often have a community service-learning component which have included partnerships with Wolf Lake First Nation and Nipissing First Nation and the Nipissing University Herbarium specializes in plants used by Indigenous people with specimens coded as medicinal and/or food plants.

*Bozhkov et al. 2020. Arte the natural sciences ready for truth, healing and reconciliation with Indigenous peoples in Canada? Exploring 'settler readiness' at a world-class freshwater research station, J Env. Studies and Science, 10:226-241; <https://doi.org/10.1007/s13412-020-00601-0>; Wong et al. 2020. Towards reconciliation: 10 Calls to Action to natural scientists working in Canada. FACETS, 5(1). <https://doi.org/10.1139/facets-2020-0005>.

¹ Eco Canada is a Not-for-profit organization established in 1992, that develops certification and training in support of Canada's environmental sector. Their most recent reporting on the environment labour market includes: From Recession to Recovery: Environmental Jobs and Hiring Trends in the Decade Ahead, September 2020, 36p.

² Environment and Climate Change Canada website includes reporting on the first annual report of this framework (Dec 2017). <https://www.canada.ca/en/environment-climate-change.html>

Ballew, M., Marlon, J., Rosenthal, S., Gustafson, A., Kotcher, J., Maibach, E., & Leiserowitz, A. (2019). Do younger generations care more about global warming? Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication. <https://climatecommunication.yale.edu/publications/do-younger-generations-care-more-about-global-warming/>

Interdisciplinary Land-Based Program Design & Experiential Learning

The program design draws on a core set of science requirements (environmental science, biology, chemistry, geography, mathematics, geomatics) common to all students. Students will select upper year courses from across science disciplines, organized in three groups:

- (A) Environmental Life Sciences,
- (B) Environmental Physical Sciences, and
- (C) Applied Environmental Sciences, Techniques and Experiential learning.

Experiential learning opportunities are supported by a broad range of existing options and established community partners. Course content introducing science students to indigenous knowledge and relationships with the environment in parallel with western scientific methods and perspectives will be built into two upper year courses, supported by faculty and community partners. A certificate in Environmental Chemistry will allow students to obtain an additional qualification to satisfy academic or professional interests. We outline changes to the existing minor in Environmental Science for consistency with the proposed major, specialization and honours specialization. By integrating biology, chemistry, environmental science, and geography courses, future students will be equipped with skills relevant to solving environmental related problems from an interdisciplinary approach, a demand from across environmental-related sections.

While northern in location, the program will connect to the global community through international partnerships and a mix of domestic and international students. Despite challenges in growth projections

in the region, new professional and science programming across northern Universities are showing positive growth. Societal demand (including international students) suggests we could build enrollments from 20 to 52 students/yr over 5 years (50% international students) and generate ~ \$251K to \$2.06 million per year in revenue. Estimated program costs (\$36-95K/yr) suggests strong program viability with estimated surpluses of \$200K to \$1.93 million per year.

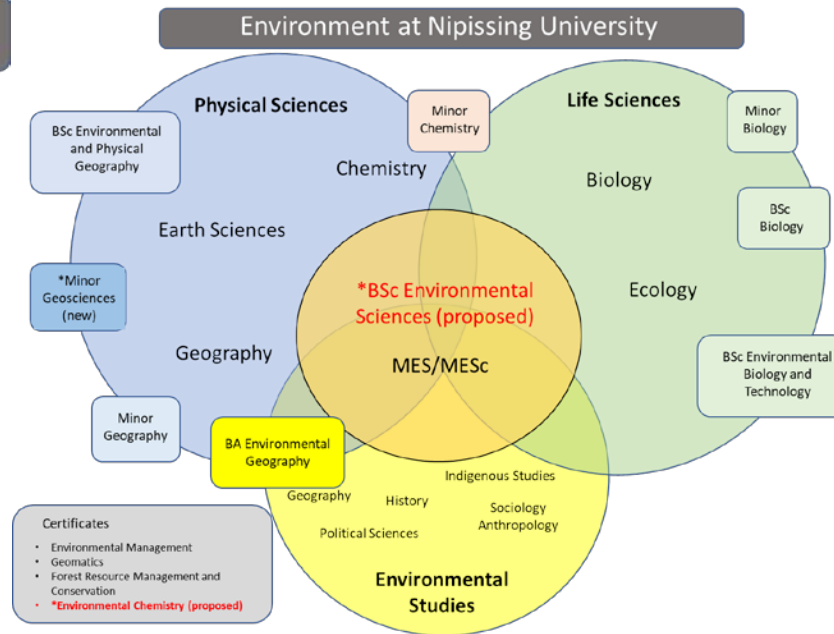
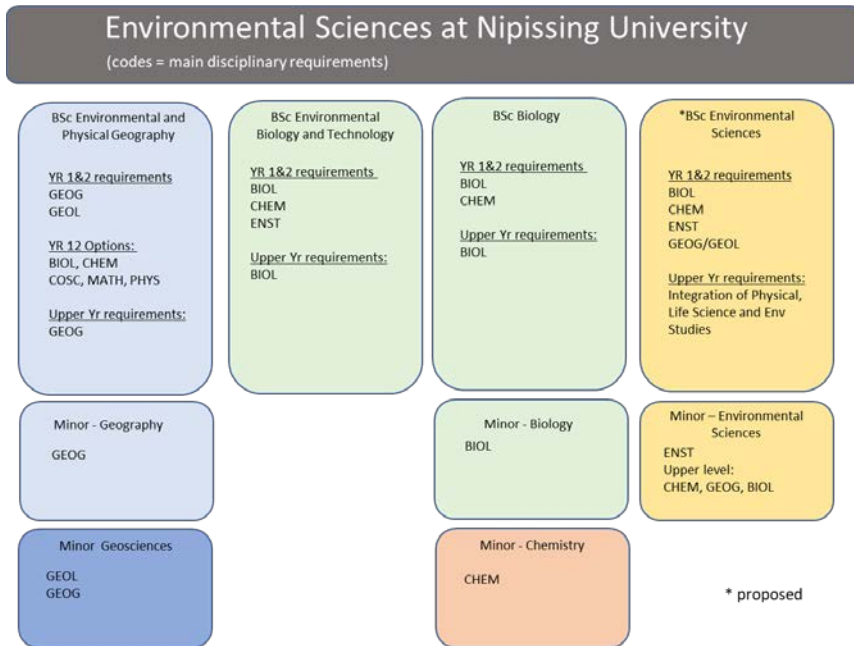


Figure 1. Existing majors and minors defining Environmental programs at Nipissing University (left) and conceptualization of the proposed BSc Environmental Sciences (right) in relation to existing environmental-science related programs. Asterisks indicate new or proposed programs.

1.2 Appropriateness of Degree Nomenclature

The degree name 'Environmental Sciences' reflects the focus on the biological, chemical, physical, earth sciences principles and processes, mathematics and data sciences as they apply to environmental problems, their solutions and preservation and management of natural resources³. It distinguishes itself from 'Environmental Studies', which, while related, explores the environment from humanities and social sciences perspectives and is the focus of a separate program proposal in development. As noted above, the interdisciplinary Environmental Sciences program will support qualification to satisfy academic or professional interest in Environmental Chemistry, a broad and interdisciplinary field that focuses on applying chemistry to the study of the environment.

The Environmental Sciences program is proposed as a distinct science program to complement existing NU science programs which are disciplinary-focused (Figure 1). The BSc in Biology allows students to specialize in ecological and environmental forms of Biology or health-related Biology. The BSc in Biology and Environmental Technology specializes in providing students with the knowledge and skills required to study Environmental Biology, and combines three years of study at Nipissing University with the one year practical and technical skills taught at Canadore College. The Bachelor of Science in Environmental and Physical Geography focuses on geography as an earth science with geography-specific courses to study environmental characteristics like water, landforms, vegetation and climate and the relationships between people and the environment. The most recent IQAP review of Environmental and Physical Geography showed a strong positive review with no recommendations on structural change to this degree program and consistently recruits majors. The BSc Environmental Sciences lies at the interface of these programs, distinct in its foundational requirements, and while allowing student flexibility in upper years, requires a much broader cross-disciplinary training than any of the existing programs (Figure 1). The addition of the BSc Environmental Sciences will attract a new student audience while supporting established programs by using existing faculty and repackaging of courses (almost 100% overlap).

1.3 Consistency of the Program with the Institution's Mission and Academic Plans

Over the last 15 years, Nipissing University has invested heavily in the areas of Environment, building excellence in both teaching and research. In addition to supporting discipline-based science programs, current programming includes a minor in Environmental Sciences and the Masters of Environmental Studies/Masters of Environmental Sciences joint program, approved in 2011, and resulting from a decade of ongoing interdisciplinary dialogue within the Departments of Geography, Biology and Chemistry, and History (Figure 1). The investment in these interdisciplinary programs are showcased in the 2019-2024 Research Plan highlighting the importance of equipping students with skills by which to consider environmental challenges through consideration of multiple perspectives.

³Gregory. 2009. Environmental Sciences *in* Environmental Sciences: A Student's Companion. SAGE Publications, Ltd, p. 25-31. Online ISBN: 9781446216187. Gregory (2009) provides discussion of the definitions of Environmental Sciences. Here, we cite the definition of Matthews, 2001: "...The recently emerging, interdisciplinary field of scientific study examining the complex interactions of human beings with the natural environment in which they live...Because modern environmental problems cannot be satisfactorily remedied by the application of any one disciplines, environmental science is based on a number of scientific disciplines (including chemistry, biology, physics, geography, geology, hydrology, ecology, meteorology, and oceanography) and social science disciplines such as economics and social policy..."

Focus on the Environment has included attraction of two Tier II Canada Research Chairs in Watershed Hydrology (2010-2020) and Environment History (2014-2019), and A Forest Bioproducts Research Chair supported by the private sector (Tembec). In winter 2021, we selected a nominee for a third Tier II CRC in Climate and Environmental Change, with particular expertise in disturbance (e.g. climate, land-use, fire) in Boreal and Subboreal watersheds, water quality and reactive transport. Environment-related faculty have attracted federal (FedNor) and provincial (NOHFC) government funding partnerships, tri-council grants related to the environment (SSHRC, NSERC), addition/clustering of new faculty with environment-related interests, and expansion of laboratory facilities dedicated to the study of the environment. Overall, environmental-sciences faculty (contributing faculty listed in Table 7, with CVs provided in Appendix 6) have attracted ~\$5.2 million dollars in external grant funding since 2009-10⁴.

The 2019-2024 Strategic Plan includes a commitment to providing students with a personalized learning experience and undergraduate research. The proposed Environmental Sciences program will provide undergraduate students with an interdisciplinary program bridging the existing (revised) Minor and preparing them for potential pathway for environment-focused professions. Environmental-science related jobs are expansive across sectors, regions and occupations across Canada and internationally (see Appendix 4 for an extensive listing, Section 8.2). The most recent labour demand report from Eco Canada (September 2020) estimates 1 in every 30 people employed in Canada are environmental workers, with "...nearly half requiring environmental-specific knowledge, skills or experience..."⁵. Regionally, training will prepare students to work with community partners such as provincial ministries (e.g. Ontario's Ministry of Environment, Conservation and Parks and Ministry of Natural Resources, Forestry and Mining), Conservation Authorities (e.g. North Bay-Mattawa Conservation Authority, Conservation Sudbury), municipalities (e.g. North Bay Police), regional First Nation communities (Dokis First Nation, Nipissing First Nation, regionally-based environmental consultants and businesses (e.g. Near North labs) and others. Training will also be consistent with a pathway to graduate studies, including Nipissing's MES/MESc program.

One of the NU's goals involves strategic growth in enrollment. The Honours Specialization, Specialization, Major and Minor in Environmental Sciences have high potential of attracting a new cohort of students to Nipissing University focused on the environment. Development of environmental sciences carries a very high potential of attracting international students.† During the 2020-2025 SMA, Nipissing is investing significantly in both international recruitment and creation of international opportunities for domestic students. Recent agreements with international universities with strong environmental science-related programming (e.g. Tec University in Coast Rica - TEC Tecnológico de Costa Rica, and University of Tocantins (Brazil) will support a growing demand for training of international students in the environmental sciences and will support internships and semesters abroad for Nipissing students. In the proposed budget (Table 8), we have targeted half of new incoming students to be international students.

Projected new total enrollments building from 20 to 52 students/yr over 5 years, would generate ~ \$251K/yr to \$2.06 million/year in revenue and result in estimated surpluses of \$200 K/yr to \$1.93 million/yr. Development of an Environmental Science program would also further strengthen future development of an Environmental Engineering program.

⁴ Information received from the Research office, 10 September, 2021. ⁵ Eco Canada is a Not-for-profit organization established in 1992, that develops certification and training in support of Canada's environmental sector. Their most recent reporting on the environment labour market includes: From Recession to Recovery: Environmental Jobs and Hiring Trends in the Decade Ahead, September 2020, 36p.

†Recent (2018/19 to 2019/20) increases at Lakehead and Algoma in environment-related programming were 31 and 58 students, respectively, with 12% and 77% of changes attributed to international students.

1.4 Consultation

In December 2020, the ad hoc Environmental Science Program committee was formed with representatives from Geography, Biology and Chemistry, Mathematics and Computer Science to oversee the conceptual development and drafting of the Stage 1 LOI and subsequently the Stage 2 proposal. This team includes two Departmental Chairs (Geography and Biology and Chemistry), the MES/MESc graduate program coordinator, and five additional faculty directly involved in writing past submissions of LOIs and/or Stage 2 application for majors in both Environmental Science and in Environmental Chemistry. This proposal unites many common interests across contributing disciplines, including addressing low enrollments in upper level science courses in Chemistry and Physical Geography by building a broad program that allows students new opportunities for study of the environment. The new program will stand as a broad offering distinct from existing science programs in Biology and Geography and supports a new certificate in Environmental Chemistry (Figure 1). The program design was drafted during Spring/Summer 2021 with informal reviews/feedback from the Dean of Arts & Science Office. Consultation with the Institutional Planning Office, International Office, and Library Services have provided information supporting estimates of enrollments and program costs. Consultation with Graduate Studies and Research has provided summaries of external grant funding awarded to environmental-science faculty. Contributing science faculty have provided listing of recent and active community partners that have supported student training through experiential learning opportunities (e.g. internships, undergraduate research). Consultation with Indigenous Studies faculty has provided early ideas on integration of Indigenous worldviews and traditional ecological knowledge in two proposed new courses (field studies and 4th yr capstone course).

2.0 Admissions and Enrollment

1.1 Admission Requirement

Students must present The Ontario Secondary School Diploma (OSSD), with 6U/M courses in English, Mathematics (Calculus & Vectors or Advanced Functions), Chemistry, and one of Biology, Physics or Earth and Space Sciences. There are no prerequisites for introductory-level Biology, Geography and Environmental Science courses. The above requirements are appropriate as the core program requirements span biology, geography and chemistry. Students transferring from another university may apply for transfer credits. As well, pathways for students with college diplomas wishing to join the Environmental Science program will be made available (consultation with the registrars' office has been conducted). This may facilitate attracting mature students from northern colleges such as Canadore, Cambrian as well as colleges with strong Environmental technician programs (e.g. Fleming). The credits transferred will be assessed on an individual basis.

1.2 Enrollment Planning

- a) Table 1 provides the anticipated enrolment from the initial year through year 4 (maturity) as included in the business model prepared in consultation with the Planning office (Figure 8).

Table 1. Anticipated enrollment in the BSc Environmental Sciences (domestic + international)

	Cohort Yr 1	Cohort Yr 2	Cohort Yr 3	Cohort Yr 4 / Maturity	Cohort Yr 5	Total Enrolment	Yr. of Program Maturity
Yr 1: 2022-2023	20					20	4
Yr 2: 2023-2024	28	18				46	4
Yr 3: 2024-2025	36	25	17			78	4
Yr 4: 2025-2026	44	32	24	16		117	4

- b) How proposed program plans supporting the anticipated class sizes shown in the Table above: During the first through the third year of the program, the anticipated class sizes, in most cases, can be accommodated in the existing lecture-based courses. Some adjustment for courses with labs might be expected and could be done by addition of an extra lab section.
- c) How the enrolment fit within the University's total enrolment forecasts set out in the University's (Strategic Mandate Agreement)? Nipissing University's projected undergraduate enrollments (FFTE) as set out in the available University's SMA (2020-2025) currently estimates low domestic growth (Table 2). Addition of a new Environmental Science program at Nipissing, attracting both domestic and international students, could contribute to Nipissing growing, increasing enrollments on the order of ~ 3%, and moving towards its capacity of 6,500 students, as identified in its Academic Plan. During the 2020-2025 SMA, Nipissing is investing significantly in international recruitment. Recent agreements with international universities with strong environmental science-related programming (e.g. Tec University in Coast Rica - TEC Tecnológico de Costa Rica, and University of Tocantins (Brazil) will support new student enrollments as well as international exchanges and internships. Assuming 50% of students are international, it is estimated this program will generate revenue ~\$2.06 million/yr in year 5 (see Table 8 for detailed program revenue and cost structure).

Table 2. Projected Undergraduate Fiscal Full-Time Equivalent (FFTE) (domestic)

	2020-21	2021-22	2022-23	2023-24	2024-25
Undergraduate FTE	4,095	4,055	4,105	4,105	4,105

3.0 Program Structure & Curriculum

Program structure has been designed with close examination of comparators across Ontario Universities and with assessment of Nipissing’s existing strengths and unique connections to the region and community partners. Environmental Science programming across Ontario Universities have foundational requirements across the sciences at first and second year levels which supports interdisciplinary training distinct from existing disciplinary science programs. This is reflected in the proposed design of a total of 21 credits of science at the introductory level.

3.1 Program Requirements

For an **Honours Specialization** in Environmental Science, students must achieve a minimum of 70% overall average in 60 credits from core courses (see astericks* in Tables below), including at least six credits at the 4000-level, and an overall average of 60%. Students must complete a total of 120 credits as per listing below. The 12 courses from Groups A, B, and/or C must include a minimum of 1 from each Group, with a minimum of 6 credits at the 4000 level. Students in the program are required to take a minimum of 2 from identified experiential learning (indicated by ** in approved Environmental Science Course List).

<u>YR 1</u>	BIOL 1007 - Introduction to Organismal and Evolutionary Biology CHEM 1006 - General Chemistry I CHEM 1007 – General Chemistry II GEOG 1017 - Introduction to Physical Geography ENSC 1006 - Introduction to Environmental Science <i>One of:</i> GEOL 1006 - The Earth’s Interior GEOL 1007 - Surficial Geology PHYS 1006 - General Physics 1: Mechanics BIOL 1006 - Introduction to Molecular and Cell Biology <i>One of:</i> MATH 1257 - Technical Statistics MATH 1036 - Calculus 1 COSC 1557 - Introduction to Computer Science COSC 1567 - Programming in C++ ACAD 2 Elective	3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr.
<u>YR 2</u>	<u>Foundation of ‘Spheres’ (4):</u> *BIOL 2446 - Principles of Ecology *GEOG 2107 - Weather and Climate * <i>One of:</i> BIOL 2836 - Invertebrate Zoology BIOL 2837 - Vertebrate Zoology BIOL 2336 - Biology of Seedless Plants BIOL 2337 - Biology of Seed Plants * <i>One of:</i> GEOG 2126 - Physical Hydrology BIOL/GEOG 3397 - Intro Soil Science GEOG 2106 - Landscape and Surface Processes <u>Techniques (2)</u>	3 cr. 3 cr. 3 cr. 3 cr. 3 cr.

	*GEOG 2017 - GIS and the Earth from Space <i>One of:</i> BIOL 3117 Biostatistics GEOG 2026 Introduction to Quantitative Methods <u>Chemistry (2)</u> *CHEM 2106 - Analytical Chemistry - Introduction <i>*One of:</i> CHEM 2046 - Environmental Analytical Chemistry CHEM 2056 - Introduction to Physical Chemistry CHEMC 2306 - Introduction to Organic Chemistry I *GEOG 2226 - Environment and Society 1 Elective	3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr.
Yr 3	*ENSC 3XXX - Environmental Field Studies (NEW) *5 from Groups A (Physical Sciences), B (Life Sciences) and/or C (Applied/Techniques). Minimum of 1 from each group. 4 Electives	3 cr. 15 cr. 12 cr.
Yr 4	*ENSC 4900 - Environmental Seminar (NEW) *5 from Groups A, B, and/or C with a minimum of 3 upper-level experiential learning courses (indicated by **). 4 Electives	3 cr. 15 cr. 12 cr.

For the **Specialization** in Environmental Science, students must achieve a minimum of 60% overall average in 54 credits from core courses (see asterisks* in above Table) and an overall average of 60%. Students must complete a total of 120 credits. The course listing is identical to the above table with the exception of reducing core course requirements from 5 to 4 for Yrs 3 and 4. The 8 courses from Groups A, B, and/or C must include a minimum of 1 from each Group. Students in the program are required to take a minimum of 1 from identified experiential learning (indicated by ** in approved Environmental Science Course List).

For the **Major** in Environmental Science, students must achieve a minimum of 60% overall average in 36 credits from core (asterisk in Table below) and an overall average of 60%. Students must complete a total of 90 credits as per listing below. The 6 courses from Groups A, B, and/or C must include a minimum of 1 from each Group.

YR 1	BIOL 1007 - Introduction to Organismal and Evolutionary Biology CHEM 1006 - General Chemistry I CHEM 1007 – General Chemistry II GEOG 1017 - Introduction to Physical Geography ENSC 1006 - Introduction to Environmental Science <i>One of:</i> GEOL 1006 - The Earth's Interior GEOL 1007 - Surficial Geology PHYS 1006 - General Physics 1: Mechanics COSC 1567 - Programming in C++ <i>One of:</i> MATH 1257 - Technical Statistics MATH 1036 - Calculus 1 COSC 1557 - Introduction to Computer Science ACAD	3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr.
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	2 Elective	6 cr.
YR 2	*BIOL 2446 - Principles of Ecology *GEOG 2107 - Weather and Climate *GEOG 2017 - GIS and the Earth from Space *CHEM 2106 - Analytical Chemistry - Introduction *GEOG 2226 - Environment and Society <i>One of:</i> BIOL 3117 - Biostatistics GEOG 2026 - Introduction to Quantitative Methods 4 Electives	3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 12 cr.
Yrs 3&4	*ENSC 3XXX - Environmental Field Studies (NEW) *6 from Groups A (Physical Sciences), B (Life Sciences) and/or C (Applied/Techniques). Minimum of 1 from each group. 3 Electives	3 cr. 18 cr. 9 cr.

For the **Minor** in Environmental Science, students pursuing a program of study in a different discipline need to achieve a minimum 60% average in the 18 credits as per listing below. The four courses from Groups A, B, and/or C must include a minimum of 1 from each Group.

YR 1	ENSC 1006 (3 cr) One of (3 cr): BIOL 1007 Organismal/Evol CHEM 1006 – Gen Chem 1 GEOG 1017 Intro Phys Geog 4 from Groups A (Physical Sciences), B (Life Sciences) and/or C (Applied/Techniques). Minimum of 1 from each group.	3 cr. 3 cr. 12 cr.
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For the **Certificate in Environmental Chemistry**, students must complete the following 15 credits:

CHEM 2106	An Introduction to Analytical Chemistry	Stephen	3 cr.
CHEM 2306	Introduction to Organic Chemistry I	Mukund	3 cr.
CHEM 2406	Environmental Analytical Chemistry	Stephen	3 cr.
Plus six credits from the following list			
CHEM 2307	Introduction to Organic Chemistry II	Mukund	3 cr.
CHEM 3017	Instrumental Analysis	Stephen	3 cr.
CHEM 3026	Organic Structure Determination	Mukund	3 cr.
BIOL/CHEM 4347	Chemistry in Life Sciences	Mukund	3 cr.
CHEM 4206	Electroanalytical Chemistry	Stephen	3 cr.
GEOG 4326	Env Hydrology	James	3 cr.
GEOG/CHEM/BIO 4XXX	Biogeochemistry (proposed)	CRC	3 cr.

University Degree Requirements beyond the program requirements.

The above program structure accommodates the breadth requirements that are listed below. We propose that the rule requiring ‘an additional minimum of 12 credits in a science discipline in an area other than that of the area of study’ be disregarded for this degree program due to its multi- and interdisciplinary design across the sciences.

Breadth Requirements and Electives:	9 courses or 27 cr.
ACAD 1601	3 cr.
Humanities (Group I)	3 cr.
Social Science (Group II) and/or Professional Studies (Group IV)	6 cr.

Additional requirements applicable to the program – Experiential Learning Courses.

- GEOG/BIOL/CHEM 4995 -Thesis is restricted to students in the fourth year of an Honours program with a minimum 70% overall average and approval of the discipline is required prior to registration. Students wishing to take this course during the following Spring/Summer or Fall/Winter Session must apply in writing to the discipline no later than February 15.
- GEOG /BIOL/CHEM 498 - Directed Study is restricted to students in the fourth year of an Honours program with a minimum 70% overall average and approval of the discipline is required prior to registration. Students wishing to take this course during the following Spring/Summer or Fall/Winter Session must apply in writing to the discipline no later than February 15.
- GEOG/BIOL/CHEM 4886 Internship I is restricted to students in the third or fourth year of an Honours program with a minimum 70% overall average in the program. Approval of the internship placement organization is required prior to registration. Students wishing to take this course during the following Spring/Summer or Fall/Winter Session must apply in writing to the Department Chair no later than February 15.
- Three field camps are offered: GEOG 4976 Physical Geography Field Camp; BIOL 4976 Biology Field Camp; BIOL 4997 Freshwater Biology Field Camp.

New and Repurposed courses required for this program.

The program proposes revision of one first year course, development of two new courses, and a repurposing of one existing course. The current ENSC 1005 (Introduction to Environmental Science) will be revised from a 6 cr to a 3 cr offering (and renamed ENSC 1006). Once revised, prerequisites for GEOG 2226 (Environment and Society), a required core course, can be reevaluated. A 3rd year Environmental Studies course is proposed to integrate field methods, including indigenous-based methods, in collaboration with Indigenous Studies and existing community partners such as Nipissing First Nation and Dokis First Nation. The existing GEOG 3016 - Field Techniques in Geography will be redesigned and renamed for this purpose. A 4th year capstone seminar course will be designed, also in consultation with the above groups and the proposed BA Environmental studies program. A new Biogeochemistry course (upper-year level) is proposed, inline with the addition of the expertise of

the anticipated CRC Climate and Environmental Change. Additional new courses include thesis and internship versions for CHEM.

List of Approved Environmental Science Courses

Underlines = existing courses not offered recently or ever.

Yellow = new/proposed

† = also listed as a choice under additional requirements.

** = upper-level experiential learning courses (Internship, thesis, directed study, field camp).

Group A: Physical Environmental Sciences

GEOG 2126 Physical Hydrology[†]
GEOG 2106 Landscape and Surface Processes[†]
BIOL/GEOG 3397 Intro Soil Science[†]
GEOG 3436 Earth Resources
GEOG 4116 Pleistocene & Glacial Geomorphology
GEOG 3057 Environmental Geomorphology
GEOG 3126 Applied Hydrology Snow and Ice
GEOG 4437 Hazards Geography
GEOG 4247 Environment Modeling
GEOG 4096 Environmental Hydrology
GEOG 4976 Physical Geography Field Camp**
CHEM 2207/BIOL 2207 Intro to Biochemistry
CHEM 2046 Environmental Analytical Chemistry[†]
CHEM 2056 Physical Chemistry[†]
CHEM 2306 Intro to Organic Chemistry I[†]
CHEM 2307 Intro to Organic Chemistry II
CHEM 2407 Inorganic Chemistry I
CHEM 3017 Instrumental Analysis
CHEM/BIOL/GEOG Biogeochemistry (NEW)
CHEM 4206 Electroanalytical Chemistry

Group B: Life Sciences

BIOL 2836 - Invertebrate Zoology[†]
BIOL 2837 - Vertebrate Zoology[†]
BIOL 2336 - Biology of Seedless Plants[†]
BIOL 2337 - Biology of Seed Plants[†]
BIOL 2447 Ecology of Ontario Trees and Forests
BIOL 3066 Flora of Northern Ontario
BIOL 3236 Plant Ecology

GEOG 3086 Principles of Biogeography
BIOL 3277 Animal Ecology
BIOL 3136 Ichthyology
BIOL 3147 Herpetology
BIOL 3596 Ornithology
BIOL 3696 Field Ornithology
BIOL 4107 Limnology
BIOL 4357 Chemical Ecology
BIOL 4437 Landscape Ecology
BIOL 4607 Environmental Biology Seminars
BIOL 4976 Biology Field Camp **
BIOL 4997 Freshwater Biology Field Camp **

Group C: Techniques, Applied Environmental Sciences and Experiential Learning

ENSC 2006 Global/ International Topics Env Sci
ENSC 2007 Canadian Topics Env Sci
BIOL 2346 Techniques Forest Ecol & Management
GEOG 3066 Remote Sensing of the Environment
BIOL/CHEM 4347 Chemistry in Life Sciences
CHEM 3026 Organic Structure Determination
BIOL 3436 Conservation Biology
BIOL 3447 Silviculture
BIOL 3717 Animal Behaviour
BIOL 4506 Special Topics in Applied Ecology
GEOG 4057 Topics in GIS Applications
GEOG 4066 Topics Remote Sensing App
GEOG 4016 Terrain Analysis
GEOG 4027 Spatial Computing
BIOL/ GEOG 4886 Internship I (Add CHEM)**
BIOL/ GEOG 4986 Directed Study (Add CHEM)**
BIOL /GEOG 4995 Thesis (Add CHEM)**
BIOL 4706 Literature Research and Seminar (Add CHEM)**

3.2 Program Content

a) Evidence of a program structure that will ensure the intellectual quality of the student experience.

The BSc Environmental Science program is structured to include:

- A set of core requirements that allow students to build fundamental scientific knowledge in biology, environmental science, data science, chemistry, geography, physics and earth sciences, and mathematics.
- A sequence of interdisciplinary courses that prepare students to appreciate the inherently complex and interdisciplinary nature of environmental issues. This includes courses at the introductory level (e.g. ENSC 1006 – Introduction to Environmental Sciences), the second year (GEOG 2226 - Environment and Society), the third year (ENSC XXXX - Field Studies in the Environment) and a capstone course (ENSC 4900 - Honours Seminar) which unites BSc Environmental Science students and BA Environmental Studies students in a seminar-based course.
- Dedicated experiential learning courses including field camps, internship opportunities, directed study and a thesis option, will allow students a range of experiences in projects, applications and research in environmental sciences.
- Electives that allow students freedom to build unique and complimentary elements based on their interests. These can include complimentary Environmental Studies courses but also recognizes that we cannot fully anticipate the linkages needed to support students in the workplaces of the future.

b) Identify ways in which the curriculum addresses the current state of the discipline or area of study.

In design, this program recognizes definition of Environmental Sciences as both the “..interdisciplinary field of scientific study examining the complex interactions of human beings with the natural environment in which they live...” and “...the sciences concerned with investigating the state and condition of the Earth...” (Gregory, 2009). Additional discussion provided here highlights the current state of interdisciplinary teaching and research. Our use of “interdisciplinarity” is tied to the idea of creating teaching opportunities and research programs that rely on the integration of ideas, methods, philosophies, and dissemination strategies between multiple “traditional” disciplines. Scholars working on global environmental change research are increasingly seeing the value of collaborating on projects involving integrative methodologies in the geophysical and biophysical sciences, social sciences, and humanities to solve environmental problems such as climate change, deforestation, soil erosion, water pollution, and loss of biodiversity.⁶

⁶For examples, see: Pastore et al., “Tapping Environmental History to Recreate America’s Colonial Hydrology,” *Environmental Science and Technology* 44, no. 23 (2010): 8798–8803; Kelly, Morgan, Cormac Ó Gráda, Sam White, Ulf Büntgen, Lena Hellmann, and Jan de Vries. “The Little Ice Age: Climate and History Reconsidered.” *Journal of Interdisciplinary History* 44 (2014): 301–77; Carey, Mark, Olivia C Molden, Mattias Borg Rasmussen, M Jackson, Anne W Nolin, and Bryan G Mark. “Impacts of Glacier Recession and Declining Meltwater on Mountain Societies.” *Annals of the American Association of Geographers* 107, no. 2 (2017): 350–59.

⁶Livingstone, David. *The Geographical Tradition: Episodes in the History of a Contested Enterprise*. Oxford; Cambridge, MA: Wiley-Blackwell, 1992. Withers, Charles W J. “Geography’s Narratives and Intellectual History.” In *The SAGE Handbook of Geographical Knowledge*, edited by John Agnew and David Livingstone, 39–50. London: SAGE, 2011

Prior to the term's first official appearance in print in 1972, interdisciplinary approaches were being defined in higher-education texts in increasing numbers in the late 1960s and early 1970s.⁷ This was a time when, according to Asa Knowles, "existing patterns of higher education were being criticized by university teachers and students alike," demanding radical changes to research practice and, more commonly, teaching methods. This was also when the fields of environmental studies and environmental sciences emerged as scholarly fields of inquiry within the context of the environmental movement.

When first conceived, "environmental studies" (ENST) grew out of "environmental sciences" (ENSc) as an interdisciplinary field of study which attempted to measure and evaluate the impact of humans on the structure and function of social and ecological systems, and which focused upon the management of these systems for their benefit and survival (Barrett and Puchy 1975)⁸. Today, the two environmental fields are often located in separate faculties divided by the Social Sciences and Humanities, and the Geophysical Sciences (Cooke and Vermaire 2015)⁹. This traditional boundary has also been reinforced by government funding opportunities, both in terms of university administration and granting agencies (e.g., in Canada the Social Sciences and Humanities Research Council versus the Natural Sciences and Engineering Research Council). At Nipissing, the Arts and Sciences are placed together in a single faculty, and faculty are clustered, but not exclusively located, according to the department they teach in. This facilitates communication among faculty teaching in different disciplinary areas.

Some of the keys to establishing successful interdisciplinary programming at Linköping University in Sweden and at the University of British Columbia were outlined by Oberg (2011)¹⁰ as follows: maintain an open and respectful climate, remove hierarchies that impair, acquire deep understanding of the research process, strengthen metacompetence, emphasize a dialogue and feedback approach. Nine of the 18 the faculty listed in support of this proposal (Table 7) are also associated with the Masters of Environmental Studies/Masters of Environmental Sciences graduate program, established in 2012 and have been actively involved in attempting to promote all of these aspects of research and teaching in our programs. While the Environmental Sciences program described here highlights strategies across "traditional" science disciplines, the program design integrates broader reach beyond the sciences and its world views in required courses in the second (GEOG 2226 Environment and Society), third (ENSC XXX – Field Studies) and 4th year levels. At the fourth year level BSc students will unite in an Honours Seminar course with students from the companion B.A program in Environmental Studies.

⁷ Asa S Knowles, "Interdisciplinarity," *The International Encyclopedia of Higher Education* (ERIC, 1977), 2208. Other discussions on the history of the term include: Julie Thompson Klein, *Interdisciplinarity: History, Theory, and Practice* (Detroit: Wayne State University Press, 1990); Allen F Repko, *Defining Interdisciplinary Studies, Interdisciplinary Research: Process and Theory* (Thousand Oaks, CA: Sage Publications Inc., 2008)

⁸ Gary W. Barrett & Claire A. Puchy, "Interdisciplinarity: Process and Theory" (Thousand Oaks: Sage, 2012). *Environmental science: A new direction in environmental studies,* *Journal International Journal of Environmental Studies* 10, 2 (1977): 157-160

⁹ Steven J. Cooke & Jesse C. Vermaire, "Environmental studies and environmental science today: inevitable mission creep and integration in action-oriented transdisciplinary areas of inquiry, training and practice," *Environmental Studies and Science* (2015) 5:70–78

¹⁰ Oberg, G. 2011. *Interdisciplinary Environmental Studies: a Primer*. Wiley-Blackwell. West Sussex, UK

- c) Identification of any unique or program innovations or creative components.

The BSc. Environmental Science offers unique elements of interdisciplinary training across the environmental sciences and regional-specific experiential learning opportunities that are supported by faculty and existing undergraduate programs. These include community engagement with regional First Nation Communities (e.g. Dokis and Nipissing First Nations), site visits with scientists/researchers at government-based organizations with which faculty have active research collaborations (e.g. North Bay-Mattawa and Sudbury District Conservation Authorities, Ministry of Environment, Conservation and Parks's Dorset Environmental Science Centre, Agriculture and Agri-Food Canada, Ministry of Natural Resources and Forestry, Living With Lakes Research Centre, Laurentian University, Ministry of Transportation) as well as guest speakers from a wide range of organizations (e.g. Ontario Power Generation) and University faculty from around the world (e.g. Michigan Technological University, Inner Mongolia Agricultural University, Hohhot China; University of North Karelia Joensuu, Finland). These opportunities are often integrated into existing undergraduate courses and the broad collaborative network supports a range of experiential learning opportunities such as practica, internships, international exchanges, study abroad programs, community outreach and involvement, and partnerships.

4.0 Experiential Learning Opportunities

Nipissing University's Academic plan emphasizes the student experience in the natural environment with outstanding spaces in which to live and learn, dedication to supporting scholarship and research, community engagement with strong connections between our campuses and community interests and our role as global citizens.¹¹

The dedicated experiential learning courses (Table 3) in the BSc Environmental Sciences integrate these strategic priorities giving students hands-on learning opportunities and meeting principles defining experiential learning and/or work-integrated learning¹². Courses include the required Environmental Field Studies (ENSC 3XXX) and upper-level options for thesis, directed study, internship and field camps (Table 3). Thesis, directed study and internship courses are existing courses for BIOL and GEOG and are proposed for CHEM 4-letter codes. Field camps are offered on campus and students may also substitute field camps from other institutions. Additional undergraduate courses offered across the environmental sciences from Groups A, B and C may also include experiential learning activities.

¹¹ Nipissing University Annual Academic Action Plan, 2019-2022. 5.6.2019 AV-M.

¹² MAESD's (Ministry of Advanced Education and Skills Development) Guiding Principles for Experiential Learning; Work integrated learning has been defined by the Business/Higher Education Roundtable of Canada (BHER).

Requirements for supervision of thesis and research opportunities are well established and require students to be supervised or co-supervised by a full-time faculty member. Approval of internship placement organizations are required prior to registration with students applying in writing to the Department Chair no later than February 15 for the following Spring/Summer of Fall/Winter session.

Anticipated increases in enrollments through this new program will require a support from a dedicated placement coordinator that could be shared across Arts and Science programs, including the MES/MESc graduate program which includes a Masters Research Project option. Table 4 provides examples of past and future internship placements.

Table 3. Description of dedicated Experiential Learning Courses

ENSC 3XXX	Environmental Field Studies	New	<p>This course introduces students to hand-on field-based approaches research, having students work in groups defining and conducting field-based projects.</p> <p>With the approval of the discipline, the student will individually plan and conduct a field and/or laboratory research project under the supervision of an appropriate faculty member. The student will also be required to present a seminar on the research, and to write the project up in dissertation form. All research projects must be supervised or co-supervised by a full-time faculty member. Student project proposals and final seminars will be reviewed or evaluated by Departmental Committee.</p> <p>Thesis is restricted to students in the fourth year of an Honours program with a minimum 70% overall average and approval of the discipline is required prior to registration. Students wishing to take this course during the following Spring/Summer or Fall/Winter Session must apply in writing to the discipline no later than February 15. 6 cr.</p>
GEOG/BIO/CHEM 4995	Thesis	Existing/ New to CHEM	<p>This course presents an opportunity for students to do special studies in the respective fields. The work is supervised by a faculty member who is qualified in the student's area of interest. Workload normally involves periodic discussions and a major essay.</p> <p>Directed Study is restricted to students in the fourth year of an Honours program with a minimum 70% overall average and approval of the discipline is required prior to registration. Students wishing to take this course during the following Spring/Summer or Fall/Winter Session must apply in writing to the discipline no later than February 15. 3 cr.</p>
GEOG /BIO/CHEM 498	Directed Study	Existing/ New to CHEM	<p>This course provides students with the opportunity to gain work experience with government, industry or non-governmental organizations having expertise in a relevant field of biology. Students are supervised by a faculty member in the Department of Biology and Chemistry and are expected to maintain an activity log, submit a final written report, and give a presentation to the Department at the end of the internship.</p> <p>Internship is restricted to students in the third or fourth year of an Honours program with a minimum 70% overall average in the program. Approval of the internship placement organization is required prior to registration. Students wishing to take this course during the following Spring/Summer or Fall/Winter Session must apply in writing to the Department Chair no later than February 15. 3 cr.</p>
GEOG/BIO/CHEM 4886	Internship I	Existing/ New to CHEM	<p>This course will consist of a one-week intensive field camp (held immediately prior to the fall session or during the spring or summer session) designed to familiarize students with organisms and environments. Emphasis will be placed on survey and sampling techniques. Materials and data collected in the field will be identified, analysed and used to develop a major report and presentation later in the term. The location and main theme of each camp (e.g. terrestrial or freshwater ecology) may vary with the instructor. Each student will be required to pay the</p>
BIOL 4976	Biology Field Camp		

costs of transportation, accommodation and meals associated with the field camp experience.
Restricted to students in the third or fourth year of the Honours Biology or Environmental Biology and Technology programs.

GEOG 4976	Geography Field Camp	<p>A specific area will be analysed from a geographic point of view in a one-week field camp. Follow-up readings, oral presentations and report writing are completed over the remainder of the term. This course will be held off campus. Each student is required to pay the costs of transportation, accommodation and meals. This course may be credited towards Science</p> <p>Restricted to students in the fourth year of an Honours program and approval of the discipline is required prior to registration. Prospective students must apply to the discipline by March of the preceding academic year. 3 cr.</p>
BIOL 4997	Freshwater Biology Field Camp	<p>This course offers students a one-week intensive, spring-time study of freshwater systems on the Nipissing University Alcan Environmental Research Preserve. Activities will include water and sediment sampling and analysis, aquatic community analyses, and instruction on study design and sampling methods. Data collected will be used to generate a major written report and public presentation. Each student will be required to pay the costs of transportation, accommodation, and meals associated with the field camp experience.</p> <p>Restricted to students in the third or fourth year of the Honours Biology or Environmental Biology and Technology programs. 3 cr.</p>

Table 4. Past and Potential Placements for Internships

Organization/Company	Website Address	Potential Number of placements per term	Location
NB/Mattawa Conservation Authority	https://www.nbmca.ca/	2-4	North Bay, ON
Conservation Sudbury	https://conservationsudbury.ca/	1	Sudbury, ON
Canadian Ecology Centre	https://www.canadianecology.ca/	2	Samuel de Champagne Park, Mattawa, ON
NB Water Treatment Plant	https://www.northbay.ca/services-payments/water-wastewater/water-wastewater-facilities/wastewater-treatment-plant/	1	North Bay, ON
FRICORP Ecological Services	http://fricorp.com/team	2	North Bay, ON
Hilliardton Marsh Research & Education Centre	https://thehilliardtonmarsh.com/	1	New Liskeard, ON
Ontario Ministry of Natural Resources and Forestry		1	North Bay, ON
Fur Harvesters Auction Inc.	https://www.furharvesters.com/	1	North Bay, ON
Dorset Environmental Science Centre, Ministry of Environment, Conservation and Parks		1	Dorset, ON
Ontario Ministry of Transportation		1	North Bay, ON
Ontario Crops Research Centre	https://www.uoguelph.ca/alliance/research-facilities/research-stations/ontario-crops-research-centre-sites/ontario-crops-research-5	1	New Liskard, ON
Nipissing Forest Resources Management Inc. (NFRM)	https://www.nipissingforest.com/	1	Callander, ON

5.0 Assessment of Student Learning

Tables 5 and 6 provided below provide description of program goals and learning objectives and curriculum mapping.

a) HONOURS SPECIALIZATION IN ENVIRONMENTAL SCIENCE

The minimum 70% overall average in 60 credits from core courses, including at least six credits at the 4000-level, and an overall average of 60% for the Honours Specialization appears a standard expectation with the requirements of other University's science Honours programs in Environmental Sciences. The expectation for a student to complete 120 credits is also in line with the University's expectation.

The proposed modes of delivery for the Honours Specialization program include lecture format, lab-based instruction in select classes across the sciences and experiential learning delivery which involves several delivery models (thesis, directed study, internship, field camps). The lab-based experiments and internships are particularly helpful in preparing students for the work-place. Students in the Honours program are provided with an option of fulfilling part of their 4th year requirements by doing a 4th year Thesis, particularly meaningful for students who intend to pursue graduate studies.

The standard methods for the assessment of student achievement depend on how each course instructor structures their class and include quizzes, tests, take-home assignments, and writing of lab reports. In some courses, students make group presentations in which comments are provided by the instructors and the rest of the audience. Such comments help students to improve on how they communicate their ideas in a clear and logical manner. Experiential learning opportunities require assessments from placement partners as well as self-assessment through reflective writing by the students themselves. For those students who do a thesis and/or internships, they will be assessed on how well they can make an oral-presentation of their research and/or work-experience.

b) SPECIALIZATION IN ENVIRONMENTAL SCIENCE

An overall average of 60% in 54 cr from core courses and an overall average of 60% for the Specialization in Environmental Science appears a standard expectation with the requirements of other University's science Specialization programs. The expectation for a student to complete 120 credits is also in line with the University's program expectations.

The proposed modes of delivery for the Specialization program include lecture format, lab-based instruction in select classes across the sciences and experiential learning delivery which involves several delivery models (directed study, internship, field camps). The lab-based experiments and internships are particularly helpful in preparing students for the work-place.

The standard methods for the assessment of student achievement depend on how each course instructor structures their class and include quizzes, tests, take-home assignments, and writing of lab reports. In some courses, students make group presentations in which comments are provided by the instructors and the rest of the audience. Such comments help students to improve on how

they communicate their ideas in a clear and logical manner. Experiential learning opportunities require assessments from placement partners as well as self-assessment through reflective writing by the students themselves.

c) MAJOR IN ENVIRONMENTAL SCIENCE

The minimum overall average of 60% in 36 cr from the core and additional requirement courses presented for the Major in Environmental Science is a standard expectation with the requirements of other University's science Major programs, as does the requirement of 90 credits.

The proposed modes of delivery for the Major include lecture format, lab-based instruction in select classes across the sciences and experiential learning delivery which involves several delivery models (directed study, internship, field camps). The lab-based experiments and internships are particularly helpful in preparing students for the work-place.

The standard methods for the assessment of student achievement include quizzes, tests, take-home assignments, and writing of lab reports. Experiential learning opportunities require assessments from placement partners as well as self-assessment through reflective writing by the students themselves. The lab-based experiments and internships will help prepare students for the work-place.

The standard methods for the assessment of student achievement depend on how each course instructor structures their class and include quizzes, tests, take-home assignments, and writing of lab reports. In some courses, students make group presentations in which comments are provided by the instructors and the rest of the audience. Such comments help students to improve on how they communicate their ideas in a clear and logical manner. Experiential learning opportunities require assessments from placement partners as well as self-assessment through reflective writing by the students themselves.

d) MINOR IN ENVIRONMENTAL SCIENCE

The proposed modes of delivery for the Minor (18 credits, 60% average) include lecture format, lab-based instruction in select classes across the sciences and experiential learning delivery which involves several delivery models (directed study, internship, field camps). The lab-based experiments and internships are particularly helpful in preparing students for the work-place.

The standard methods for the assessment of student achievement include quizzes, tests, take-home assignments, and writing of lab reports. Experiential learning opportunities require assessments from placement partners as well as self-assessment through reflective writing by the students themselves. The lab-based experiments and internships will help prepare students for the work-place.

The standard methods for the assessment of student achievement depend on how each course instructor structures their class and include quizzes, tests, take-home assignments, and writing of lab reports. In some courses, students make group presentations in which comments are provided by the instructors and the rest of the audience. Such comments help students to improve on how they communicate their ideas in a clear and logical manner. Experiential learning opportunities

require assessments from placement partners as well as self-assessment through reflective writing by the students themselves.
minimum

TABLE 5a: Program Goals & Learning Outcomes Aligned with Environmental Science Honours Specialization Degree Expectations

PROGRAM GOAL (PG)	ENVIRONMENTAL SCIENCE HONOURS SPECIALIZATION DEGREE EXPECTATION	STUDENT LEARNING OUTCOMES	ILLUSTRATIVE EXAMPLES FOR EACH HONOURS SPECIALIZATION PROGRAM GOAL – SHOWING ASSESSMENT METHODS
PG-1	To graduate students who can critically examine environmental processes and recognize their relevance to environmental issues	<ul style="list-style-type: none"> • Define key terms and concepts relevant to the environment and individual environmental processes (abiotic, biotic). • Demonstrate an understanding of the fundamental characteristics, structure and composition of different elements of the environment (abiotic, biotic) • Demonstrate an understanding of key processes that affect the environment (abiotic, biotic), and their variability (spatial, temporal) 	Goal to be assessed through: <ul style="list-style-type: none"> • Written lab reports • Tests and Quizzes • Class discussions
PG-2	To develop graduates who have a thorough understanding of how various forms of environmental change are arising, impacts being felt and how they can be mitigated	<ul style="list-style-type: none"> • Evaluate and analyze interactions between elements of the environment • Define key types/aspects of environmental change, both natural and man-made, and their impacts • Apply understanding of mitigation approaches and their relevance to contemporary environmental issues 	Goal to be assessed through: <ul style="list-style-type: none"> • Written lab reports • Tests and Quizzes • Class discussions
PG-3	To train graduates who can use an interdisciplinary scientific approach to the understanding and interpretation of their world	<ul style="list-style-type: none"> • Locate, interpret and appropriately use environmental observations. • Describe appropriate field and lab techniques used for data collection in the environment • Create and construct basic environmental sampling designs • Analyze different types of environmental data. • Apply understanding of environmental observations/measurements to current environmental problems. 	Goal to be assessed through: <ul style="list-style-type: none"> • Written lab reports • Tests and Quizzes • Class discussions
PG-4	To graduate students who are prepared to be independent researchers	<ul style="list-style-type: none"> • Demonstrate a sufficient ability to carry out research while observing laboratory and field safety protocols • Apply theory and practice in assigned lab or field-based experiments and/or investigations with accuracy, precision and appropriate design • Apply written and oral communication skills, appropriate for the various projects, necessary for the dissemination of research results 	Goal to be assessed through: <ul style="list-style-type: none"> • Planning and conducting a research project • Writing reports of findings • Presentation of findings to peers
PG-5	To develop graduates who have the full potential for pursuing further education, and also those that can pursue various careers with ease	<ul style="list-style-type: none"> • Clearly explain practical applications of the various projects/experiments • An accurate assessment of research-projects that have relevance to work place • Demonstrate ability to communicate ideas in a clear and logical manner • Apply and display technical skills (e.g. use of spreadsheets, statistical programs and/or computer programming) to analyze data collected from research 	<ul style="list-style-type: none"> • Planning and conducting a research project • Writing reports of findings • Oral presentations

TABLE 5b: Program Goals & Learning Outcomes Aligned with Environmental Science Specialization Degree Expectations

PROGRAM GOAL (PG)	ENVIRONMENTAL SCIENCE HONOURS SPECIALIZATION DEGREE EXPECTATION	STUDENT LEARNING OUTCOMES	ILLUSTRATIVE EXAMPLES FOR EACH HONOURS SPECIALIZATION PROGRAM GOAL – SHOWING ASSESSMENT METHODS
PG-1	To graduate students who can critically examine environmental processes and recognize their relevance to environmental issues	<ul style="list-style-type: none"> • Define key terms and concepts relevant to the environment and individual environmental processes (abiotic, biotic). • Demonstrate an understanding of the fundamental characteristics, structure and composition of different elements of the environment (abiotic, biotic) • Demonstrate an understanding of key processes that affect the environment (abiotic, biotic), and their variability (spatial, temporal) 	Goal to be assessed through: <ul style="list-style-type: none"> • Written lab reports • Tests and Quizzes • Class discussions
PG-2	To develop graduates who have a thorough understanding of how various forms of environmental change are arising, impacts being felt and how they can be mitigated	<ul style="list-style-type: none"> • Evaluate and analyze interactions between elements of the environment • Define key types/aspects of environmental change, both natural and man-made, and their impacts • Apply understanding of mitigation approaches and their relevance to contemporary environmental issues 	Goal to be assessed through: <ul style="list-style-type: none"> • Written lab reports • Tests and Quizzes • Class discussions
PG-3	To train graduates who can use an interdisciplinary scientific approach to the understanding and interpretation of their world	<ul style="list-style-type: none"> • Locate, interpret and appropriately use environmental observations. • Describe appropriate field and lab techniques used for data collection in the environment • Create and construct basic environmental sampling designs • Analyze different types of environmental data. • Apply understanding of environmental observations/measurements to current environmental problems. 	Goal to be assessed through: <ul style="list-style-type: none"> • Written lab reports • Tests and Quizzes • Class discussions
PG-4	To graduate students who are prepared to be independent researchers	<ul style="list-style-type: none"> • Demonstrate a sufficient ability to carry out research while observing laboratory and field safety protocols • Apply theory and practice in assigned lab or field-based experiments and/or investigations with accuracy, precision and appropriate design • Apply written and oral communication skills, appropriate for the various projects, necessary for the dissemination of research results 	Goal to be assessed through: <ul style="list-style-type: none"> • Planning and conducting a research project • Writing reports of findings • Presentation of findings to peers
PG-5	To develop graduates who have the full potential for pursuing further education, and also those that can pursue various careers with ease	<ul style="list-style-type: none"> • Clearly explain practical applications of the various projects/experiments • An accurate assessment of research-projects that have relevance to work place • Demonstrate ability to communicate ideas in a clear and logical manner • Apply and display technical skills (e.g. use of spreadsheets, statistical programs and/or computer programming) to analyze data collected from research 	<ul style="list-style-type: none"> • Planning and conducting a research project • Writing reports of findings • Oral presentations

TABLE 5c: Program Goals & Learning Outcomes Aligned with Environmental Science Major Degree Expectations

PROGRAM GOAL (PG)	ENVIRONMENTAL SCIENCE HONOURS SPECIALIZATION DEGREE EXPECTATION	STUDENT LEARNING OUTCOMES	ILLUSTRATIVE EXAMPLES FOR EACH HONOURS SPECIALIZATION PROGRAM GOAL – SHOWING ASSESSMENT METHODS
PG-1	To graduate students who can critically examine environmental processes and recognize their relevance to environmental issues	<ul style="list-style-type: none"> • Define key terms and concepts relevant to the environment and individual environmental processes (abiotic, biotic). • Demonstrate an understanding of the fundamental characteristics, structure and composition of different elements of the environment (abiotic, biotic) • Demonstrate an understanding of key processes that affect the environment (abiotic, biotic), and their variability (spatial, temporal) 	Goal to be assessed through: <ul style="list-style-type: none"> • Written lab reports • Tests and Quizzes • Class discussions
PG-2	To develop graduates who have a thorough understanding of how various forms of environmental change are arising, impacts being felt and how they can be mitigated	<ul style="list-style-type: none"> • Evaluate and analyze interactions between elements of the environment • Define key types/aspects of environmental change, both natural and man-made, and their impacts • Apply understanding of mitigation approaches and their relevance to contemporary environmental issues 	Goal to be assessed through: <ul style="list-style-type: none"> • Written lab reports • Tests and Quizzes • Class discussions
PG-3	To train graduates who can use an interdisciplinary scientific approach to the understanding and interpretation of their world	<ul style="list-style-type: none"> • Locate, interpret and appropriately use environmental observations. • Describe appropriate field and lab techniques used for data collection in the environment • Create and construct basic environmental sampling designs • Analyze different types of environmental data. • Apply understanding of environmental observations/measurements to current environmental problems. 	Goal to be assessed through: <ul style="list-style-type: none"> • Written lab reports • Tests and Quizzes • Class discussions
PG-4	To graduate students who are prepared to be independent researchers	<ul style="list-style-type: none"> • Demonstrate a sufficient ability to carry out research while observing laboratory and field safety protocols • Apply theory and practice in assigned lab or field-based experiments and/or investigations with accuracy, precision and appropriate design • Apply written and oral communication skills, appropriate for the various projects, necessary for the dissemination of research results 	Goal to be assessed through: <ul style="list-style-type: none"> • Planning and conducting a research project • Writing reports of findings • Presentation of findings to peers

Table 6. Curriculum Mapping

Required Courses		Related Undergraduate Degree Expectations					
		1	2	3	4	5	6
Course Code	Course Title	Depth & Breadth of Knowledge	Knowledge of Methodologies	Application of Knowledge	Communication Skills	Awareness of Limits of Knowledge	Autonomy and professional Capacity
CHEM 1006	General Chemistry I	X	X	X			
CHEM 1007	General Chemistry II	X	X	X			
BIOL 1006	Introduction to Molecular and Cell Biology	X	X	X			
BIOL 1007	Introduction to Organismal and Evolutionary Biology	X	X	X			
GEOG 1017	Introduction to Physical Geography	X	X	X			
ENSC 1006	Introduction to Environmental Science	X	X	X			
BIOL 2446	Principles of Ecology	X	X	X			
GEOG 2107	Weather and Climate	X	X	X			
GEOG 2017	GIS and the Earth from Space	X	X	X			
CHEM 2106	Analytical Chemistry - Introduction	X	X	X			
GEOG 2226	Environment and Society	X	X	X	X	X	
ENSC 3XXX	Environmental Field Studies	X	X	X	X	X	X
ENSC 4900	Environmental Seminar	X	X	X	X	X	X
One of the following							
Math 1257	Technical Statistics	X	X	X			
Math 1036	Calculus 1	X	X	X			
COSC 1557	Introduction to Computer Science	X	X	X			
One of the following							
GEOG 1006	The Earth's Interior	X	X	X			
GEOG 1007	Surficial Geology	X	X	X			
PHYS 1006	General Physics I: Mechanics	X	X	X			
COSC 1567	Programming in C++	X	X	X			
One of the following							
GEOG 2026	Introduction to Quantitative Methods	X	X	X	X	X	
BIOL 3117	Biostatistics	X	X	X	X	X	
One of the following							
BIOL 2836	Invertebrate Zoology	X	X	X			
BIOL 2837	Vertebrate Zoology	X	X	X			
BIOL 2336	Biology of Seedless Plants	X	X	X			
BIOL 2337	Biology of Seed Plants	X	X	X			
One of the following							
GEOG 2126	Physical Hydrology	X	X	X			
GEOG/BIOL 3397	Introductory Soil Science	X	X	X			
GEOG 2106	Landscape and Surface Processes	X	X	X			
One of the following							
CHEM 2046	Environmental Analytical Chemistry	X	X	X			
CHEM 2056	Introduction to Physical Chemistry	X	X	X			
CHEM 2306	Introduction to Organic Chemistry I	X	X	X			

6.0 Faculty: Resources & Quality Indicators

There is excellent and broad environmental sciences expertise and course offerings represented on campus, as illustrated in the Environmental Course List. This will facilitate longterm sustainability of this new program. Individual science faculty have research or other partnerships that facilitate unique field experiences, research, experiential learning opportunities that are integrated into individual courses and/or internships and thesis research (Tables 7 and 8). Faculty CVs are provided in Appendix 6.

Table 7. Faculty Expertise and Research (*4 additional faculty profiles to be added)

Faculty Name	Department	Education	Status (Tenured, Tenure-Track, LTA)	Area(s) of Specialization/Expertise	Publications		
					Refereed	Non-refereed	Refereed Abst/Con Prc.
Jeff Dech	Biology/ Chemistry	PhD	Professor, Tenured	Forest ecology; community ecology; dendrochronology; ecological modeling; silviculture	32	3	1
Ewa Dokis	Biology/ Chemistry	PhD	Assistant Professor, Tenured	Biology			
Reeham Mirza	Biology/ Chemistry	PhD	Associate Professor, Tenured	Aquatic Species			
Peter Nosko	Biology/ Chemistry	PhD	Associate Professor, Tenured	Biology			
Tony Parks	Biology/ Chemistry	PhD	Associate Professor, Tenured	Biology			
Dave Hackett	Biology/ Chemistry	PhD	Assistant Professor, Tenured	Biology (Environmental Science: conservation problems of loons; monitoring of salamanders and other amphibians; biological and environmental factors affecting fur bearers)	14*	16	16
Mukund Jha	Biology/ Chemistry	PhD	Professor, Tenured	Organic Chemistry (Chemical Synthesis, Green Chemistry, Medicinal Chemistry, Microbiology, Enzymology)	35		59
Stephen Kariuki	Biology/ Chemistry	PhD	Associate Professor, Tenured	Analytical Chemistry (Hydrometallurgy, Bioleaching, Analysis of sulphur compounds in water)	26	22	22
April James	Geography	PhD	Professor, Tenured	Hydrology, Streamflow generation, Environmental Tracers, Modeling	32	15	63
John Kovacs	Geography	PhD	Professor, Tenured	Environmental monitoring; environmental mapping; remote sensing; biogeography	53	19	67
David Rowbotham	Geography	PhD	Assistant Professor, Tenured	Terrain analysis; natural hazards; geomorphology;	4	4	8

				geographic information systems			
Eric Mattson	Geography	PhD	Assistant Professor, Tenured	Snow and Ice Hydrology	6	8	26
Odwa Atari	Geography	PhD	Associate Professor, Tenured	Health geography; Geographic Information Systems (GIS); environmental management	20	19	21
James Abbott	Geography	PhD	Associate Professor, Tenured	Highly variable natural and human landscapes; rural livelihoods; Africa; Small-scale fisheries; environmental indicators; non-state institutional actors	8	3	2
Dan Walters	Geography	PhD	Professor, Tenured	Water governance; First Nations drinking water and wastewater risk; harmful algae blooms; agricultural decision support	35	4	40
Mark Wachowiak	Math and Computer Science	PhD	Professor, Tenured	Biomedical Computing, Geospatial Computation, Visualization, Digital Humanities	37		54 (Referred conf. proceed.)

*Dave Hackett's refereed publications includes 4 co-authored editions of an Environmental Science textbook that is used in universities across Canada.

Table 8. Faculty Instruction and Supervision (**4 additional faculty profiles to be added*)

MEMBER	Supervised		Committees		Other	Courses
	Master	PhD	Master	PhD		
Jeff Dech	9	1	3		1 (PDF), 16(UG)	
Ewa Dokis						
Reeham Mirza						
Peter Nosko						
Tony Parks						
Dave Hackett						19
Mukund Jha	2	2	3	2	1 (PDF)	10
Stephen Kariuki	2		2		17	8
April James	13	2	10	5	4 (PDF); 6(UG)	13
John Kovacs	5	1	2	1	3 PDF	4
David Rowbotham			1		17 (UG)	12
Eric Mattson			2	1	29 (UG)	31
Odwa Atari	3		1		1(UG)	43
James Abbott	3		2			17
Dan Walters	11		7		10	17
Mark Wachowiak	3		2		10 (UG – RA supervision)	15

7.0 Program Costs and Resource Planning

7.1 Program Costs

In consultation with the Office of Institutional planning, five-year program costs and anticipated revenues have been estimated and are provided in Table 8. Instruction within the proposed program will be managed by the existing teaching staff and the anticipated Canada Research Chair

in Climate and Environmental Change. Funding for a Placement coordinator to be shared across Arts & Science programming is included (10% of ~65K/yr salary) starting in YR 1. Funding for thesis supervision is included starting in Yr 4. Annual support for honorariums for First Nation participants is included, as is materials, field and lab equipment maintenance to support experiential learning courses (10K/yr). One teaching assistantship is included to support the Environmental Science Field Studies course. Total program costs are estimated to be \$36K/yr to \$95K/yr over the 5-year plan.

Estimated revenue generated by the program is based on targeted enrollment of 20 students/yr in YR1 and increasing to 52 students/yr by year 5. We assume 50% of new enrollments in any year will be international students. Total annual program revenue is estimated to be \$251K in Yr 1, increasing to ~\$2.06 million in Yr 5. This assumes annual attrition of 10% from YR 1 to Yr2 and 5% in subsequent years.

Assuming the above program costs and revenue generation, an annual program surplus is estimated each year, building from ~\$200K in Yr 1 to ~1.93 million in Yr 5.

Table 8. Program Costs and Anticipated Revenue.

Business Plan for Environmental Sciences, Modest Growth Model; With Domestic and International															
	Year 1	Year 1	Year 1	Year 2	Year 2	Year 2	Year 3	Year 3	Year 3	Year 4	Year 4	Year 4	Year 5	Year 5	Year 5
	Hours	Weeks	Terms	Hours	Weeks	Terms	Hours	Weeks	Terms	Hours	Weeks	Terms	Hours	Weeks	Terms
Program Enrollment															
New Enrollment (Domestic)			10			14			18			22			26
New Enrollment (International)			10			14			18			22			26
Continuing Enrollment (Domestic)						9			21			37			55
Continuing Enrollment (International)						9			21			37			55
Total Enrollment			20			46			78			117			163
Revenue	Rate	# students	Total	Rate	# students	Total	Rate	# students	Total	Rate	# students	Total	Rate	# students	Total
Tuition (Domestic)	\$ 5,781	10	\$ 57,810	\$ 5,839	23	\$ 134,293	\$ 5,897	39.15	\$ 230,875	\$ 5,956	58.7155	\$ 349,720	\$ 6,016	81.414035	\$ 489,765
Tuition (International)	\$ 19,325	10	\$ 193,250	\$ 19,325	23	\$ 444,475	\$ 19,325	39.15	\$ 756,574	\$ 19,325	58.7155	\$ 1,134,677	\$ 19,325	81.414035	\$ 1,573,326
Govt operating grant	\$ 2,023	20	\$ 113,288	\$ 1,687	46	\$ 217,286	\$ 1,351	78.3	\$ 296,193	\$ 1,183	117.431	\$ 388,978	\$ 1,183	162.82807	\$ 539,352
Total Revenues			\$ 251,060			\$ 578,768			\$ 987,449			\$ 1,484,397			\$ 2,063,091
Expenses	Factor/No	Unit Cost (\$)	Cost (\$)	Factor/No	Unit Cost (\$)	Cost (\$)	Factor/No	Unit Cost (\$)	Cost (\$)	Factor/No	Unit Cost (\$)	Cost (\$)	Factor/No	Unit Cost (\$)	Cost (\$)
New Full time/Part-time faculty (NONE)	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -
Placement coordinator (10%)	0.1	\$ 65,000	\$ 6,500	0.1	\$ 68,250	\$ 6,825	0.1	\$ 71,663	\$ 7,166	0.1	\$ 75,246	\$ 7,525	0.1	\$ 79,008	\$ 7,901
Faculty Supervision Thesis/MRP	0	\$ 400	\$ -	0	\$ 420	\$ -	0	\$ 441	\$ -	16	\$ 463	\$ 7,409	40	\$ 486	\$ 19,448
Materials/Equipment/Maintenance - experiential learning			\$ 10,000			\$ 10,000			\$ 10,000			\$ 10,000			\$ 10,000
Honorariums (FN Community members)	3	\$ 350	\$ 1,050	3	\$ 350	\$ 1,050	3	\$ 350	\$ 1,050	3	\$ 350	\$ 1,050	3	\$ 350	\$ 1,050
PD (for instructors)	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -
Student teaching assistants	1	\$ 5,000	\$ 5,000	1	\$ 5,250	\$ 5,250	1	\$ 5,512	\$ 5,512	1	\$ 5,788	\$ 5,788	1	\$ 6,077	\$ 6,077
Student research assistants	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -
Curriculum development	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -
Benefits			\$ 1,625			\$ 1,706			\$ 1,792			\$ 3,733			\$ 6,837
Total Salary Expense			\$ 24,175			\$ 24,831			\$ 25,520			\$ 35,505			\$ 51,313
Other Expenses															
Materials and supplies			\$ 500			\$ 520			\$ 541			\$ 562			\$ 585
Faculty Office			\$ 1,500			\$ 1,500			\$ 3,000			\$ 3,000			\$ 3,000
Capital equipment															
Library resources			\$ 1,500			\$ 1,000			\$ 1,000			\$ 1,000			\$ 1,000
Research support (start up grants)			\$ -			\$ -			\$ -			\$ -			\$ -
Information technology															
Printing			\$ 1,000			\$ 1,040			\$ 1,082			\$ 1,125			\$ 1,170
Advertising, marketing and promotion			\$ 1,000			\$ 1,040			\$ 1,082			\$ 1,125			\$ 1,170
Travel			\$ -			\$ -			\$ -			\$ -			\$ -
Recruiting costs			\$ 2,500			\$ 2,500			\$ 2,500			\$ 2,500			\$ 2,500
Grad Financial Support - RA			\$ -			\$ -			\$ -			\$ -			\$ -
Grad Financial Support - TA															
Student Access Guarantee			\$ 4,047			\$ 9,400			\$ 16,161			\$ 24,480			\$ 34,284
Professional Fees - Accreditation			\$ -			\$ -			\$ -			\$ -			\$ -
Other admin costs															
Total other expenses			\$ 12,047			\$ 17,000			\$ 25,366			\$ 33,793			\$ 43,708
Total Expenses			\$ 36,222			\$ 41,832			\$ 50,885			\$ 69,297			\$ 95,021
Contribution Before Overhead			\$ 214,838			\$ 536,936			\$ 936,564			\$ 1,415,099			\$ 1,968,070
Admin Overhead			\$ 14,489			\$ 16,733			\$ 20,354			\$ 27,719			\$ 38,009
Surplus/ (Deficit)			\$ 200,350			\$ 520,203			\$ 916,209			\$ 1,387,380			\$ 1,930,061

7.2 Resources

a) Administrative support.

It is proposed that a School of Environment, with a dedicated (an out-of-scope) Director be created to support the new BSc Environmental Sciences, along with the proposed BA Environmental Studies and existing MES/MESc graduate program. This administrative structure would support day-to-day operations of the interdisciplinary undergraduate programs, the affiliated certificate and the joint MES/MESc graduate program, allowing for coordination across the various contributing departments. This structure would also support a dedicated Placement Coordinator shared across A&S programs.

a) Library Support

An assessment of information resources and services has been prepared and provided by the Library Services, provided in Appendix.

b) Technology and Physical Space

Any increases in technology support and physical resource requirements would be aligned with generating new enrollments. For many physical, life science and chemistry courses, labs are an important component and have limited class sizes. If the intake numbers and the number of the students in the proposed program significantly exceed existing classrooms, there will be need for expanded lab sections and/or space for select courses.

8.0 Demand for Program

8.1 Evidence of Student Demand

Using provincial data made available through the Nipissing University Planning office, demand for environmental sciences-related undergraduate degree training in 2019-20 in all of Ontario is estimated around ~ 42,000¹³ students per year (~4,700 international) with ~ 2,500 (~ 250 international) of these students enrolled in northern Ontario Universities (Algoma, Lakehead, Laurentian, Nipissing) (Appendix 2). Recent increases in Environmental-Science enrollments at Lakehead and Algoma (26% and 48% increases respectively for 2019/20 compared to 2018/19) illustrate demand for additional Environmental Science programming at northern Ontario Universities. Some of this appears to be attracting new domestic but also international students. The data suggests that 12% and 77% of the increases at Lakehead and Algoma, respectively, are attributed to international students. A new Environmental Science program at Nipissing, attracting both domestic and international students could contribute to Nipissing growing towards its capacity of 6,500 students, as identified in its' Academic Plan. Recent international agreements signed between Nipissing University and Universities in Brazil, Costa Rica, India, and the Philippines support strong demand for environmental science programming (Appendix 3).

¹³ Ontario Headcount data for 2019/20 using only environment-related program titles from five broad program categories 1) Agricultural/Animal/Plant/Veterinary Sciences and Related fields, 2) Biological and Biomedical Sciences, 3) Multit/Interdisciplinary Studies, 4) Natural Resources and Conservation, 5) Physical Sciences.

Demand for additional programming in Environmental Sciences and academic and professional interest in further qualification in Environmental Chemistry is clearly apparent from feedback from our existing students and their pursuit of environmental chemistry related graduate programming and employment upon their graduation from Nipissing (Table 9). The proposed Environmental Sciences program with a certificate in Environmental Chemistry will be supported by existing faculty and offerings and the addition of the proposed Canada Research Chair in Climate and Environmental Change with expertise in landscape biogeochemistry including the fate and transport of mercury. A certificate in Environmental Chemistry will benefit student transition to both professional post Baccalaureate employment and environmental chemistry related graduate programs.

Table 9. Representative List of NU Graduates pursuing chemistry-related pathways.

Recent NU Students	Graduate Program (MS/PhD)	Current Whereabouts
Matthew Edwards	University of Waterloo (PhD)	Separation Science Product Manager, Markes International, Cardiff, UK
Cody Butler	Trent University (MS)	Lab Technician, Water Quality Centre, Trent University
Darian Blanchard	University of Guelph (MS)	Application Specialist, Syngenta
Kate-Lyn Lund	Dalhousie University (MS)	Chemistry Instructor, Nipissing University
Michael Edmunds	University of Guelph (MS)	Biostatistician, Health Canada
Jordan Evans	University of Toronto (MS)	Medicinal Chemist, Novartis, Cambridge, MA, USA
Michael Ross	DDS, University of Toronto	Dentist, North Bay, ON
Stephanie Guy	Queen's University (PhD)	Postdoctoral Fellow at Ottawa Hospital Research Institute, Ottawa
Nathan Wray	Simon Fraser University (MS)	QC Analyst, STEMCELL Technologies, Vancouver, Canada
Spencer Short	University of Ottawa (PhD in progress)	
Jennifer Tropiano	McMaster University (MS in progress)	

8.2 Evidence of Society/Labour Market Need

Universities across Canada have developed Environmental Science programs in addition to traditional disciplinary programs in recognition of the need for multidisciplinary and interdisciplinary approaches to solving environmental problems. Eco-Canada (Environmental Careers Organization Canada, a non-for-profit founded in 1992 to support Canada's growing environmental sector) identifies 88 entries for Canadian Environmental post secondary programs (includes undergraduate and college programs) and has accredited 33 of these programs from across Canada (www.eco.ca). Increasingly, society expects those engaged in careers that deal with human-environment interactions to make informed decisions about

complex multi-faceted problems; however, traditional disciplinary approaches to undergraduate education do not provide knowledge and experience required to do this effectively.

There has been a growing demand for experts in all areas of Environmental Sciences, including Environmental Chemistry. Employment of skills and knowledge in environmental sciences and chemistry include collecting and analyzing air, water, and soil samples; involvement in the remediation programs; development of strategies to reduce sources of pollution and treatment of waste that cannot be eliminated; designing of processes, systems, and equipment for quality assurance and quality control; conducting research based on improvement of the health and safety of the environment; and training of technical staff. Environmental science and chemistry majors are employed across sections, including waste management firms, environmental consulting firms, forensic labs, oil and gas industries, agrochemical companies, universities and research institutes, and federal/provincial/municipal government departments.

Examples of Environmental Science and Environmental Chemistry related employment were obtained from several web-based resources, include Environmental Careers Organization Canada's job board (www.eco.ca), and a web-search on Environmental Chemistry Jobs in Canada (posted April 2019) (<https://ca.indeed.com/Environmental-Chemistry-jobs?vjk=d487a06f5c95af98>) and are provided in Appendix 4. Environmental-science related jobs are expansive across sectors, regions and occupations across Canada. The most recent labour demand report from Eco Canada (September 2020) estimates 1 in every 30 people employed in Canada are environmental workers and while the environmental job market has been affected by COVID-19, they expect environmental jobs are expected to rebound ahead of others, both because of job creation and anticipated retirement¹⁴. Eco Canada's report estimates that "...nearly half of the hiring needs will be for core environmental workers or these in roles requiring environmental-specific knowledge, skills or experience...". Survey specific to environmental chemistry indicates that there is an overwhelming demand for environment-related employment in the labour market in areas that include: Environmental consultants, Environmental supervisors, Laboratory technologists, Environmental protection analysts, Chemical wastes technologists, Environmental chemists, Laboratory supervisors, Laboratory analysts, Laboratory plant Chemical plant operators, Air quality monitors, and Teachers.

Select (known) listing of current employers for students graduating from Nipissing University's affiliated MES/MESc graduate program since 2012 include: Ontario Parks • Ontario Power Generation • Ontario Ministry of Natural Resources and Forestry • Anishnabek Nation • Dorset Environmental Science Centre, Ontario Ministry of Environment, Conservation and Parks • Canadore College • Dokis First Nation • Nipissing First Nation • Guelph Research Station, University of Guelph • Municipal Member of Parliament, New Liskeard • McIntosh Perry Engineering Firm • City of North Bay • SNC Lavalin Group Inc. • Greenstar Forest Solutions • Lawyer • Michigan Department of Environment, Great Lakes and Energy • Story Environmental, North Bay ON.

¹⁴ Eco Canada. From Recession to Recovery: Environmental Jobs and Hiring Trends in the Decade Ahead, September 2020, 36p.

8.3 Evidence of Justifiable Duplication

Many universities across Canada offer undergraduate programs in Environmental Sciences. However, development of Environmental Sciences at Nipissing University will provide new opportunities to train students in the north about northern environmental problems and their solutions. Existing strength across the contributing sciences at Nipissing highlights that with little investment, an important addition to Environmental Science training rooted in the north can be added. Appendix 5 provides a list of comparator programs offered by other provincial postsecondary institutions and specifically in northern Ontario. While large and mid-size universities offer BSc programs specific to Environmental Chemistry, in Northern Ontario this specialized program is lacking. Given that we are a smaller University, an Environmental Science program paired with a certificate in Environmental Chemistry at Nipissing University would be a strong attractor for new students and provide new opportunities to make a positive change for the Northern Ontario.

9.0 Institutional Fit

This new program will be submitted to the Ministry for funding.

9.1 Alignment with Strategic Mandate Agreement

As highlighted by the 2020-2025 SMA, “Nipissing University was created by a provincial act to specifically address the needs of Northern Ontario and continues to have a special focus on serving the North in the North”. The addition of new Environmental Science programming at Nipissing University is strongly aligned with improving capacities in Northern Ontario and will positively contribute to SMA performance metrics.¹⁵ It will further build Nipissing’s capabilities for integrated land-based teaching. Graduates from Environmental Science programs are typically employed across both private and public sectors with potential for pursuing professional designations (e.g. Environmental Professional, Professional Forestry, Professional Geoscientist¹⁶) after gaining environmental work experience, leading to higher graduate employment earnings. Contributing NU faculty have long established records of working with community-based partners, generating environment-related research that is both regionally of value as well as of interest to broader academic and applied audiences, also evidenced by strong Tri-Agency funding (~ \$5.2 million since 2009-10) and Research Chair Awards (1 industrial, 2 Tier 2 CRCs, including 1 renewal). The Environmental Sciences program will build on strong existing capacities for hands-on experiential learning opportunities that will be further supported by a recent teaching chair in STEM.

¹⁵ 2020-2025 Strategic Mandate Agreement: Nipissing University, <https://www.ontario.ca/page/2020-2025-strategic-mandate-agreement-nipissing-university>

¹⁶ www.eco.ca; www.opfa.ca; www.pgo.ca

The Environment and Natural Resources is an area of strength with existing programming with Nipissing offering (Figure 1):

- a BSc in Biology
- a BSc in Environmental Biology and Technology,
- a BSc in Environment and Physical Geography,
- Minors in Environmental Sciences (est. 2016/17), Chemistry, Geography, Biology

- and a joint Masters of Environmental Studies/Masters of Environmental Sciences (MES/MESc) graduate program hosted by three founding departments (Geography, Biology and Chemistry, History) that has been offered since 2012.

Environmental sciences at Nipissing University can be a program area of important expansion. At Nipissing University, there is currently no Major or Honours Specialization in Environmental Science and no Major specific to Environmental Chemistry. The proposed BSc Environmental Sciences program with a new certificate in Environmental chemistry will fill an important gap in current programming, increasing visibility on how students can study the environment at Nipissing University, building from the existing minor and providing pathways to professional and graduate studies opportunities. It will differ from existing BSc. programming by offering broader interdisciplinary science and experiential learning requirements, consistent with cross-sector professional interests. Content in Environmental Chemistry highlighted by the new certificate will allow students to satisfy additional academic and professional interests. An interdisciplinary program in Environmental Sciences carries a very high potential of attracting international students to NU. It is also a very strong stepping stone for future considerations in development of Environmental Engineering.

9.2 Program Prioritization/Program transformation Initiatives

The new BSc Environmental Sciences program draws on several existing programs in Biology, Geography, and Chemistry, to maximize interdisciplinary connections and provide new and unique opportunities for students interested in pursuing a degree in environmental sciences. Using Nipissing University's common-degree structure, the program integrates existing courses to offer excellence in interdisciplinary environmental science training consistent with competitor programming across the province. The interdisciplinary nature of the program will lend itself to furthering Nipissing University's community outreach and land-based research specific to northeastern Ontario, with commitment to training the next generation of environmental scientists consistent with the Truth and Reconciliation Commission recommendations, with awareness and engagement across northern communities (First Nations, northern municipalities) and sectors including northern industries (forestry, mining, hydropower generation). Supporting science on the land and community engagement, this degree program will train students in the north about northern environmental problems and their solutions. These design features will differentiate Nipissing's Environmental Science program from its competitors. It will also provide new opportunities to connect students globally with interdisciplinary study of the environment. The addition of the BSc Environmental Sciences will attract a new student audience while supporting established programs by using existing faculty and courses (almost 100% overlap).

Appendix 1. Library Report for Proposed Environmental Sciences Program

Program:	Bachelor of Science in Environmental Sciences, certificate in Environmental Chemistry
Faculty:	Arts and Science
Institution:	Nipissing University
Librarian:	Laura Sinclair, BSc, MLIS, BEd
Date:	August 2021

Introduction

The Library is a shared service between Canadore College and Nipissing University. Most of the staff members and collections are based in the Harris Learning Library (HLL) located at the North Bay College Drive campus. The Library website can be accessed at www.eclibrary.ca. The Library collection includes books, e-books, print and online journals, and audiovisual materials such as films and kits. Liaison librarians collaborate with faculty to select resources for the collection to support coursework and research activities. As a result of the pandemic and a shift to more online courses, there has been an even greater priority given to the acquisition of digital resources.

Library Resources for the Environmental Sciences Program and Environmental Chemistry Certificate

Although the BSc in Environmental Sciences will be a new program, the curriculum is comprised of many courses that are currently offered and are supported by the library collection. The Library currently provides access to several databases that have subject specific content for this program, including:

- Web of Science
- Science Direct
- GeoBase
- BioOne
- Nature

Additionally, several databases include content for related fields of study such as Biology, Geography, Chemistry, Health Sciences and others. Comprehensive multidisciplinary databases such as Academic Search Premier, Academic OneFile and Scholars Portal Journals also contain literature that is relevant to courses offered for the Environmental Sciences program and Environmental Chemistry certificate. It is essential to maintain access to this broad scope of resources, especially when some courses, such as those for thesis work and directed studies, could potentially be multidisciplinary in content.

There are other resources that could be considered for future acquisition in support of this program, such as the Environment Complete database (over 1000 fulltext, non-open access journal titles related to ecology, sustainability, environmental policy, energy etc.). The American Chemical Society publications and the Royal Society of Chemistry database would also support the proposed program and certificate; however, subscription to these resources is not currently recommended unless course offerings expand. They are costly, and would require faculty consultation and an increase to library funding.

The Library has a fairly robust journal collection, containing more than 60 000 publications. There are over 2500 titles in the “Earth and Environmental Sciences” category of journals in the Library system. Additionally, in excess of 500 journals are classified as “Chemistry” titles. There are many multidisciplinary

publications containing content related to Environmental Sciences as well. No essential journal additions are recommended at this time; however, faculty members may request specific journal titles, which would be considered on a case-by-case basis, with cost being a major consideration.

The monograph collection for Environmental Sciences is modest, with priority given to faculty requests. Both print books and e-books are collected, depending upon faculty preference, expense, and format availability. With the increase in online instruction and learning, ebooks have become the preferred format. The addition of some newer content is recommended.

Films related to Environmental Sciences are purchased selectively and usually only upon faculty request, due to cost; however, the Library has some streamed video databases with relevant titles. For instance, curio.ca (streamed content from the Canadian Broadcasting Corporation) is a multidisciplinary collection, and includes more than 300 films classified as “Environmental Science” content. The National Film Board collection also has some related streamed content, particularly in the “Environment and Sustainability” curated playlist. No further film expenditures are recommended at this time.

The Library maintains a Kit collection, and some of these items may be relevant to Environmental Sciences and Environmental Chemistry courses. Molecule building sets, periodic table activities, rock and mineral collections and other manipulatives could potentially be useful for teaching and learning in these disciplines. Faculty requests for additions to the kit collection are welcome, but no specific resources are recommended at this point.

Budget

Library Licensed Resources include online journal databases, streamed video, and other digital subscriptions involving ongoing expenditures. These costs are paid from the Library Collections budget each year, with the remaining amount from that budget line allocated among various subject areas for the purchase of Unlicensed Resources, including books, films, and other media. The projected Licensed Resources expenditure for Nipissing University for the 2021-22 fiscal year is approximately \$750 000.

The allocation amounts listed in the following chart are for Environmental Science/Studies or Geography (see *** note) and are used to purchase books, multimedia, and any journals purchased outside of database subscription packages.

Budget Year	Total Allocation Journal/Book/AV	Journal Expenditures	Book/AV Allocation
2021-22	\$1500	\$0	\$1500
2020-21	\$750	\$0	\$750
2019-20 ***	\$3046	\$939	\$2107
2018-19 ***	\$3724	\$1933	\$1791
2017-18 ***	\$4668	\$1823	\$2845

*** Prior to the 2020-21 budget year, budget allocations for Geography and Environmental Science/Studies were combined. The Library allocations were revised in 2020-21 to provide a separate line for Environmental Science/Studies resources. The budget chart shows allocations for the combined budget for the years of 2017-2020, and the allocation for Environmental Science/Studies for the 2021-22 and 2020-21 budget years.

Recommendations

It is recommended that at a minimum, start-up funding of \$1500 be provided for the acquisition of some current Environmental Sciences and Environmental Chemistry monograph titles such as handbooks,

reference and methodology materials, as well as some updated environmental content. Ebooks are the preferred format; however, academic ebook titles tend to be more expensive than their print counterparts, so ongoing funding of \$1000 per year is recommended to maintain collection currency.

Access to journal literature for this program and certificate should be adequately supported with the current suite of databases. It is essential to maintain access to these resources. Typically, databases increase in cost by 3-5 % per year, and the fluctuating value of the Canadian dollar has an impact on the acquisitions budget and should be accounted for in funding decisions.

Other resources may be necessary, depending on course curricula and instructor requirements, and requests for new resources would be considered on a case-by-case basis, with library budget being one of the determining factors.

Start-up Costs: \$1500 for monographs;

Ongoing Costs: \$1000/year for monographs

Collections Snapshot						Library Instruction, Services, and Spaces					
Library Collections						Teaching and Learning					
	2019-20	2018-19	2017-18	2016-17	2015-16		2019-20	2018-19	2017-18	2016-17	2015-16
print volumes	179,964	180,717	180,593	180,345	181,892	reference questions	11,614	14,533	14,341	9665	11,078
print books	178,788	180,103	180,150	179,542	181,090	instruction sessions	213	212	220	198	207
e-books	333,465	207,484	207,433	87,060	201,166	students in instruction sessions	5549	6099	6797	5464	5946
print journals	125	136	163	174	174						
e-journals	Not available	63,317	53,686	51,176	66,505						
Expenditures						Spaces for Learning and Research					
	2019-20	2018-19	2017-18	2016-17	2015-16	Harris Learning Library					
print books	\$62,013	\$71,457	\$174,474	\$88,391	\$163,161	seating capacity: 537					
e-books	\$26,380	\$5,909	\$16,771	\$56,621	\$61,024	group rooms: 12					
individual serial	\$28,585	\$30,538	\$15,907	\$36,753	\$55,753	individual study rooms: 7					
databases	\$645,543	\$765,071	\$683,953	\$631,723	\$527,621	turnstile count - sample day	2019-20 815	2018-19 1188	2017-18 1108	2016-17 1288	2015-16 1334
total budget	\$964,000	\$882,459	\$832,333	\$1,028,173	\$807,559	Services					
						Hours of operation during academic year: 8:00 am to 10:30 pm Monday to Thursday 8:00 am to 6:00 pm Friday 10:00 am to 5:30 pm Saturday and Sunday					
Use of Collections						Info Desk hours of operation: same as building hours					
	2019-20	2018-19	2017-18	2016-17	2015-16	Research appointments					
circulation	6024	23,724	26,501	26,681	22,900	24/7 access via proxy					
reserves circulation	905	1992	2342	2982	4177	URL resolver					
Use of other Collections						Free Interlibrary Loan (ILL)					
	2019-20	2018-19	2017-18	2016-17	2015-16						
books borrowed via interlibrary loan (ILL)	484	792	775	745	761						
articles electronic or photocopy via interlibrary loan (ILL)	346	376	332	317	337						

Appendix 2. Recent Ontario Institutional Enrollments in Environmental Sciences

Ontario Headcount data for 2019/20 term using only environment-related program titles from five broad program categories 1) Agricultural/Animal/Plant/Veterinary Sciences and Related fields, 2) Biological and Biomedical Sciences, 3) Multi/Interdisciplinary Studies, 4) Natural Resources and Conservation, 5) Physical Sciences and only environmental sciences-related program titles. Data made available through Nipissing University's Office of Institutional Planning and Research.

Provincial Comparison - Headcount

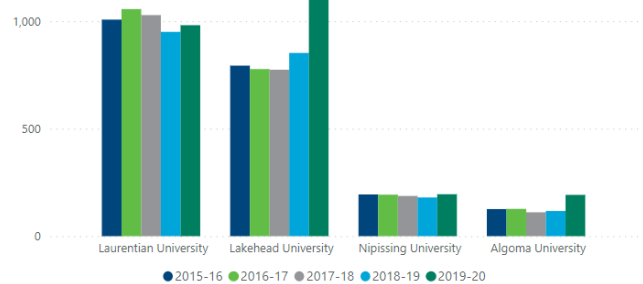


Program Category

CIPCode

Program Title

University Name	2015-16	2016-17	2017-18	2018-19	2019-20
Algoma University	126	127	111	117	192
Lakehead University	793	777	774	852	1,107
Laurentian University	1,007	1,056	1,028	950	981
Nipissing University	194	193	187	180	195
Total	2,120	2,153	2,100	2,099	2,475



Office of Institutional Planning and Research

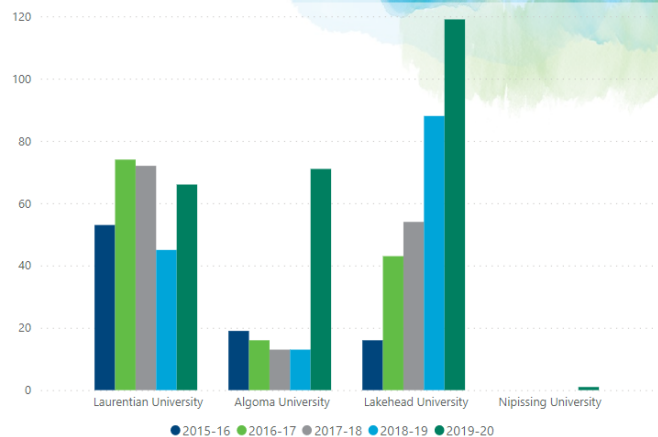
Provincial Comparison - International Student Headcount



Program Category

Program Title

University Name	2015-16	2016-17	2017-18	2018-19	2019-20
Algoma University	19	16	13	13	71
Lakehead University	16	43	54	88	119
Laurentian University	53	74	72	45	66
Nipissing University					1
Total	89	135	139	147	257



Office of Institutional Planning and Research

Appendix 3. Nipissing University International Agreements and Letters of Support

(to be added, as appropriate)

Appendix 4. Evidence of Social/Labour Market Need

Evidence of Social/Labour Market Need. Examples of environmental science and environmental chemistry related employment were obtained from several web-based resources, include Environmental Careers Organization Canada's job board (www.eco.ca)¹⁷, and a web-search on Environmental Chemistry Jobs in Canada (posted April 2019) (<https://ca.indeed.com/Environmental-Chemistry-jobs?vjk=d487a06f5c95af98>).

¹⁷ ECO Canada (Environmental Careers Organization of Canada) is an online resource for environmental jobs, certification and training established in 1992 as part of Canada's sector council initiative. Sector councils are organizations that address human resource challenges facing the Canadian economy With the support of private sector investors and the Government of Canada's Department of Human Resources and Social Development, ECO Canada works to determine the skills and human resource needs of Canada's environment industry.

Job Title	Job Description
Agriculture specialist	Agriculture specialists provide assistance and advice to farmers and livestock producers. They consult on a number of areas, including crop choice and rotation, cultivation and harvesting, soil and water issues, and animal husbandry and nutrition. Agriculture specialists often specialize in a specific area, for example animal science, economics, agricultural mechanics, soil science, or field crops. Agriculture specialists work closely with farmers and livestock producers to ensure the success of their businesses.
Agriculture technician	An agricultural technician combines knowledge of engineering with biological science to the field of agriculture to improve sustainable agriculture production. Agricultural engineers are involved in many diverse projects, including the design of machinery and structures and the development of methods to conserve soil and water to improve the processing of agricultural products.
Agronomist	An agronomist works in the field of agronomy which is a branch of agriculture that deals mainly in field-crop production, soil and land management, and water resources. Agronomy integrates all disciplines of crop production, from variety selection to harvesting, and from soil management to entomology. It is a science that finds ways to grow crops effectively and commercially while protecting the environment.
Air quality specialist	Air quality specialists ensure emissions and other airborne pollutants do not violate provincial or federal air pollution laws. They see to it that pollutants, for example, those generated through chemical reactions and combustion, are not released into the air at harmful levels according to emission-impact assessments and without first being treated with proper contaminant-removal technologies. Air quality specialists also review environmental assessments for proposed factories and manufacturing plants and make recommendations for air pollution control equipment.
Air quality technician/technologist	As an air quality technician/technologist, you deal with all types of air pollution that can affect every aspect of our environment. Air quality technicians/technologists monitor, assess, and report on ambient air quality in both urban and rural areas, as well as air quality in environmental emergency situations such as fires or chemical spills. Air pollutants are often considered insidious because they can be harmful even when many people can't see them and don't know they are there. Your job is to measure air pollutants so that accurate assessments can be made with respect to the effects of the pollutants on humans and the environment.
Analytical chemist	Analytical chemists' study and test the chemical composition and reaction of many different substances. Using complex equipment and procedures, such as chromatography, electrophoresis, mass spectrometry, and optical spectroscopy, they test samples, identify, and quantify their components. In addition to the environment, they work in industries such as oil and gas, pharmaceutical research, and forensics.
Aquaculture support worker	As an aquaculture support worker, you assist aquaculturists and fisheries technicians/ technologists in the operation of hatcheries and finfish, shellfish, and aquatic plant farms. You are responsible for maintaining stock, tanks, and other equipment and are involved in activities such as scuba diving, handling feed, repairing pumps, and changing nets. Because the job involves many hours spent outdoors, working conditions for aquaculture support workers are as variable and challenging as the weather.
Aquaculturist	As an aquaculturist, you are in charge of the farming of aquatic organisms, including culturing and growing freshwater and marine finfish, shellfish, and aquatic plants. Aquaculturists specialize in operating, monitoring, and maintaining aquatic farms, including rearing fish classes in natural or controlled environmental such as tanks, ponds, or net cages. Aquaculturists require a broad range of knowledge such as fish health, water chemistry, and mechanical skills, and can work on land-based operations or large freshwater and marine grow-out sites. Aquaculturists play a key role in ensuring the sustainability and quality management of aquatic farms.
Arborist	Arborists are tree professionals and that require extensive certifications. Arborists are trained professionals who have studied how to plant, maintain, care, and diagnose trees, shrubs, and other

	woody plants. They are specialized in all species of trees and shrubs to offer expert advice to grow and develop trees.
Avalanche forecaster	As an avalanche forecaster, you play a critical role in protecting the public and raising avalanche awareness. You combine skills in mountaineering with knowledge of mountain conditions, weather, and snow science to evaluate the risk of avalanches in a given area.
Biochemist	Biochemists study biological processes in micro-organisms, plants, and animals. They look at how living organisms function at the subcellular and molecular levels and apply their research to a number of industries, including agriculture, medicine, energy, and manufacturing. Biochemists often work in interdisciplinary teams and are involved in a wide range of activities, from research and teaching to patent law.
Biological technician	As a biological technician, you work closely with a team of supervising biologists to conduct tests, record observations, and research information in relation to the environment. You work in concert with biologists and are often responsible for carrying out detailed experiments to support research. You set up, operate, and maintain laboratory equipment, monitor experiments while recording the results. In addition, biological technicians develop and adapt laboratory procedures and devise solutions under the direction of biologists.
Biotechnologist	As a biotechnologist, you apply the knowledge to select, manipulate, or modify organisms to produce strains uniquely suited to making a product or driving a process. You play a large role in finding new and innovative solutions to environmental problems, for example using organisms such as bacteria to clean up contaminated sites, investigating new energy sources, or producing environmentally friendly raw materials. In addition to the environment, you could also work in industries such as food production, medicine and health, and manufacturing.
Botanist	Botanists work in the field of botany, the study of plants and their surrounding ecosystems. It spans from forests and trees to the smallest microscopic components of the ecosystem. Types of botany jobs include botanical research and botanical research. The skills and expertise of botanists are beneficial in numerous sectors. This means botanists can work in agriculture, horticulture, land use planning, conservation, forestry, and medicine.
Cartographer	Cartographers are mapmakers. They gather, evaluate, and visualize geographic information and analyze geographical data to create charts and reports. They combine creativity with technical aptitude to produce, for example, topological maps, aeronautical charts, natural resource maps, or nautical charts and other hydrographic maps. In addition, they may work on demographic maps such as population characteristics, economic maps such as land use, or social maps such as crime rates and poverty.
Chemical technician	Chemical technicians/technologists perform chemical sampling and analysis and are involved in a variety of projects, for example, analytical testing, quality control protocols, and product research and development. They often work as members of multidisciplinary teams with chemists, chemical engineers, and other related professions. Chemical technicians/technologists can specialize in a number of disciplines, including environmental testing, mining and exploration, pharmaceuticals, and hazard waste, and opportunities for technicians/technologists can be very diverse depending on the industry and their education.
Chief sustainability officer	Chief Sustainability Officers (CSOs) are the highest-level of executives in an organization who oversee their company's sustainability activities. As part of the "C-suite" of chief officers, CSOs provide visionary leadership and coordinate with management, shareholders, and employees to develop and maintain an effective corporate strategy for sustainability. In order to be successful in their executive role, CSOs need strong public relations skills, extensive staff management experience, good strategic planning skills and a firm grasp of financial operations and budgeting. Since a wide range of skills and knowledge are required for this role, most CSOs come from diverse backgrounds, including external affairs, environmental management, research, operations management, marketing, business development, finance, or legal affairs.
Clean energy researcher	Clean energy researchers are environmental scientists or engineers who specialize in discovering alternative and renewable energy sources. Like other environmental engineers, they often work in teams with other professionals. They analyze energy needs and plan renewable, environmentally friendly solutions. For example, they may help people have lower per-unit energy costs and also help preserve the environment.
Climate change specialist	Climate change specialists study the changes in weather over time. They do this by looking at the winds, temperatures, lightning, sunshine, and rainfall. This information helps them to make sense of climate trends and changes, and allows specialists to see how human activity affects the weather. Climate change specialists look at how society can adapt to and lessen the impacts of climate change, and how citizens can positively impact and protect the environment.
Climatologist	A climatologist studies the earth's climate and the weather patterns and processes that cause them. They use long-term meteorological data such as temperature, wind speed, and precipitation to study trends, understand causes, and make predictions.
Compliance promotion specialist	As a compliance promotion specialist, you provide technical, scientific, regulatory, and management advice to public and private industry in relation to compliance with federal acts and regulations. You are involved in a variety of activities aimed at awareness and education, including writing and

	publishing information, conducting and participating in public outreach activities, and researching and promoting best practices. You are an expert on the acts and regulations that govern the protection of environmental and human health and address issues ranging from hazardous waste to species at risk.
Conservation biologist	Conservation biologists protect and restore biodiversity and aim to understand and minimize human impacts on the natural world as well as on scarce animal populations. Through research and observation, conservation biologists help establish plans for maintaining habitats and animal populations at sustainable levels.
Conservation officer	As a conservation officer, you have a variety of responsibilities, including promoting compliances with environmental legislation through public education, public involvement, and awareness. You are often responsible for enforcing provincial and federal environmental regulations governing the protection of wildlife, fisheries, and natural resources, and have the authority afforded that of a peace officer as outlined under the criminal code of Canada. You are always on call to respond to public complaints and protect our natural resources.
Ecologist	As an ecologist, you study ecology and observe environmental patterns. Your observations and analyses provide insight into the ways that changes in the environment - both natural and human-caused - dictate the behaviours of different species. Your work also helps show how interactions between ecosystems, species, and the environment impact the planet.
Eco-tourism operator	As an ecotourism operator, you specialize in leading clients on tours to learn about an area's natural and cultural history while preserving its natural environment.
Eco-toxicologist	Eco-toxicologists specialize in toxicology studying the harmful effects of chemical, biological, and physical agents on living organisms, including humans. Eco-toxicologists draw on a variety of scientific disciplines to predict, measure and explain the frequency and severity of adverse effects of environmental toxins on living organisms. Their work improves environmental protection by bringing a greater understanding of the hazards and risks to which organisms are exposed.
Energy auditor	Energy auditors use a systemized approach to measure, record, and evaluate the flow of energy. They determine if it is being used efficiently and pinpoint where it is being wasted. Individuals in this occupation come from varying backgrounds. You could be an accountant with an interest in the energy sector, or an engineer who received an auditor designation, anyone and everyone could become an energy auditor.
Entomologist	As an entomologist, you study insects. You use science to identify, classify, and study insects and their relationships to plants and animal life. Your research plays a huge role in understanding ecosystems: how they function, how they are changing, and how best to protect them. You also play a large role in industries such as agriculture and forestry, and in managing insect populations to protect public health.
Environmental assessment analyst	An environmental assessment analyst researches and analyzes environmental data and information for the preparation of environmental assessment reports following federal and provincial environmental assessment legislation.
Environmental auditor	An environmental audit is a detailed analysis of an organization's products and processes that evaluates its performance from an environmental perspective. Environmental auditors can conduct two different types of audits: a compliance audit measures if a business is meeting internal and external environmental guidelines and legislation, and a management performance audit measures if a business is meeting the criteria for management systems.
Environmental chemist	Environmental chemists work to improve environmental health and safety using their knowledge of the chemical properties of substances. They study the formation of chemicals, how chemicals interact with the environment and what effects they have. They also apply chemical theory to calculate the impact of human activity on the environment
Environmental communications officer	An environmental communications officer oversees the dissemination of information on environmental issues and events on behalf of the organization they work for. Environmental communications officers are responsible for developing awareness and outreach programs for local communities living in protected areas and they monitor and supervise outreach activities including conducting surveys and organizing fundraising events.
Environmental coordinator	Environmental coordinators develop and implement environmental programs for companies and organizations that are not necessarily environmentally-based themselves. Coordinators are responsible for overseeing these programs and for reporting to upper management on their progress. For example, an environmental coordinator might work for a large manufacturing company to test nearby land and water for contaminants and to ensure that equipment is working safely. Environmental coordinators work for private companies, government departments, educational institutions, research organizations, and consulting firms. They can also be self-employed.
Environmental economist	Environmental economists specialize in a branch of economics that incorporates environmental implications into economic analysis. They study the environmental impacts, both positive and negative, of projects and policies from an economic perspective and use this to advise industry and government on the environmental impacts of decisions.
Environmental educator	Environmental educators are teachers, coordinators, facilitators, communicators, mentors, and community leaders. They work in a variety of locales and with a variety of audiences: some work in schools and post-secondary institutions, some teach adults through workshops and conferences, and

	others work in places such as zoos and parks. Environmental educators teach others about issues of conservation, preservation, and sustainability and play a significant role in developing environmental awareness.
Environmental enforcement officer	Environmental enforcement officers enforce provisions of the Fisheries Act and the Canadian Environmental Protection Act, 1999. They conduct inspections to verify compliance with environmental legislation and investigate cases where violations are discovered. Environmental laws and regulations are designed to protect and foster a healthy and sustainable environment; environmental enforcement officers ensure these laws are not broken.
Environmental epidemiologist	Environmental epidemiologists are medical professionals who investigate the relationship between health and the environment. Problems frequently investigated by environmental epidemiologists include environmental toxins, for example, soil contaminants; health problems caused by poor air and water quality; and occupational hazards, for example, asbestos in old buildings. In addition to diagnosing these problems, environmental epidemiologists recommend strategies and interventions to fix or improve harmful situations and are critical to maintaining public health.
Environmental geologist	Environmental geologists study the structure of the earth with a direct focus of understanding human interactions with the land, particularly to predict or anticipate geological issues and provide information to help minimize impacts on the environment. This occupation is an extension of various scientific disciplines such as physics, chemistry, and biology.
Environmental geophysicist	Geophysicists study the structure and composition of zones below Earth's surface using techniques that employ seismic, electrical, and magnetic signals. They use non-invasive methods to study subsurface conditions, for example contamination and oil and gas exploration.
Environmental health officer	Environmental health officers are responsible for carrying out measures for protecting public health, including administering and enforcing provincial legislation related to environmental health and providing support to minimize health and safety hazards.
Environmental lawyer	An environmental lawyer works to represent clients in legal issues such as with clean technology, water pollution, climate change, the management of land subject to Indigenous communities and other public lands. Other areas of focus include environmental rights, international environmental law, the law of the sea and international resources law. Environmental lawyers advocate for balanced regulations regarding pollution and the handling of materials, fight to protect biodiversity, agriculture, and ecosystems and confront issues of waste management.
Environmental manager	Environmental managers work in both the public and private sectors and are responsible for managing projects to lessen environmental impacts and ensure that all applicable legislative requirements are fulfilled. They are also involved in activities such as environmental awareness projects, sustainable development, fundraising, and public consultation programs. Often responsible for managing the work of others, environmental managers may also be involved in training personnel on environmental issues. To be a good environmental manager, you need a broad understanding of environmental issues combined with the expertise and a lot of experience in project development and management.
Environmental marketing specialist	Environmental marketing specialists work to promote environmental products, services, and programs. These specialists conduct market research and develop strategies for environmental organizations and firms. They are responsible for public relations activities such as gauging public opinion, developing partnerships with other stakeholders, and interacting within a team environment. Environmental marketing specialists also contribute greatly to product evaluation by identifying target audiences and goals, developing the project schedule and budgets, coordinating resources to implement the work plans, assessing and assuming risk management, and promoting and marketing the product.
Environmental monitor	As an environmental monitor, it's your job to study the natural world and to make sure that human activities don't harm the environment. For example, an environmental monitor working for a mine would spend most days outdoors collecting samples of water, air, land, and plants. They would measure the dirt roads, making sure the roads don't erode into the nearby creek and create silt in the creek (which would probably kill any fish in the creek). They'd collect all of this data out in the field and send it back to labs for analysis. Environmental monitors generally work for government departments, environmental boards, large corporations, and consulting companies.
Environmental monitoring technician	Environmental monitoring technicians observe the environment and the impacts of human and industrial activities. There are two areas of specialization for environmental monitoring technicians: regulatory and research. Regulatory monitors are responsible for monitoring the activities of the industry to ensure project terms and conditions are met, whereas research monitors assist technicians and technologists in monitoring factors of the environment, for example, wildlife counts, surveys, or sampling. Environmental monitoring technicians communicate valuable information to stakeholders to work toward mitigating negative environmental impacts.
Environmental planner	Environmental planners are responsible for developing short- and long-term plans for land use in urban and rural areas while balancing considerations such as social, economic, and environmental issues. They also contribute to environmental impact assessments. Environmental planners can be involved in a range of fields, including strategic, commercial, and industrial development, as well as heritage, tourism, and integrated resource planning. Environmental planners work on a range of scales, from local planning to regional and national strategies.

Environmental policy analyst	Environmental policy analysts define how environmental concerns are approached from an organizational or government perspective. They review and analyze trends and impacts to develop environmental policies. Working both in the private and public sector, they establish environmentally responsible business practices, advise decision-makers and develop regulations. Environmental policy analysts define how environmental concerns are approached from an organizational or government perspective. They review and analyze trends and impacts to develop environmental policies. Working both in the private and public sector, they establish environmentally responsible business practices, advise decision-makers and develop regulations.
Environmental psychologist	Environmental psychologists study the relationship between the physical environment and human behaviour. They focus on both natural and constructed environments on a scale ranging from individual homes and offices to entire urban areas and geographic regions. Their research looks at issues of attention and how people notice and perceive their environment, why people prefer different environments, and how people cope with environmental stress. Environmental psychologists play an active role in examining human behaviours that have caused environmental problems such as global warming and resource depletion, as well as in initiating the necessary substantial changes to human lifestyles to achieve a sustainable future.
Environmental reporter	Environmental reporters are journalists who specialize in gathering and presenting environmental information that is newsworthy and timely. Like all journalists, they write, film, and transcribe news reports, commentaries, and features for a variety of media, including print, television, radio, and the Internet.
Environmental scientist	Environmental scientists support environmental projects in their workplace with scientific analysis. They conduct scientific studies, prepare reports, and develop management plans to help make sure the environment is preserved. For example, an environmental scientist might visit an industrial plant and test the area's air quality. If the tests show that the company has been polluting the air, then the environmental scientist would work with the company's management to make the plant more environmentally friendly. The scientist may also organize training programs for the staff, so they know how to test the air quality and fix any problems. Environmental scientists work for a large number of organizations, including community environmental offices, band and hamlet councils, consulting companies, and federal and provincial governments.
Environmental technical salesperson	As an environmental technical salesperson, you know this product is a good fit for the needs of hazardous waste professionals, particularly those who respond to emergency spills. The product is a new kind of sand-filled spill barrier designed to contain and divert hazardous spills. You discuss the product with the supervisor, initially focusing on the unique adhesive feature of these barriers, which temporarily bond with any smooth surface, such as a road or cement floor, making them very quick to position in emergency situations, where time is critical. You also highlight other advantages of these barriers: they are reusable, easy to move and position, and resistant to most hazardous materials.
Environmental technician/technologist	Environmental technologists/technicians support the environmental sector from a more hands-on approach and work with environmental scientists, lawyers, and researchers.
Environmental training specialist	Environmental training specialists design and deliver environmentally focused training to a wide variety of clientele in both the public and private sectors. They develop specific courses to enhance environmental skills and knowledge using a number of formats and delivery techniques. They often collaborate with other qualified individuals to deliver training that requires a specific skillset and expertise. Environmental training specialists combine technical knowledge and research ability with strong communication skills and a talent for working with many kinds of people in order to convey information and teach others.
Fisheries specialist	Fisheries specialists study fish populations to improve disease control, maintain habitat quality, and develop conservation methods and safe industry practices. They often specialize in fish biology, habitat management, or population dynamics. A large part of the job involves working to consult with and educate, the public on a variety of environmental issues that affect agriculture, forestry, and watersheds.
Fisheries technician	Fisheries technicians/technologists study fish and their environment and can work with both wild populations and hatchery-raised stock. Working with a variety of fish species and habitats, fisheries technicians/technologists are often responsible for sampling and gathering data and supporting research and fisheries management. They play a key role in the conservation and protection of Canada's fisheries resources.
Forest firefighter	Forest firefighters move towards the source of fire to suppress it and minimize damages both to the environment, workspaces and homes, and protect potential victims such as humans and wildlife. Their role is becoming ever more important as we see an increasing number of forest fires in the summer months with periods of unbreathable air and 'stay home' orders.
Forester	Foresters apply scientific expertise to land and natural resource management and are responsible for implementing and supervising natural resource programs in forestry and land use. They combine their knowledge of the biotic components of a forest, namely the trees and other vegetation, with the abiotic components of air, water, and soil to make sound management and planning decisions. There are also a number of urban foresters working for municipalities to manage tree stands and small forested areas within Canada's towns and cities.

Forestry technician/technologist	Forestry technicians/technologists work closely with other forestry professionals to manage, conserve, and harvest forests. Forestry technicians/technologists play a key role in the management of Canada's forest resources, contributing to the balance of sustainability and demand for wood products.
Geographer	Geographers study the physical world and examine the connections between people, places, and the earth. They examine social aspects, such as human demography, and physical aspects, such as geomorphology, drawing on a number of other disciplines, for example, biology, oceanography, and sociology. Geographers contribute to the understanding of social and environmental issues regarding land use and resource management by examining how different spatial elements are related to one another.
Geomatics technician	Geomatics technicians/technologists determine the exact locations and positions of natural and man-made features by collecting data from maps, surveys, remote sensing, and GIS databases. They work with sophisticated software to model and analyze visible surface features, as well as what is hidden underground and underwater.
GIS analyst	Geographic information system (GIS) is a digital mapping technique that links computer-generated maps with databases. GIS analysts use this technology to integrate biophysical, ecological, and socio-economic data that can be analyzed for purposes such as tracking wildlife, mapping erosion, monitoring air and water quality, or measuring logging rates.
Glaciologist	Glaciologists analyze the formation, movement, and effects of the different kinds of glaciers, for example, alpine and arctic glaciers, ice caps, ice sheets, and ice shelves. A large part of the research conducted by glaciologists analyzes how glaciers and ice caps move and change in response to climate change and how these changes in turn influence climate and the surrounding environment.
Hazardous waste technician	Hazardous waste technicians are responsible for handling, processing, packaging, and tracking hazardous waste for shipment, treatment, and disposal. They can also be involved in coordinating hazardous waste programs for both private industry and the public sector. They can be employed by waste recycling and treatment facilities or with large companies, packaging and shipping their hazardous waste. Hazardous waste technicians have specialized training on how to safely handle and dispose of chemical, biohazard, and radioactive wastes.
Horticulturist	Horticulturists are agricultural scientists whose focus is finding a better way to develop, grow, harvest, store, process, and ship fruits, vegetables, and decorative plants. They work with orchard, field, garden, nursery, and greenhouse plants to research and conduct tests related to breeding, spraying, and harvesting plants. Horticulturists also use their expertise to develop new plant varieties, such as varieties that can better resist insects or disease or are better adapted to growing in a range of climates and soils.
Hydrologist	A hydrologist studies the dynamic nature of water, the forces that cause water to move around and what effects this movement has on the surrounding environment. Hydrologists examine issues such as precipitation pathways, the relationship between rainfall and runoff, and the effects of precipitation on soils and various landscapes. They are also involved in projects to determine and promote sustainable usage of water sources and water conservation.
Industrial waste inspector	Industrial waste inspectors are watchdogs who routinely check companies to make certain they are adhering to regulations. They use keen observation skills, sampling, and laboratory skills in combination with an understanding of industrial practices, corporate environmental policy, environmental liability, and procedures for proper handling, storage, and disposal of waste. Above all else, industrial waste inspectors rely on their knowledge of environmental regulations to ensure that companies are in compliance with applicable laws and the environment is protected.
ISO 14000 consultant	ISO 14000 consultants plan and implement an organization's ISO 14000 (International Organization for Standardization) systems. These systems allow the organization to better manage its environmental risks by providing standard, established, and documented procedures to follow. ISO 14000 consultants focus on a number of areas, including environmental management systems, environmental auditing, evaluation of environmental performance, environmental labeling, and life cycle assessment.
Laboratory assessor	Laboratory assessors examine and private and public laboratories. They evaluate a lab's operation to ensure compliance with government and environmental regulations, as well as licensure and certification requirements. Their assessments include checking critical equipment and operational characteristics, evaluating demonstrations of testing procedures, and reviewing Quality Control systems within the lab. Laboratory assessors ensure laboratories achieve and maintain the highest levels of scientific and management excellence as a means to protect human and environmental health.
Land use planner	Land use planners decide how to build communities based on environmental and human needs. After taking the time to understand what residents, community groups, politicians, and businesspeople want in their communities, land use planners develop a strategy for action. For example, if a land use planner were creating a plan for a new neighborhood, he or she would design roads, parks, homes, and stores. Land use planners work for real estate agencies, not-for-profit organizations, architectural companies, and the government.

Landscape architect	Landscape architecture takes a holistic view of the design, planning, management, and stewardship of the land. Landscape architects often work as members of a multidisciplinary team, for example, with planners, ecologists, and engineers, on projects that can range from designing residential yards and parks to constructing wetlands to treating polluted runoff from former industrial sites. Landscape architects use art and science to create a balance between the needs and wants of people and the limitations of the environment.
Limnologist	Limnologists are scientists who study the physical, chemical, and biological properties of lakes, rivers, and streams. They study abiotic characteristics, such as stratification and water chemistry, as well as biotic elements, such as aquatic vegetation, algae, microbes, and invertebrates. Limnologists and their work play a vital role in protecting freshwater resources, and Canadian researchers are global leaders in the field.
Marine biologist	Marine biologists study species that inhabit bodies of water and observe any changes to bodies of water. They also focus on different aspects of marine life, including the process of marine development, how organisms interact with one another and the ecosystem and how pollution may affect marine environments.
Meteorologist	Meteorologists are atmospheric scientists. They continually analyze vast amounts of data, including surface and upper air observations of temperature, wind, pressure, and humidity, as well as weather satellite data, radar data, lightning strikes, and data from weather models. Based on this information, they might issue a warning or produce a public, aviation, or marine forecast. But not all meteorologists forecast the weather: other specialties include research into atmospheric chemistry, biological impacts, and computer modelling.
Microbiologist	Microbiologists study organisms that are too small to be seen by the naked eye, including bacteria, fungi, viruses, and protozoa. Microbiologists that specialize in the environment are typically involved in projects that address issues of contamination, for example, identifying and quantifying pathogens, as well as bioremediation, which uses micro-organisms such as bacteria to clean up toxic substances. In addition to the environment, microbiologists are employed by industries such as pharmaceuticals and medicine, food production, and agriculture.
Naturalist	Naturalists are experts in natural history. They study not only living things, such as plants and wildlife but non-living things, such as minerals and fossils. Naturalists often use their knowledge to educate others, for example, visitors to parks, through nature hikes and interpretive centres. Naturalists may also work for environmental organizations planning special events or write for newsletters, television, and radio. The opportunities for naturalists are varied, but all naturalists have the common goal of sharing their knowledge of the environment to preserve our natural history.
Occupational hygienist	Occupational hygienists maintain workplace health and safety by identifying, evaluating, and controlling exposure to chemical, physical, ergonomic, and biological hazards. The responsibilities of an occupational hygienist vary depending on the industry, workplace, and the types of hazards affecting employees. Occupational hygienists most often work in companies to reduce stresses on the worker and to implement control measures that will reduce the incidences of impaired health and sickness and identify inefficiencies in the workplace.
Oceanographer	Oceanographers are scientists who apply biological, chemical, physical, and geological principles to the study of the world's oceans. They study flow patterns such as currents, circulation, and tides; the relationship between the oceans, weather, and climate; chemical factors such as contaminants; and ocean interactions, for example with air, ice, and land formations. Oceanography is a combination of validating existing ideas and research and finding new ways to explore the ocean and explain new findings.
Ornithologist	Ornithology is the study of birds, including bird physiology, behaviour, population structure, and how they live in their environment. Ornithologists can be found working on a variety of projects, for example protecting endangered species, such as the whooping crane and peregrine falcon, from extinction or addressing practical problems, such as keeping scavenger birds away from landfill sites or stopping geese from nesting near airports. Given the migratory nature of many bird species, the knowledge and expertise contributed by ornithologists to the management and preservation of ecosystems has local, provincial, and international impact.
Park interpreter	Park interpreters research, develop, and conduct education programs for visitors to national, provincial, and municipal parks and conservation areas. They use a variety of methods for educating visitors, for example nature walks, theatre presentations, or bulletins and pamphlets. Park interpreters are always studying different aspects of their environment and sharing what they learn.
Park warden	Park wardens are responsible for implementing natural resource management, public safety, and law enforcement programs within Canada's national parks system. They are involved in a variety of activities, including assisting scientists with research, monitoring wildlife, capturing, and relocating animals when necessary, making public presentations, liaising with visitors, and providing first aid and search and rescue support. Park wardens use their educational background and work experience to monitor ecological concerns and maintain the environmental health of Canada's national parks.
Pollution control technologist	A pollution control technologist focuses on identifying pollution sources, monitoring pollutants, and addressing issues of contamination and pollution.

Post secondary instructor	Post secondary instructors of environmental programs teach students at universities and other degree-granting institutions. They also conduct scientific research and publish their findings in professional and academic journals and magazines. For example, someone wanting to understand how geese find the same location every year would study geese throughout university and then become a professor to share their knowledge. Most professors work at universities and other degree granting institutions. Others work for the government.
Recycling coordinator	Two critical environmental issues overuse of natural resources and shortage of places to dispose of waste have necessitated the role of recycling coordinator. There are many opportunities for recycling in Canada, and recycling coordinators must be aware of all of them. Recycling coordinators have a variety of backgrounds, but all share a commitment to environmental sustainability and lessening the impact of society's consumption on the environment.
Remediation specialist	Environmental remediation is the treatment and removal of contamination from soil, groundwater, and other media. Remediation specialists design and implement remedial action plans to clean up sites affected by substances such as automotive fuels, pesticides, and heavy metals.
Remote sensing technologist	Remote sensing technologists use aerial photos, imaging radar, digital image analysis, and Global Information Systems (GIS) to study the Earth's surface—without ever needing to visit the location they study. For example, a remote sensing specialist might interpret images to understand how a forest fire is moving and whether a nearby community will need to be evacuated. Remote sensing specialists work for natural resources companies, forestry consulting firms, other consulting firms, environmental organizations, and the government.
Restoration biologist	A restoration biologist works to renew degraded, damaged, or destroyed ecosystems and habitats that have been disturbed by human action and climate change. They provide expertise and guidance in planning and conducting habitat, watershed, and stream channel restoration projects and monitor endangered species and coordinate conservation activities.
Science camp coordinator	Science camp coordinators are responsible for all aspects of camp programming. One moment they could teach an interactive lesson to the kids and the next, they might be in the kitchen preparing them dinner. They will need to know a lot about science and the natural world, because they will be developing lesson plans and programs. Camp coordinators spend a lot of time with children, so they will need to be understanding, patient, and energetic. Many science camp coordinators are self-employed, while others work for government agencies, libraries, schools, heritage centres, and other recreational institutions.
Science teacher	High school science teachers plan and teach science courses. Teachers in cities often teach classes in only one or two subject areas. In smaller, rural areas, teachers often have to teach a broader range of material. High school teachers need to have a broad understanding of the subjects they teach and should be patient, enthusiastic, and creative in their approaches. For example, you could plan a lesson about the properties of water and ice by having your students design and build an igloo. Most teachers work for public or private school boards. Others work in vocational schools or for the department of education.
Soil conservationist	Soil conservationists help farmers and other land managers make the best use of the land without causing harm. They identify and work to minimize threats to soil health, for example, wind erosion, storm runoff, and nutrient depletion. Soil conservationists improve management practices to protect land and implement strategies for sustainable use. Soil conservationists help farmers and other land managers make the best use of the land without causing harm. They identify and work to minimize threats to soil health, for example, wind erosion, storm runoff, and nutrient depletion. Soil conservationists improve management practices to protect land and implement strategies for sustainable use.
Soil scientist	Soil scientists study the chemical, physical, and biological properties of the first few metres of Earth's crust. More specifically, they study soil formation, classification, and soil characteristics such as the organisms found in the soil and the relationship between soil types and plant growth. The information provided by soil scientists is vital to industries such as agriculture and forestry, as well as policymakers addressing issues of public health and environmental protection.
Survey technician	Survey technicians operate survey instruments and computer equipment to measure distance, angles, elevations, and contours. They use this information to establish geographical locations and boundaries. For example, a survey technician might survey and lay out sub-divisions for rural development. Survey techs work for construction companies, aerial photographers, natural resource firms, and the government. Some survey technicians are self-employed.
Sustainability consultant	A sustainability consultant works within the environmental sustainability discipline which explores the ways in which human activity and the environment can interact to meet the needs of today without jeopardizing the future. Sustainability is built on three pillars – economic, social, and environmental – each of which is important.
Sustainability educator	Sustainability Educators are university or college professors who research and teach specialized topics in sustainability. In order to qualify for this role, Sustainability Educators must demonstrate high levels of education and experience: the vast majority of these professionals have post-graduate degrees and at least eight years of professional experience. Similar to Sustainability Researchers, Sustainability Educators act as thought-leaders and innovators for the theory, practice and research behind

	sustainability. These practitioners spend many years learning about key sustainability factors, including environmental, social, cultural, political, economic and ethical issues. While Sustainability Educators must develop extensive knowledge about diverse sustainability topics, they also need to communicate this expertise clearly and effectively to post-secondary students. In fact, this opportunity to educate the next generation of sustainability professionals is one of the most exciting and rewarding aspects of a career as a Sustainability Educator.
Sustainability officer	Sustainability officers oversee a comprehensive suite of activities related to reducing environmental impacts and applying sustainability principles. They develop, implement, and evaluate programs for their employers that support social, environmental, and economic sustainability objectives.
Sustainability researcher	Sustainability researchers conduct studies to develop sustainability models, indicators and best practices. They often hold advanced degrees in fields related to environmental, economic and social sustainability. Some sustainability researchers also support policy development in federal, provincial or municipal governments.
Sustainability specialist	Sustainability specialists help their organizations comply with national, provincial and local environmental regulations, while also ensuring their organization functions in a financially viable and socially responsible manner. These practitioners interpret and develop procedures to meet environmental regulatory requirements, establish sustainability strategies and programs, communicate with stakeholders about environmental concerns, and address the risks associated with environmental degradation. This occupation is ideal for mid-career professionals who have significant experience in their employer's operations, since sustainability specialists often need a comprehensive understanding of all facets of their company, along with a strong knowledge of sustainability principles and practices.
Sustainability trainer	Sustainability trainers develop and deliver training programs to help corporations implement sustainable business practices in an efficient and cost-effective manner. These practitioners build a solid understanding of the latest trends in economic, social and environmental sustainability, then create courses, seminars and workshops that present these trends to business audiences using engaging, concise and informative formats. As a result, the role of a sustainability trainer is one part sustainability researcher and one part sustainability educator – sustainability trainers need strong subject matter expertise on sustainability issues, as well as a talent for teaching according to different learning styles and needs. By educating businesses about sustainability best practices, sustainability trainers help numerous individuals work more effectively, reduce costs, conserve resources and mitigate environmental harm.
Sustainable interior designer	A sustainable interior designer creates interior spaces using design principles such as functionality, accessibility and aesthetics and expands their focus to include environmental considerations.
Tree planter	Tree planters plant seedlings and often select and prepare sites for tree planting. For example, a tree planter might use a shovel to clear away debris before planting young trees in the soil. Tree planters work for logging companies, tree planting companies, and contractors.
Waste management specialist	Waste management specialists plan, implement, and coordinate comprehensive waste management systems that are designed to maximize waste prevention, reuse, and recycling opportunities. They can be involved in all stages of a project, for example establishing a company's waste management goals and objectives, working with employees to help implement waste management policies, and evaluating the success of management plans. Waste management specialists play a key role in minimizing the impact of waste and protecting the environment.
Wastewater collection and treatment operator	Wastewater collection and treatment operators work on systems that collect and treat municipal wastewater. Depending on the size of the system and the municipality, this can be two different jobs: in smaller systems, one person often does both treatment and collection, but in larger centres, a different operator handles each function. Wastewater collection operators work on storage and storm sewer systems, specifically piping, pumping, and lift stations, whereas wastewater treatment operators work in treatment plants, treating and disposing municipal wastewater. These operators also take samples for lab analysis, work with chemicals and equipment used to disinfect wastewater, and maintain equipment, making minor repairs to piping, pumps, and valves.
Water and wastewater laboratory technologist	Water and wastewater laboratory technologists manage technical processes used for water purification and wastewater disposal. They ensure that these processes are environmentally safe and are compliant with industry standards and methods. Water and wastewater laboratory technologists manage technical processes used for water purification and wastewater disposal. They ensure that these processes are environmentally safe and are compliant with industry standards and methods.
Water quality technician	Water quality technicians are responsible for monitoring and operating control systems and ensuring that the equipment in water filtration and treatment plants are functioning properly so that water is safe for use. These individuals perform a variety of technical duties, including inspecting, sampling, monitoring, and testing, and work with both groundwater and surface water sources.
Water treatment and distribution operator	Water treatment and distribution operators oversee the activities and processes that go into treating and distributing municipal drinking water. Water treatment and distribution operators oversee the activities and processes that go into treating and distributing municipal drinking water.

Wetland biologist	A wetland biologist manages and protects wetland resources. To do this they implement wetland conservation techniques, enforce regulations, and provide consultation on construction projects in wetland sensitive areas. Your work in this occupation involves performing environmental field studies, monitoring plants and species at risk of becoming endangered.
Wildlife biologist	Wildlife biologists maintain and conserve Canada's wildlife populations. They examine factors such as disease, nutrition, habitat relationships, and population dynamics. Wildlife biologists study the impact of environmental change on species survival and growth rates and the interactions between wildlife and their ecosystems, and they predict how land use decisions will impact wildlife and the ecosystems they depend on.
Wildlife technician/ technologist	Wildlife technicians/technologists provide support and services to scientists working in wildlife management and animal biology. The responsibilities of wildlife technicians/technologists are wide-ranging, depending on where in Canada they work. Generally, the work of wildlife technicians/technologists consists of collecting and analyzing samples, operating and maintaining laboratory field equipment, inputting and managing data, and preparing reports of findings.
Wind energy developer	Wind energy developers search out opportunities and appropriate sites to build large-scale wind energy developments. They also manage design, construction, and marketing of the product. Wind energy developers must not only understand the technical aspects of wind farms and energy generation, but also have strong negotiation and sales skills to broker deals with landowners, suppliers, and potential buyers.
Zoologist	A Zoologist is a sub-division of biologists. Zoology is the scientific study of the animal kingdom and encompasses a comprehensive variety of organisms, from small invertebrates such as earthworms to giant mammals such as blue whales. This occupation is sometimes used interchangeably with wildlife biologists or animal biologists.
Job Title	Job Description – Specific examples from web survey in 2019
Environmental Consultant (Pollutech Environmental Limited Oakville, ON	The Pollutech Group of Companies Inc., is an independent Canadian consulting firm providing services nationally and internationally in the fields of environmental consulting, chemistry and biology. Pollutech Environmental Limited has immediate employment opportunities in its Oakville, Ontario office to join its professional staff of environmental consultants.
Environmental Supervisor (SynergyAspen Environmental Inc. Fort St. John, BC)	The Environmental Supervisor performs significant field work including site investigation, remediation, reclamation and natural sciences projects. This role provides assistance to the Environmental Scientist, both in the field, and in the office.
Laboratory Technician Environmental SGS Canada, Lakefield, ON	Duties may include: sample reception, sample identification, sample preparation, sample dilutions, setting up analytical batches and analysis, batch Quality Control, approving and releasing results to the data centre and filing of lab results/data.
Environmental Specialist – Various Fields Government of Canada, Montreal, QC	Duties: Environmental Services lends its expertise to Public Services and Procurement Canada (PSPC) and other federal departments in carrying out their mandates, including environmental issues. Under general supervision, specialists manage projects, studies, investigations, compliance assessments and audits on a variety of issues in addition to proposing appropriate actions in support of compliance of both departmental, federal, provincial, territorial, and municipal regulations and standards. EDUCATION: You must have a degree from a recognized postsecondary institution with specialization in biology, physics, chemistry, geology, engineering or another science related to the duties of the position.
Laboratory Assistant - Food and Environmental Integrated Explorations Inc Guelph, ON	The ideal candidate will be involved in all areas of the company including the microbiology, chemistry, investigative and environmental sectors. Laboratory duties will include but are not limited to: Chemistry - TS/VS, TP, TN, BODs, CODs
Environmental Consultant (Contract) Chinook Environmental Services Ltd. Red Deer, AB	Chinook Environmental Services Ltd. (CESL) is in need of an individual to assist in daily field duties. The Candidate MUST have a Post-Secondary background in Environmental Science.
Environmental Health Officer First Nations Health Authority - Kamloops, BC Permanent	In this position you will be helping First Nations leadership manage a wide range of public health risks associated with both natural and built environments. As an Environmental Health Officer, you will promote and enhance the health and wellness of First Nations Communities through the implementation, assessment, and evaluation of environmental public health programs and services in communicable disease control, drinking water, health and housing, food safety, solid waste, public buildings, emergency preparedness and response, risk assessment, environmental contaminants research, wastewater disposal, and pest management.
Environment Protection Analyst Yukon Government - Whitehorse, YT	The ideal candidate for this position will have experience in development and interpretation of environmental policy and legislation, strong motivation to find collaborative solutions to

	<p>environmental challenges, strong analytical and communication skills, and is able to work well independently and as part of a close-knit team.</p> <p>Education: post-secondary degree with a major in chemistry, hydrogeology, environmental or other related sciences, or in chemical, environmental or civil-environmental engineering</p>
Chemical Waste Technician Photech Environmental Solutions Inc. - Ottawa, ON	<p>Photech Environmental Solutions Inc is a hazardous waste management company located in Niagara Falls, Ontario. We are contracted to provide daily chemical waste collection and handling services to the University of Ottawa. The successful candidate must possess a strong post-secondary background in Chemistry.</p>
Environmental Chemist Contrecoeur, QC	<p>Triumvirate Environmental, one of the largest environmental services firms in North America, is looking for an Environmental Chemist to work in our Contrecoeur facility. As an Environmental Chemist, you will be able to work closely with our senior staff, building out your career at a hazardous waste company.</p> <p>Qualifications: Qualifications: BS in Environmental Science, Chemistry, Biology or equivalent preferred</p>
Chemist Baxter - Alliston, ON	<p>Specific Skills: Analyze, synthesize, purify, modify and characterize chemical or biochemical compounds; Conduct programs to identify and quantify environmental toxicants; Conduct research to develop new chemical formulations and processes and devise new technical applications of industrial chemicals and compounds; Investigate chemical aspects of the mechanisms of drug action, the diagnosis and treatment of disease and the organ function; Participate in interdisciplinary research and development projects; Conduct research to discover, develop, refine and evaluate new products such as those used in nanomedicine, nanoelectronics and other applications of chemistry</p>
Part-time Laboratory Technician Environmental SGS Canada - Lakefield, ON	<p>Duties may include: sample reception, sample identification, sample preparation.</p> <p>Ideal Candidate: A post secondary education (degree and/or diploma) in a Science related program (Chemistry, Biochemistry, Environmental Science) is a strong asset.</p>
Laboratory Supervisor - Specialty Analysis – Air & LC/MS/MS AGAT Laboratories - Mississauga, ON	<p>Duties and Responsibilities include: Ensure that all quality/safety/environmental/corporate policies and procedures are being followed</p> <p>Qualifications include: Diploma or Bachelor of Science in Chemistry or related field</p>
Chemical Plant Operator GFL Operator - Brampton, ON	<p>JOB DUTIES INCLUDE : The successful candidate will have 3 to 5 years' experience in the Environmental Field, with a background in chemistry (preferred).</p> <p>Experience: Waste management: 1 year (Preferred); Chemicals/Hazardous wastes: 1 year (Preferred)</p>
LABORATORY ANALYST ALS Group Thunder Bay, ON	<p>About the Position: Reporting to the Supervisor, the Lab Analyst is responsible for preparing and processing environmental samples for extraction including maintaining adequate production, quality control and turnaround times.</p> <p>The ideal candidate would have: Post-secondary diploma/degree in chemistry or related field an asset; Laboratory Experience.</p>
Laboratory Technician SGS Canada - London, ON	<p>Duties may include: sample reception, sample identification, sample preparation, sample dilutions, setting up analytical batches and analysis, batch Quality Control, approving and releasing results to the data centre and filing of lab results/data.</p> <p>Ideal Candidate includes: A post secondary education (degree and/or diploma) in a Science related program (Chemistry, Biochemistry, Environmental Science) is a strong asset.</p>
Depot Technician Terrapure Environmental - Georgina, ON	<p>Terrapure Environmental is a leading Canadian provider of innovative, cost-effective environmental and industrial services, and recycling solutions that help address industry's complex environmental challenges. Headquartered in Burlington, Ont., Terrapure employs 2,000 people and operates an integrated network of over 60 locations from coast to coast.</p> <p>Position Description: As a Depot Technician, your primary responsibility will be to receive, sort and pack household hazardous waste from area residents at the Georgina Depot. In the role you will report to the MHSW Programs Coordinator.</p> <p>Education: Post-secondary degree, diploma in the field of chemistry or environmental would be an asset</p>
Laboratory Assistant ALS Group- Waterloo, ON	<p>About the Position: The Lab Assistant position will be working with client samples providing preparations, extractions and analysis of these samples for routine organic chemistry parameters.</p>
Elementary Science Teacher Richmond Hill Montessori and Elementary Private School - Richmond Hill, ON \$77,000 - \$87,000 a year	<p>Responsibilities include: Teach Science to primary students (grades 1-2) following, and building upon the Ontario curriculum.</p> <p>Qualifications: Bachelors' degree in Science, with Honours; Bachelor of Education in Science, with primary/junior qualifications.</p>
Air Quality Monitoring Technologist WSP - Grande Prairie, AB	<p>Overview of the Opportunity: WSP is currently seeking an Air Quality Monitoring Technologist to join our Air Quality team, located at our Grand Prairie office. Reporting to the Team Lead this position will be responsible for air monitor sampling, calibrations and data collection.</p>

Appendix 5. List of Ontario Environmental Science Programs and Comparison to Proposed Program

(To be completed). The Table below provides a comparison of the program that we seek to introduce and examples of what is offered by other postsecondary institutions within the province (not an exhaustive list).

University	Degree	Admission Requirements	Structure and Comments
U of Toronto	BSc. Honours Environmental Science	<u>6 Grade 12 U/ M courses (or equivalent) including 12U English. Required: Advanced Functions, Biology and Chemistry or Physics. A minimum 70%* overall final average.</u>	- Each year features an Environmental Science Foundational course that is coupled with selected courses chosen from a list of related sciences from various disciplines. - 24 First Yr requirements (Environmental Foundation - full year course; pick 6 courses from a list of BIOL, CHEM, GEOG, MATH & Physics; 2 electives).
Carlton U.	BSc. Honours Environmental Science	<u>6 Grade 12 U/ M courses (or equivalent) including: Advanced Functions and two of Biology, Chemistry, Earth and Space Sciences or Physics. (Calculus and Vectors is strongly recommended).</u>	
Lakehead University	BSc. Environmental Science (Biology, Earth Science or Geography majors)	A minimum of 6 Grade 12U or M courses including English	- Structure includes a core of common course, plus courses required for a major in 1 of 3 disciplines: Biology, Earth Science, Geography. 21 - - First Yr required credits including MATH, 2 CHEM, 2 BIOL, 1 Env Studies.
Algoma University	BSc. Honours Environmental Science	<u>4 Grade 12 U or M courses (or equivalent) including Advanced Functions, 2 U/M Sciences (BIOL/CHEM recommended); minimum 70% overall average.</u>	This is a balanced Environmental Science Program, somewhat similar to the Nipissing University Program, but Algoma University is a very small university that can accommodate only a small number of students.
Laurentian University	N/A		Laurentian folded their BSc Environmental Sciences program and their School of Environment with financial cuts in spring 2021. This leaves a significant gap in programming in Northeastern Ontario.
Wilfred Laurier University		6 U/M Courses; English, CHEM, Advanced Functions (60%); Biology (70%)	The program offers Biology, Chemistry and Geography courses but it lacks Environmental Science courses with labs where appropriate science skills can be integrated.
University of Guelph	BSc. Honours Environmental Science	<u>6 4U/M courses including ENG4U and specific subject requirements:Advanced Functions, and two of the following three courses: Biology,Chemistry, Physics. English is also recommended.</u>	The School of Environmental Sciences at the University of Guelph has an agricultural emphasis in keeping with its strengths such as agri-food sciences, human & animal nutrition, and rural development.
McMaster University	Multiple programs		Multiple Environment Science programs (e.g Earth and Environmental Science; Environmental Science; Biodiversity and Environmental Science).
Bishop's	BSc. Environmental Sciences		- Defines a core group of courses (13 courses or 39 credits) from 1st and 2 nd yr); then options from 2 additional groups of courses. - First Yr: 27 required cr. (9 courses: 2 MATH, 2 PHYSICS, 2 CHEM, 1 BIOL, 1 ENV STUDIES; 1 PHYS GEOG).

University of Guelph	BSc Indigenous Environmental Science and Practice	- 6 U/M courses: English, Advanced Functions Math; Biology, Chemistry and two additional 4U or 4M courses.	<ul style="list-style-type: none"> - Includes Coop and experiential learning. - First Yr: 24 cr. Required (Intro to Indigenous Environmental Stewardship, Discovering Biodiversity, Calculus I, General Chemistry, Introductory Financial Accounting, Natural History of the Great Lakes Region, Indigenous Knowledge for Environmental Stewardship , Indigenous Language and Culture - Unique courses related to Indigenous Environmental Stewardship, Right Relations, Indigenous language and culture.
Western	BSc Environmental Sciences		<ul style="list-style-type: none"> - Courses organized into 3 groups (Life Science, Physical Science, Env Studies related (non science)).
Trent U (multiple options)	Multiple programs – see comments.		<ul style="list-style-type: none"> - B.E.S.S: - intensive degree for exceptional students that teaches full integration of science and policy, ecological and political, preventive and interventionist approaches to environmental problems - BSc or BA Environmental and Resources Sciences/Studies (Eco Accredited) - BSc Environmental and Life Sciences - Indigenous Environmental Studies and Sciences Program

Appendix 6. Faculty CVs

PROGRAM PROPOSAL
ENVIRONMENTAL SCIENCES
(Honours Specialization; Specialization; Major; Minor)

Date: Revised November 2021

NEW PROGRAM PROPOSAL

NEW PROGRAM PROPOSAL

For Submission to:

- Academic Quality Assurance and Planning Committee (AQAPC)
- Senate
- Ontario Universities Council on Quality Assurance

NAME OF PROPOSED PROGRAM	Environmental Science
DEGREE TO BE CONFERRED	Bachelor of Science Honours Specialization Bachelor of Science Specialization Bachelor of Science Major Bachelor of Science Minor
SHORT FORM FOR DEGREE TO BE CONFERRED	BSc Honours, BSc
LOCATION OF PROGRAM TO BE OFFERED	North Bay
ACADEMIC UNIT RESPONSIBLE FOR PROGRAM	School of Environment (proposed)
ANTICIPATED START DATE OF NEW PROGRAM	Fall 2022
DEAN(S) RESPONSIBLE FOR PROPOSAL	Dean of Arts and Science
WORKING GROUP CHAIR & MEMBERS OF WORKING GROUP	April James (MES/MESc Program Coordinator, Geography) Jeff Dech (Chair of Biology and Chemistry) Dave Hackett (Biology) Mukund Jha (Chemistry) John Kovacs (Chair of Geography) Eric Matson (Geography) Mark Wachowiak (Teaching Chair, Math and Computer Science) James Abbott (Geography)
DATE APPROVED BY AQAPC	

Appendices to be Included:

- Appendix 1. Library Services Report
- Appendix 2. Recent Ontario Institutional Enrollments in Environmental Sciences
- Appendix 3. Nipissing University International Agreements and Letters of Support
- Appendix 4. Evidence of Social/Labour Market Need
- Appendix 5. Justifiable Duplication – List of Ontario Environmental Science Programs and comparison to proposed program
- Appendix 6. Faculty CVs

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1.0 Introduction and Overview

1.1. Program Description

COVID-19, flooding, drought, fire, heat domes, polar vortices, unprecedented glacial melting: 2020 and 2021 have been unparalleled in environmental-related challenges brought about by climate and environmental change that have disrupted the physical, social, economic and political fabric of our lives. Communities in northeastern Ontario and Canada's north have urgent questions and needs related to the impact of climate and environmental change as natural and human landscapes undergo unprecedented change in the North. Northern Ontario communities are typically rural, geographically isolated, with "...limited economic diversity and relatively high dependence on climate-sensitive sectors..." (Barros et al., 2014). This makes them more vulnerable to climate change impacts and more limited in adaptation strategies. Communities not accessible by permanent roads or rail are facing transportation challenges for food, fuel and other critical supplies due to shortened ice-road seasons. Changes to fish and game populations may affect a critical way of life for Indigenous communities reliant on traditional food sources.

Ontario's northern communities depend heavily on mining, hydropower, forestry, and agriculture and experts predict with high confidence the influence of extreme weather on most sectors with extremes in temperature, frequency and severity of weather events (ice storms, rainfall, heat, drought, wind) all projected for Ontario (ECO, 2012). In the Laurentian Great Lakes Basin, recent predictions are for increases in spring and winter precipitation (Zhang et al. 2019) and flooding during the spring of 2019 on the Ottawa river, Lake Nipissing and in the Muskoka region provide compelling regional examples how extreme events can affect communities. Further, case studies of climate change impacts in the Canadian mining sector include examples of how climate events like low water levels/drought have slowed or stopped production due to lack of water for dust suppression or other water intake requirements, and how power outages due to ice storms and road access due to either thawing under higher temperatures, or flooding under intense rains have translated into large financial losses (Marshall et al, 2009). These environmental problems put at risk food and water security, livelihoods, and profoundly emphasize their complexity. These are the 'big questions' of our generation.

Barros et al., 2014. Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects, Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Barros, VR, CB Field, DJ Dokken, MD Mastrandrea, KJ Mach, TE Bilir, M Chatterjee, KL Ebi, YO Estrada, RC Genova, B Girma, ES Kissel, AN Levy, S MacCracken, PR Mastrandrea, LL Whites (eds.)]. Cambridge University Press, Cambridge United Kingdom and New York NY, USA, pp. 688. ; **ECO 2012, READY FOR CHANGE? An assessment of Ontario's climate change adaptation strategy.** Special Report to the Legislative Assembly of Ontario, [March 2012](#). 24p.; **Zhang et al. 2019.** Projected extreme temperature and precipitation of the Laurentian Great Lakes Basin. *Global and Planetary Change*. 172, 325-335; **Marshall et al., 2009.** Climate Change and Canadian Mining: Opportunities for Adaptation. August 2009, David Suzuki Foundation, 160p.

To train the next generation with the skills, creativity and insight to address these critical environmental problems, Nipissing University must respond with programming that draws on existing expertise across the sciences to develop a deliberately interdisciplinary environmental science program rooted in northern community. The most recent labour demand report from Eco Canada (September 2020) estimates 1 in every 30 people employed in Canada are environmental workers and while the environmental job market has been affected by COVID-19, they expect environmental jobs are expected to rebound ahead of others, both because of job creation and anticipated retirement¹. A recent survey by Yale University's program on climate change communication found that Millennials and iGens saw global warming as personally more important and ranked it higher in importance for voting decisions as they approached the 2020 presidential election compared to older generations (Ballew et al. 2019). To attract the iGen generation to study the Environment at Nipissing University, programming and expertise addressing Climate and Environmental Change is no less than foundational in this proposed epoch of the Anthropocene.

The BSc Honours Specialization, Specialization, Major and Minor in Environmental Sciences will provide a multi- and interdisciplinary curriculum, building fundamental scientific knowledge in biology, chemistry, geography, physics and earth sciences, mathematics and data sciences, and supporting advanced scientific and quantitative understanding of the environment, environmental problems and their solutions (Figure 1).

This program aligns with government actions like the Pan-Canadian Framework on Clean Growth and Climate Change, responding to the immediate need for action on climate change and engaging across government, industry and Indigenous communities for meaningful collaboration². The complex nature of many current environmental issues requires development of holistic understanding and skill developments that extend beyond disciplines to tackle what has been termed 'wicked' problems or "Big Questions". This program will provide foundational training for students to think differently about the nature of environmental problems, and how to consider alternative ways of studying and resolving these problems from across the sciences.

Sciences on the Land

With this program, Nipissing will be building on existing science programming rooted in the north, and serving northern communities, including First Nations. First Nation communities are natural partners for programming in environmental sciences. Recent studies such as Wong et al. (2020) and Bozhkov et al. (2020) highlight the common connection to the land that natural scientists and Indigenous communities share while also clearly illustrating the historical limitations and improvement needed for training of natural scientists on Indigenous history, rights, worldviews and ways to ethically conduct environmental research in relation with First Nation communities and traditional territories. At Nipissing University, faculty across both Environmental Sciences and Environmental Studies have built long term community engagement with regional First Nation communities of Dokis and Nipissing First Nations, collaborating in teaching and research. Discussion of environment and indigenous worldviews and practices are embedded in existing courses like GEOG 2226 (Environment & Society) and GEOG 4437 Hazards Geography (e.g. Indigenous fire management). Botany field courses BIOL

2447 (Ecology of Northern Trees and Forests) and BIOL 3066 (Flora of Northern Ontario) highlight intersections of western science with Traditional Ecological Knowledge (TEK) with field assignments on plants important to Indigenous peoples. Courses like GEOG 3066 and 3066 (Remote Sensing of the Environment) showcase collaborative use of applied science with regional First Nation communities (e.g. application of remote sensing with Dokis FN partners. Courses such as BIOL 3066 and BIOL 3007 [Environmental Issues in Forestry]) often have a community service-learning component which have included partnerships with Wolf Lake First Nation and Nipissing First Nation and the Nipissing University Herbarium specializes in plants used by Indigenous people with specimens coded as medicinal and/or food plants.

*Bozhkov et al. 2020. Arte the natural sciences ready for truth, healing and reconciliation with Indigenous peoples in Canada? Exploring 'settler readiness' at a world-class freshwater research station, *J. Env. Studies and Science*, 10:226-241; <https://doi.org/10.1007/s13412-020-00601-0>; Wong et al. 2020. Towards reconciliation: 10 Calls to Action to natural scientists working in Canada. *FACETS*, 5(1). <https://doi.org/10.1139/facets-2020-0005>.

¹ Eco Canada is a Not-for-profit organization established in 1992, that develops certification and training in support of Canada's environmental sector. Their most recent reporting on the environment labour market includes: *From Recession to Recovery: Environmental Jobs and Hiring Trends in the Decade Ahead*, September 2020, 36p.

² Environment and Climate Change Canada website includes reporting on the first annual report of this framework (Dec 2017). <https://www.canada.ca/en/environment-climate-change.html>

Ballew, M., Marlon, J., Rosenthal, S., Gustafson, A., Kotcher, J., Maibach, E., & Leiserowitz, A. (2019). Do younger generations care more about global warming? Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication. <https://climatecommunication.yale.edu/publications/do-younger-generations-care-more-about-global-warming/>

Interdisciplinary Land-Based Program Design & Experiential Learning

The program design draws on a core set of science requirements (environmental science, biology, chemistry, geography, mathematics, geomatics) common to all students. Students will select upper year courses from across science disciplines, organized in three groups:

- (A) Environmental Life Sciences,
- (B) Environmental Physical Sciences, and
- (C) Applied Environmental Sciences, Techniques and Experiential learning.

Experiential learning opportunities are supported by a broad range of existing options and established community partners. Course content introducing science students to indigenous knowledge and relationships with the environment in parallel with western scientific methods and perspectives will be built into two upper year courses, supported by faculty and community partners. A certificate in Environmental Chemistry will allow students to obtain an additional qualification to satisfy academic or professional interests. We outline changes to the existing minor in Environmental Science for consistency with the proposed major, specialization and honours specialization. By integrating biology, chemistry, environmental science, and geography courses, future students will be equipped with skills relevant to solving environmental related problems from an interdisciplinary approach, a demand from across environmental-related sections.

While northern in location, the program will connect to the global community through international partnerships and a mix of domestic and international students. Despite challenges in growth projections

in the region, new professional and science programming across northern Universities are showing positive growth. Societal demand (including international students) suggests we could build enrollments from 20 to 52 students/yr over 5 years (50% international students) and generate ~ \$251K to \$2.06 million per year in revenue. Estimated program costs (\$36-95K/yr) suggests strong program viability with estimated surpluses of \$200K to \$1.93 million per year.

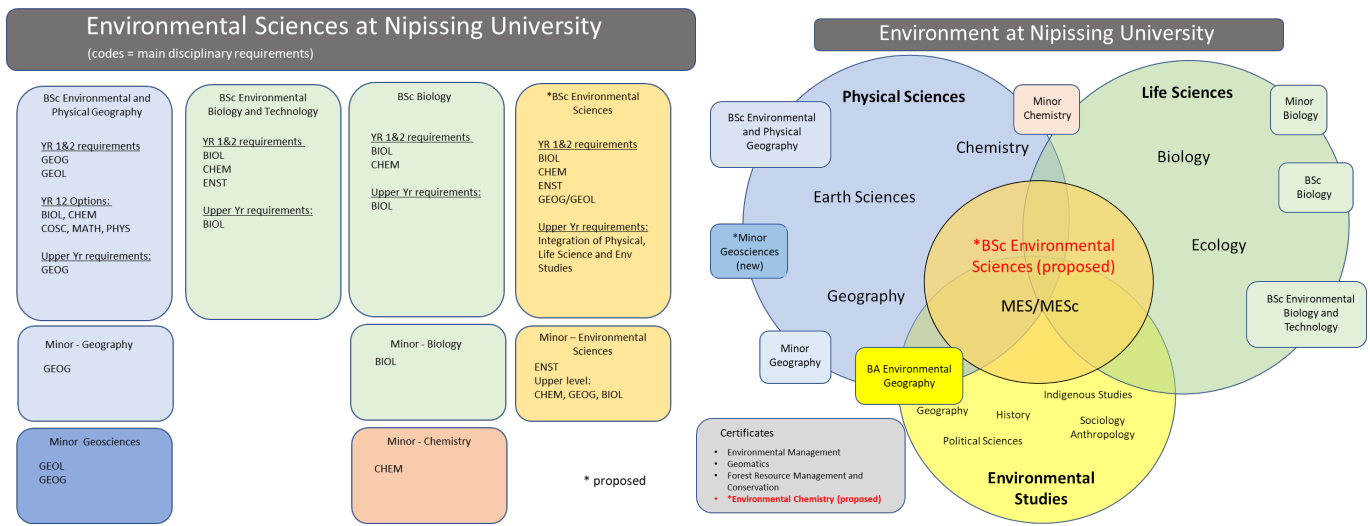


Figure 1. Existing majors and minors defining Environmental programs at Nipissing University (left) and conceptualization of the proposed BSc Environmental Sciences (right) in relation to existing environmental-science related programs. Asterisks indicate new or proposed programs.

1.2 Appropriateness of Degree Nomenclature

The degree name 'Environmental Sciences' reflects the focus on the biological, chemical, physical, earth sciences principles and processes, mathematics and data sciences as they apply to environmental problems, their solutions and preservation and management of natural resources³. It distinguishes itself from 'Environmental Studies', which, while related, explores the environment from humanities and social sciences perspectives and is the focus of a separate program proposal in development. As noted above, the interdisciplinary Environmental Sciences program will support qualification to satisfy academic or professional interest in Environmental Chemistry, a broad and interdisciplinary field that focuses on applying chemistry to the study of the environment.

The Environmental Sciences program is proposed as a distinct science program to complement existing NU science programs which are disciplinary-focused (Figure 1). The BSc in Biology allows students to specialize in ecological and environmental forms of Biology or health-related Biology. The BSc in Biology and Environmental Technology specializes in providing students with the knowledge and skills required to study Environmental Biology, and combines three years of study at Nipissing University with the one year practical and technical skills taught at Canadore College. The Bachelor of Science in Environmental and Physical Geography focuses on geography as an earth science with geography-specific courses to study environmental characteristics like water, landforms, vegetation and climate and the relationships between people and the environment. The most recent IQAP review of Environmental and Physical Geography showed a strong positive review with no recommendations on structural change to this degree program and consistently recruits majors. The BSc Environmental Sciences lies at the interface of these programs, distinct in its foundational requirements, and while allowing student flexibility in upper years, requires a much broader cross-disciplinary training than any of the existing programs (Figure 1). The addition of the BSc Environmental Sciences will attract a new student audience while supporting established programs by using existing faculty and repackaging of courses (almost 100% overlap).

1.3 Consistency of the Program with the Institution's Mission and Academic Plans

Over the last 15 years, Nipissing University has invested heavily in the areas of Environment, building excellence in both teaching and research. In addition to supporting discipline-based science programs, current programming includes a minor in Environmental Sciences and the Masters of Environmental Studies/Masters of Environmental Sciences joint program, approved in 2011, and resulting from a decade of ongoing interdisciplinary dialogue within the Departments of Geography, Biology and Chemistry, and History (Figure 1). The investment in these interdisciplinary programs are showcased in the 2019-2024 Research Plan highlighting the importance of equipping students with skills by which to consider environmental challenges through consideration of multiple perspectives.

³Gregory. 2009. *Environmental Sciences in Environmental Sciences: A Student's Companion*. SAGE Publications, Ltd, p. 25-31. Online ISBN: 9781446216187. Gregory (2009) provides discussion of the definitions of Environmental Sciences. Here, we cite the definition of Matthews, 2001: "...The recently emerging, interdisciplinary field of scientific study examining the complex interactions of human beings with the natural environment in which they live...Because modern environmental problems cannot be satisfactorily remedied by the application of any one disciplines, environmental science is based on a number of scientific disciplines (including chemistry, biology, physics, geography, geology, hydrology, ecology, meteorology, and oceanography) and social science disciplines such as economics and social policy..."

Focus on the Environment has included attraction of two Tier II Canada Research Chairs in Watershed Hydrology (2010-2020) and Environment History (2014-2019), and A Forest Bioproducts Research Chair supported by the private sector (Tembec). In winter 2021, we selected a nominee for a third Tier II CRC in Climate and Environmental Change, with particular expertise in disturbance (e.g. climate, land-use, fire) in Boreal and Subboreal watersheds, water quality and reactive transport. Environment-related faculty have attracted federal (FedNor) and provincial (NOHFC) government funding partnerships, tri-council grants related to the environment (SSHRC, NSERC), addition/clustering of new faculty with environment-related interests, and expansion of laboratory facilities dedicated to the study of the environment. Overall, environmental-sciences faculty (contributing faculty listed in Table 7, with CVs provided in Appendix 6) have attracted ~\$5.2 million dollars in external grant funding since 2009-10⁴.

The 2019-2024 Strategic Plan includes a commitment to providing students with a personalized learning experience and undergraduate research. The proposed Environmental Sciences program will provide undergraduate students with an interdisciplinary program bridging the existing (revised) Minor and preparing them for potential pathway for environment-focused professions. Environmental-science related jobs are expansive across sectors, regions and occupations across Canada and internationally (see Appendix 4 for an extensive listing, Section 8.2). The most recent labour demand report from Eco Canada (September 2020) estimates 1 in every 30 people employed in Canada are environmental workers, with "...nearly half requiring environmental-specific knowledge, skills or experience."⁵. Regionally, training will prepare students to work with community partners such as provincial ministries (e.g. Ontario's Ministry of Environment, Conservation and Parks and Ministry of Natural Resources, Forestry and Mining), Conservation Authorities (e.g. North Bay-Mattawa Conservation Authority, Conservation Sudbury), municipalities (e.g. North Bay Police), regional First Nation communities (Dokis First Nation, Nipissing First Nation, regionally-based environmental consultants and businesses (e.g. Near North labs) and others. Training will also be consistent with a pathway to graduate studies, including Nipissing's MES/MESc program.

One of the NU's goals involves strategic growth in enrollment. The Honours Specialization, Specialization, Major and Minor in Environmental Sciences have high potential of attracting a new cohort of students to Nipissing University focused on the environment. Development of environmental sciences carries a very high potential of attracting international students.† During the 2020-2025 SMA, Nipissing is investing significantly in both international recruitment and creation of international opportunities for domestic students. Recent agreements with international universities with strong environmental science-related programming (e.g. Tec University in Costa Rica - TEC Tecnológico de Costa Rica, and University of Tocantins (Brazil) will support a growing demand for training of international students in the environmental sciences and will support internships and semesters abroad for Nipissing students. In the proposed budget (Table 8), we have targeted half of new incoming students to be international students.

Projected new total enrollments building from 20 to 52 students/yr over 5 years, would generate ~ \$251K/yr to \$2.06 million/year in revenue and result in estimated surpluses of \$200 K/yr to \$1.93 million/yr. Development of an Environmental Science program would also further strengthen future development of an Environmental Engineering program.

⁴ Information received from the Research office, 10 September, 2021. ⁵ Eco Canada is a Not-for-profit organization established in 1992, that develops certification and training in support of Canada's environmental sector. Their most recent reporting on the environment labour market includes: From Recession to Recovery: Environmental Jobs and Hiring Trends in the Decade Ahead, September 2020, 36p.

*Recent (2018/19 to 2019/20) increases at Lakehead and Algoma in environment-related programming were 31 and 58 students, respectively, with 12% and 77% of changes attributed to international students.

1.4 Consultation

In December 2020, the ad hoc Environmental Science Program committee was formed with representatives from Geography, Biology and Chemistry, Mathematics and Computer Science to oversee the conceptual development and drafting of the Stage 1 LOI and subsequently the Stage 2 proposal. This team includes two Departmental Chairs (Geography and Biology and Chemistry), the MES/MESc graduate program coordinator, and five additional faculty directly involved in writing past submissions of LOIs and/or Stage 2 application for majors in both Environmental Science and in Environmental Chemistry. This proposal unites many common interests across contributing disciplines, including addressing low enrollments in upper level science courses in Chemistry and Physical Geography by building a broad program that allows students new opportunities for study of the environment. The new program will stand as a broad offering distinct from existing science programs in Biology and Geography and supports a new certificate in Environmental Chemistry (Figure 1). The program design was drafted during Spring/Summer 2021 with informal reviews/feedback from the Dean of Arts & Science Office. Consultation with the Institutional Planning Office, International Office, and Library Services have provided information supporting estimates of enrollments and program costs. Consultation with Graduate Studies and Research has provided summaries of external grant funding awarded to environmental-science faculty. Contributing science faculty have provided listing of recent and active community partners that have supported student training through experiential learning opportunities (e.g. internships, undergraduate research). Consultation with Indigenous Studies faculty has provided early ideas on integration of Indigenous worldviews and traditional ecological knowledge in two proposed new courses (field studies and 4th yr capstone course).

2.0 Admissions and Enrollment

1.1 Admission Requirement

Students must present The Ontario Secondary School Diploma (OSSD), with 6U/or-M courses in English, Mathematics (one of Calculus & Vectors or Advanced Functions), Chemistry, and one of, and two of the following three: Biology, Physics or Earth and Space Sciences, Chemistry, Physics. ~~In the event that a student will have taken Grade 11 courses in these areas and not grade 12 courses, remedial courses CHEM 1911 and BIOL 1911 are available and may be recommended. PHYS 1911 and MATH 1911, if needed, are also available. No~~ There are no prerequisites ~~are expected~~ for the introductory-level Biology, Geography and Environmental Science courses. The above requirements are appropriate as the core program requirements span biology, geography and chemistry. Students transferring from another university may apply for transfer credits. As well, a pathway for students with college diplomas wishing to join the Environmental Science program will be made available (consultation with the registrars' office has been conducted). This may facilitate attracting mature students from northern colleges such as Canadore, Cambrian as well as colleges with strong Environmental technician programs (e.g. Fleming). The credits transferred will be assessed on an individual basis.

Commented [AJ1]: These changes have been made in discussion/consultation with Heather Brown.
First Yr BIO has no prerequisite.
First Yr Chem does have gd 12 prerequisite.
Calc listed as an option for math because this means students could use this course for calculation of average instead of Adv. Functions.
Note – students taking Calc with also have Adv. Func.

Commented [AJ2]: I have met with Marney Leclerc in Registrar's office to discuss mapping out college pathways. We are working together to envision these. They could be submitted as motions after program approval.

1.2 Enrollment Planning

- a) Table 1 provides the anticipated enrolment from the initial year through year 4 (maturity) as included in the business model prepared in consultation with the Planning office (Figure 8).

Table 1. Anticipated enrollment in the BSc Environmental Sciences (domestic + international)

	Cohort Yr 1	Cohort Yr 2	Cohort Yr 3	Cohort Yr 4 / Maturity	Cohort Yr 5	Total Enrolment	Yr. of Program Maturity
Yr 1: 2022-2023	20					20	4
Yr 2: 2023-2024	28	18				46	4
Yr 3: 2024-2025	36	25	17			78	4
Yr 4: 2025-2026	44	32	24	16		117	4

- b) How proposed program plans supporting the anticipated class sizes shown in the Table above:
During the first through the third year of the program, the anticipated class sizes, in most cases, can be accommodated in the existing lecture-based courses. Some adjustment for courses with labs might be expected and could be done by addition of an extra lab section.
- c) How the enrolment fit within the University's total enrolment forecasts set out in the University's (Strategic Mandate Agreement)?
Nipissing University's projected undergraduate enrollments (FFTE) as set out in the available University's SMA (2020-2025) currently estimates low domestic growth (Table 2). Addition of a new Environmental Science program at Nipissing, attracting both domestic and international students, could contribute to Nipissing growing, increasing enrollments on the order of ~ 3%, and moving towards its capacity of 6,500 students, as identified in its Academic Plan. During the 2020-2025 SMA, Nipissing is investing significantly in international recruitment. Recent agreements with international universities with strong environmental science-related programing (e.g. Tec University in Coast Rica - TEC Tecnológico de Costa Rica, and University of Tocantins (Brazil) will support new student enrollments as well as international exchanges and internships. Assuming 50% of students are international, it is estimated this program will generate revenue ~\$2.06 million/yr in year 5 (see Table 8 for detailed program revenue and cost structure).

Table 2. Projected Undergraduate Fiscal Full-Time Equivalent (FFTE) (domestic)

	2020-21	2021-22	2022-23	2023-24	2024-25
Undergraduate FTE	4,095	4,055	4,105	4,105	4,105

3.0 Program Structure & Curriculum

Program structure has been designed with close examination of comparators across Ontario Universities and with assessment of Nipissing’s existing strengths and unique connections to the region and community partners. Environmental Science programming across Ontario Universities have foundational requirements across the sciences at first and second year levels which supports interdisciplinary training distinct from existing disciplinary science programs. This is reflected in the proposed design of a total of 21 credits of science at the introductory level.

3.1 Program Requirements

For an **Honours Specialization** in Environmental Science, students must achieve a minimum of 70% overall average in 60 credits from core courses (see astericks* in Tables below), including at least six credits at the 4000-level, and an overall average of 60%. Students must complete a total of 120 credits as per listing below. The 12 courses from Groups A, B, and/or C must include a minimum of 1 from each Group, with a minimum of 6 credits at the 4000 level. Students in the program are required to take a minimum of 2 from identified experiential learning (indicated by ** in approved Environmental Science Course List).

YR 1	BIOL 1007 - Introduction to Organismal and Evolutionary Biology CHEM 1006 - General Chemistry I CHEM 1007 – General Chemistry II GEOG 1017 - Introduction to Physical Geography ENSC 1006 - Introduction to Environmental Science <i>One of:</i> GEOL 1006 - The Earth’s Interior GEOL 1007 - Surficial Geology PHYS 1006 - General Physics I: Mechanics BIOL 1006 - Introduction to Molecular and Cell Biology <i>One of:</i> MATH 1257 - Technical Statistics MATH 1036 - Calculus I COSC 1557 - Introduction to Computer Science COSC 1567 - Programming in C++ ACAD 2 Elective	3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 6 cr.
YR 2	<u>Foundation of ‘Spheres’ (4):</u> *BIOL 2446 - Principles of Ecology *GEOG 2107 - Weather and Climate * <i>One of:</i> BIOL 2836 - Invertebrate Zoology BIOL 2837 - Vertebrate Zoology BIOL 2336 - Biology of Seedless Plants BIOL 2337 - Biology of Seed Plants * <i>One of:</i> GEOG 2126 - Physical Hydrology BIOL/GEOG 3397 - Intro Soil Science GEOG 2106 - Landscape and Surface Processes <u>Techniques (2)</u>	3 cr. 3 cr. 3 cr. 3 cr.

	*GEOG 2017 - GIS and the Earth from Space	3 cr.
	<i>One of:</i>	3 cr.
	BIOL 3117 Biostatistics	
	GEOG 2026 Introduction to Quantitative Methods	
	<u>Chemistry (2)</u>	
	*CHEM 2106 - Analytical Chemistry - Introduction	3 cr.
	<i>*One of:</i>	3 cr.
	CHEM 2046 - Environmental Analytical Chemistry	
	CHEM 2056 - Introduction to Physical Chemistry	
	CHEMC 2306 - Introduction to Organic Chemistry I	
	*GEOG 2226 - Environment and Society	3 cr.
	1 Elective	3 cr.
Yr 3	*ENSC 3XXX - Environmental Field Studies (NEW)	3 cr.
	*5 from Groups A (Physical Sciences), B (Life Sciences) and/or C (Applied/Techniques). Minimum of 1 from each group.	15 cr.
	4 Electives	12 cr.
Yr 4	*ENSC 4900 - Environmental Seminar (NEW)	3 cr.
	*5 from Groups A, B, and/or C with a minimum of 3 upper-level experiential learning courses (indicated by **).	15 cr.
	4 Electives	12 cr.

For the **Specialization** in Environmental Science, students must achieve a minimum of 60% overall average in 54 credits from core courses (see astericks* in above Table) and an overall average of 60%. Students must complete a total of 120 credits. The course listing is identical to the above table with the exception of reducing core course requirements from 5 to 4 for Yrs 3 and 4. The 8 courses from Groups A, B, and/or C must include a minimum of 1 from each Group. Students in the program are required to take a minimum of 1 from identified experiential learning (indicated by ** in approved Environmental Science Course List).

For the **Major** in Environmental Science, students must achieve a minimum of 60% overall average in 36 credits from core (asterisk in Table below) and an overall average of 60%. Students must complete a total of 90 credits as per listing below. The 6 courses from Groups A, B, and/or C must include a minimum of 1 from each Group.

YR 1	BIOL 1007 - Introduction to Organismal and Evolutionary Biology	3 cr.
	CHEM 1006 - General Chemistry I	3 cr.
	CHEM 1007 – General Chemistry II	3 cr.
	GEOG 1017 - Introduction to Physical Geography	3 cr.
	ENSC 1006 - Introduction to Environmental Science	3 cr.
	<i>One of:</i>	3 cr.
	GEOL 1006 - The Earth's Interior	
	GEOL 1007 - Surficial Geology	
	PHYS 1006 - General Physics 1: Mechanics	
	COSC 1567 - Programming in C++	
	<i>One of:</i>	3 cr.
	MATH 1257 - Technical Statistics	
	MATH 1036 - Calculus 1	
	COSC 1557 - Introduction to Computer Science	
	ACAD	3 cr.

	2 Elective	6 cr.
YR 2	*BIOL 2446 - Principles of Ecology *GEOG 2107 - Weather and Climate *GEOG 2017 - GIS and the Earth from Space *CHEM 2106 - Analytical Chemistry - Introduction *GEOG 2226 - Environment and Society <i>One of:</i> BIOL 3117 - Biostatistics GEOG 2026 - Introduction to Quantitative Methods 4 Electives	3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 3 cr. 12 cr.
Yrs 3&4	*ENSC 3XXX - Environmental Field Studies (NEW) *6 from Groups A (Physical Sciences), B (Life Sciences) and/or C (Applied/Techniques). Minimum of 1 from each group. 3 Electives	3 cr. 18 cr. 9 cr.

For the **Minor** in Environmental Science, students pursuing a program of study in a different discipline need to achieve a minimum 60% average in the 18 credits as per listing below. The four courses from Groups A, B, and/or C must include a minimum of 1 from each Group.

YR 1	ENSC 1006 (3 cr) One of (3 cr): BIOL 1007 Organismal/Evol CHEM 1006 – Gen Chem 1 GEOG 1017 Intro Phys Geog 4 from Groups A (Physical Sciences), B (Life Sciences) and/or C (Applied/Techniques). Minimum of 1 from each group.	3 cr. 3 cr. 12 cr.
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For the **Certificate in Environmental Chemistry**, students must complete the following 15 credits:

CHEM 2106	An Introduction to Analytical Chemistry	Stephen	3 cr.
CHEM 2306	Introduction to Organic Chemistry I	Mukund	3 cr.
CHEM 2406	Environmental Analytical Chemistry	Stephen	3 cr.
Plus six credits from the following list			
CHEM 2307	Introduction to Organic Chemistry II	Mukund	3 cr.
CHEM 3017	Instrumental Analysis	Stephen	3 cr.
CHEM 3026	Organic Structure Determination	Mukund	3 cr.
BIOL/CHEM 4347	Chemistry in Life Sciences	Mukund	3 cr.
CHEM 4206	Electroanalytical Chemistry	Stephen	3 cr.
GEOG 4326	Env Hydrology	James	3 cr.
GEOG/CHEM/BIO 4XXX	Biogeochemistry (proposed)	CRC	3 cr.

University Degree Requirements beyond the program requirements.

The above program structure accommodates the breadth requirements that are listed [here;below.](#) We propose that the rule requiring 'an additional minimum of 12 credits in a science discipline in an area other than that of the area of study' be disregarded for this degree program due to its multi- and interdisciplinary design across the sciences.

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Breadth Requirements and Electives:	9 courses or 27 cr.
ACAD 1601	3 cr.
Humanities (Group I)	6 3 cr.
Social Science (Group II) and/or Professional Studies (Group IV)	6 cr.
Electives (other sciences?)	12 cr.

Additional requirements applicable to the program – Experiential Learning Courses.

- GEOG/BIOL/CHEM 4995 -Thesis is restricted to students in the fourth year of an Honours program with a minimum 70% overall average and approval of the discipline is required prior to registration. Students wishing to take this course during the following Spring/Summer or Fall/Winter Session must apply in writing to the discipline no later than February 15.
- GEOG /BIOL/CHEM 498 - Directed Study is restricted to students in the fourth year of an Honours program with a minimum 70% overall average and approval of the discipline is required prior to registration. Students wishing to take this course during the following Spring/Summer or Fall/Winter Session must apply in writing to the discipline no later than February 15.
- GEOG/BIOL/CHEM 4886 Internship I is restricted to students in the third or fourth year of an Honours program with a minimum 70% overall average in the program. Approval of the internship placement organization is required prior to registration. Students wishing to take this course during the following Spring/Summer or Fall/Winter Session must apply in writing to the Department Chair no later than February 15.
- Three field camps are offered: GEOG 4976 Physical Geography Field Camp; BIOL 4976 Biology Field Camp; BIOL 4997 Freshwater Biology Field Camp.

New and Repurposed courses required for this program.

The program proposes [revision of one first year course](#), development of two new courses ~~and a~~, and [a](#) repurposing of ~~a third~~, one existing course. [The current ENSC 1005 \(Introduction to Environmental Science\) will be revised from a 6 cr to a 3 cr offering \(and renamed ENSC 1006\). Once revised, prerequisites for GEOG 2226 \(Environment and Society\), a required core course, can be reevaluated.](#) A 3rd year Environmental Studies course is proposed to integrate field methods, including indigenous-based methods, in collaboration with Indigneous Studies and existing community partners ,such as Nipissing First Nation and Dokis First Nation. The existing GEOG 3016 - Field Techniques in Geography will be redesigned and renamed for this purpose. A 4th year capstone seminar course will be designed, also in consultation with the above groups and the proposed BA Environmental studies program. A new Biogeochemistry course (upper-year level) is proposed, inline with the addition of

the expertise of the anticipated CRC Climate and Environmental Change. Additional new courses include thesis and internship versions for CHEM.

List of Approved Environmental Science Courses

Underlines = existing courses not offered recently or ever.

Yellow = new/proposed

† = also listed as a choice under additional requirements.

** = upper-level experiential learning courses (Internship, thesis, directed study, field camp).

Group A: Physical Environmental Sciences

GEOG 2126 Physical Hydrology[†]

GEOG 2106 Landscape and Surface Processes[†]

BIOL/GEOG 3397 Intro Soil Science[†]

GEOG 3436 Earth Resources

GEOG 4116 Pleistocene & Glacial Geomorphology

GEOG 3057 Environmental Geomorphology

GEOG 3126 Applied Hydrology Snow and Ice

GEOG 4437 Hazards Geography

GEOG 4247 Environment Modeling

GEOG 4096 Environmental Hydrology

GEOG 4976 Physical Geography Field Camp**

CHEM 2207/BIOL 2207 Intro to Biochemistry

CHEM 2046 Environmental Analytical Chemistry[†]

CHEM 2056 Physical Chemistry[†]

CHEM 2306 Intro to Organic Chemistry I[†]

CHEM 2307 Intro to Organic Chemistry II

CHEM 2407 Inorganic Chemistry I

CHEM 3017 Instrumental Analysis

CHEM/BIOL/GEOG Biogeochemistry (NEW)

CHEM 4206 Electroanalytical Chemistry

Group B: Life Sciences

BIOL 2836 - Invertebrate Zoology[†]

BIOL 2837 - Vertebrate Zoology[†]

BIOL 2336 - Biology of Seedless Plants[†]

BIOL 2337 - Biology of Seed Plants[†]

BIOL 2447 Ecology of Ontario Trees and Forests

BIOL 3066 Flora of Northern Ontario

BIOL 3236 Plant Ecology

GEOG 3086 Principles of Biogeography

BIOL 3277 Animal Ecology

BIOL 3136 Ichthyology

BIOL 3147 Herpetology

BIOL 3596 Ornithology

BIOL 3696 Field Ornithology

BIOL 4107 Limnology

BIOL 4357 Chemical Ecology

BIOL 4437 Landscape Ecology

BIOL 4607 Environmental Biology Seminars

BIOL 4976 Biology Field Camp **

BIOL 4997 Freshwater Biology Field Camp **

Group C: Techniques, Applied Environmental Sciences and Experiential Learning

ENSC 2006 Global/ International Topics Env Sci

ENSC 2007 Canadian Topics Env Sci

BIOL 2346 Techniques Forest Ecol & Management

GEOG 3066 Remote Sensing of the Environment

BIOL/CHEM 4347 Chemistry in Life Sciences

CHEM 3026 Organic Structure Determination

BIOL 3436 Conservation Biology

BIOL 3447 Silviculture

BIOL 3717 Animal Behaviour

BIOL 4506 Special Topics in Applied Ecology

GEOG 4057 Topics in GIS Applications

GEOG 4066 Topics Remote Sensing App

GEOG 4016 Terrain Analysis

GEOG 4027 Spatial Computing

BIOL/ GEOG 4886 Internship I (Add CHEM)**

BIOL/ GEOG 4986 Directed Study (Add CHEM)**

BIOL /GEOG 4995 Thesis (Add CHEM)**

BIOL 4706 Literature Research and Seminar (Add CHEM)**

3.2 Program Content

a) Evidence of a program structure that will ensure the intellectual quality of the student experience.

The BSc Environmental Science program is structured to include:

- A set of core requirements that allow students to build fundamental scientific knowledge in biology, environmental science, data science, chemistry, geography, physics and earth sciences, and mathematics.
- A sequence of interdisciplinary courses that prepare students to appreciate the inherently complex and interdisciplinary nature of environmental issues. This includes courses at the introductory level (e.g. ENSC 1006 – Introduction to Environmental Sciences), the second year (GEOG 2226 - Environment and Society), the third year (ENSC XXXX - Field Studies in the Environment) and a capstone course (ENSC 4900 - Honours Seminar) which unites BSc Environmental Science students and BA Environmental Studies students in a seminar-based course.
- Dedicated experiential learning courses including field camps, internship opportunities, directed study and a thesis option, will allow students a range of experiences in projects, applications and research in environmental sciences.
- Electives that allow students freedom to build unique and complimentary elements based on their interests. These can include complimentary Environmental Studies courses but also recognizes that we cannot fully anticipate the linkages needed to support students in the workplaces of the future.

b) Identify ways in which the curriculum addresses the current state of the discipline or area of study.

In design, this program recognizes definition of Environmental Sciences as both the “..interdisciplinary field of scientific study examining the complex interactions of human beings with the natural environment in which they live...” and “...the sciences concerned with investigating the state and condition of the Earth...” (Gregory, 2009). Additional discussion provided here highlights the current state of interdisciplinary teaching and research. Our use of “interdisciplinarity” is tied to the idea of creating teaching opportunities and research programs that rely on the integration of ideas, methods, philosophies, and dissemination strategies between multiple “traditional” disciplines. Scholars working on global environmental change research are increasingly seeing the value of collaborating on projects involving integrative methodologies in the geophysical and biophysical sciences, social sciences, and humanities to solve environmental problems such as climate change, deforestation, soil erosion, water pollution, and loss of biodiversity.⁶

⁶ For examples, see: Pastore et al., “Tapping Environmental History to Recreate America’s Colonial Hydrology,” *Environmental Science and Technology* 44, no. 23 (2010): 8798–8803; Kelly, Morgan, Cormac Ó Gráda, Sam White, Ulf Büntgen, Lena Hellmann, and Jan de Vries. “The Little Ice Age: Climate and History Reconsidered.” *Journal of Interdisciplinary History* 44 (2014): 301–77; Carey, Mark, Olivia C Molden, Mattias Borg Rasmussen, M Jackson, Anne W Nolin, and Bryan G Mark. “Impacts of Glacier Recession and Declining Meltwater on Mountain Societies.” *Annals of the American Association of Geographers* 107, no. 2 (2017): 350–59.

⁶ Livingstone, David. *The Geographical Tradition: Episodes in the History of a Contested Enterprise*. Oxford; Cambridge, MA: Wiley-Blackwell, 1992. Withers, Charles W J. “Geography’s Narratives and Intellectual History.” In *The SAGE Handbook of Geographical Knowledge*, edited by John Agnew and David Livingstone, 39–50. London: SAGE, 2011

Prior to the term's first official appearance in print in 1972, interdisciplinary approaches were being defined in higher-education texts in increasing numbers in the late 1960s and early 1970s.⁷ This was a time when, according to Asa Knowles, "existing patterns of higher education were being criticized by university teachers and students alike," demanding radical changes to research practice and, more commonly, teaching methods. This was also when the fields of environmental studies and environmental sciences emerged as scholarly fields of inquiry within the context of the environmental movement.

When first conceived, "environmental studies" (ENST) grew out of "environmental sciences" (ENSc) as an interdisciplinary field of study which attempted to measure and evaluate the impact of humans on the structure and function of social and ecological systems, and which focused upon the management of these systems for their benefit and survival (Barrett and Puchy 1975)⁸. Today, the two environmental fields are often located in separate faculties divided by the Social Sciences and Humanities, and the Geophysical Sciences (Cooke and Vermaire 2015)⁹. This traditional boundary has also been reinforced by government funding opportunities, both in terms of university administration and granting agencies (e.g., in Canada the Social Sciences and Humanities Research Council versus the Natural Sciences and Engineering Research Council). At Nipissing, the Arts and Sciences are placed together in a single faculty, and faculty are clustered, but not exclusively located, according to the department they teach in. This facilitates communication among faculty teaching in different disciplinary areas.

Some of the keys to establishing successful interdisciplinary programming at Linköping University in Sweden and at the University of British Columbia were outlined by Oberg (2011)¹⁰ as follows: maintain an open and respectful climate, remove hierarchies that impair, acquire deep understanding of the research process, strengthen metacompetence, emphasize a dialogue and feedback approach. Nine of the 18 the faculty listed in support of this proposal (Table 7) are also associated with the Masters of Environmental Studies/Masters of Environmental Sciences graduate program, established in 2012 and have been actively involved in attempting to promote all of these aspects of research and teaching in our programs. While the Environmental Sciences program described here highlights strategies across "traditional" science disciplines, the program design integrates broader reach beyond the sciences and its world views in required courses in the second (GEOG 2226 Environment and Society), third (ENSC XXX – Field Studies) and 4th year levels. At the fourth year level BSc students will unite in an Honours Seminar course with students from the companion B.A program in Environmental Studies.

⁷ Asa S Knowles, "Interdisciplinarity," *The International Encyclopedia of Higher Education* (ERIC, 1977), 2208. Other discussions on the history of the term include: Julie Thompson Klein, *Interdisciplinarity: History, Theory, and Practice* (Detroit: Wayne State University Press, 1990); Allen F Repko, *Defining Interdisciplinary Studies, Interdisciplinary Research: Process and Theory* (Thousand Oaks, CA: Sage Publications Inc., 2008)

⁸ Gary W. Barrett & Claire A. Puchy, "Interdisciplinarity: Process and Theory" (Thousand Oaks: Sage, 2012). *Environmental science: A new direction in environmental studies*, *Journal International Journal of Environmental Studies* 10, 2 (1977): 157-160

⁹ Steven J. Cooke & Jesse C. Vermaire, "Environmental studies and environmental science today: inevitable mission creep and integration in action-oriented transdisciplinary areas of inquiry, training and practice," *Environmental Studies and Science* (2015) 5:70-78

¹⁰ Oberg, G. 2011. *Interdisciplinary Environmental Studies: a Primer*. Wiley-Blackwell. West Sussex, UK

- c) Identification of any unique or program innovations or creative components.

The BSc. Environmental Science offers unique elements of interdisciplinary training across the environmental sciences and regional-specific experiential learning opportunities that are supported by faculty and existing undergraduate programs. These include community engagement with regional First Nation Communities (e.g. Dokis and Nipissing First Nations), site visits with scientists/researchers at government-based organizations with which faculty have active research collaborations (e.g. North Bay-Mattawa and Sudbury District Conservation Authorities, Ministry of Environment, Conservation and Parks, Ministry of Natural Resources and Forestry, Living With Lakes Research Centre, Laurentian University, Ministry of Transportation) as well as guest speakers from a wide range of organizations (e.g. Ontario Power Generation) and University faculty from around the world (e.g. Michigan Technological University, Inner Mongolia Agricultural University, Hohhot China; University of North Karelia Joensuu, Finland). These opportunities are often integrated into existing undergraduate courses and the broad collaborative network supports a range of experiential learning opportunities such as practica, internships, international exchanges, study abroad programs, community outreach and involvement, and partnerships.

4.0 Experiential Learning Opportunities

Nipissing University's Academic plan emphasizes the student experience in the natural environment with outstanding spaces in which to live and learn, dedication to supporting scholarship and research, community engagement with strong connections between our campuses and community interests and our role as global citizens.¹¹

The dedicated experiential learning courses (Table 3) in the BSc Environmental Sciences integrate these strategic priorities giving students hands-on learning opportunities and meeting principles defining experiential learning and/or work-integrated learning¹². Courses include the required Environmental Field Studies (ENSC 3XXX) and upper-level options for thesis, directed study, internship and field camps (Table 3). Thesis, directed study and internship courses are existing courses for BIOL and GEOG and are proposed for CHEM 4-letter codes. Field camps are offered on campus and students may also substitute field camps from other institutions. Additional undergraduate courses offered across the environmental sciences from Groups A, B and C may also include experiential learning activities.

¹¹ Nipissing University Annual Academic Action Plan, 2019-2022. 5.6.2019 AV-M.

¹² MAESD's (Ministry of Advanced Education and Skills Development) Guiding Principles for Experiential Learning: Work integrated learning has been defined by the Business/Higher Education Roundtable of Canada (BHER).

Requirements for supervision of thesis and research opportunities are well established and require students to be supervised or co-supervised by a full-time faculty member. Approval of internship placement organizations are required prior to registration with students applying in writing to the Department Chair no later than February 15 for the following Spring/Summer of Fall/Winter session.

Anticipated increases in enrollments through this new program will require a support from a dedicated placement coordinator that could be shared across Arts and Science programs, including the MES/MESc graduate program which includes a Masters Research Project option. Table 4 provides examples of past and future internship placements.

Table 3. Description of dedicated Experiential Learning Courses

ENSC 3XXX	Environmental Field Studies	New	<p>This course introduces students to hand-on field-based approaches research, having students work in groups defining and conducting field-based projects.</p>
GEOG/BIO/CHEM 4995	Thesis	Existing/ New to CHEM	<p>With the approval of the discipline, the student will individually plan and conduct a field and/or laboratory research project under the supervision of an appropriate faculty member. The student will also be required to present a seminar on the research, and to write the project up in dissertation form. All research projects must be supervised or co-supervised by a full-time faculty member. Student project proposals and final seminars will be reviewed or evaluated by Departmental Committee.</p> <p>This is restricted to students in the fourth year of an Honours program with a minimum 70% overall average and approval of the discipline is required prior to registration. Students wishing to take this course during the following Spring/Summer or Fall/Winter Session must apply in writing to the discipline no later than February 15. 6 cr.</p>
GEOG /BIOL/CHEM 498	Directed Study	Existing/ New to CHEM	<p>This course presents an opportunity for students to do special studies in the respective fields. The work is supervised by a faculty member who is qualified in the student's area of interest. Workload normally involves periodic discussions and a major essay.</p> <p>Directed Study is restricted to students in the fourth year of an Honours program with a minimum 70% overall average and approval of the discipline is required prior to registration. Students wishing to take this course during the following Spring/Summer or Fall/Winter Session must apply in writing to the discipline no later than February 15. 3 cr.</p>
GEOG/BIO/CHEM 4886	Internship I	Existing/ New to CHEM	<p>This course provides students with the opportunity to gain work experience with government, industry or non-governmental organizations having expertise in a relevant field of biology. Students are supervised by a faculty member in the Department of Biology and Chemistry and are expected to maintain an activity log, submit a final written report, and give a presentation to the Department at the end of the internship.</p> <p>Internship is restricted to students in the third or fourth year of an Honours program with a minimum 70% overall average in the program. Approval of the internship placement organization is required prior to registration. Students wishing to take this course during the following Spring/Summer or Fall/Winter Session must apply in writing to the Department Chair no later than February 15. 3 cr.</p>
BIOL 4976	Biology Field Camp		<p>This course will consist of a one-week intensive field camp (held immediately prior to the fall session or during the spring or summer session) designed to familiarize students with organisms and environments. Emphasis will be placed on survey and sampling techniques. Materials and data collected in the field will be identified, analysed and used to develop a major report and presentation later in the term. The location and main theme of each camp (e.g. terrestrial or freshwater ecology) may vary with the instructor. Each student will be required to pay the</p>

costs of transportation, accommodation and meals associated with the field camp experience.
Restricted to students in the third or fourth year of the Honours Biology or Environmental Biology and Technology programs.

GEOG 4976	Geography Field Camp	<p>A specific area will be analysed from a geographic point of view in a one-week field camp. Follow-up readings, oral presentations and report writing are completed over the remainder of the term. This course will be held off campus. Each student is required to pay the costs of transportation, accommodation and meals. This course may be credited towards Science</p> <p>Restricted to students in the fourth year of an Honours program and approval of the discipline is required prior to registration. Prospective students must apply to the discipline by March of the preceding academic year. 3 cr.</p>
BIOL 4997	Freshwater Biology Field Camp	<p>This course offers students a one-week intensive, spring-time study of freshwater systems on the Nipissing University Alcan Environmental Research Preserve. Activities will include water and sediment sampling and analysis, aquatic community analyses, and instruction on study design and sampling methods. Data collected will be used to generate a major written report and public presentation. Each student will be required to pay the costs of transportation, accommodation, and meals associated with the field camp experience.</p> <p>Restricted to students in the third or fourth year of the Honours Biology or Environmental Biology and Technology programs. 3 cr.</p>

Table 4. Past and Potential Placements for Internships

Organization/Company	Website Address	Potential Number of placements per term	Location
NB/Mattawa Conservation Authority	https://www.nbmca.ca/	2-4	North Bay, ON
Conservation Sudbury	https://conservationsudbury.ca/	1	Sudbury, ON
Canadian Ecology Centre	https://www.canadianecology.ca/	2	Samuel de Champagne Park, Mattawa, ON
NB Water Treatment Plant	https://www.northbay.ca/services-payments/water-wastewater/water-wastewater-facilities/wastewater-treatment-plant/	1	North Bay, ON
FRICORP Ecological Services	http://fricorp.com/team	2	North Bay, ON
Hilliardton Marsh Research & Education Centre	https://thehilliardtonmarsh.com/	1	New Liskeard, ON
Ontario Ministry of Natural Resources and Forestry		1	North Bay, ON
Fur Harvesters Auction Inc.	https://www.furharvesters.com/	1	North Bay, ON
Dorset Environmental Science Centre, Ministry of Environment, Conservation and Parks		1	Dorset, ON
Ontario Ministry of Transportation		1	North Bay, ON
Ontario Crops Research Centre	https://www.uoguelph.ca/alliance/research-facilities/research-stations/ontario-crops-research-centre-sites/ontario-crops-research-5	1	New Liskard, ON
Nipissing Forest Resources Management Inc. (NFRM)	https://www.nipissingforest.com/	1	Callander, ON

5.0 Assessment of Student Learning

Tables 5 and 6 provided below provide description of program goals and learning objectives and curriculum mapping.

a) HONOURS SPECIALIZATION IN ENVIRONMENTAL SCIENCE

The minimum 70% overall average in 60 credits from core courses, including at least six credits at the 4000-level, and an overall average of 60% for the Honours Specialization appears a standard expectation with the requirements of other University's science Honours programs in Environmental Sciences. The expectation for a student to complete 120 credits is also in line with the University's expectation.

The proposed modes of delivery for the Honours Specialization program include lecture format, lab-based instruction in select classes across the sciences and experiential learning delivery which involves several delivery models (thesis, directed study, internship, field camps). The lab-based experiments and internships are particularly helpful in preparing students for the work-place. Students in the Honours program are provided with an option of fulfilling part of their 4th year requirements by doing a 4th year Thesis, particularly meaningful for students who intend to pursue graduate studies.

The standard methods for the assessment of student achievement depend on how each course instructor structures their class and include quizzes, tests, take-home assignments, and writing of lab reports. In some courses, students make group presentations in which comments are provided by the instructors and the rest of the audience. Such comments help students to improve on how they communicate their ideas in a clear and logical manner. Experiential learning opportunities require assessments from placement partners as well as self-assessment through reflective writing by the students themselves. For those students who do a thesis and/or internships, they will be assessed on how well they can make an oral-presentation of their research and/or work-experience.

b) SPECIALIZATION IN ENVIRONMENTAL SCIENCE

An overall average of 60% in 54 cr from core courses and an overall average of 60% for the Specialization in Environmental Science appears a standard expectation with the requirements of other University's science Specialization programs. The expectation for a student to complete 120 credits is also in line with the University's program expectations.

The proposed modes of delivery for the Specialization program include lecture format, lab-based instruction in select classes across the sciences and experiential learning delivery which involves several delivery models (directed study, internship, field camps). The lab-based experiments and internships are particularly helpful in preparing students for the work-place.

The standard methods for the assessment of student achievement depend on how each course instructor structures their class and include quizzes, tests, take-home assignments, and writing of lab reports. In some courses, students make group presentations in which comments are provided by the instructors and the rest of the audience. Such comments help students to improve on how

they communicate their ideas in a clear and logical manner. Experiential learning opportunities require assessments from placement partners as well as self-assessment through reflective writing by the students themselves.

c) MAJOR IN ENVIRONMENTAL SCIENCE

The minimum overall average of 60% in 36 cr from the core and additional requirement courses presented for the Major in Environmental Science is a standard expectation with the requirements of other University's science Major programs, as does the requirement of 90 credits.

The proposed modes of delivery for the Major include lecture format, lab-based instruction in select classes across the sciences and experiential learning delivery which involves several delivery models (directed study, internship, field camps). The lab-based experiments and internships are particularly helpful in preparing students for the work-place.

The standard methods for the assessment of student achievement include quizzes, tests, take-home assignments, and writing of lab reports. Experiential learning opportunities require assessments from placement partners as well as self-assessment through reflective writing by the students themselves. The lab-based experiments and internships will help prepare students for the work-place.

The standard methods for the assessment of student achievement depend on how each course instructor structures their class and include quizzes, tests, take-home assignments, and writing of lab reports. In some courses, students make group presentations in which comments are provided by the instructors and the rest of the audience. Such comments help students to improve on how they communicate their ideas in a clear and logical manner. Experiential learning opportunities require assessments from placement partners as well as self-assessment through reflective writing by the students themselves.

d) MINOR IN ENVIRONMENTAL SCIENCE

The proposed modes of delivery for the Minor (18 credits, 60% average) include lecture format, lab-based instruction in select classes across the sciences and experiential learning delivery which involves several delivery models (directed study, internship, field camps). The lab-based experiments and internships are particularly helpful in preparing students for the work-place.

The standard methods for the assessment of student achievement include quizzes, tests, take-home assignments, and writing of lab reports. Experiential learning opportunities require assessments from placement partners as well as self-assessment through reflective writing by the students themselves. The lab-based experiments and internships will help prepare students for the work-place.

The standard methods for the assessment of student achievement depend on how each course instructor structures their class and include quizzes, tests, take-home assignments, and writing of lab reports. In some courses, students make group presentations in which comments are provided by the instructors and the rest of the audience. Such comments help students to improve on how they communicate their ideas in a clear and logical manner. Experiential learning opportunities

require assessments from placement partners as well as self-assessment through reflective writing by the students themselves.

minimum

TABLE 5a: Program Goals & Learning Outcomes Aligned with Environmental Science Honours Specialization Degree Expectations

PROGRAM GOAL (PG)	ENVIRONMENTAL SCIENCE HONOURS SPECIALIZATION DEGREE EXPECTATION	STUDENT LEARNING OUTCOMES	ILLUSTRATIVE EXAMPLES FOR EACH HONOURS SPECIALIZATION PROGRAM GOAL – SHOWING ASSESSMENT METHODS
PG-1	To graduate students who can critically examine environmental processes and recognize their relevance to environmental issues	<ul style="list-style-type: none"> Define key terms and concepts relevant to the environment and individual environmental processes (abiotic, biotic). Demonstrate an understanding of the fundamental characteristics, structure and composition of different elements of the environment (abiotic, biotic) Demonstrate an understanding of key processes that affect the environment (abiotic, biotic), and their variability (spatial, temporal) 	Goal to be assessed through: <ul style="list-style-type: none"> Written lab reports Tests and Quizzes Class discussions
PG-2	To develop graduates who have a thorough understanding of how various forms of environmental change are arising, impacts being felt and how they can be mitigated	<ul style="list-style-type: none"> Evaluate and analyze interactions between elements of the environment Define key types/aspects of environmental change, both natural and man-made, and their impacts Apply understanding of mitigation approaches and their relevance to contemporary environmental issues 	Goal to be assessed through: <ul style="list-style-type: none"> Written lab reports Tests and Quizzes Class discussions
PG-3	To train graduates who can use an interdisciplinary scientific approach to the understanding and interpretation of their world	<ul style="list-style-type: none"> Locate, interpret and appropriately use environmental observations. Describe appropriate field and lab techniques used for data collection in the environment Create and construct basic environmental sampling designs Analyze different types of environmental data. Apply understanding of environmental observations/measurements to current environmental problems. 	Goal to be assessed through: <ul style="list-style-type: none"> Written lab reports Tests and Quizzes Class discussions
PG-4	To graduate students who are prepared to be independent researchers	<ul style="list-style-type: none"> Demonstrate a sufficient ability to carry out research while observing laboratory and field safety protocols Apply theory and practice in assigned lab or field-based experiments and/or investigations with accuracy, precision and appropriate design Apply written and oral communication skills, appropriate for the various projects, necessary for the dissemination of research results 	Goal to be assessed through: <ul style="list-style-type: none"> Planning and conducting a research project Writing reports of findings Presentation of findings to peers
PG-5	To develop graduates who have the full potential for pursuing further education, and also those that can pursue various careers with ease	<ul style="list-style-type: none"> Clearly explain practical applications of the various projects/experiments An accurate assessment of research-projects that have relevance to work place Demonstrate ability to communicate ideas in a clear and logical manner Apply and display technical skills (e.g. use of spreadsheets, statistical programs and/or computer programing) to analyze data collected from research 	<ul style="list-style-type: none"> Planning and conducting a research project Writing reports of findings Oral presentations

TABLE 5b: Program Goals & Learning Outcomes Aligned with Environmental Science Specialization Degree Expectations

PROGRAM GOAL (PG)	ENVIRONMENTAL SCIENCE HONOURS SPECIALIZATION DEGREE EXPECTATION	STUDENT LEARNING OUTCOMES	ILLUSTRATIVE EXAMPLES FOR EACH HONOURS SPECIALIZATION PROGRAM GOAL – SHOWING ASSESSMENT METHODS
PG-1	To graduate students who can critically examine environmental processes and recognize their relevance to environmental issues	<ul style="list-style-type: none"> Define key terms and concepts relevant to the environment and individual environmental processes (abiotic, biotic). Demonstrate an understanding of the fundamental characteristics, structure and composition of different elements of the environment (abiotic, biotic) Demonstrate an understanding of key processes that affect the environment (abiotic, biotic), and their variability (spatial, temporal) 	Goal to be assessed through: <ul style="list-style-type: none"> Written lab reports Tests and Quizzes Class discussions
PG-2	To develop graduates who have a thorough understanding of how various forms of environmental change are arising, impacts being felt and how they can be mitigated	<ul style="list-style-type: none"> Evaluate and analyze interactions between elements of the environment Define key types/aspects of environmental change, both natural and man-made, and their impacts Apply understanding of mitigation approaches and their relevance to contemporary environmental issues 	Goal to be assessed through: <ul style="list-style-type: none"> Written lab reports Tests and Quizzes Class discussions
PG-3	To train graduates who can use an interdisciplinary scientific approach to the understanding and interpretation of their world	<ul style="list-style-type: none"> Locate, interpret and appropriately use environmental observations. Describe appropriate field and lab techniques used for data collection in the environment Create and construct basic environmental sampling designs Analyze different types of environmental data. Apply understanding of environmental observations/measurements to current environmental problems. 	Goal to be assessed through: <ul style="list-style-type: none"> Written lab reports Tests and Quizzes Class discussions
PG-4	To graduate students who are prepared to be independent researchers	<ul style="list-style-type: none"> Demonstrate a sufficient ability to carry out research while observing laboratory and field safety protocols Apply theory and practice in assigned lab or field-based experiments and/or investigations with accuracy, precision and appropriate design Apply written and oral communication skills, appropriate for the various projects, necessary for the dissemination of research results 	Goal to be assessed through: <ul style="list-style-type: none"> Planning and conducting a research project Writing reports of findings Presentation of findings to peers
PG-5	To develop graduates who have the full potential for pursuing further education, and also those that can pursue various careers with ease	<ul style="list-style-type: none"> Clearly explain practical applications of the various projects/experiments An accurate assessment of research-projects that have relevance to work place Demonstrate ability to communicate ideas in a clear and logical manner Apply and display technical skills (e.g. use of spreadsheets, statistical programs and/or computer programming) to analyze data collected from research 	<ul style="list-style-type: none"> Planning and conducting a research project Writing reports of findings Oral presentations

TABLE 5c: Program Goals & Learning Outcomes Aligned with Environmental Science Major Degree Expectations

PROGRAM GOAL (PG)	ENVIRONMENTAL SCIENCE HONOURS SPECIALIZATION DEGREE EXPECTATION	STUDENT LEARNING OUTCOMES	ILLUSTRATIVE EXAMPLES FOR EACH HONOURS SPECIALIZATION PROGRAM GOAL – SHOWING ASSESSMENT METHODS
PG-1	To graduate students who can critically examine environmental processes and recognize their relevance to environmental issues	<ul style="list-style-type: none"> • Define key terms and concepts relevant to the environment and individual environmental processes (abiotic, biotic). • Demonstrate an understanding of the fundamental characteristics, structure and composition of different elements of the environment (abiotic, biotic) • Demonstrate an understanding of key processes that affect the environment (abiotic, biotic), and their variability (spatial, temporal) 	Goal to be assessed through: <ul style="list-style-type: none"> • Written lab reports • Tests and Quizzes • Class discussions
PG-2	To develop graduates who have a thorough understanding of how various forms of environmental change are arising, impacts being felt and how they can be mitigated	<ul style="list-style-type: none"> • Evaluate and analyze interactions between elements of the environment • Define key types/aspects of environmental change, both natural and man-made, and their impacts • Apply understanding of mitigation approaches and their relevance to contemporary environmental issues 	Goal to be assessed through: <ul style="list-style-type: none"> • Written lab reports • Tests and Quizzes • Class discussions
PG-3	To train graduates who can use an interdisciplinary scientific approach to the understanding and interpretation of their world	<ul style="list-style-type: none"> • Locate, interpret and appropriately use environmental observations. • Describe appropriate field and lab techniques used for data collection in the environment • Create and construct basic environmental sampling designs • Analyze different types of environmental data. • Apply understanding of environmental observations/measurements to current environmental problems. 	Goal to be assessed through: <ul style="list-style-type: none"> • Written lab reports • Tests and Quizzes • Class discussions
PG-4	To graduate students who are prepared to be independent researchers	<ul style="list-style-type: none"> • Demonstrate a sufficient ability to carry out research while observing laboratory and field safety protocols • Apply theory and practice in assigned lab or field-based experiments and/or investigations with accuracy, precision and appropriate design • Apply written and oral communication skills, appropriate for the various projects, necessary for the dissemination of research results 	Goal to be assessed through: <ul style="list-style-type: none"> • Planning and conducting a research project • Writing reports of findings • Presentation of findings to peers

Table 6. Curriculum Mapping

Required Courses		Related Undergraduate Degree Expectations					
		1	2	3	4	5	6
Course Code	Course Title	Depth & Breadth of Knowledge	Knowledge of Methodologies	Application of Knowledge	Communication Skills	Awareness of Limits of Knowledge	Autonomy and professional Capacity
CHEM 1006	General Chemistry I	X	X	X			
CHEM 1007	General Chemistry II	X	X	X			
BIOL 1006	Introduction to Molecular and Cell Biology	X	X	X			
BIOL 1007	Introduction to Organismal and Evolutionary Biology	X	X	X			
GEOG 1017	Introduction to Physical Geography	X	X	X			
ENSC 1006	Introduction to Environmental Science	X	X	X			
BIOL 2446	Principles of Ecology	X	X	X			
GEOG 2107	Weather and Climate	X	X	X			
GEOG 2017	GIS and the Earth from Space	X	X	X			
CHEM 2106	Analytical Chemistry - Introduction	X	X	X			
GEOG 2226	Environment and Society	X	X	X	X	X	
ENSC 3XXX	Environmental Field Studies	X	X	X	X	X	X
ENSC 4900	Environmental Seminar	X	X	X	X	X	X
One of the following							
Math 1257	Technical Statistics	X	X	X			
Math 1036	Calculus 1	X	X	X			
COSC 1557	Introduction to Computer Science	X	X	X			
One of the following							
GEOL 1006	The Earth's Interior	X	X	X			
GEOL 1007	Surficial Geology	X	X	X			
PHYS 1006	General Physics I: Mechanics	X	X	X			
COSC 1567	Programming in C++	X	X	X			
One of the following							
GEOG 2026	Introduction to Quantitative Methods	X	X	X	X	X	
BIOL 3117	Biostatistics	X	X	X	X	X	
One of the following							
BIOL 2836	Invertebrate Zoology	X	X	X			
BIOL 2837	Vertebrate Zoology	X	X	X			
BIOL 2336	Biology of Seedless Plants	X	X	X			
BIOL 2337	Biology of Seed Plants	X	X	X			
One of the following							
GEOG 2126	Physical Hydrology	X	X	X			
GEOG/BIOL 3397	Introductory Soil Science	X	X	X			
GEOG 2106	Landscape and Surface Processes	X	X	X			
One of the following							
CHEM 2046	Environmental Analytical Chemistry	X	X	X			
CHEM 2056	Introduction to Physical Chemistry	X	X	X			
CHEM 2306	Introduction to Organic Chemistry I	X	X	X			

6.0 Faculty: Resources & Quality Indicators

There is excellent and broad environmental sciences expertise and course offerings represented on campus, as illustrated in the Environmental Course List. This will facilitate longterm sustainability of this new program. Individual science faculty have research or other partnerships that facilitate unique field experiences, research, experiential learning opportunities that are integrated into individual courses and/or internships and thesis research (Tables 7 and 8). Faculty CVs are provided in Appendix 6.

Table 7. Faculty Expertise and Research (*4 additional faculty profiles to be added)

Faculty Name	Department	Education	Status (Tenured, Tenure-Track, LTA)	Area(s) of Specialization/Expertise	Publications		
					Refereed	Non-refereed	Refereed Abst/Con Prc.
Jeff Dech	Biology/Chemistry	PhD	Professor, Tenured	Forest ecology; community ecology; dendrochronology; ecological modeling; silviculture	32	3	1
Ewa Dokis	Biology/Chemistry	PhD	Assistant Professor, Tenured	Biology			
Reeham Mirza	Biology/Chemistry	PhD	Associate Professor, Tenured	Aquatic Species			
Peter Nosko	Biology/Chemistry	PhD	Associate Professor, Tenured	Biology			
Tony Parks	Biology/Chemistry	PhD	Associate Professor, Tenured	Biology			
Dave Hackett	Biology/Chemistry	PhD	Assistant Professor, Tenured	Biology (Environmental Science: conservation problems of loons; monitoring of salamanders and other amphibians; biological and environmental factors affecting fur bearers)	14*	16	16
Mukund Jha	Biology/Chemistry	PhD	Professor, Tenured	Organic Chemistry (Chemical Synthesis, Green Chemistry, Medicinal Chemistry, Microbiology, Enzymology)	35		59
Stephen Kariuki	Biology/Chemistry	PhD	Associate Professor, Tenured	Analytical Chemistry (Hydrometallurgy, Bioleaching, Analysis of sulphur compounds in water)	26	22	22
April James	Geography	PhD	Professor, Tenured	Hydrology, Streamflow generation, Environmental Tracers, Modeling	32	15	63
John Kovacs	Geography	PhD	Professor, Tenured	Environmental monitoring; environmental mapping; remote sensing; biogeography	53	19	67
David Rowbotham	Geography	PhD	Assistant Professor, Tenured	Terrain analysis; natural hazards; geomorphology;	4	4	8

				geographic information systems			
Eric Mattson	Geography	PhD	Assistant Professor, Tenured	Snow and Ice Hydrology	6	8	26
Odwa Atari	Geography	PhD	Associate Professor, Tenured	Health geography; Geographic Information Systems (GIS); environmental management	20	19	21
James Abbott	Geography	PhD	Associate Professor, Tenured	Highly variable natural and human landscapes; rural livelihoods; Africa; Small-scale fisheries; environmental indicators; non-state institutional actors	8	3	2
Dan Walters	Geography	PhD	Professor, Tenured	Water governance; First Nations drinking water and wastewater risk; harmful algae blooms; agricultural decision support	35	4	40
Mark Wachowiak	Math and Computer Science	PhD	Professor, Tenured	Biomedical Computing, Geospatial Computation, Visualization, Digital Humanities	37		54 (Referred conf. proceed.)

*Dave Hackett's refereed publications includes 4 co-authored editions of an Environmental Science textbook that is used in universities across Canada.

Table 8. Faculty Instruction and Supervision (*(*4 additional faculty profiles to be added)*)

MEMBER	Supervised		Committees		Other	Courses
	Master	PhD	Master	PhD		
Jeff Dech	9	1	3		1 (PDF), 16(UG)	
Ewa Dokis						
Reeham Mirza						
Peter Nosko						
Tony Parks						
Dave Hackett						19
Mukund Jha	2	2	3	2	1 (PDF)	10
Stephen Kariuki	2		2		17	8
April James	13	2	10	5	4 (PDF); 6(UG)	13
John Kovacs	5	1	2	1	3 PDF	4
David Rowbotham			1		17 (UG)	12
Eric Mattson			2	1	29 (UG)	31
Odwa Atari	3		1		1(UG)	43
James Abbott	3		2			17
Dan Walters	11		7		10	17
Mark Wachowiak	3		2		10 (UG – RA supervision)	15

7.0 Program Costs and Resource Planning

7.1 Program Costs

In consultation with the Office of Institutional planning, five-year program costs and anticipated revenues have been estimated and are provided in Table 8. Instruction within the proposed program will be managed by the existing teaching staff and the anticipated Canada Research Chair

in Climate and Environmental Change. Funding for a Placement coordinator to be shared across Arts & Science programming is included (10% of ~65K/yr salary) starting in YR 1. Funding for thesis supervision is included starting in Yr 4. Annual support for honorariums for First Nation participants is included, as is materials, field and lab equipment maintenance to support experiential learning courses (10K/yr). One teaching assistantship is included to support the Environmental Science Field Studies course. Total program costs are estimated to be \$36K/yr to \$95K/yr over the 5-year plan.

Estimated revenue generated by the program is based on targeted enrollment of 20 students/yr in YR1 and increasing to 52 students/yr by year 5. We assume 50% of new enrollments in any year will be international students. Total annual program revenue is estimated to be \$251K in Yr 1, increasing to ~\$2.06 million in Yr 5. This assumes annual attrition of 10% from YR 1 to Yr2 and 5% in subsequent years.

Assuming the above program costs and revenue generation, an annual program surplus is estimated each year, building from ~\$200K in Yr 1 to ~1.93 million in Yr 5.

Table 8. Program Costs and Anticipated Revenue.

Business Plan for Environmental Sciences, Modest Growth Model; With Domestic and International															
	Year 1	Year 1	Year 1	Year 2	Year 2	Year 2	Year 3	Year 3	Year 3	Year 4	Year 4	Year 4	Year 5	Year 5	Year 5
	Hours	Weeks	Terms	Hours	Weeks	Terms	Hours	Weeks	Terms	Hours	Weeks	Terms	Hours	Weeks	Terms
Program Enrollment															
New Enrollment (Domestic)			10			14			18			22			26
New Enrollment (International)			10			14			18			22			26
Continuing Enrollment (Domestic)						9			21			37			55
Continuing Enrollment (International)						9			21			37			55
Total Enrollment			20			46			78			117			163
Revenue	Rate	# students	Total	Rate	# students	Total	Rate	# students	Total	Rate	# students	Total	Rate	# students	Total
Tuition (Domestic)	\$ 5,781	10	\$ 57,810	\$ 5,839	23	\$ 134,293	\$ 5,897	39.15	\$ 230,875	\$ 5,956	58.7155	\$ 349,720	\$ 6,016	81.414035	\$ 499,765
Tuition (International)	\$ 19,325	10	\$ 193,250	\$ 19,325	23	\$ 444,475	\$ 19,325	39.15	\$ 756,574	\$ 19,325	58.7155	\$ 1,134,677	\$ 19,325	81.414035	\$ 1,573,326
Govt operating grant	\$ 2,023	20	\$ 113,288	\$ 1,687	46	\$ 217,286	\$ 1,351	78.3	\$ 296,193	\$ 1,183	117.431	\$ 388,978	\$ 1,183	162.82807	\$ 539,352
Total Revenues			\$ 251,060			\$ 578,768			\$ 987,449			\$ 1,484,397			\$ 2,063,091
Expenses	Factor/No	Unit Cost (\$)	Cost (\$)	Factor/No	Unit Cost (\$)	Cost (\$)	Factor/No	Unit Cost (\$)	Cost (\$)	Factor/No	Unit Cost (\$)	Cost (\$)	Factor/No	Unit Cost (\$)	Cost (\$)
New Full time/Part-time faculty (NONE)	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -
Placement coordinator (10%)	0.1	\$ 65,000	\$ 6,500	0.1	\$ 68,250	\$ 6,825	0.1	\$ 71,663	\$ 7,166	0.1	\$ 75,246	\$ 7,525	0.1	\$ 79,008	\$ 7,901
Faculty Supervision Thesis/MRP	0	\$ 400	\$ -	0	\$ 420	\$ -	0	\$ 441	\$ -	16	\$ 463	\$ 7,409	40	\$ 486	\$ 19,448
Materials/Equipment/Maintenance - experiential learning			\$ 10,000			\$ 10,000			\$ 10,000			\$ 10,000			\$ 10,000
Honorariums (FN Community members)	3	\$ 350	\$ 1,050	3	\$ 350	\$ 1,050	3	\$ 350	\$ 1,050	3	\$ 350	\$ 1,050	3	\$ 350	\$ 1,050
PD for instructors	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -
Student teaching assistants	1	\$ 5,000	\$ 5,000	1	\$ 5,250	\$ 5,250	1	\$ 5,512	\$ 5,512	1	\$ 5,788	\$ 5,788	1	\$ 6,077	\$ 6,077
Student research assistants	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -
Curriculum development	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -
Benefits			\$ 1,625			\$ 1,706			\$ 1,792			\$ 3,733			\$ 6,837
Total Salary Expense			\$ 24,175			\$ 24,831			\$ 25,520			\$ 35,505			\$ 51,313
Other Expenses															
Materials and supplies			\$ 500			\$ 520			\$ 541			\$ 562			\$ 585
Faculty Office			\$ 1,500			\$ 1,500			\$ 3,000			\$ 3,000			\$ 3,000
Capital equipment															
Library resources			\$ 1,500			\$ 1,000			\$ 1,000			\$ 1,000			\$ 1,000
Research support (start up grants)			\$ -			\$ -			\$ -			\$ -			\$ -
Information technology															
Printing			\$ 1,000			\$ 1,040			\$ 1,082			\$ 1,125			\$ 1,170
Advertising, marketing and promotion			\$ 1,000			\$ 1,040			\$ 1,082			\$ 1,125			\$ 1,170
Travel			\$ -			\$ -			\$ -			\$ -			\$ -
Recruiting costs			\$ 2,500			\$ 2,500			\$ 2,500			\$ 2,500			\$ 2,500
Grad Financial Support - RA			\$ -			\$ -			\$ -			\$ -			\$ -
Grad Financial Support - TA			\$ -			\$ -			\$ -			\$ -			\$ -
Student Access Guarantee			\$ 4,047			\$ 9,400			\$ 16,161			\$ 24,480			\$ 34,284
Professional Fees - Accreditation			\$ -			\$ -			\$ -			\$ -			\$ -
Other admin costs															
Total other expenses			\$ 12,047			\$ 17,000			\$ 25,366			\$ 33,793			\$ 43,708
Total Expense			\$ 36,222			\$ 41,832			\$ 50,885			\$ 69,297			\$ 95,021
Contribution Before Overhead			\$ 214,838			\$ 536,936			\$ 936,564			\$ 1,415,099			\$ 1,968,070
Admin Overhead			\$ 14,489			\$ 16,733			\$ 20,354			\$ 27,719			\$ 38,009
Surplus/ (Deficit)			\$ 200,350			\$ 520,203			\$ 916,209			\$ 1,387,380			\$ 1,930,061

7.2 Resources

a) Administrative support.

It is proposed that a School of Environment, with a dedicated (an out-of-scope) Director be created to support the new BSc Environmental Sciences, along with the proposed BA Environmental Studies and existing MES/MESc graduate program. This administrative structure would support day-to-day operations of the interdisciplinary undergraduate programs, the affiliated certificate and the joint MES/MESc graduate program, allowing for coordination across the various contributing departments. This structure would also support a dedicated Placement Coordinator shared across A&S programs.

a) Library Support

An assessment of information resources and services has been prepared and provided by the Library Services, provided in Appendix.

b) Technology and Physical Space

Any increases in technology support and physical resource requirements would be aligned with generating new enrollments. For many physical, life science and chemistry courses, labs are an important component and have limited class sizes. If the intake numbers and the number of the students in the proposed program significantly exceed existing classrooms, there will be need for expanded lab sections and/or space for select courses.

8.0 Demand for Program

8.1 Evidence of Student Demand

Using provincial data made available through the Nipissing University Planning office, demand for environmental sciences-related undergraduate degree training in 2019-20 in all of Ontario is estimated around ~ 42,000¹³ students per year (~4,700 international) with ~ 2,500 (~ 250 international) of these students enrolled in northern Ontario Universities (Algoma, Lakehead, Laurentian, Nipissing) (Appendix 2). Recent increases in Environmental-Science enrollments at Lakehead and Algoma (26% and 48% increases respectively for 2019/20 compared to 2018/19) illustrate demand for additional Environmental Science programming at northern Ontario Universities. Some of this appears to be attracting new domestic but also international students. The data suggests that 12% and 77% of the increases at Lakehead and Algoma, respectively, are attributed to international students. A new Environmental Science program at Nipissing, attracting both domestic and international students could contribute to Nipissing growing towards its capacity of 6,500 students, as identified in its' Academic Plan. Recent international agreements signed between Nipissing University and Universities in Brazil, Costa Rica, India, and the Philippines support strong demand for environmental science programming (Appendix 3).

¹³ Ontario Headcount data for 2019/20 using only environment-related program titles from five broad program categories 1) Agricultural/Animal/Plant/Veterinary Sciences and Related fields, 2) Biological and Biomedical Sciences, 3) Multit/Interdisciplinary Studies, 4) Natural Resources and Conservation, 5) Physical Sciences.

Demand for additional programming in Environmental Sciences and academic and professional interest in further qualification in Environmental Chemistry is clearly apparent from feedback from our existing students and their pursuit of environmental chemistry related graduate programming and employment upon their graduation from Nipissing (Table 9). The proposed Environmental Sciences program with a certificate in Environmental Chemistry will be supported by existing faculty and offerings and the addition of the proposed Canada Research Chair in Climate and Environmental Change with expertise in landscape biogeochemistry including the fate and transport of mercury. A certificate in Environmental Chemistry will benefit student transition to both professional post Baccalaureate employment and environmental chemistry related graduate programs.

Table 9. Representative List of NU Graduates pursuing chemistry-related pathways.

Recent NU Students	Graduate Program (MS/PhD)	Current Whereabouts
Matthew Edwards	University of Waterloo (PhD)	Separation Science Product Manager, Markes International, Cardiff, UK
Cody Butler	Trent University (MS)	Lab Technician, Water Quality Centre, Trent University
Darian Blanchard	University of Guelph (MS)	Application Specialist, Syngenta
Kate-Lyn Lund	Dalhousie University (MS)	Chemistry Instructor, Nipissing University
Michael Edmunds	University of Guelph (MS)	Biostatistician, Health Canada
Jordan Evans	University of Toronto (MS)	Medicinal Chemist, Novartis, Cambridge, MA, USA
Michael Ross	DDS, University of Toronto	Dentist, North Bay, ON
Stephanie Guy	Queen's University (PhD)	Postdoctoral Fellow at Ottawa Hospital Research Institute, Ottawa
Nathan Wray	Simon Fraser University (MS)	QC Analyst, STEMCELL Technologies, Vancouver, Canada
Spencer Short	University of Ottawa (PhD in progress)	
Jennifer Tropiano	McMaster University (MS in progress)	

8.2 Evidence of Society/Labour Market Need

Universities across Canada have developed Environmental Science programs in addition to traditional disciplinary programs in recognition of the need for multidisciplinary and interdisciplinary approaches to solving environmental problems. Eco-Canada (Environmental Careers Organization Canada, a non-for-profit founded in 1992 to support Canada's growing environmental sector) identifies 88 entries for Canadian Environmental post secondary programs (includes undergraduate and college programs) and has accredited 33 of these programs from across Canada (www.eco.ca). Increasingly, society expects those engaged in careers that deal with human-environment interactions to make informed decisions about

complex multi-faceted problems; however, traditional disciplinary approaches to undergraduate education do not provide knowledge and experience required to do this effectively.

There has been a growing demand for experts in all areas of Environmental Sciences, including Environmental Chemistry. Employment of skills and knowledge in environmental sciences and chemistry include collecting and analyzing air, water, and soil samples; involvement in the remediation programs; development of strategies to reduce sources of pollution and treatment of waste that cannot be eliminated; designing of processes, systems, and equipment for quality assurance and quality control; conducting research based on improvement of the health and safety of the environment; and training of technical staff. Environmental science and chemistry majors are employed across sections, including waste management firms, environmental consulting firms, forensic labs, oil and gas industries, agrochemical companies, universities and research institutes, and federal/provincial/municipal government departments.

Examples of Environmental Science and Environmental Chemistry related employment were obtained from several web-based resources, include Environmental Careers Organization Canada's job board (www.eco.ca), and a web-search on Environmental Chemistry Jobs in Canada (posted April 2019) (<https://ca.indeed.com/Environmental-Chemistry-jobs?vjk=d487a06f5c95af98>) and are provided in Appendix 4. Environmental-science related jobs are expansive across sectors, regions and occupations across Canada. The most recent labour demand report from Eco Canada (September 2020) estimates 1 in every 30 people employed in Canada are environmental workers and while the environmental job market has been affected by COVID-19, they expect environmental jobs are expected to rebound ahead of others, both because of job creation and anticipated retirement¹⁴. Eco Canada's report estimates that "...nearly half of the hiring needs will be for core environmental workers or these in roles requiring environmental-specific knowledge, skills or experience...". Survey specific to environmental chemistry indicates that there is an overwhelming demand for environment-related employment in the labour market in areas that include: Environmental consultants, Environmental supervisors, Laboratory technologists, Environmental protection analysts, Chemical wastes technologists, Environmental chemists, Laboratory supervisors, Laboratory analysts, Laboratory plant Chemical plant operators, Air quality monitors, and Teachers.

Select (known) listing of current employers for students graduating from Nipissing University's affiliated MES/MESc graduate program since 2012 include: Ontario Parks • Ontario Power Generation • Ontario Ministry of Natural Resources and Forestry • Anishnabek Nation • Dorset Environmental Science Centre, Ontario Ministry of Environment, Conservation and Parks • Canadore College • Dokis First Nation • Nipissing First Nation • Guelph Research Station, University of Guelph • Municipal Member of Parliament, New Liskeard • McIntosh Perry Engineering Firm • City of North Bay • SNC Lavalin Group Inc. • Greenstar Forest Solutions • Lawyer • Michigan Department of Environment, Great Lakes and Energy • Story Environmental, North Bay ON.

¹⁴ Eco Canada. From Recession to Recovery: Environmental Jobs and Hiring Trends in the Decade Ahead, September 2020, 36p.

8.3 Evidence of Justifiable Duplication

Many universities across Canada offer undergraduate programs in Environmental Sciences. However, development of Environmental Sciences at Nipissing University will provide new opportunities to train students in the north about northern environmental problems and their solutions. Existing strength across the contributing sciences at Nipissing highlights that with little investment, an important addition to Environmental Science training rooted in the north can be added. Appendix 5 provides a list of comparator programs offered by other provincial postsecondary institutions and specifically in northern Ontario. While large and mid-size universities offer BSc programs specific to Environmental Chemistry, in Northern Ontario this specialized program is lacking. Given that we are a smaller University, an Environmental Science program paired with a certificate in Environmental Chemistry at Nipissing University would be a strong attractor for new students and provide new opportunities to make a positive change for the Northern Ontario.

9.0 Institutional Fit

This new program will be submitted to the Ministry for funding.

9.1 Alignment with Strategic Mandate Agreement

As highlighted by the 2020-2025 SMA, “Nipissing University was created by a provincial act to specifically address the needs of Northern Ontario and continues to have a special focus on serving the North in the North”. The addition of new Environmental Science programming at Nipissing University is strongly aligned with improving capacities in Northern Ontario and will positively contribute to SMA performance metrics.¹⁵ It will further build Nipissing’s capabilities for integrated land-based teaching. Graduates from Environmental Science programs are typically employed across both private and public sectors with potential for pursuing professional designations (e.g. Environmental Professional, Professional Forestry, Professional Geoscientist¹⁶) after gaining environmental work experience, leading to higher graduate employment earnings. Contributing NU faculty have long established records of working with community-based partners, generating environment-related research that is both regionally of value as well as of interest to broader academic and applied audiences, also evidenced by strong Tri-Agency funding (~ \$5.2 million since 2009-10) and Research Chair Awards (1 industrial, 2 Tier 2 CRCs, including 1 renewal). The Environmental Sciences program will build on strong existing capacities for hands-on experiential learning opportunities that will be further supported by a recent teaching chair in STEM.

¹⁵ 2020-2025 Strategic Mandate Agreement: Nipissing University, <https://www.ontario.ca/page/2020-2025-strategic-mandate-agreement-nipissing-university>

¹⁶ www.eco.ca; www.opfa.ca; www.pgo.ca

The Environment and Natural Resources is an area of strength with existing programming with Nipissing offering (Figure 1):

- a BSc in Biology
- a BSc in Environmental Biology and Technology,
- a BSc in Environment and Physical Geography,
- Minors in Environmental Sciences (est. 2016/17), Chemistry, Geography, Biology

- and a joint Masters of Environmental Studies/Masters of Environmental Sciences (MES/MESc) graduate program hosted by three founding departments (Geography, Biology and Chemistry, History) that has been offered since 2012.

Environmental sciences at Nipissing University can be a program area of important expansion. At Nipissing University, there is currently no Major or Honours Specialization in Environmental Science and no Major specific to Environmental Chemistry. The proposed BSc Environmental Sciences program with a new certificate in Environmental chemistry will fill an important gap in current programming, increasing visibility on how students can study the environment at Nipissing University, building from the existing minor and providing pathways to professional and graduate studies opportunities. It will differ from existing BSc. programming by offering broader interdisciplinary science and experiential learning requirements, consistent with cross-sector professional interests. Content in Environmental Chemistry highlighted by the new certificate will allow students to satisfy additional academic and professional interests. An interdisciplinary program in Environmental Sciences carries a very high potential of attracting international students to NU. It is also a very strong stepping stone for future considerations in development of Environmental Engineering.

9.2 Program Prioritization/Program transformation Initiatives

The new BSc Environmental Sciences program draws on several existing programs in Biology, Geography, and Chemistry, to maximize interdisciplinary connections and provide new and unique opportunities for students interested in pursuing a degree in environmental sciences. Using Nipissing University's common-degree structure, the program integrates existing courses to offer excellence in interdisciplinary environmental science training consistent with competitor programming across the province. The interdisciplinary nature of the program will lend itself to furthering Nipissing University's community outreach and land-based research specific to northeastern Ontario, with commitment to training the next generation of environmental scientists consistent with the Truth and Reconciliation Commission recommendations, with awareness and engagement across northern communities (First Nations, northern municipalities) and sectors including northern industries (forestry, mining, hydropower generation). Supporting science on the land and community engagement, this degree program will train students in the north about northern environmental problems and their solutions. These design features will differentiate Nipissing's Environmental Science program from its competitors. It will also provide new opportunities to connect students globally with interdisciplinary study of the environment. The addition of the BSc Environmental Sciences will attract a new student audience while supporting established programs by using existing faculty and courses (almost 100% overlap).

Appendix 1. Library Report for Proposed Environmental Sciences Program

Program:	Bachelor of Science in Environmental Sciences, certificate in Environmental Chemistry
Faculty:	Arts and Science
Institution:	Nipissing University
Librarian:	Laura Sinclair, BSc, MLIS, BEd
Date:	August 2021

Introduction

The Library is a shared service between Canadore College and Nipissing University. Most of the staff members and collections are based in the Harris Learning Library (HLL) located at the North Bay College Drive campus. The Library website can be accessed at www.eclibrary.ca. The Library collection includes books, e-books, print and online journals, and audiovisual materials such as films and kits. Liaison librarians collaborate with faculty to select resources for the collection to support coursework and research activities. As a result of the pandemic and a shift to more online courses, there has been an even greater priority given to the acquisition of digital resources.

Library Resources for the Environmental Sciences Program and Environmental Chemistry Certificate

Although the BSc in Environmental Sciences will be a new program, the curriculum is comprised of many courses that are currently offered and are supported by the library collection. The Library currently provides access to several databases that have subject specific content for this program, including:

- Web of Science
- Science Direct
- GeoBase
- BioOne
- Nature

Additionally, several databases include content for related fields of study such as Biology, Geography, Chemistry, Health Sciences and others. Comprehensive multidisciplinary databases such as Academic Search Premier, Academic OneFile and Scholars Portal Journals also contain literature that is relevant to courses offered for the Environmental Sciences program and Environmental Chemistry certificate. It is essential to maintain access to this broad scope of resources, especially when some courses, such as those for thesis work and directed studies, could potentially be multidisciplinary in content.

There are other resources that could be considered for future acquisition in support of this program, such as the Environment Complete database (over 1000 fulltext, non-open access journal titles related to ecology, sustainability, environmental policy, energy etc.). The American Chemical Society publications and the Royal Society of Chemistry database would also support the proposed program and certificate; however, subscription to these resources is not currently recommended unless course offerings expand. They are costly, and would require faculty consultation and an increase to library funding.

The Library has a fairly robust journal collection, containing more than 60 000 publications. There are over 2500 titles in the "Earth and Environmental Sciences" category of journals in the Library system. Additionally, in excess of 500 journals are classified as "Chemistry" titles. There are many multidisciplinary

publications containing content related to Environmental Sciences as well. No essential journal additions are recommended at this time; however, faculty members may request specific journal titles, which would be considered on a case-by-case basis, with cost being a major consideration.

The monograph collection for Environmental Sciences is modest, with priority given to faculty requests. Both print books and e-books are collected, depending upon faculty preference, expense, and format availability. With the increase in online instruction and learning, ebooks have become the preferred format. The addition of some newer content is recommended.

Films related to Environmental Sciences are purchased selectively and usually only upon faculty request, due to cost; however, the Library has some streamed video databases with relevant titles. For instance, curio.ca (streamed content from the Canadian Broadcasting Corporation) is a multidisciplinary collection, and includes more than 300 films classified as “Environmental Science” content. The National Film Board collection also has some related streamed content, particularly in the “Environment and Sustainability” curated playlist. No further film expenditures are recommended at this time.

The Library maintains a Kit collection, and some of these items may be relevant to Environmental Sciences and Environmental Chemistry courses. Molecule building sets, periodic table activities, rock and mineral collections and other manipulatives could potentially be useful for teaching and learning in these disciplines. Faculty requests for additions to the kit collection are welcome, but no specific resources are recommended at this point.

Budget

Library Licensed Resources include online journal databases, streamed video, and other digital subscriptions involving ongoing expenditures. These costs are paid from the Library Collections budget each year, with the remaining amount from that budget line allocated among various subject areas for the purchase of Unlicensed Resources, including books, films, and other media. The projected Licensed Resources expenditure for Nipissing University for the 2021-22 fiscal year is approximately \$750 000.

The allocation amounts listed in the following chart are for Environmental Science/Studies or Geography (see *** note) and are used to purchase books, multimedia, and any journals purchased outside of database subscription packages.

Budget Year	Total Allocation Journal/Book/AV	Journal Expenditures	Book/AV Allocation
2021-22	\$1500	\$0	\$1500
2020-21	\$750	\$0	\$750
2019-20 ***	\$3046	\$939	\$2107
2018-19 ***	\$3724	\$1933	\$1791
2017-18 ***	\$4668	\$1823	\$2845

*** Prior to the 2020-21 budget year, budget allocations for Geography and Environmental Science/Studies were combined. The Library allocations were revised in 2020-21 to provide a separate line for Environmental Science/Studies resources. The budget chart shows allocations for the combined budget for the years of 2017-2020, and the allocation for Environmental Science/Studies for the 2021-22 and 2020-21 budget years.

Recommendations

It is recommended that at a minimum, start-up funding of \$1500 be provided for the acquisition of some current Environmental Sciences and Environmental Chemistry monograph titles such as handbooks,

reference and methodology materials, as well as some updated environmental content. Ebooks are the preferred format; however, academic ebook titles tend to be more expensive than their print counterparts, so ongoing funding of \$1000 per year is recommended to maintain collection currency.

Access to journal literature for this program and certificate should be adequately supported with the current suite of databases. It is essential to maintain access to these resources. Typically, databases increase in cost by 3-5 % per year, and the fluctuating value of the Canadian dollar has an impact on the acquisitions budget and should be accounted for in funding decisions.

Other resources may be necessary, depending on course curricula and instructor requirements, and requests for new resources would be considered on a case-by-case basis, with library budget being one of the determining factors.

Start-up Costs: \$1500 for monographs;
Ongoing Costs: \$1000/year for monographs

Collections Snapshot						Library Instruction, Services, and Spaces					
Library Collections						Teaching and Learning					
	2019-20	2018-19	2017-18	2016-17	2015-16		2019-20	2018-19	2017-18	2016-17	2015-16
print volumes	179,964	180,717	180,593	180,345	181,892	reference questions	11,614	14,533	14,341	9665	11,078
print books	178,788	180,103	180,150	179,542	181,090	instruction sessions	213	212	220	198	207
e-books	333,465	207,484	207,433	87,060	201,166	students in instruction sessions	5549	6099	6797	5464	5946
print journals	125	136	163	174	174						
e-journals	Not available	63,317	53,686	51,176	66,505						
Expenditures						Spaces for Learning and Research					
	2019-20	2018-19	2017-18	2016-17	2015-16	Harris Learning Library					
print books	\$62,013	\$71,457	\$174,474	\$88,391	\$163,161	seating capacity: 537					
e-books	\$26,380	\$5,909	\$16,771	\$56,621	\$61,024	group rooms: 12					
individual serial	\$28,585	\$30,538	\$15,907	\$36,753	\$55,753	individual study rooms: 7					
databases	\$645,543	\$765,071	\$683,953	\$631,723	\$527,621	turnstile count - sample day	2019-20	2018-19	2017-18	2016-17	2015-16
total budget	\$964,000	\$882,459	\$832,333	\$1,028,173	\$807,559		815	1188	1108	1288	1334
						Services					
Use of Collections						Hours of operation during academic year: 8:00 am to 10:30 pm Monday to Thursday 8:00 am to 6:00 pm Friday 10:00 am to 5:30 pm Saturday and Sunday					
	2019-20	2018-19	2017-18	2016-17	2015-16	Info Desk hours of operation: same as building hours					
circulation	6024	23,724	26,501	26,681	22,900	Research appointments					
reserves circulation	905	1992	2342	2982	4177	24/7 access via proxy					
						URL resolver					
Use of other Collections						Free Interlibrary Loan (ILL)					
	2019-20	2018-19	2017-18	2016-17	2015-16						
books borrowed via interlibrary loan (ILL)	484	792	775	745	761						
articles electronic or photocopy via interlibrary loan (ILL)	346	376	332	317	337						

Appendix 2. Recent Ontario Institutional Enrollments in Environmental Sciences

Ontario Headcount data for 2019/20 using only environment-related program titles from five broad program categories 1) Agricultural/Animal/Plant/Veterinary Sciences and Related fields, 2) Biological and Biomedical Sciences, 3) Multi/Interdisciplinary Studies, 4) Natural Resources and Conservation, 5) Physical Sciences and only environmental sciences-related program titles. Data made available through Nipissing University's Office of Institutional Planning and Research.

Provincial Comparison - Headcount

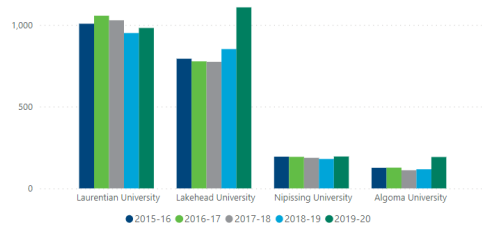


Program Category:

CIPCode:

Program Title:

University Name	2015-16	2016-17	2017-18	2018-19	2019-20
Algoma University	126	127	111	117	192
Lakehead University	793	777	774	852	1,107
Laurentian University	1,007	1,056	1,028	950	981
Nipissing University	194	193	187	180	195
Total	2,120	2,153	2,100	2,099	2,475



Office of Institutional Planning and Research

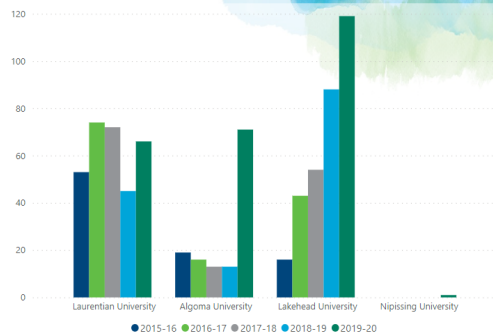
Provincial Comparison - International Student Headcount



Program Category:

Program Title:

University Name	2015-16	2016-17	2017-18	2018-19	2019-20
Algoma University	19	16	13	13	71
Lakehead University	16	43	54	88	119
Laurentian University	53	74	72	45	66
Nipissing University					1
Total	89	135	139	147	257



Office of Institutional Planning and Research

Appendix 3. Nipissing University International Agreements and Letters of Support

(to be added, as appropriate)

Appendix 4. Evidence of Social/Labour Market Need

Evidence of Social/Labour Market Need. Examples of environmental science and environmental chemistry related employment were obtained from several web-based resources, include Environmental Careers Organization Canada's job board (www.eco.ca)¹⁷, and a web-search on Environmental Chemistry Jobs in Canada (posted April 2019) (<https://ca.indeed.com/Environmental-Chemistry-jobs?vjk=d487a06f5c95af98>).

¹⁷ ECO Canada (Environmental Careers Organization of Canada) is an online resource for environmental jobs, certification and training established in 1992 as part of Canada's sector council initiative. Sector councils are organizations that address human resource challenges facing the Canadian economy. With the support of private sector investors and the Government of Canada's Department of Human Resources and Social Development, ECO Canada works to determine the skills and human resource needs of Canada's environment industry.

Job Title	Job Description
Agriculture specialist	Agriculture specialists provide assistance and advice to farmers and livestock producers. They consult on a number of areas, including crop choice and rotation, cultivation and harvesting, soil and water issues, and animal husbandry and nutrition. Agriculture specialists often specialize in a specific area, for example animal science, economics, agricultural mechanics, soil science, or field crops. Agriculture specialists work closely with farmers and livestock producers to ensure the success of their businesses.
Agriculture technician	An agricultural technician combines knowledge of engineering with biological science to the field of agriculture to improve sustainable agriculture production. Agricultural engineers are involved in many diverse projects, including the design of machinery and structures and the development of methods to conserve soil and water to improve the processing of agricultural products.
Agronomist	An agronomist works in the field of agronomy which is a branch of agriculture that deals mainly in field-crop production, soil and land management, and water resources. Agronomy integrates all disciplines of crop production, from variety selection to harvesting, and from soil management to entomology. It is a science that finds ways to grow crops effectively and commercially while protecting the environment.
Air quality specialist	Air quality specialists ensure emissions and other airborne pollutants do not violate provincial or federal air pollution laws. They see to it that pollutants, for example, those generated through chemical reactions and combustion, are not released into the air at harmful levels according to emission-impact assessments and without first being treated with proper contaminant-removal technologies. Air quality specialists also review environmental assessments for proposed factories and manufacturing plants and make recommendations for air pollution control equipment.
Air quality technician/technologist	As an air quality technician/technologist, you deal with all types of air pollution that can affect every aspect of our environment. Air quality technicians/technologists monitor, assess, and report on ambient air quality in both urban and rural areas, as well as air quality in environmental emergency situations such as fires or chemical spills. Air pollutants are often considered insidious because they can be harmful even when many people can't see them and don't know they are there. Your job is to measure air pollutants so that accurate assessments can be made with respect to the effects of the pollutants on humans and the environment.
Analytical chemist	Analytical chemists study and test the chemical composition and reaction of many different substances. Using complex equipment and procedures, such as chromatography, electrophoresis, mass spectrometry, and optical spectroscopy, they test samples, identify, and quantify their components. In addition to the environment, they work in industries such as oil and gas, pharmaceutical research, and forensics.
Aquaculture support worker	As an aquaculture support worker, you assist aquaculturists and fisheries technicians/technologists in the operation of hatcheries and finfish, shellfish, and aquatic plant farms. You are responsible for maintaining stock, tanks, and other equipment and are involved in activities such as scuba diving, handling feed, repairing pumps, and changing nets. Because the job involves many hours spent outdoors, working conditions for aquaculture support workers are as variable and challenging as the weather.
Aquaculturist	As an aquaculturist, you are in charge of the farming of aquatic organisms, including culturing and growing freshwater and marine finfish, shellfish, and aquatic plants. Aquaculturists specialize in operating, monitoring, and maintaining aquatic farms, including rearing fish classes in natural or controlled environmental such as tanks, ponds, or net cages. Aquaculturists require a broad range of knowledge such as fish health, water chemistry, and mechanical skills, and can work on land-based operations or large freshwater and marine grow-out sites. Aquaculturists play a key role in ensuring the sustainability and quality management of aquatic farms.
Arborist	Arborists are tree professionals and that require extensive certifications. Arborists are trained professionals who have studied how to plant, maintain, care, and diagnose trees, shrubs, and other

	woody plants. They are specialized in all species of trees and shrubs to offer expert advice to grow and develop trees.
Avalanche forecaster	As an avalanche forecaster, you play a critical role in protecting the public and raising avalanche awareness. You combine skills in mountaineering with knowledge of mountain conditions, weather, and snow science to evaluate the risk of avalanches in a given area.
Biochemist	Biochemists study biological processes in micro-organisms, plants, and animals. They look at how living organisms function at the subcellular and molecular levels and apply their research to a number of industries, including agriculture, medicine, energy, and manufacturing. Biochemists often work in interdisciplinary teams and are involved in a wide range of activities, from research and teaching to patent law.
Biological technician	As a biological technician, you work closely with a team of supervising biologists to conduct tests, record observations, and research information in relation to the environment. You work in concert with biologists and are often responsible for carrying out detailed experiments to support research. You set up, operate, and maintain laboratory equipment, monitor experiments while recording the results. In addition, biological technicians develop and adapt laboratory procedures and devise solutions under the direction of biologists.
Biotechnologist	As a biotechnologist, you apply the knowledge to select, manipulate, or modify organisms to produce strains uniquely suited to making a product or driving a process. You play a large role in finding new and innovative solutions to environmental problems, for example using organisms such as bacteria to clean up contaminated sites, investigating new energy sources, or producing environmentally friendly raw materials. In addition to the environment, you could also work in industries such as food production, medicine and health, and manufacturing.
Botanist	Botanists work in the field of botany, the study of plants and their surrounding ecosystems. It spans from forests and trees to the smallest microscopic components of the ecosystem. Types of botany jobs include botanical research and botanical research. The skills and expertise of botanists are beneficial in numerous sectors. This means botanists can work in agriculture, horticulture, land use planning, conservation, forestry, and medicine.
Cartographer	Cartographers are mapmakers. They gather, evaluate, and visualize geographic information and analyze geographical data to create charts and reports. They combine creativity with technical aptitude to produce, for example, topological maps, aeronautical charts, natural resource maps, or nautical charts and other hydrographic maps. In addition, they may work on demographic maps such as population characteristics, economic maps such as land use, or social maps such as crime rates and poverty.
Chemical technician	Chemical technicians/technologists perform chemical sampling and analysis and are involved in a variety of projects, for example, analytical testing, quality control protocols, and product research and development. They often work as members of multidisciplinary teams with chemists, chemical engineers, and other related professions. Chemical technicians/technologists can specialize in a number of disciplines, including environmental testing, mining and exploration, pharmaceuticals, and hazard waste, and opportunities for technicians/technologists can be very diverse depending on the industry and their education.
Chief sustainability officer	Chief Sustainability Officers (CSOs) are the highest-level of executives in an organization who oversee their company's sustainability activities. As part of the "C-suite" of chief officers, CSOs provide visionary leadership and coordinate with management, shareholders, and employees to develop and maintain an effective corporate strategy for sustainability. In order to be successful in their executive role, CSOs need strong public relations skills, extensive staff management experience, good strategic planning skills and a firm grasp of financial operations and budgeting. Since a wide range of skills and knowledge are required for this role, most CSOs come from diverse backgrounds, including external affairs, environmental management, research, operations management, marketing, business development, finance, or legal affairs.
Clean energy researcher	Clean energy researchers are environmental scientists or engineers who specialize in discovering alternative and renewable energy sources. Like other environmental engineers, they often work in teams with other professionals. They analyze energy needs and plan renewable, environmentally friendly solutions. For example, they may help people have lower per-unit energy costs and also help preserve the environment.
Climate change specialist	Climate change specialists study the changes in weather over time. They do this by looking at the winds, temperatures, lightning, sunshine, and rainfall. This information helps them to make sense of climate trends and changes, and allows specialists to see how human activity affects the weather. Climate change specialists look at how society can adapt to and lessen the impacts of climate change, and how citizens can positively impact and protect the environment.
Climatologist	A climatologist studies the earth's climate and the weather patterns and processes that cause them. They use long-term meteorological data such as temperature, wind speed, and precipitation to study trends, understand causes, and make predictions.
Compliance promotion specialist	As a compliance promotion specialist, you provide technical, scientific, regulatory, and management advice to public and private industry in relation to compliance with federal acts and regulations. You are involved in a variety of activities aimed at awareness and education, including writing and

	publishing information, conducting and participating in public outreach activities, and researching and promoting best practices. You are an expert on the acts and regulations that govern the protection of environmental and human health and address issues ranging from hazardous waste to species at risk.
Conservation biologist	Conservation biologists protect and restore biodiversity and aim to understand and minimize human impacts on the natural world as well as on scarce animal populations. Through research and observation, conservation biologists help establish plans for maintaining habitats and animal populations at sustainable levels.
Conservation officer	As a conservation officer, you have a variety of responsibilities, including promoting compliances with environmental legislation through public education, public involvement, and awareness. You are often responsible for enforcing provincial and federal environmental regulations governing the protection of wildlife, fisheries, and natural resources, and have the authority afforded that of a peace officer as outlined under the criminal code of Canada. You are always on call to respond to public complaints and protect our natural resources.
Ecologist	As an ecologist, you study ecology and observe environmental patterns. Your observations and analyses provide insight into the ways that changes in the environment - both natural and human-caused - dictate the behaviours of different species. Your work also helps show how interactions between ecosystems, species, and the environment impact the planet.
Eco-tourism operator	As an ecotourism operator, you specialize in leading clients on tours to learn about an area's natural and cultural history while preserving its natural environment.
Eco-toxicologist	Eco-toxicologists specialize in toxicology studying the harmful effects of chemical, biological, and physical agents on living organisms, including humans. Eco-toxicologists draw on a variety of scientific disciplines to predict, measure and explain the frequency and severity of adverse effects of environmental toxins on living organisms. Their work improves environmental protection by bringing a greater understanding of the hazards and risks to which organisms are exposed.
Energy auditor	Energy auditors use a systemized approach to measure, record, and evaluate the flow of energy. They determine if it is being used efficiently and pinpoint where it is being wasted. Individuals in this occupation come from varying backgrounds. You could be an accountant with an interest in the energy sector, or an engineer who received an auditor designation, anyone and everyone could become an energy auditor.
Entomologist	As an entomologist, you study insects. You use science to identify, classify, and study insects and their relationships to plants and animal life. Your research plays a huge role in understanding ecosystems: how they function, how they are changing, and how best to protect them. You also play a large role in industries such as agriculture and forestry, and in managing insect populations to protect public health.
Environmental assessment analyst	An environmental assessment analyst researches and analyzes environmental data and information for the preparation of environmental assessment reports following federal and provincial environmental assessment legislation.
Environmental auditor	An environmental audit is a detailed analysis of an organization's products and processes that evaluates its performance from an environmental perspective. Environmental auditors can conduct two different types of audits: a compliance audit measures if a business is meeting internal and external environmental guidelines and legislation, and a management performance audit measures if a business is meeting the criteria for management systems.
Environmental chemist	Environmental chemists work to improve environmental health and safety using their knowledge of the chemical properties of substances. They study the formation of chemicals, how chemicals interact with the environment and what effects they have. They also apply chemical theory to calculate the impact of human activity on the environment.
Environmental communications officer	An environmental communications officer oversees the dissemination of information on environmental issues and events on behalf of the organization they work for. Environmental communications officers are responsible for developing awareness and outreach programs for local communities living in protected areas and they monitor and supervise outreach activities including conducting surveys and organizing fundraising events.
Environmental coordinator	Environmental coordinators develop and implement environmental programs for companies and organizations that are not necessarily environmentally-based themselves. Coordinators are responsible for overseeing these programs and for reporting to upper management on their progress. For example, an environmental coordinator might work for a large manufacturing company to test nearby land and water for contaminants and to ensure that equipment is working safely. Environmental coordinators work for private companies, government departments, educational institutions, research organizations, and consulting firms. They can also be self-employed.
Environmental economist	Environmental economists specialize in a branch of economics that incorporates environmental implications into economic analysis. They study the environmental impacts, both positive and negative, of projects and policies from an economic perspective and use this to advise industry and government on the environmental impacts of decisions.
Environmental educator	Environmental educators are teachers, coordinators, facilitators, communicators, mentors, and community leaders. They work in a variety of locales and with a variety of audiences: some work in schools and post-secondary institutions, some teach adults through workshops and conferences, and

	others work in places such as zoos and parks. Environmental educators teach others about issues of conservation, preservation, and sustainability and play a significant role in developing environmental awareness.
Environmental enforcement officer	Environmental enforcement officers enforce provisions of the Fisheries Act and the Canadian Environmental Protection Act, 1999. They conduct inspections to verify compliance with environmental legislation and investigate cases where violations are discovered. Environmental laws and regulations are designed to protect and foster a healthy and sustainable environment; environmental enforcement officers ensure these laws are not broken.
Environmental epidemiologist	Environmental epidemiologists are medical professionals who investigate the relationship between health and the environment. Problems frequently investigated by environmental epidemiologists include environmental toxins, for example, soil contaminants; health problems caused by poor air and water quality; and occupational hazards, for example, asbestos in old buildings. In addition to diagnosing these problems, environmental epidemiologists recommend strategies and interventions to fix or improve harmful situations and are critical to maintaining public health.
Environmental geologist	Environmental geologists study the structure of the earth with a direct focus of understanding human interactions with the land, particularly to predict or anticipate geological issues and provide information to help minimize impacts on the environment. This occupation is an extension of various scientific disciplines such as physics, chemistry, and biology.
Environmental geophysicist	Geophysicists study the structure and composition of zones below Earth's surface using techniques that employ seismic, electrical, and magnetic signals. They use non-invasive methods to study subsurface conditions, for example contamination and oil and gas exploration.
Environmental health officer	Environmental health officers are responsible for carrying out measures for protecting public health, including administering and enforcing provincial legislation related to environmental health and providing support to minimize health and safety hazards.
Environmental lawyer	An environmental lawyer works to represent clients in legal issues such as with clean technology, water pollution, climate change, the management of land subject to Indigenous communities and other public lands. Other areas of focus include environmental rights, international environmental law, the law of the sea and international resources law. Environmental lawyers advocate for balanced regulations regarding pollution and the handling of materials, fight to protect biodiversity, agriculture, and ecosystems and confront issues of waste management.
Environmental manager	Environmental managers work in both the public and private sectors and are responsible for managing projects to lessen environmental impacts and ensure that all applicable legislative requirements are fulfilled. They are also involved in activities such as environmental awareness projects, sustainable development, fundraising, and public consultation programs. Often responsible for managing the work of others, environmental managers may also be involved in training personnel on environmental issues. To be a good environmental manager, you need a broad understanding of environmental issues combined with the expertise and a lot of experience in project development and management.
Environmental marketing specialist	Environmental marketing specialists work to promote environmental products, services, and programs. These specialists conduct market research and develop strategies for environmental organizations and firms. They are responsible for public relations activities such as gauging public opinion, developing partnerships with other stakeholders, and interacting within a team environment. Environmental marketing specialists also contribute greatly to product evaluation by identifying target audiences and goals, developing the project schedule and budgets, coordinating resources to implement the work plans, assessing and assuming risk management, and promoting and marketing the product.
Environmental monitor	As an environmental monitor, it's your job to study the natural world and to make sure that human activities don't harm the environment. For example, an environmental monitor working for a mine would spend most days outdoors collecting samples of water, air, land, and plants. They would measure the dirt roads, making sure the roads don't erode into the nearby creek and create silt in the creek (which would probably kill any fish in the creek). They'd collect all of this data out in the field and send it back to labs for analysis. Environmental monitors generally work for government departments, environmental boards, large corporations, and consulting companies.
Environmental monitoring technician	Environmental monitoring technicians observe the environment and the impacts of human and industrial activities. There are two areas of specialization for environmental monitoring technicians: regulatory and research. Regulatory monitors are responsible for monitoring the activities of the industry to ensure project terms and conditions are met, whereas research monitors assist technicians and technologists in monitoring factors of the environment, for example, wildlife counts, surveys, or sampling. Environmental monitoring technicians communicate valuable information to stakeholders to work toward mitigating negative environmental impacts.
Environmental planner	Environmental planners are responsible for developing short- and long-term plans for land use in urban and rural areas while balancing considerations such as social, economic, and environmental issues. They also contribute to environmental impact assessments. Environmental planners can be involved in a range of fields, including strategic, commercial, and industrial development, as well as heritage, tourism, and integrated resource planning. Environmental planners work on a range of scales, from local planning to regional and national strategies.

Environmental policy analyst	Environmental policy analysts define how environmental concerns are approached from an organizational or government perspective. They review and analyze trends and impacts to develop environmental policies. Working both in the private and public sector, they establish environmentally responsible business practices, advise decision-makers and develop regulations. Environmental policy analysts define how environmental concerns are approached from an organizational or government perspective. They review and analyze trends and impacts to develop environmental policies. Working both in the private and public sector, they establish environmentally responsible business practices, advise decision-makers and develop regulations.
Environmental psychologist	Environmental psychologists study the relationship between the physical environment and human behaviour. They focus on both natural and constructed environments on a scale ranging from individual homes and offices to entire urban areas and geographic regions. Their research looks at issues of attention and how people notice and perceive their environment, why people prefer different environments, and how people cope with environmental stress. Environmental psychologists play an active role in examining human behaviours that have caused environmental problems such as global warming and resource depletion, as well as in initiating the necessary substantial changes to human lifestyles to achieve a sustainable future.
Environmental reporter	Environmental reporters are journalists who specialize in gathering and presenting environmental information that is newsworthy and timely. Like all journalists, they write, film, and transcribe news reports, commentaries, and features for a variety of media, including print, television, radio, and the Internet.
Environmental scientist	Environmental scientists support environmental projects in their workplace with scientific analysis. They conduct scientific studies, prepare reports, and develop management plans to help make sure the environment is preserved. For example, an environmental scientist might visit an industrial plant and test the area's air quality. If the tests show that the company has been polluting the air, then the environmental scientist would work with the company's management to make the plant more environmentally friendly. The scientist may also organize training programs for the staff, so they know how to test the air quality and fix any problems. Environmental scientists work for a large number of organizations, including community environmental offices, band and hamlet councils, consulting companies, and federal and provincial governments.
Environmental technical salesperson	As an environmental technical salesperson, you know this product is a good fit for the needs of hazardous waste professionals, particularly those who respond to emergency spills. The product is a new kind of sand-filled spill barrier designed to contain and divert hazardous spills. You discuss the product with the supervisor, initially focusing on the unique adhesive feature of these barriers, which temporarily bond with any smooth surface, such as a road or cement floor, making them very quick to position in emergency situations, where time is critical. You also highlight other advantages of these barriers: they are reusable, easy to move and position, and resistant to most hazardous materials.
Environmental technician/technologist	Environmental technologists/technicians support the environmental sector from a more hands-on approach and work with environmental scientists, lawyers, and researchers.
Environmental training specialist	Environmental training specialists design and deliver environmentally focused training to a wide variety of clientele in both the public and private sectors. They develop specific courses to enhance environmental skills and knowledge using a number of formats and delivery techniques. They often collaborate with other qualified individuals to deliver training that requires a specific skillset and expertise. Environmental training specialists combine technical knowledge and research ability with strong communication skills and a talent for working with many kinds of people in order to convey information and teach others.
Fisheries specialist	Fisheries specialists study fish populations to improve disease control, maintain habitat quality, and develop conservation methods and safe industry practices. They often specialize in fish biology, habitat management, or population dynamics. A large part of the job involves working to consult with and educate the public on a variety of environmental issues that affect agriculture, forestry, and watersheds.
Fisheries technician	Fisheries technicians/technologists study fish and their environment and can work with both wild populations and hatchery-raised stock. Working with a variety of fish species and habitats, fisheries technicians/technologists are often responsible for sampling and gathering data and supporting research and fisheries management. They play a key role in the conservation and protection of Canada's fisheries resources.
Forest firefighter	Forest firefighters move towards the source of fire to suppress it and minimize damages both to the environment, workspaces and homes, and protect potential victims such as humans and wildlife. Their role is becoming ever more important as we see an increasing number of forest fires in the summer months with periods of unbreathable air and 'stay home' orders.
Forester	Foresters apply scientific expertise to land and natural resource management and are responsible for implementing and supervising natural resource programs in forestry and land use. They combine their knowledge of the biotic components of a forest, namely the trees and other vegetation, with the abiotic components of air, water, and soil to make sound management and planning decisions. There are also a number of urban foresters working for municipalities to manage tree stands and small forested areas within Canada's towns and cities.

Forestry technician/technologist	Forestry technicians/technologists work closely with other forestry professionals to manage, conserve, and harvest forests. Forestry technicians/technologists play a key role in the management of Canada's forest resources, contributing to the balance of sustainability and demand for wood products.
Geographer	Geographers study the physical world and examine the connections between people, places, and the earth. They examine social aspects, such as human demography, and physical aspects, such as geomorphology, drawing on a number of other disciplines, for example, biology, oceanography, and sociology. Geographers contribute to the understanding of social and environmental issues regarding land use and resource management by examining how different spatial elements are related to one another.
Geomatics technician	Geomatics technicians/technologists determine the exact locations and positions of natural and man-made features by collecting data from maps, surveys, remote sensing, and GIS databases. They work with sophisticated software to model and analyze visible surface features, as well as what is hidden underground and underwater.
GIS analyst	Geographic information system (GIS) is a digital mapping technique that links computer-generated maps with databases. GIS analysts use this technology to integrate biophysical, ecological, and socio-economic data that can be analyzed for purposes such as tracking wildlife, mapping erosion, monitoring air and water quality, or measuring logging rates.
Glaciologist	Glaciologists analyze the formation, movement, and effects of the different kinds of glaciers, for example, alpine and arctic glaciers, ice caps, ice sheets, and ice shelves. A large part of the research conducted by glaciologists analyzes how glaciers and ice caps move and change in response to climate change and how these changes in turn influence climate and the surrounding environment.
Hazardous waste technician	Hazardous waste technicians are responsible for handling, processing, packaging, and tracking hazardous waste for shipment, treatment, and disposal. They can also be involved in coordinating hazardous waste programs for both private industry and the public sector. They can be employed by waste recycling and treatment facilities or with large companies, packaging and shipping their hazardous waste. Hazardous waste technicians have specialized training on how to safely handle and dispose of chemical, biohazard, and radioactive wastes.
Horticulturist	Horticulturists are agricultural scientists whose focus is finding a better way to develop, grow, harvest, store, process, and ship fruits, vegetables, and decorative plants. They work with orchard, field, garden, nursery, and greenhouse plants to research and conduct tests related to breeding, spraying, and harvesting plants. Horticulturists also use their expertise to develop new plant varieties, such as varieties that can better resist insects or disease or are better adapted to growing in a range of climates and soils.
Hydrologist	A hydrologist studies the dynamic nature of water, the forces that cause water to move around and what effects this movement has on the surrounding environment. Hydrologists examine issues such as precipitation pathways, the relationship between rainfall and runoff, and the effects of precipitation on soils and various landscapes. They are also involved in projects to determine and promote sustainable usage of water sources and water conservation.
Industrial waste inspector	Industrial waste inspectors are watchdogs who routinely check companies to make certain they are adhering to regulations. They use keen observation skills, sampling, and laboratory skills in combination with an understanding of industrial practices, corporate environmental policy, environmental liability, and procedures for proper handling, storage, and disposal of waste. Above all else, industrial waste inspectors rely on their knowledge of environmental regulations to ensure that companies are in compliance with applicable laws and the environment is protected.
ISO 14000 consultant	ISO 14000 consultants plan and implement an organization's ISO 14000 (International Organization for Standardization) systems. These systems allow the organization to better manage its environmental risks by providing standard, established, and documented procedures to follow. ISO 14000 consultants focus on a number of areas, including environmental management systems, environmental auditing, evaluation of environmental performance, environmental labeling, and life cycle assessment.
Laboratory assessor	Laboratory assessors examine and private and public laboratories. They evaluate a lab's operation to ensure compliance with government and environmental regulations, as well as licensure and certification requirements. Their assessments include checking critical equipment and operational characteristics, evaluating demonstrations of testing procedures, and reviewing Quality Control systems within the lab. Laboratory assessors ensure laboratories achieve and maintain the highest levels of scientific and management excellence as a means to protect human and environmental health.
Land use planner	Land use planners decide how to build communities based on environmental and human needs. After taking the time to understand what residents, community groups, politicians, and businesspeople want in their communities, land use planners develop a strategy for action. For example, if a land use planner were creating a plan for a new neighborhood, he or she would design roads, parks, homes, and stores. Land use planners work for real estate agencies, not-for-profit organizations, architectural companies, and the government.

Landscape architect	Landscape architecture takes a holistic view of the design, planning, management, and stewardship of the land. Landscape architects often work as members of a multidisciplinary team, for example, with planners, ecologists, and engineers, on projects that can range from designing residential yards and parks to constructing wetlands to treating polluted runoff from former industrial sites. Landscape architects use art and science to create a balance between the needs and wants of people and the limitations of the environment.
Limnologist	Limnologists are scientists who study the physical, chemical, and biological properties of lakes, rivers, and streams. They study abiotic characteristics, such as stratification and water chemistry, as well as biotic elements, such as aquatic vegetation, algae, microbes, and invertebrates. Limnologists and their work play a vital role in protecting freshwater resources, and Canadian researchers are global leaders in the field.
Marine biologist	Marine biologists study species that inhabit bodies of water and observe any changes to bodies of water. They also focus on different aspects of marine life, including the process of marine development, how organisms interact with one another and the ecosystem and how pollution may affect marine environments.
Meteorologist	Meteorologists are atmospheric scientists. They continually analyze vast amounts of data, including surface and upper air observations of temperature, wind, pressure, and humidity, as well as weather satellite data, radar data, lightning strikes, and data from weather models. Based on this information, they might issue a warning or produce a public, aviation, or marine forecast. But not all meteorologists forecast the weather: other specialties include research into atmospheric chemistry, biological impacts, and computer modelling.
Microbiologist	Microbiologists study organisms that are too small to be seen by the naked eye, including bacteria, fungi, viruses, and protozoa. Microbiologists that specialize in the environment are typically involved in projects that address issues of contamination, for example, identifying and quantifying pathogens, as well as bioremediation, which uses micro-organisms such as bacteria to clean up toxic substances. In addition to the environment, microbiologists are employed by industries such as pharmaceuticals and medicine, food production, and agriculture.
Naturalist	Naturalists are experts in natural history. They study not only living things, such as plants and wildlife but non-living things, such as minerals and fossils. Naturalists often use their knowledge to educate others, for example, visitors to parks, through nature hikes and interpretive centres. Naturalists may also work for environmental organizations planning special events or write for newsletters, television, and radio. The opportunities for naturalists are varied, but all naturalists have the common goal of sharing their knowledge of the environment to preserve our natural history.
Occupational hygienist	Occupational hygienists maintain workplace health and safety by identifying, evaluating, and controlling exposure to chemical, physical, ergonomic, and biological hazards. The responsibilities of an occupational hygienist vary depending on the industry, workplace, and the types of hazards affecting employees. Occupational hygienists most often work in companies to reduce stresses on the worker and to implement control measures that will reduce the incidences of impaired health and sickness and identify inefficiencies in the workplace.
Oceanographer	Oceanographers are scientists who apply biological, chemical, physical, and geological principles to the study of the world's oceans. They study flow patterns such as currents, circulation, and tides; the relationship between the oceans, weather, and climate; chemical factors such as contaminants; and ocean interactions, for example with air, ice, and land formations. Oceanography is a combination of validating existing ideas and research and finding new ways to explore the ocean and explain new findings.
Ornithologist	Ornithology is the study of birds, including bird physiology, behaviour, population structure, and how they live in their environment. Ornithologists can be found working on a variety of projects, for example protecting endangered species, such as the whooping crane and peregrine falcon, from extinction or addressing practical problems, such as keeping scavenger birds away from landfill sites or stopping geese from nesting near airports. Given the migratory nature of many bird species, the knowledge and expertise contributed by ornithologists to the management and preservation of ecosystems has local, provincial, and international impact.
Park interpreter	Park interpreters research, develop, and conduct education programs for visitors to national, provincial, and municipal parks and conservation areas. They use a variety of methods for educating visitors, for example nature walks, theatre presentations, or bulletins and pamphlets. Park interpreters are always studying different aspects of their environment and sharing what they learn.
Park warden	Park wardens are responsible for implementing natural resource management, public safety, and law enforcement programs within Canada's national parks system. They are involved in a variety of activities, including assisting scientists with research, monitoring wildlife, capturing, and relocating animals when necessary, making public presentations, liaising with visitors, and providing first aid and search and rescue support. Park wardens use their educational background and work experience to monitor ecological concerns and maintain the environmental health of Canada's national parks.
Pollution control technologist	A pollution control technologist focuses on identifying pollution sources, monitoring pollutants, and addressing issues of contamination and pollution.

Post secondary instructor	Post secondary instructors of environmental programs teach students at universities and other degree-granting institutions. They also conduct scientific research and publish their findings in professional and academic journals and magazines. For example, someone wanting to understand how geese find the same location every year would study geese throughout university and then become a professor to share their knowledge. Most professors work at universities and other degree granting institutions. Others work for the government.
Recycling coordinator	Two critical environmental issues overuse of natural resources and shortage of places to dispose of waste have necessitated the role of recycling coordinator. There are many opportunities for recycling in Canada, and recycling coordinators must be aware of all of them. Recycling coordinators have a variety of backgrounds, but all share a commitment to environmental sustainability and lessening the impact of society's consumption on the environment.
Remediation specialist	Environmental remediation is the treatment and removal of contamination from soil, groundwater, and other media. Remediation specialists design and implement remedial action plans to clean up sites affected by substances such as automotive fuels, pesticides, and heavy metals.
Remote sensing technologist	Remote sensing technologists use aerial photos, imaging radar, digital image analysis, and Global Information Systems (GIS) to study the Earth's surface—without ever needing to visit the location they study. For example, a remote sensing specialist might interpret images to understand how a forest fire is moving and whether a nearby community will need to be evacuated. Remote sensing specialists work for natural resources companies, forestry consulting firms, other consulting firms, environmental organizations, and the government.
Restoration biologist	A restoration biologist works to renew degraded, damaged, or destroyed ecosystems and habitats that have been disturbed by human action and climate change. They provide expertise and guidance in planning and conducting habitat, watershed, and stream channel restoration projects and monitor endangered species and coordinate conservation activities.
Science camp coordinator	Science camp coordinators are responsible for all aspects of camp programming. One moment they could teach an interactive lesson to the kids and the next, they might be in the kitchen preparing them dinner. They will need to know a lot about science and the natural world, because they will be developing lesson plans and programs. Camp coordinators spend a lot of time with children, so they will need to be understanding, patient, and energetic. Many science camp coordinators are self-employed, while others work for government agencies, libraries, schools, heritage centres, and other recreational institutions.
Science teacher	High school science teachers plan and teach science courses. Teachers in cities often teach classes in only one or two subject areas. In smaller, rural areas, teachers often have to teach a broader range of material. High school teachers need to have a broad understanding of the subjects they teach and should be patient, enthusiastic, and creative in their approaches. For example, you could plan a lesson about the properties of water and ice by having your students design and build an igloo. Most teachers work for public or private school boards. Others work in vocational schools or for the department of education.
Soil conservationist	Soil conservationists help farmers and other land managers make the best use of the land without causing harm. They identify and work to minimize threats to soil health, for example, wind erosion, storm runoff, and nutrient depletion. Soil conservationists improve management practices to protect land and implement strategies for sustainable use. Soil conservationists help farmers and other land managers make the best use of the land without causing harm. They identify and work to minimize threats to soil health, for example, wind erosion, storm runoff, and nutrient depletion. Soil conservationists improve management practices to protect land and implement strategies for sustainable use.
Soil scientist	Soil scientists study the chemical, physical, and biological properties of the first few metres of Earth's crust. More specifically, they study soil formation, classification, and soil characteristics such as the organisms found in the soil and the relationship between soil types and plant growth. The information provided by soil scientists is vital to industries such as agriculture and forestry, as well as policymakers addressing issues of public health and environmental protection.
Survey technician	Survey technicians operate survey instruments and computer equipment to measure distance, angles, elevations, and contours. They use this information to establish geographical locations and boundaries. For example, a survey technician might survey and lay out sub-divisions for rural development. Survey techs work for construction companies, aerial photographers, natural resource firms, and the government. Some survey technicians are self-employed.
Sustainability consultant	A sustainability consultant works within the environmental sustainability discipline which explores the ways in which human activity and the environment can interact to meet the needs of today without jeopardizing the future. Sustainability is built on three pillars – economic, social, and environmental – each of which is important.
Sustainability educator	Sustainability Educators are university or college professors who research and teach specialized topics in sustainability. In order to qualify for this role, Sustainability Educators must demonstrate high levels of education and experience: the vast majority of these professionals have post-graduate degrees and at least eight years of professional experience. Similar to Sustainability Researchers, Sustainability Educators act as thought-leaders and innovators for the theory, practice and research behind

	sustainability. These practitioners spend many years learning about key sustainability factors, including environmental, social, cultural, political, economic and ethical issues. While Sustainability Educators must develop extensive knowledge about diverse sustainability topics, they also need to communicate this expertise clearly and effectively to post-secondary students. In fact, this opportunity to educate the next generation of sustainability professionals is one of the most exciting and rewarding aspects of a career as a Sustainability Educator.
Sustainability officer	Sustainability officers oversee a comprehensive suite of activities related to reducing environmental impacts and applying sustainability principles. They develop, implement, and evaluate programs for their employers that support social, environmental, and economic sustainability objectives.
Sustainability researcher	Sustainability researchers conduct studies to develop sustainability models, indicators and best practices. They often hold advanced degrees in fields related to environmental, economic and social sustainability. Some sustainability researchers also support policy development in federal, provincial or municipal governments.
Sustainability specialist	Sustainability specialists help their organizations comply with national, provincial and local environmental regulations, while also ensuring their organization functions in a financially viable and socially responsible manner. These practitioners interpret and develop procedures to meet environmental regulatory requirements, establish sustainability strategies and programs, communicate with stakeholders about environmental concerns, and address the risks associated with environmental degradation. This occupation is ideal for mid-career professionals who have significant experience in their employer's operations, since sustainability specialists often need a comprehensive understanding of all facets of their company, along with a strong knowledge of sustainability principles and practices.
Sustainability trainer	Sustainability trainers develop and deliver training programs to help corporations implement sustainable business practices in an efficient and cost-effective manner. These practitioners build a solid understanding of the latest trends in economic, social and environmental sustainability, then create courses, seminars and workshops that present these trends to business audiences using engaging, concise and informative formats. As a result, the role of a sustainability trainer is one part sustainability researcher and one part sustainability educator – sustainability trainers need strong subject matter expertise on sustainability issues, as well as a talent for teaching according to different learning styles and needs. By educating businesses about sustainability best practices, sustainability trainers help numerous individuals work more effectively, reduce costs, conserve resources and mitigate environmental harm.
Sustainable interior designer	A sustainable interior designer creates interior spaces using design principles such as functionality, accessibility and aesthetics and expands their focus to include environmental considerations.
Tree planter	Tree planters plant seedlings and often select and prepare sites for tree planting. For example, a tree planter might use a shovel to clear away debris before planting young trees in the soil. Tree planters work for logging companies, tree planting companies, and contractors.
Waste management specialist	Waste management specialists plan, implement, and coordinate comprehensive waste management systems that are designed to maximize waste prevention, reuse, and recycling opportunities. They can be involved in all stages of a project, for example establishing a company's waste management goals and objectives, working with employees to help implement waste management policies, and evaluating the success of management plans. Waste management specialists play a key role in minimizing the impact of waste and protecting the environment.
Wastewater collection and treatment operator	Wastewater collection and treatment operators work on systems that collect and treat municipal wastewater. Depending on the size of the system and the municipality, this can be two different jobs: in smaller systems, one person often does both treatment and collection, but in larger centres, a different operator handles each function. Wastewater collection operators work on storage and storm sewer systems, specifically piping, pumping, and lift stations, whereas wastewater treatment operators work in treatment plants, treating and disposing municipal wastewater. These operators also take samples for lab analysis, work with chemicals and equipment used to disinfect wastewater, and maintain equipment, making minor repairs to piping, pumps, and valves.
Water and wastewater laboratory technologist	Water and wastewater laboratory technologists manage technical processes used for water purification and wastewater disposal. They ensure that these processes are environmentally safe and are compliant with industry standards and methods. Water and wastewater laboratory technologists manage technical processes used for water purification and wastewater disposal. They ensure that these processes are environmentally safe and are compliant with industry standards and methods.
Water quality technician	Water quality technicians are responsible for monitoring and operating control systems and ensuring that the equipment in water filtration and treatment plants are functioning properly so that water is safe for use. These individuals perform a variety of technical duties, including inspecting, sampling, monitoring, and testing, and work with both groundwater and surface water sources.
Water treatment and distribution operator	Water treatment and distribution operators oversee the activities and processes that go into treating and distributing municipal drinking water. Water treatment and distribution operators oversee the activities and processes that go into treating and distributing municipal drinking water.

Wetland biologist	A wetland biologist manages and protects wetland resources. To do this they implement wetland conservation techniques, enforce regulations, and provide consultation on construction projects in wetland sensitive areas. Your work in this occupation involves performing environmental field studies, monitoring plants and species at risk of becoming endangered.
Wildlife biologist	Wildlife biologists maintain and conserve Canada's wildlife populations. They examine factors such as disease, nutrition, habitat relationships, and population dynamics. Wildlife biologists study the impact of environmental change on species survival and growth rates and the interactions between wildlife and their ecosystems, and they predict how land use decisions will impact wildlife and the ecosystems they depend on.
Wildlife technician/ technologist	Wildlife technicians/technologists provide support and services to scientists working in wildlife management and animal biology. The responsibilities of wildlife technicians/technologists are wide-ranging, depending on where in Canada they work. Generally, the work of wildlife technicians/technologists consists of collecting and analyzing samples, operating and maintaining laboratory field equipment, inputting and managing data, and preparing reports of findings.
Wind energy developer	Wind energy developers search out opportunities and appropriate sites to build large-scale wind energy developments. They also manage design, construction, and marketing of the product. Wind energy developers must not only understand the technical aspects of wind farms and energy generation, but also have strong negotiation and sales skills to broker deals with landowners, suppliers, and potential buyers.
Zoologist	A Zoologist is a sub-division of biologists. Zoology is the scientific study of the animal kingdom and encompasses a comprehensive variety of organisms, from small invertebrates such as earthworms to giant mammals such as blue whales. This occupation is sometimes used interchangeably with wildlife biologists or animal biologists.
Job Title	Job Description – Specific examples from web survey in 2019
Environmental Consultant (Pollutech Environmental Limited Oakville, ON	The Pollutech Group of Companies Inc., is an independent Canadian consulting firm providing services nationally and internationally in the fields of environmental consulting, chemistry and biology. Pollutech Environmental Limited has immediate employment opportunities in its Oakville, Ontario office to join its professional staff of environmental consultants.
Environmental Supervisor (SynergyAspen Environmental Inc. Fort St. John, BC)	The Environmental Supervisor performs significant field work including site investigation, remediation, reclamation and natural sciences projects. This role provides assistance to the Environmental Scientist, both in the field, and in the office.
Laboratory Technician Environmental SGS Canada, Lakefield, ON	Duties may include: sample reception, sample identification, sample preparation, sample dilutions, setting up analytical batches and analysis, batch Quality Control, approving and releasing results to the data centre and filing of lab results/data.
Environmental Specialist – Various Fields Government of Canada, Montreal, QC	Duties: Environmental Services lends its expertise to Public Services and Procurement Canada (PSPC) and other federal departments in carrying out their mandates, including environmental issues. Under general supervision, specialists manage projects, studies, investigations, compliance assessments and audits on a variety of issues in addition to proposing appropriate actions in support of compliance of both departmental, federal, provincial, territorial, and municipal regulations and standards. EDUCATION: You must have a degree from a recognized postsecondary institution with specialization in biology, physics, chemistry, geology, engineering or another science related to the duties of the position.
Laboratory Assistant - Food and Environmental Integrated Explorations Inc Guelph, ON	The ideal candidate will be involved in all areas of the company including the microbiology, chemistry, investigative and environmental sectors. Laboratory duties will include but are not limited to: Chemistry - TS/VIS, TP, TN, BODs, CODs
Environmental Consultant (Contract) Chinook Environmental Services Ltd. Red Deer, AB	Chinook Environmental Services Ltd. (CESL) is in need of an individual to assist in daily field duties. The Candidate MUST have a Post-Secondary background in Environmental Science.
Environmental Health Officer First Nations Health Authority - Kamloops, BC Permanent	In this position you will be helping First Nations leadership manage a wide range of public health risks associated with both natural and built environments. As an Environmental Health Officer, you will promote and enhance the health and wellness of First Nations Communities through the implementation, assessment, and evaluation of environmental public health programs and services in communicable disease control, drinking water, health and housing, food safety, solid waste, public buildings, emergency preparedness and response, risk assessment, environmental contaminants research, wastewater disposal, and pest management.
Environment Protection Analyst Yukon Government - Whitehorse, YT	The ideal candidate for this position will have experience in development and interpretation of environmental policy and legislation, strong motivation to find collaborative solutions to

	environmental challenges, strong analytical and communication skills, and is able to work well independently and as part of a close-knit team. Education: post-secondary degree with a major in chemistry, hydrogeology, environmental or other related sciences, or in chemical, environmental or civil-environmental engineering
Chemical Waste Technician Photech Environmental Solutions Inc. - Ottawa, ON	Photech Environmental Solutions Inc is a hazardous waste management company located in Niagara Falls, Ontario. We are contracted to provide daily chemical waste collection and handling services to the University of Ottawa. The successful candidate must possess a strong post-secondary background in Chemistry.
Environmental Chemist Contrecoeur, QC	Triumvirate Environmental, one of the largest environmental services firms in North America, is looking for an Environmental Chemist to work in our Contrecoeur facility. As an Environmental Chemist, you will be able to work closely with our senior staff, building out your career at a hazardous waste company. Qualifications: BS in Environmental Science, Chemistry, Biology or equivalent preferred
Chemist Baxter - Alliston, ON	Specific Skills: Analyze, synthesize, purify, modify and characterize chemical or biochemical compounds; Conduct programs to identify and quantify environmental toxicants ; Conduct research to develop new chemical formulations and processes and devise new technical applications of industrial chemicals and compounds; Investigate chemical aspects of the mechanisms of drug action, the diagnosis and treatment of disease and the organ function; Participate in interdisciplinary research and development projects; Conduct research to discover, develop, refine and evaluate new products such as those used in nanomedicine, nanoelectronics and other applications of chemistry
Part-time Laboratory Technician Environmental SGS Canada - Lakefield, ON	Duties may include: sample reception, sample identification, sample preparation. Ideal Candidate: A post secondary education (degree and/or diploma) in a Science related program (Chemistry, Biochemistry, Environmental Science) is a strong asset.
Laboratory Supervisor - Specialty Analysis – Air & LC/MS/MS AGAT Laboratories - Mississauga, ON	Duties and Responsibilities include: Ensure that all quality/safety/environmental/corporate policies and procedures are being followed Qualifications include: Diploma or Bachelor of Science in Chemistry or related field
Chemical Plant Operator GFL Operator - Brampton, ON	JOB DUTIES INCLUDE : The successful candidate will have 3 to 5 years' experience in the Environmental Field, with a background in chemistry (preferred). Experience: Waste management: 1 year (Preferred); Chemicals/Hazardous wastes: 1 year (Preferred)
LABORATORY ANALYST ALS Group Thunder Bay, ON	About the Position: Reporting to the Supervisor, the Lab Analyst is responsible for preparing and processing environmental samples for extraction including maintaining adequate production, quality control and turnaround times. The ideal candidate would have: Post-secondary diploma/degree in chemistry or related field an asset; Laboratory Experience.
Laboratory Technician SGS Canada - London, ON	Duties may include: sample reception, sample identification, sample preparation, sample dilutions, setting up analytical batches and analysis, batch Quality Control, approving and releasing results to the data centre and filing of lab results/data. Ideal Candidate includes: A post secondary education (degree and/or diploma) in a Science related program (Chemistry, Biochemistry, Environmental Science) is a strong asset.
Depot Technician Terrapure Environmental - Georgina, ON	Terrapure Environmental is a leading Canadian provider of innovative, cost-effective environmental and industrial services, and recycling solutions that help address industry's complex environmental challenges. Headquartered in Burlington, Ont., Terrapure employs 2,000 people and operates an integrated network of over 60 locations from coast to coast. Position Description: As a Depot Technician, your primary responsibility will be to receive, sort and pack household hazardous waste from area residents at the Georgina Depot. In the role you will report to the MHSW Programs Coordinator. Education: Post-secondary degree, diploma in the field of chemistry or environmental would be an asset
Laboratory Assistant ALS Group - Waterloo, ON	About the Position: The Lab Assistant position will be working with client samples providing preparations, extractions and analysis of these samples for routine organic chemistry parameters.
Elementary Science Teacher Richmond Hill Montessori and Elementary Private School - Richmond Hill, ON \$77,000 - \$87,000 a year	Responsibilities include: Teach Science to primary students (grades 1-2) following, and building upon the Ontario curriculum. Qualifications: Bachelors' degree in Science, with Honours; Bachelor of Education in Science, with primary/junior qualifications.
Air Quality Monitoring Technologist WSP - Grande Prairie, AB	Overview of the Opportunity: WSP is currently seeking an Air Quality Monitoring Technologist to join our Air Quality team, located at our Grand Prairie office. Reporting to the Team Lead this position will be responsible for air monitor sampling, calibrations and data collection.

Appendix 5. List of Ontario Environmental Science Programs and Comparison to Proposed Program

(To be completed). The Table below provides a comparison of the program that we seek to introduce and examples of what is offered by other postsecondary institutions within the province (not an exhaustive list).

University	Degree	Admission Requirements	Structure and Comments
U of Toronto	BSc. Honours Environmental Science	<u>6 Grade 12 U/ M courses (or equivalent) including 12U English.</u> Required: <u>Advanced Functions, Biology and Chemistry or Physics.</u> A minimum 70%* overall final average.	- Each year features an Environmental Science Foundational course that is coupled with selected courses chosen from a list of related sciences from various disciplines. - 24 First Yr requirements (Environmental Foundation - full year course; pick 6 courses from a list of BIOL, CHEM, GEOG, MATH & Physics; 2 electives).
Carleton U.	BSc. Honours Environmental Science	<u>6 Grade 12 U/ M courses (or equivalent) including: Advanced Functions and two of Biology, Chemistry, Earth and Space Sciences or Physics. (Calculus and Vectors is strongly recommended).</u>	
Lakehead University	BSc. Environmental Science (Biology, Earth Science or Geography majors)	A minimum of 6 Grade 12U or M courses including English	- Structure includes a core of common course, plus courses required for a major in 1 of 3 disciplines: Biology, Earth Science, Geography. 21 - - First Yr required credits including MATH, 2 CHEM, 2 BIOL, 1 Env Studies.
Algoma University	BSc. Honours Environmental Science	<u>4 Grade 12 U or M courses (or equivalent) including Advanced Functions, 2 U/M Sciences (BIOL/CHEM recommended);</u> minimum 70% overall average.	This is a balanced Environmental Science Program, somewhat similar to the Nipissing University Program, but Algoma University is a very small university that can accommodate only a small number of students.
Laurentian University	N/A		Laurentian folded their BSc Environmental Sciences program and their School of Environment with financial cuts in spring 2021. This leaves a significant gap in programming in Northeastern Ontario.
Wilfrid Laurier University		6 U/M Courses; English, CHEM, Advanced Functions (60%); Biology (70%)	The program offers Biology, Chemistry and Geography courses but it lacks Environmental Science courses with labs where appropriate science skills can be integrated.
University of Guelph	BSc. Honours Environmental Science	<u>6 4U/M courses including ENG4U and specific subject requirements:</u> Advanced Functions, and two of the following three courses: Biology, Chemistry, Physics. English is also recommended.	The School of Environmental Sciences at the University of Guelph has an agricultural emphasis in keeping with its strengths such as agri-food sciences, human & animal nutrition, and rural development.
McMaster University	Multiple programs		Multiple Environment Science programs (e.g Earth and Environmental Science; Environmental Science; Biodiversity and Environmental Science).
Bishop's	BSc. Environmental Sciences		- Defines a core group of courses (13 courses or 39 credits) from 1st and 2nd yr); then options from 2 additional groups of courses. - First Yr: 27 required cr. (9 courses: 2 MATH, 2 PHYSICS, 2 CHEM, 1 BIOL, 1 ENV STUDIES; 1 PHYS GEOG).

University of Guelph	BSc Indigenous Environmental Science and Practice	- 6 U/M courses: English, Advanced Functions Math; Biology, Chemistry and two additional 4U or 4M courses.	<ul style="list-style-type: none"> - Includes Coop and experiential learning. - First Yr: 24 cr. Required (Intro to Indigenous Environmental Stewardship, Discovering Biodiversity, Calculus I, General Chemistry, Introductory Financial Accounting, Natural History of the Great Lakes Region, Indigenous Knowledge for Environmental Stewardship , Indigenous Language and Culture - Unique courses related to Indigenous Environmental Stewardship, Right Relations, Indigenous language and culture.
Western	BSc Environmental Sciences		<ul style="list-style-type: none"> - Courses organized into 3 groups (Life Science, Physical Science, Env Studies related (non science).
Trent U (multiple options)	Multiple programs – see comments.		<ul style="list-style-type: none"> - B.E.S.S: - intensive degree for exceptional students that teaches full integration of science and policy, ecological and political, preventive and interventionist approaches to environmental problems - BSc or BA Environmental and Resources Sciences/Studies (Eco Accredited) - BSc Environmental and Life Sciences - Indigenous Environmental Studies and Sciences Program

Appendix 6. Faculty CVs

(To be completed)

**Report of the
Academic Curriculum Committee**

Friday, February 25, 2022

The meeting of the Academic Curriculum Committee was held on Friday, February 25, 2022 at 2:00 p.m. by Zoom Conference. The following members participated:

Members Present

Carole Richardson	Pavlina Radia	Douglas Gosse
Debra Iafrate	Charles Anyinam	Nancy Black
Darren Campbell	Chris Greco	Sarah Pecoskie-Schweir
Blaine Hatt	James Murton	
Rosemary Nagy	Mercedes (Fichaud) Parsons	

Absent with Regrets:

Julie Corkett, Madalyn Murray, Alexandre Karassev

Guests:

Carly Dokis, Katrina Srigley, Greg Brown, Dan Walters, Ron Hoffman, Tyson Stewart, Sal Renshaw, Prasad Ravi, Jonathan Muterera, David Hemsworth,

Sarah Tedesco, Recording Secretary

The Academic Curriculum Committee received and discussed changes for the Faculty of Arts and Science and the Faculty of Education and Professional Studies. The outcomes of those discussions are reflected in the recommendations to Senate contained in the motions below. Supporting material is attached.

Respectfully submitted,



Carole Richardson, PhD
Provost and Vice-President, Academic and Research

Motion 1: That Senate receive the Report of the Academic Curriculum Committee dated February 25, 2022.

Faculty of Arts and Science

Sociology

Non-substantive:

The course title for SOCI-2036 be changed from “Introduction to Social Gerontology” to “Gerontology: Aging and Society” as outlined in attached document.

Non-substantive:

The course title for SOCI-2037 be changed from “Sociology of Family and Household Relationships” to “Sociology of the Family” as outlined in attached document.

Non-substantive:

The course title for SOCI-2046 be changed from “Minority Groups in Canada” to “Ethnicity and Racialization” as outlined in attached document.

Non-substantive:

The course title for SOCI-2066 be changed from “Social Stratification” to “Social Inequality” as outlined in attached document.

Non-substantive:

The course title for SOCI-2076 be changed from “Deviance and Conformity” to “Deviance, Crime & Social Control” as outlined in attached document.

Non-substantive:

The course title for SOCI-2096 be changed from “Sociology of Education: Social Theory and Education” to “Sociology of Education” as outlined in attached document.

Non-substantive:

The course title for SOCI-2097 be changed from “Sociology of Education: Social Issues in Education” to “Social Issues in Education” as outlined in attached document.

Non-substantive:

The course title for SOCI-2236 be changed from “Sociology of Human Sexual Behaviour I: Love, Sex and Intimacy” to “Love, Sex and Intimacy” as outlined in attached document.

Non-substantive:

The course title for SOCI-2237 be changed from “Sociology of Human Sexual Behaviour II: Varieties of Human Sexual Behaviour” to “Human Sexual Behaviour” as outlined in attached document.

Non-substantive:

The course title for SOCI-3006 be changed from “The Sociology of Collective Behaviour” to “Social Movements and Moral Panics” as outlined in attached document.

Non-substantive:

The course title for SOCI-3026 be changed from “The Sociology of Work” to “Work, Employment and Society” as outlined in attached document

Non-substantive:

The course title for SOCI-3057 be changed from “Demography: Introduction to Population Studies” to “Population and Society” as outlined in attached document.

Non-substantive:

The course title for SOCI-3076 be changed from “Mass Culture and Mass Media I: Journalism and Mass Communication” to “Digital Media and Society” as outlined in attached document.

Non-substantive:

The course title for SOCI-4137 be changed from “Selected Topics in Aging” to “Topics in Aging and Health” as outlined in attached document.

Non-substantive:

The course title for SOCI-4016 be changed from “Advanced Sociological Theory” to “Social Processes and Social Structure” as outlined in attached document.

Non-substantive:

The course title for ANTH-2056 be changed from “The Anthropocene” to “The Anthropocene: Environment & Globalization” as outlined in attached document.

Non-substantive:

The course title for ANTH-2006 be changed from “The Ethnographer’s Craft” to “Ethnographic Imagination” as outlined in attached document.

Non-substantive:

The course title for ANTH-2027 be changed from “Archaeology II” to “Applied Archaeological Excavation” as outlined in attached document.

Non-substantive:

The course title for ANTH-3407 be changed from “Anthropological Theory” to “Contested Concepts: Power & Perspective” as outlined in attached document.

Non-substantive:

The revision of the course description for ANTH-3407 Anthropological Theory as outlined in attached document.

Motion 2: That Senate approve that ANTH-3027: Indigenous Peoples and the State be cross-listed with Sociology.

Rationale: The Department of Sociology and Anthropology is a combined Department, with some faculty trained in both Sociological and Anthropological theories and methods. Cross-listing the course ANTH 3027 will allow for the Department to make use of faculty resources across programs, and will fill an important gap in course offerings in Sociology.

Non-substantive:

The course SOCI-3156: Women and Age be banked as outlined in attached document.

Non-substantive:

The course SOCI-3176: Age, Health, and Work I be banked as outlined in attached document.

Non-substantive:

That the course SOCI-3177: Age, Health, and Work II be banked as outlined in attached document.

Motion 3: That Senate approve the creation of SOCI-3167: Society and Mental Disorder as outlined in the attached template.

Rationale: This proposed course was piloted as a Special Topics course in the Fall 2021, with great success. The addition of SOCI 3167: Society and Mental Disorder fits with the Department's thematic expertise in Health Studies and can serve as an elective course in the Certificate in Health Studies and Gerontology. The addition of SOCI 3167 will also provide Sociology students with an additional elective option for course selection as part of their degree program.

Motion 4: That Senate approve that the 3-credit course SOCI-3167 Society and Mental Disorder be added as program requirements for the Certificate in Health Studies and Gerontology as outlined in the attached document.

Rationale: The course content for SOCI 3167: Society and Mental Disorder directly aligns with the Certificate in Health Studies and Gerontology. Adding this course to the list of elective courses for the Certificate in Health Studies and Gerontology will allow students more options for course selection and will allow for greater flexibility in course planning. The following chart outlines the program structure for the Certificate in Health Studies and Gerontology with the removal of SOCI 3156, SOCI 3176, SOCI 3177 and the addition of SOCI 3167.:

Non-substantive:

The prerequisite for SOCI-2016: Classical Sociological Theory be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-2017: Contemporary Sociological Theory be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-2027: Sociology of Nursing be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-2036: Introduction to Social Gerontology be changed as outlined in attached document:

Non-substantive:

The prerequisite for SOCI-2037: Sociology of Family and Household Relationships, SOCI-2046: Minority Groups in Canada, SOCI-2066: Social Stratification, SOCI-2076: Deviance and Conformity, SOCI-2196: Sociology of Medicine, SOCI-2236: Sociology of Human Sexual Behaviour I: Love, Sex and Intimacy, and SOCI-2237: Sociology of Human Sexual Behaviour II: Varieties of Human Sexual Behaviour be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-3006: The Sociology of Collective Behaviour, SOCI-3007: Consumer Culture, SOCI-3026: Sociology of Work, SOCI-3036: Qualitative Research Methods, SOCI-3076: Mass Culture and Mass Media I: Journalism and Mass Communication, SOCI-3166: The Social Determinants of Health, SOCI-3256: Globalization and Development, and SOCI-3506: Social Problems be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-3016: Critical Perspectives on Social Theory be changed as outlined in attached document.

Non-substantive:

The prerequisite for ANTH-3036: Qualitative Research Methods be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-3057: Demography: Introduction to Population Studies be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-3186: Health and the Family be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-3226: Survey Research be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-3956: Special Topics in Sociology and ANTH 3407: Anthropological Theory be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-4016: Advanced Sociological Theory be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-4127: Advanced Social Data Analysis be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-4137: Selected Topics in Aging be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-4206: Determinants of Population Change be changed as outlined in attached document.

Non-substantive:

The prerequisite for SOCI-4227: Science, Technology and Environment be changed as outlined in attached document.

Non-substantive

The prerequisite for ANTH-4106: Multispecies Ethnography be changed as outlined in attached document.

Motion 5: That Senate approve the creation of SOCI-3957: Special Topics in Sociology II as outlined in the attached template.

Rationale: Sociology currently only has one special topics course. The addition of a second special topics course in Sociology will allow for greater flexibility in course planning and will allow the Department to pilot new thematic courses to assess student interest. The addition of a second special topics course in Sociology will also provide Sociology students with an additional elective option for course selection.

Motion 6: That Senate approve that the creation of SOCI-3187: Gaming Subcultures as outlined in the attached template.

Rationale: This course provides a focused discussion of group formation and behavior within the context of gaming in popular culture. While these are issues embedded in and across the curriculum in SOCI/ANTH, there is a need for increasing our course offerings which focus primarily on emerging contemporary social phenomena within the 21st century. SOCI 3187 will also enhance the breadth and number of electives available for students.

Motion 7: That Senate approve the creation of ANTH-2066 Language and Culture as outlined in the attached template.

Rationale: Currently, the Anthropology program is primarily focused on the sub-field of Cultural Anthropology, with some course offerings in Archaeology. The addition of ANTH 2066 will provide students with increased exposure to the sub-field of Linguistic Anthropology at the second-year level, and will contribute to the delivery of a four-field Anthropology program. The addition of ANTH 2066 will expand second year course offerings in Anthropology and may be of interest to students in cognate disciplines such as Classical Studies and Modern Languages, History, English, Indigenous Studies, and Gender Equality and Social Justice.

Motion 8: That Senate approve the creation of ANTH-2076 Biology and Culture as outlined in the attached template.

Rationale: The Department of Anthropology presently lacks a lower-level course exploring the impact of biological perspectives in Anthropology. Since Biological Anthropology is a core Anthropological subfield and this is an area of considerable demand for many Nipissing students in other programs, we believe this course would both fill an important gap in the Anthropology program and may be of interest to students in cognate disciplines such as Biology, Physical Health and Education, Psychology, Sociology, and History.

Non-substantive:

The revision of the course description for SOCI-3226: Survey Research as outlined in attached document.

History

Motion 9: That Senate approve the creation of the certificate Societies in Transition: Relationship, Reciprocity, and Reconciliation Histories as outlined in the attached document.

Rationale:

SIT deepens the Faculty of Arts & Science and Nipissing University's commitment to indigenization and decolonization. It responds to the Truth and Reconciliation Commission's Calls to Action (# 10, 24, 28, 62) and University's Canada Principles and Commitments to Action in Indigenous Education (#2, 3, 4, 5, 6, 8, 10, 11, 12) by centering Indigenous histories and ways of knowing and being, including enacting reciprocity and building relationships in a good way, in support of reconciliation. Please see attached Departmental Approval forms.

Motion 10: That Senate approve the addition of a Note in the Academic Calendar for History Students completing an honours double major, as outlined below:

Note:

History students completing an Honours Double Major may count 3 credits from a 6 credit 4000 level HIST course towards the 3000 level HIST requirement for the Major in History.

Rationale:

In the fourth year, double major students require “at least 3 credits at fourth year”; however, we do not offer 3 credit fourth-year courses and students have requested this option. To ensure that students are not required to take 3 extra credits, we propose this solution after consultation with Academic Advising and the Registrar’s Office. We submitted a global petition for the 2021-22 academic year but want to formalize this in the academic calendar.

Indigenous Studies**Non-Substantive:**

The revision of the course description for LEAD-2006 Indigenous Political Culture as outlined in attached document.

Motion 11: That Senate approve the addition of learning outcomes for LEAD-2006 Indigenous Political Culture as outlined in the attached document.

Learning Outcomes

- Explore critical facets of current political systems that intersect with Indigenous communities
- Describe key features of Indigenous political structures
- Discuss Indigenous customary governance as emergent discourse and practices
- Distinguish culturally-specific leadership practices, particularly in local First Nations
- Analyze urban Indigenous political trends in provincial and federal contexts
- Articulate the intersections of Indigenous and settler political concepts and values

Rationale:

When LEAD-2006 was created, there were no learning outcomes included with the curriculum proposal.

Motion 12: That Senate approve to cross-list LEAD-2006 Indigenous Political Culture with Indigenous Studies.

Rationale:

The Department of Indigenous Studies would like to make this course count towards the Indigenous Studies degree requirements.

Motion 13: That Senate approve to change the expected delivery mode for LEAD-2006 Indigenous Political Culture as outlined in the attached document.

New Expected Contact Time

3 hours of lecture per week

Old Expected Contact Time

2 hours of lecture and 1 hour of lab per week.

- *Revision to motion 13: “Old Expected Contact Time: 2 hours of lecture and 1 hour of **service learning** per week”*

Rationale:

LEAD-2006 may include a service learning component within the course, it will be at select times throughout the term, not on a weekly basis.

Non-substantive:

The revision of the course description for LEAD-1006 Indigenous Political Culture as outlined in attached document.

Motion 14: That Senate approve the addition of learning outcomes for LEAD-1006 Concepts and Ethics of Indigenous Leadership as outlined in the attached document.

Learning Outcomes

- Describe key cultural values in the context of leadership responsibilities
- Analyze the intersection of Indigenous leadership ethics and contemporary socio-political issues
- Identify customary Indigenous conflict resolution practices
- Express through community-based learning experiences basic relational practices, reciprocity,
- Engage in self-reflective learning
- Articulate and demonstrate protocols and ethics that are central to Indigenous leadership responsibilities

Rationale:

There were no learning outcomes submitted with the curriculum proposal to create LEAD-1006.

Motion 15: That Senate approve to cross-list LEAD-1006 Concepts and Ethics of Indigenous Leadership with the Indigenous Studies.

Rationale:

The Department of Indigenous Studies would like to make this course count towards the Indigenous Studies degree requirements.

Motion 16: That Senate approve to change the expected delivery mode for LEAD-1006 Concepts and Ethics of Indigenous Leadership as outlined in the attached document.

New Expected Contact Time

3 hours of lecture per week

Old Expected Contact Time

2 hours of lecture and 1 hour of lab per week.

Rationale:

LEAD-1006 may include a service learning component within the course, it will be at select times throughout the term, not on a weekly basis.

Motion 17: That Senate approve the creation of INDG-3107 Indigenous Research Methodologies as outlined in the attached document.

Rationale:

To add to the current third year course options for Indigenous Studies majors, as well as to increase the diversity of Indigenous-focused streams. This course will become a core requirement for the program when Indigenous Studies becomes an Honours program.

Motion 18: That Senate approve the creation of INDG-4706 Indigenous Knowledge Seminar – Special Topics as outlined in the attached template.

Rationale:

To create 4th year course options to meet the requirements to offer Honours level courses, consistent with the growth of the department to offer an Hons. B.A. level of study.

Gender Equality and Social Justice**Non-substantive:**

The course title for GEND-2147 be changed from Bodies, Borders and Belonging to Forced Migration as outlined in attached document.

Non-substantive:

The course title for GEND-2246 be changed from Transforming Harm: Case Studies in Transformative Justice to Transformative Justice: Case Studies as outlined in attached document.

Motion 19: That Senate approve the deletion of GEND-3127 Gender, Globalization and Human Rights.

Rationale:

This course is being replaced (below) by an updated version attached GEND 3137 Re-Imagining Globalization.

Motion 20: That Senate approve the creation of GEND-3137 Re-Imagining Globalization and be added to Group 3 Human Rights and Social Justice as outlined in the attached template

Rationale:

This course replaces Gender, Globalization and Human Rights with an updated and newly re-designed curriculum. Much has changed in the more than ten years since the course was initially put on the books and revisions to the curriculum now exceed the existing description. It is effectively a different course, hence we are deleting 3127 and replacing it with 3137.

Motion 21: That Senate approve the creation of GEND-3216 Testimony and Witness to be added to the GESJ curriculum in Group 3 Human Rights and Social Justice and to the 9-credit option in the Human Rights Minor as outlined in the attached template.

Rationale:

This course was offered as a special topic in 2020-21 under the title Narrating Human Rights. The course is grounded in the instructor's (R. Nagy) current research interests and represents a timely intervention in the current context of the politics of reconciliation, digital witnessing technologies, the #MeToo movement, and the ways in which the "Empire of Trauma" risks the pathologisation of victims of human rights abuse (Fassin and Rechtman 2009; Million 2013). A significant section of the course engages Indigenous storytelling, residential school survivor testimony, and settler witnessing, thereby contributing to the University's commitment to decolonizing and Indigenizing the curriculum

Motion 22: That Senate approve the creation of GEND-2326 Pets to be added to the GESJ curriculum in Group 2 Power and Inequality as outlined in the attached template.

Rationale:

This course is the 4th in a series of courses focused on animals as part of GESJ's developing

environmental justice focus. It will be regularly cycled with Animal Rites, Religion Justice and Animals and Virtual Animals.

Motion 23: That Senate approve the creation of GEND-3357 The Opioid Crisis to be added to the GESJ curriculum in Group 3 Human Rights and Social Justice and to the 9 credit option in the Human Rights Minor as outlined in the attached template.

Rationale:

This course has been offered twice now under a special topics code and has enrolled with waitlists. It's very popular as an elective with Nursing students and is contributing to an emerging concentration in health related courses in GESJ. It is taught by a part-time faculty member who works directly with this population, The AIDS Committee of North Bay which also provides placement opportunities to students from a range of programs across the university.

Non-substantive:

The revision of the course description for GEND-4205 Honours Seminar as outlined in attached document.

Non-substantive:

The prerequisites for GEND-4205 Honours Seminar be changed as outlined in attached document.

Non-substantive:

Rename Gender Equality & Social Justice's Group 2, Power and Inequality to Power, Justice and Transformation as outlined in attached document.

Motion 24: That Senate approve that the program requirements for the Gender Equality and Social Justice Honours Degree, Specialization, and Major be revised to allow students to count a maximum of 6 credits of 1000 level courses as outlined in the attached document.

Rationale: When GESJ changed its first year course from 6 credits to 3 credits we revised the program requirements to allow for a 3 credit progression. However, we failed to recognize that many students would take both our first year courses GEND 1006 and GEND 1007 and it was never our intention to prevent them from doing that. We currently have to deal with petitions addressing this issue. The changes will allow them to take up to 6 credits of 1000 level courses.

Motion 25: That Senate approve that the program requirements for the Minor in Gender Equality and Social Justice be revised as outlined in the attached document.

Rationale: When GESJ changed its first year course from 6 credits to 3 credits we revised the program requirements to allow for a 3 credit progression. However, we failed to recognize that many students would take both our first year courses GEND 1006 and GEND 1007. It was never our intention to prevent them from doing that, hence the revision to allow up to 6 credits at the 1000 level. We also want to allow students to count at least part of INTD classes towards a minor, including INTD 2005 (6 credits) which are cross-listed for all other GESJ degree options.

Faculty of Education and Professional Studies

School of Criminology and Criminal Justice

Non substantive:

The prerequisite for CRJS 3506 Criminology of Serial Murder be changed as outlined in the attached document:

Motion 26: That Senate approve the creation of CRJS 2127 Interpreting Criminal Justice Research as outlined in the attached template.

Rationale: (1) Students enrolled in the newly approved 2 years college/2 years Nipissing Policing and Corrections streams, and those currently enrolled in the preexisting Policing, Corrections and general Criminal Justice streams will complete their degrees and seek employment in their chosen policing, correctional services and allied fields: they do not proceed on to graduate programs. (2) Consequently, students enrolled in the newly approved 2 years college/2 years Nipissing Policing and Corrections streams, and those currently enrolled in the preexisting Policing, Corrections and general Criminal Justice streams will not make use of the skills currently acquired in the required courses SOCI 2126 Sociological Research Methods and SOCI 2127 Quantitative Research Methods, as police officers, correctional workers and probation/parole officers, and others directly seeking employment in the criminal justice field do not conduct research studies as part of their employment positions. (3) The proposed course CRJS 2127 Interpreting Criminal Justice Research will expose Policing, Corrections and the general Criminal Justice stream students to the kinds of research methods, analysis and reporting found in use in the criminal justice field, including academic research and government reports, and will provide students with basic skills to interpret both qualitative and quantitative presentation of research results.

Motion 27: That Senate approve the creation of CRJS 3046 – Interpersonal Communications in Criminal Justice as outlined in the attached template.

Rationale: Interpersonal Communications in Criminal Justice has been taught for 3 academic years as a Special Topics in Criminal Justice Course (CRJS 3927). This course has been very well received by students and provides Criminal Justice students, as well as anyone who hopes to work with the public or vulnerable populations practical communication skills. It would be beneficial for this course to be added to the School of Criminology and Criminal Justice elective course offerings, as it fits with the applied nature of our program and every major functional job analysis conducted on the job of police officer recognizes communication as an essential competency.

Motion 28: The Senate approve that the program requirements for the Bachelor of Arts Criminal Justice, School of Criminology and Criminal Justice be changed as outlined in the attached document.

Non substantive: The School of Criminology & Criminal Justice be renamed as the School of Criminal Justice as outlined in attached document.

School of Nursing

Motion 29: That Senate approve the following learning outcomes for NSGD 3336 Culture and Nursing Practice be added:

Students who successfully complete this course will:

- describe assumptions, values, and beliefs of themselves personally and professionally as they develop awareness of culture and diversity among people
- assess how evidence is constructed and legitimized as knowledge among differing worldviews

- develop awareness of cultural variables that influence health and health care delivery such as social class, gender, age, ability, race/ethnicity, and health care systems
- critique theoretical perspectives and conceptual models for nursing care in relation to other ways of being and knowing
- discuss potentially uncomfortable/challenging health care experiences of patients and identify strategies for intercultural development among nurses, healthcare teams, and health systems
- integrate elements of cultural awareness that reflect new ways of being and knowing in professional nursing practice.

Rationale: There are currently no approved learning outcomes for this course.

Non-substantive:

The restrictions for NSGD 3336 Culture and Nursing Practice are changed as outlined in the attached document.

Non-substantive:

The restrictions for NURS 1006, NURS 1016, NURS 1037 be changed as outlined in the attached document:

Non-substantive:

The restrictions for NURS 2037 be changed as outlined in the attached document:

Non-substantive:

The restrictions for NURS 2016, NURS 2047, NURS 2036 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 2016 be changed as outlined in the attached document:

Non-substantive:

The corequisites for NURS 2016 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 2706 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 2037 be changed as outline in the attached document.

Non-substantive:

The prerequisites for NURS 2517 and NURS 2707 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 2036 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 2047 be changed as outlined in the attached document.

Non-substantive:

The restrictions for NURS 3017, NURS 3116, NURS 3117, NURS 3007 be changed as outlined in the attached document.

Non-substantive:

The restrictions for NURS 3036 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 3017 be changed as outlined in the attached document.

Non-substantive:

The corequisites for NURS 3017 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 3116 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 3117 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 3036 be changed as outlined in the attached document.

Non-substantive:

The antirequisites for NURS 3036 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 3007 be changed as outlined in the attached document.

Non-substantive:

The corequisites for NURS 3007 be changed as outlined in the attached document.

Non-substantive:

The restrictions for NURS 4036, NURS 4436, NURS 4067, NURS 4126 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 4036 be changed as outlined in the attached document.

Non-substantive:

The corequisites for NURS 4036 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 4436 be changed as outlined in the attached document.

Non-substantive:

The corequisites for NURS 4436 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 4067 be changed as outlined in the attached document.

Non-substantive:

The corequisites for NURS 4067 be changed as outlined in the attached document.

Non-substantive:

The prerequisites for NURS 4126 be changed as outlined in the attached document.

Non-substantive:

The corequisites for NURS 4126 be changed as outlined in the attached document.

Non-substantive:

The corequisites for NURS 4704 be changed as outlined in the attached document.

Schulich School of Education**Non-substantive:**

The course title for EDUC 1535 be changed from English as a Second Language, Part I to Teaching English Language Learners, Part I as outlined in the attached document.

Non-substantive:

The course title for EDUC 2535 be changed from English as a Second Language, Part II to Teaching English Language Learners, Part II as outlined in the attached document.

Non-substantive:

The course title for EDUC 3535 be changed from English as a Second Language, Part III (Specialist) to Teaching English Language Learners, Part III (Specialist) as outlined in the attached document.

Motion 30: That Senate approve that the course EDUC 1585 International Languages, Portuguese, Part I be added to the list of In-Service offerings.

Rationale: To provide candidates the opportunity to enhance their professional practice, pedagogies and knowledge and skills in International Language, Portuguese teaching. Nipissing University continues to be the only AQ provider of International Languages. (Spanish, German, Italian and Portuguese)

School of Business

Motion 31: That Senate approve the creation of ADMN 1007: Business Economics course as outlined in the attached template.

Rationale:

CPA Ontario requires a series of steps to become a chartered professional accountant. The first two steps are the CPA-PREP (prerequisite and preparatory courses) and CPA-PEP (professional education program. Currently, Nipissing University is a CPA-recognized post-secondary institution that provides the necessary courses and degree requirements for students to be exempted from the CPA-PREP portion of the certification and to be able to directly enter into the second step -- the CPA-PEP.

The CPA periodically changes and updates the course requirements for its recognized post-secondary institutions (e.g., Nipissing University), and these institutions are required to update their curriculum to remain recognized. The addition of the following course helps accommodate recent changes to the CPA requirements.

In the Nipissing University School of Business, 90-95% of accounting students seek to secure the CPA designation. Recently the CPA mandated the requirement of data analytics. In order to keep the course workload of business students pursuing the CPA designation from becoming overwhelming, the CPA often balances the competencies required. Thus, the addition of the required data analytics is offset by the CPA allowing post-secondary institutions to combine the two economics courses into a single course to meet the required CPA competencies.

Motion 32: That Senate approve to change the wording in the Academic Calendar as listed below.

New Requirements:

To graduate with a Bachelor of Business Administration (Honours) or a Bachelor of Business Administration (four-year), students must complete 120 credits, including 66 credits of core requirements as outlined below. Students may also complete a concentration, along with their core BBA requirements. Available Concentrations are as follows: Accounting, Entrepreneurship and Innovation Leadership, Finance, Human Resource Management, Marketing, and International Business.

Old Requirements:

To graduate with a Bachelor of Business Administration (Honours) or a Bachelor of Business Administration (four-year), students must complete 120 credits, including 66 credits of core requirements as outlined below. Students may also complete a concentration, along with their core BBA requirements. Available Concentrations are as follows: Accounting, Entrepreneurship and Innovation Leadership, Finance, Human Resource Management, Marketing, and International Business.

Rationale: CPA Ontario requires a series of steps to become a chartered professional accountant. The first two steps are the CPA-PREP (prerequisite and preparatory courses) and CPA-PEP (professional education program). Currently, Nipissing University is a CPA-recognized post-secondary institution that provides the necessary courses and degree requirements for students to be exempted from the CPA-PREP portion of the certification and to be able to directly enter into the second step -- the CPA-PEP.

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Motion 33: That Senate approve the creation of ACCT 3906: Data Analytics for Accounting as outlined in the attached template.

Rationale: CPA Ontario requires a series of steps to become a chartered professional accountant. The first two steps are the CPA-PREP (prerequisite and preparatory courses) and CPA-PEP (professional education program). Currently, Nipissing University is a CPA-recognized post-secondary institution that provides the necessary courses and degree requirements for students to be exempted from the CPA-PREP portion of the certification and to be able to directly enter into the second step -- the CPA-PEP.

The CPA periodically changes and updates the course requirements for its recognized post-secondary institutions (e.g., Nipissing University), and these institutions are required to update their curriculum to remain recognized. The addition of the following course helps accommodate recent changes to the CPA requirements.

In the Nipissing University School of Business, 90-95% of accounting students seek to secure the CPA designation. Recently the CPA mandated the requirement of data analytics. In order

to keep the course workload of business students pursuing the CPA designation from becoming overwhelming, the CPA often balances the competencies required. CPA requires data analytics to be adopted to continue as a recognized post-secondary institution.

Motion 34: That Senate approve that an optional Coop be offered to Post Baccalaureate Diploma students as outlined in the attached document.

Co-op Internship Option for Post Baccalaureate program

During their program, Post Baccalaureate students can take part in one optional Co-op Internship. Co-op Internship will be 4 months in length. Co-op Internship will be of minimum 12 weeks duration (minimum 420 hours), in work placements. Entry into Co-op Internship is NOT automatic. **In order to be eligible to enter Co-op Internship, students must have completed 24 credits with a minimum average of 70%.** To select the Co-op Internship option, students must apply by the end their first academic year of the Post Baccalaureate program. Students cannot take any courses during Co-op Internship.

The aim of the work term is to provide Canadian work experience to students and the credits for this course will not be counted towards the graduation.

CURRICULUM PROPOSALS
Approved by the Arts & Science Executive
February 11, 2022

For Consideration of the ACC

CURRICULUM PROPOSALS:

Moved by A. Weeks, seconded by K. Srigley that the Arts & Science Executive consider an omnibus motion to combine Motions #1 – 74.

CARRIED

Moved by C. Dokis, seconded by S. Srigley that the Arts & Science Executive recommend to the ACC the approval of Motions #1-74.

CARRIED

CURRICULUM PROPOSALS:

SOCIOLOGY

Motion #1: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for SOCI-2036 be changed from “Introduction to Social Gerontology” to **“Gerontology: Aging and Society.”**

Rationale:

The new title is a more suitable description of the course content. Removal of the term “introduction” reflects the position of the course as a second-year level course.

Motion #2: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for SOCI-2037 be changed from “Sociology of Family and Household Relationships” to **“Sociology of the Family.”**

Rationale:

The shorter title will make it easier for students to locate and register in the course.

Motion #3: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for SOCI-2046 be changed from “Minority Groups in Canada” to “**Ethnicity and Racialization.**”

Rationale:

The new title is a more suitable description of the course content, and more appropriately reflects recent trends and approaches to the topics of ethnicity and racialization in Sociology.

Motion #4: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for SOCI-2066 be changed from “Social Stratification” to “**Social Inequality.**”

Rationale:

The new title is a more suitable description of the course content. The change of title from “Social Stratification” to “Social Inequality” reflects current approaches to social inequality in Sociology and cognate disciplines. The focus on social inequality may be valuable to students in other disciplines such as Anthropology, Social Work, Social Welfare, History, and Gender Studies.

Motion #5: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for SOCI-2076 be changed from “Deviance and Conformity” to “**Deviance, Crime & Social Control.**”

Rationale:

The new title is a more suitable description of the course content. The course already contains considerable content related to crime and social control, and the renaming of the course highlights these fields of study and clarifies the course content for students.

Motion #6: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for SOCI-2096 be changed from “Sociology of Education: Social Theory and Education” to **“Sociology of Education.”**

Rationale:

The shorter title will make it easier for students to locate and register in the course. The change in course title also differentiates SOCI 2096 from SOCI 2097.

Motion #7: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for SOCI-2097 be changed from “Sociology of Education: Social Issues in Education” to **“Social Issues in Education.”**

Rationale:

The shorter title will make it easier for students to locate and register in the course. Removing “Sociology of Education” from the course title also differentiates SOCI 2097 from SOCI 2096.

Motion #8: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for SOCI-2236 be changed from “Sociology of Human Sexual Behaviour I: Love, Sex and Intimacy” to **“Love, Sex and Intimacy.”**

Rationale:

The shorter title will make it easier for students to locate and register in the course. Removing “Sociology of Human Sexual Behaviour I” from the course title also differentiates SOCI 2236 from SOCI 2237.

Motion #9: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for SOCI-2237 be changed from “Sociology of Human Sexual Behaviour II: Varieties of Human Sexual Behaviour” to **“Human Sexual Behaviour.”**

Rationale:

The shorter title will make it easier for students to locate and register in the course. The change in course title also differentiates SOCI 2236 from SOCI 2237.

Motion #10: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for SOCI-3006 be changed from “The Sociology of Collective Behaviour” to **“Social Movements and Moral Panics.”**

Rationale:

The new title is a more suitable description of the course content. The course centres on social movements and mass behaviour and the renaming of the course highlights these fields of study and clarifies the course content for students.

Motion #11: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for SOCI-3026 be changed from “The Sociology of Work” to **“Work, Employment and Society.”**

Rationale:

The shorter title will make it easier for students to locate and register in the course.

Motion #12: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for SOCI-3057 be changed from “Demography: Introduction to Population Studies” to **“Population and Society.”**

Rationale:

The shorter title will make it easier for students to locate and register in the course. The new title is a more suitable description of the course content. Removal of the term “introduction” reflects the position of the course as a third-year level course.

Motion #13: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for SOCI-3076 be changed from “Mass Culture and Mass Media I: Journalism and Mass Communication” to “**Digital Media and Society.**”

Rationale:

The shorter title will make it easier for students to locate and register in the course. The new course title reflects current approaches to understanding the role of media in social life in Sociology and cognate disciplines.

Motion #14: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for SOCI-4137 be changed from “Selected Topics in Aging” to “**Topics in Aging and Health.**”

Rationale:

The new course title provides a more accurate description of the course content. The course already contains considerable content related to aging and health, and the renaming of the course clarifies the course content for students.

Motion #15: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for SOCI-4016 be changed from “Advanced Sociological Theory” to “**Social Processes and Social Structure.**”

Rationale:

The new course title provides a more accurate description of the course content. The course is framed around the concepts of social processes and social structure, and the renaming of the course with a focus on these concepts clarifies the course content for students and may be valuable to students in other disciplines such as Anthropology, Social Work, Social Welfare, History, and Gender Studies.

Motion #16: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for ANTH-2056 be changed from “The Anthropocene” to **“The Anthropocene: Environment & Globalization.”**

Rationale:

The new title is a more suitable description of the course content. Many students are unfamiliar with the term “The Anthropocene” so the new title clarifies the content of the course for students.

Motion #17: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for ANTH-2006 be changed from “The Ethnographer’s Craft” to **“Ethnographic Imagination.”**

Rationale:

The new title is a more suitable description of the course content. Many students were unfamiliar with the concept of the “craft” of ethnography, and so the new title will clarify the content of the course for students while still focusing on the productive nature of ethnographic work.

Motion #18: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for ANTH-2027 be changed from “Archaeology II” to **“Applied Archaeological Excavation.”**

Rationale:

The new title is a more suitable description of the course content and clarifies the course content for students.

Motion #19: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for ANTH-3407 be changed from “Anthropological Theory” to “**Contested Concepts: Power & Perspective.**”

Rationale:

The new title is a more suitable description of the course content and clarifies the course content for students.

Motion #20: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC to revise the **course description** for ANTH-3407 Anthropological Theory.

New Description:

Students gain a deeper understanding of the major paradigms and historical forces that have influenced the development of Anthropology over time and explore intersections and divergences between different schools of thought. Students examine contemporary perspectives on the intersection between culture and power and on the application of social and cultural theory in ethnographic research.

Old Description:

This course will provide senior students in Anthropology with the opportunity to engage with advanced Anthropological theory and to refine research, presentation, and writing skills in a specialized field of study.

Rationale:

The new course description is a more suitable description of the course content and clarifies the course content for students.

Motion #22: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the course SOCI-3156: Women and Age be **banked**.

Rationale:

The faculty member who regularly teaches this course is on long-term leave. Consequently, this course has only been offered once in the past four years. We do not anticipate that this course will be offered in the next three-year course cycle planning.

This course can be counted toward the Certificate in Health Studies and Gerontology. In 2020, two additional courses were added to the list of courses that students could count toward the Certificate in Health Studies and Gerontology (ANTH 3026 & ANTH 3046). Sociology is also adding one additional new course that can be counted toward the Certificate in Health Studies and Gerontology (SOCI 3167). Consequently, banking this course should not impact students' ability to gain enough credits to complete the certificate.

Motion #23: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the course SOCI-3176: Age, Health, and Work I be **banked**.

Rationale:

The faculty member who regularly teaches this course is on long-term leave. Consequently, this course has not been offered in the past four years. We do not anticipate that this course will be offered in the next three-year course cycle planning.

This course can be counted toward the Certificate in Health Studies and Gerontology. In 2020, two additional courses were added to the list of courses that students could count toward the Certificate in Health Studies and Gerontology (ANTH 3026 & ANTH 3046). Sociology is also adding one additional new course that can be counted toward the Certificate in Health Studies and Gerontology (SOCI 3167). Consequently, banking this course should not impact students' ability to gain enough credits to complete the certificate.

Motion #24: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the course SOCI-3177: Age, Health, and Work II be **banked**.

Rationale:

The faculty member who regularly teaches this course is on long-term leave. Consequently, this course has only been offered once in the past four years. We do not anticipate that this course will be offered in the next three-year course cycle planning.

This course can be counted toward the Certificate in Health Studies and Gerontology. In 2020, two additional courses were added to the list of courses that students could count toward the Certificate in Health Studies and Gerontology (ANTH 3026 & ANTH 3046). Sociology is also adding one additional new course that can be counted toward the Certificate in Health Studies and Gerontology (SOCI 3167). Consequently, banking this course should not impact students' ability to gain enough credits to complete the certificate.

Motion #27: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisite** for SOCI-2016: Classical Sociological Theory be changed as outlined below:

New Prerequisite:

Three credits of Sociology or Anthropology at the 1000 level or permission of the instructor.

Old Prerequisite:

ANTR 1006 OR SOCI 1016 OR SOCI 1015

Rationale:

The new prerequisite simplifies the list of courses that could count as prerequisites for the student. The addition of “permission of the instructor” allows for students who have not taken three credits of Sociology or Anthropology at the 1000 level, but who may have an equivalent course, to enrol in SOCI 2016 with the permission of the instructor.

Motion #28: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisite** for SOCI-2017: Contemporary Sociological Theory be changed as outlined below:

New Prerequisite:

SOCI 2016 or ANTH 2016 or permission of the instructor.

Old Prerequisite:

SOCI 2016 or ANTH 2016

Rationale:

The addition of “permission of the instructor” allows for students who have not taken SOCI 2016 or ANTH 2016, but who may have taken an equivalent course, to enrol in SOCI 2017 with the permission of the instructor.

Motion #29: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisite** for SOCI-2027: Sociology of Nursing be changed as outlined below:

New Prerequisite:

None.

Old Prerequisite:

SOCI 1016

Rationale:

Students registered in SOCI 2027 will be able to successfully complete the course without having taken SOCI 1016. Removing SOCI 1016 as a prerequisite allows for greater student flexibility in their course selection and would allow students from related disciplines to enrol in SOCI 2027 without having to take the Introduction to Sociology course.

Motion #30: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisite** for SOCI-2036: Introduction to Social Gerontology be changed as outlined below:

New Prerequisite:

None.

Old Prerequisite:

SOCI 1015 or SOCI 1016 or enrolment in the Bachelor of Science in Nursing.

Rationale:

Students registered in SOCI 2036 will be able to successfully complete the course without having taken SOCI 1016. Removing SOCI 1016 as a prerequisite allows for greater student flexibility in their course selection and would allow students from related disciplines to enrol in SOCI 2036 without having to take the Introduction to Sociology course.

Motion #31: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisite** for SOCI-2037: Sociology of Family and Household Relationships, SOCI-2046: Minority Groups in Canada, SOCI-2066: Social Stratification, SOCI-2076: Deviance and Conformity, SOCI-2196: Sociology of Medicine, SOCI-2236: Sociology of Human Sexual Behaviour I: Love, Sex and Intimacy, and SOCI-2237: Sociology of Human Sexual Behaviour II: Varieties of Human Sexual Behaviour be changed as outlined below.

New Prerequisite:

None.

Old Prerequisite:

SOCI 1015 or SOCI 1016

Rationale:

Students registered in these courses will be able to successfully complete the courses without having taken SOCI 1015 or SOCI 1016. Removing SOCI 1015/1016 as a prerequisite allows for greater student flexibility in their course selection and would allow students from related disciplines to enrol in these courses without having to take the Introduction to Sociology course.

Motion #32: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisite** for SOCI-3006: The Sociology of Collective Behaviour, SOCI-3007: Consumer Culture, SOCI-3026: Sociology of Work, SOCI-3036: Qualitative Research Methods, SOCI-3076: Mass Culture and Mass Media I: Journalism and Mass Communication, SOCI-3166: The Social Determinants of Health, SOCI-3256: Globalization and Development, and SOCI-3506: Social Problems be changed as outlined below.

New Prerequisite:

Any 18 credits completed.

Old Prerequisite:

SOCI 1015 or SOCI 1016

Rationale:

Students registered in these courses will be able to successfully complete the course without having taken SOCI 1015 or 1016, so long as they have completed at least 18 credits. Removing SOCI 1015/1016 as a prerequisite allows for greater student flexibility in their course selection and would allow students from related disciplines to enrol in these courses without having to take the Introduction to Sociology course.

Motion #33: Non-substantive

Moved by _____ seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisite** for SOCI-3016: Critical Perspectives on Social Theory be changed as outlined below:

New Prerequisite:

SOCI 2016 and SOCI 2017 or permission of the instructor.

Old Prerequisite:

SOCI 2016 and SOCI 2017

Rationale:

The addition of “permission of the instructor” allows for students who have not taken SOCI 2016 or SOCI 2017, but who may have taken an equivalent course, to enrol in SOCI 3016 with the permission of the instructor.

Motion #34: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisite** for ANTH-3036: Qualitative Research Methods be changed as outlined below:

New Prerequisite:

Any 18 credits completed.

Old Prerequisite:

SOCI 1016 or SOCI 1015 or ANTH 1006

Rationale:

Students registered in ANTH 3036 will be able to successfully complete the course without having taken SOCI 1016 or ANTH 1006, so long as they have completed at least 18 credits. Removing the prerequisite allows for greater student flexibility in their course selection and would allow students from related disciplines to enrol in ANTH 3036 without having to take the Introduction to Sociology or Introduction to Anthropology course. The change of prerequisites also mirrors those of the cross-coded course SOCI 3036.

Motion #35: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisite** for SOCI-3057: Demography: Introduction to Population Studies be changed as outlined below:

New Prerequisite:

Any 18 credits completed.

Old Prerequisite:

SOCI 1016 or SOCI 1015 or permission of the instructor.

Rationale:

Students registered in SOCI 3057 will be able to successfully complete the course without having taken SOCI 1016, so long as they have completed at least 18 credits. Removing the prerequisite allows for greater student flexibility in their course selection and would allow students from related disciplines to enrol in SOCI 3057 without having to take the Introduction to Sociology course.

Motion #36: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisite** for SOCI-3186: Health and the Family be changed as outlined below:

New Prerequisite:

Any 18 credits completed.

Old Prerequisite:

SOCI 1015 or SOCI 1016 or enrolment in the Bachelor of Science in Nursing.

Rationale:

Students registered in SOCI 3186 will be able to successfully complete the course without having taken SOCI 1016, so long as they have completed at least 18 credits. Removing the prerequisite allows for greater student flexibility in their course selection and would allow students from related disciplines to enrol in SOCI 3186 without having to take the Introduction to Sociology course.

Motion #37: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisite** for SOCI-3226: Survey Research be changed as outlined below:

New Prerequisite:

SOCI 2126 or SOCI 3126, and SOCI 2127 or SOCI 3127 or permission of the instructor.

Old Prerequisite:

SOCI 2126 or SOCI 3126, and SOCI 2127 or SOCI 3127

Rationale:

The addition of “permission of the instructor” allows for students who have not taken SOCI 2126 or SOCI 3126 and SOCI 2127 or SOCI 3127, but who may have taken an equivalent course, to enrol in SOCI 3227 with the permission of the instructor.

Motion #38: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisite** for SOCI-3956: Special Topics in Sociology and ANTH 3407: Anthropological Theory be changed as outlined below:

New Prerequisite:

Any 18 credits completed.

Old Prerequisite:

30 credits or permission of the instructor.

Rationale:

The change from 30 credits to 18 credits brings the prerequisite in-line with other 3000-level courses offered by the Department.

Motion #39: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisite** for SOCI-4016: Advanced Sociological Theory be changed as outlined below:

New Prerequisite:

SOCI 2016, SOCI 2017, and any 30 credits completed, or permission of the instructor.

Old Prerequisite:

SOCI 2016 and SOCI 2017. Restricted to students in the fourth year of the Honours Sociology or Honours Criminal Justice programs and who have completed 24 credits in Sociology and/or Criminal Justice.

Rationale:

The addition of “permission of the instructor” allows for students who have not taken SOCI 2016 and SOCI 2017, but who may have taken an equivalent course, to enrol in SOCI 4016 with the permission of the instructor. The change from 24 to 30 credits brings the prerequisite in-line with other 4000-level courses offered by the Department. The removal of the restriction that students be in the fourth year of the Honours Sociology or Honours Criminal Justice programs allows students in cognate disciplines to register in the course.

Motion #40: Non-substantive

Moved by _____ seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisite** for SOCI-4127: Advanced Social Data Analysis be changed as outlined below:

New Prerequisite:

SOCI 2126, SOCI 2127, and any 30 credits completed, or permission of the instructor.

Old Prerequisite:

SOCI 2126 and SOCI 2127. Restricted to students enrolled in an Honours Sociology or Honours Criminal Justice programs and who have any 54 credits completed.

Rationale:

The addition of “permission of the instructor” allows for students who have not taken SOCI 2126 and SOCI 2127, but who may have taken an equivalent course, to enrol in SOCI 4127 with the permission of the instructor. The change from 54 to 24 credits brings the prerequisite in-line with other 4000-level courses offered by the Department. The removal of the restriction that students be in the fourth year of the Honours Sociology or Honours Criminal Justice programs allows students in cognate disciplines to register in the course.

Motion #41: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisite** for SOCI-4137: Selected Topics in Aging be changed as outlined below:

New Prerequisite:

Any 30 credits completed.

Old Prerequisite:

SOCI 1016 or SOCI 1015. Restricted to students in the fourth year of the Honours Sociology or Honours Criminal Justice programs and who have completed 24 credits in Sociology and/or Criminal Justice.

Rationale:

Students registered in SOCI 4137 will be able to successfully complete the course without having taken SOCI 1016, so long as they have completed at least 30 credits. The removal of the restriction that students be in the fourth year of the Honours Sociology or Honours Criminal Justice programs allows students in cognate disciplines to register in the course. The addition of any 30-credits completed brings the prerequisite in-line with other 4000-level courses offered by the Department.

Motion #42: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisite** for SOCI-4206: Determinants of Population Change be changed as outlined below:

New Prerequisite:

Any 30 credits completed.

Old Prerequisite:

SOCI 3057

Rationale:

Students registered in SOCI 4206 will be able to successfully complete the course without having taken SOCI 3057, so long as they have completed at least 30 credits. The addition of any 30-credits completed brings the prerequisite in-line with other 4000-level courses offered by the Department.

Motion #43: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisite** for SOCI-4227: Science, Technology and Environment be changed as outlined below:

New Prerequisite:

Any 30 credits completed.

Old Prerequisite:

SOCI 2016 and SOCI 2017. Restricted to students enrolled in the Major, Specialization or Honours Specialization in Sociology or Anthropology with a minimum of 84 credits completed.

Rationale:

Students registered in SOCI 4227 will be able to successfully complete the course without having taken SOCI 2016 and SOCI 2017, so long as they have completed at least 30 credits. The change from 84 to 30 credits brings the prerequisite in-line with other 4000-level courses offered by the Department. The removal of the restriction that students be in the Major, Specialization or Honours Specialization in Sociology or Anthropology allows students in cognate disciplines to register in the course.

Motion #44: Non-substantive

Moved by _____ seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisite** for ANTH-4106: Multispecies Ethnography be changed as outlined below:

New Prerequisite:

Any 30 credits completed.

Old Prerequisite:

Any 54 credits completed.

Rationale:

The Department rotates upper year courses, and so this course is not always available to students in their fourth year. Allowing students to take the course after completing 30 credits (rather than 54) allows them greater flexibility to take the course after their second year. The addition of any 30-credits completed brings the prerequisite in-line with other 4000-level courses offered by the Department.

Motion #51: Non-Substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC the revision of the **course description** for SOCI-4127: Advanced Social Data Analysis.

New Description:

Students develop skills in analyzing, interpreting, and communicating results from survey data and large data sets. Students train for entry-level positions in careers that involve managing and analyzing quantitative data by statistical software (e.g., SPSS and Stata), or to pursue a graduate degree. Specific topics include multivariate linear and logistic regression analysis, path analysis, factor analysis, analysis of variance, and event-history analysis.

Old Description:

In this course students will examine several multivariate statistical techniques that are commonly used to analyse survey data and large data sets. Specific topics will include multiple regression, logistic regression, factor analysis, ANOVA, and event-history analysis.

Rationale:

The new course description is a more suitable description of the course content and clarifies the course content for students.

Motion #52: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC the revision of the **course description** for SOCI-3226: Survey Research.

New Description:

Students explore all aspects of survey research in different fields. Students learn to plan sample surveys, design questionnaires for different media (e.g., mail, internet, telephone, and face-to-face), and select a sample of a large population. Through hands-on practice and workshops, students gain skills necessary to design and implement their original survey, analyse survey data, interpret and communicate the survey results, and assess the quality (reliability and validity) of survey data.

Old Description:

This course familiarizes students with all aspects of survey research in social sciences and related fields. Students learn to plan sample surveys and to design questionnaires for different media (e.g. mail, internet, self-completion, and face-to-face). Specific issues for the course include sampling methods, and reliability and validity in survey research. Statistical techniques for analysing survey data and for assessing reliability and validity are examined using SPSS.

Rationale:

The new course description is a more suitable description of the course content and clarifies the course content for students.

Course Code	SOCI 3167
Course Title	Society and Mental Disorder
Course Credits	<input checked="" type="checkbox"/> 3 credits <input type="checkbox"/> 6 credits <input type="checkbox"/> Other Click here to specify
Course Description <i>(restricted to 50-75 words, present tense and active voice)</i>	Students explore how social and cultural context shapes conceptions of mental health and illness and the expression of mental disorders and distress. Students examine/analyze mental illness, mental disorder and well-being from a range of perspectives including medical, sociological, and biopsychosocial approaches.
Course Prerequisite	Any 18 credits completed
Course Corequisite	
Antirequisite	
List any restrictions or special notes for this course. <i>For example "This course is restricted to BPHE students".</i>	
Is this a Topic Course? <i>(Topic courses are courses that students can take more than once for credit.)</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Will this course have an Experiential Learning component? If so, please indicate the type(s).	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, click here to indicate type(s).
Hours of contact time expected per week, if applicable. <i>For example, two hours of lecture and one hour of laboratory work.</i>	3 hours / week
Is this course Cross-Listed? If so, with what department?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, click here to enter department
Program Implications <i>For example, changing a required 6 credit course to 3 credit course.</i>	None

<p>Learning Outcomes <i>(6-8 points, visible, measurable and in active voice)</i></p> <p>For detailed information on Learning Outcomes, please consult the Quality Assurance website.</p>	<p>Students who successfully complete this course will:</p> <ol style="list-style-type: none"> 1) Describe how social/cultural context shapes conceptions of mental health and illness and the expression of mental disorders and distress. 2) Apply critical, analytical understandings of mental health / disorder from a range of perspectives – medical, sociological, psychological, and biopsychosocial. 3) Describe the history and significance of the DSM, how it shapes clinical practice and cultural knowledge, and the controversies surrounding it. 4) Evaluate the framing of contemporary mental disorders as social problems. 5) Assess taken-for-granted assumptions of psychiatry and the dominant medical model approach to psychiatric medicine. 6) Discuss how sociologists have approached understanding mental disorders over time.
<p>Will this request affect another faculty other than your own?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><i>If yes, please use the Departmental Curriculum Approval form to indicate the approval of all departments/disciplines whose programs are affected by this proposal.</i></p>
<p>Will additional resources be required? If so, please list them. <i>(ie. additional faculty, library resources or new laboratory space)?</i></p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Click here to enter additional resources</p>

Program Requirements:

The certificate in Health Studies and Gerontology consists of 18 credits as outlined below:

All of:		
SOCI 2036	Social Gerontology	3 cr.
SOCI 3186	Health and the Family	3 cr.
Twelve credits of:		
SOCI 2196	Sociology of Medicine	3 cr.
SOCI 2027	Sociology of Nursing	3 cr.
SOCI 3057	Demography	3 cr.
*SOCI 3167	Society and Mental Disorder	3 cr.
SOCI 3166	Social Epidemiology	3 cr.
SOCI 4137	Selected Topics in Aging	3 cr.
ANTH 3046	The Living and the Dead	3 cr.
ANTH 3026	Medical Anthropology	3 cr.
*Course added to the list of elective courses for the Certificate in Health Studies and Gerontology		

Course Code	SOCI 3957
Course Title	Special Topics in Sociology II
Course Credits	<input checked="" type="checkbox"/> 3 credits <input type="checkbox"/> 6 credits <input type="checkbox"/> Other Click here to specify
Course Description <i>(restricted to 50-75 words, present tense and active voice)</i>	Students examine a specific topic or theme in Sociology. The topic varies from year to year according to the specialization of the instructor.
Course Prerequisite	Any 18 credits completed.
Course Corequisite	
Antirequisite	
List any restrictions or special notes for this course. <i>For example "This course is restricted to BPHE students".</i>	
Is this a Topic Course? <i>(Topic courses are courses that students can take more than once for credit.)</i>	X Yes No

<p>Will this course have an Experiential Learning component? If so, please indicate the type(s).</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, click here to indicate type(s).</p>
<p>Hours of contact time expected per week, if applicable. <i>For example, two hours of lecture and one hour of laboratory work.</i></p>	<p>3 hours of seminar per week</p>
<p>Is this course Cross-Listed? If so, with what department?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>Program Implications <i>For example, changing a required 6 credit course to 3 credit course.</i></p>	<p><u>No</u></p>
<p>Learning Outcomes <i>(6-8 points, visible, measurable and in active voice)</i></p> <p>For detailed information on Learning Outcomes, please consult the Quality Assurance website.</p>	<p>Students who successfully complete this course will:</p> <ol style="list-style-type: none"> 1) Apply a breadth of sociological theories to the understanding of a specific topic of sociological inquiry. 2) Identify connections between a specific topic of sociological inquiry and wider trends in sociology and social life. 3) Evaluate key debates within a specific topic area of sociological inquiry. 4) Critically analyze diverse methodological approaches to the study of a specific topic of sociological inquiry. 5) Assemble and use secondary sources to explain and contextualize sociological problems.

	6) Synthesize and communicate key findings and themes in a specific topic of sociological inquiry.
Will this request affect another faculty other than your own?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes, please use the Departmental Curriculum Approval form to indicate the approval of all departments/disciplines whose programs are affected by this proposal.</i>
Will additional resources be required? If so, please list them. (ie. additional faculty, library resources or new laboratory space)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Course Code	SOCI 3187
Course Title	Gaming Subcultures
Course Credits	<input checked="" type="checkbox"/> 3 credits <input type="checkbox"/> 6 credits <input type="checkbox"/> Other Click here to specify
Course Description (restricted to 50-75 words, present tense and active voice)	Students examine how individuals and groups participate in gaming subcultures. Topics may include video games, board games, sports fandom, reality gameshows, hobbies, and cosplay. Students analyse how people create and navigate a gaming identity within broader social processes of group conflict, cooperation, leisure, and problem solving. Students conceptualize the societal and individual benefits and possible disadvantages associated with gaming culture.
Course Prerequisite	Any 18 credits completed
Course Corequisite	
Antirequisite	
List any restrictions or special notes for this course. <i>For example "This course is restricted to BPHE students".</i>	

<p>Is this a Topic Course? <i>(Topic courses are courses that students can take more than once for credit.)</i></p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>Will this course have an Experiential Learning component? If so, please indicate the type(s).</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, click here to indicate type(s).</p>
<p>Hours of contact time expected per week, if applicable. <i>For example, two hours of lecture and one hour of laboratory work.</i></p>	<p>3 hours of lecture per week</p>
<p>Is this course Cross-Listed? If so, with what department?</p>	<p>X Yes No This course will be cross-listed with Anthropology</p>
<p>Program Implications <i>For example, changing a required 6 credit course to 3 credit course.</i></p>	<p>None</p>
<p>Learning Outcomes <i>(6-8 points, visible, measurable and in active voice)</i></p> <p>For detailed information on Learning Outcomes, please consult the Quality Assurance website.</p>	<p>Students who successfully complete this course will:</p> <ol style="list-style-type: none"> 1. Define game studies (ludology) and describe the role of games within traditional and modern societies and cultures. 2. Identify, analyze, and evaluate major theoretical orientations within the ludology literature. 3. Demonstrate how the dynamics of competition and cooperation within gaming contexts impact social interaction. 4. Explore and analyze how games as ‘world-building activities’ constitute the creation, management and performance of personas and social identities.

	<p>5. Investigate how individuals and groups use gaming to navigate and alter the social normative boundaries that divide fantasy from reality.</p> <p>6. Construct a researchable sociological, social psychological or anthropological question and frame an answer in the intellectual tradition employed by social scientists within ludological studies.</p>
Will this request affect another faculty other than your own?	<p>Yes No X</p> <p><i>If yes, please use the Departmental Curriculum Approval form to indicate the approval of all departments/disciplines whose programs are affected by this proposal.</i></p>
Will additional resources be required? If so, please list them. (ie. additional faculty, library resources or new laboratory space)?	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>None. The course will be part of regular course cycling in SOCI/ANTH offered by a tenured faculty member.</p>

Course Code	ANTH 2066
Course Title	Language and Culture
Course Credits	X 3 credits <input type="checkbox"/> 6 credits <input type="checkbox"/> Other Click here to specify
Course Description (restricted to 50-75 words, present tense and active voice)	Students explore core concepts in Linguistic Anthropology, with an emphasis on the intersections between language, culture, and society. Students examine a variety of topics including language ideologies, how social relationships and social structures influence language use, how language is used in social interactions, the relationships between language and power, and language endangerment and revitalization.
Course Prerequisite	
Course Corequisite	
Antirequisite	

<p>List any restrictions or special notes for this course. <i>For example "This course is restricted to BPHE students".</i></p>	
<p>Is this a Topic Course? <i>(Topic courses are courses that students can take more than once for credit.)</i></p>	<p><input type="checkbox"/> Yes X No</p>
<p>Will this course have an Experiential Learning component? If so, please indicate the type(s).</p>	<p><input type="checkbox"/> Yes X No If yes, click here to indicate type(s).</p>
<p>Hours of contact time expected per week, if applicable. <i>For example, two hours of lecture and one hour of laboratory work.</i></p>	<p>3 hours of lecture per week</p>
<p>Is this course Cross-Listed? If so, with what department?</p>	<p><input type="checkbox"/> Yes X No</p>
<p>Program Implications <i>For example, changing a required 6 credit course to 3 credit course.</i></p>	<p>None</p>
<p>Learning Outcomes <i>(6-8 points, visible, measurable and in active voice)</i></p> <p>For detailed information on Learning Outcomes, please consult the Quality Assurance website.</p>	<p>Students who successfully complete this course will:</p> <ol style="list-style-type: none"> 1) Describe the relationship between language and culture, including how language ideologies influence language use. 2) Explain why language must be examined in context and be able to differentiate between linguistic competence and communicative competence. 3) Identify key debates surrounding the concept of linguistic relativity. 4) Assess the role that systems of power, including colonialism, has played in shaping language use.

	<p>5) Explain how social structures such as gender, class, ethnicity, education, and status shape language use.</p> <p>6) Identify forms of non-verbal communication and describe how they relate to human communication.</p> <p>7) Discuss the complexity and flexibility of language and consider how language can change over time.</p>
Will this request affect another faculty other than your own?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes, please use the Departmental Curriculum Approval form to indicate the approval of all departments/disciplines whose programs are affected by this proposal.</i>
Will additional resources be required? If so, please list them. (ie. additional faculty, library resources or new laboratory space)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No None. The course will be part of regular course cycling in SOCI/ANTH offered by a tenured faculty member.

Course Code	ANTH 2076
Course Title	Biology and Culture
Course Credits	<input checked="" type="checkbox"/> 3 credits <input type="checkbox"/> 6 credits <input type="checkbox"/> Other Click here to specify
Course Description (restricted to 50-75 words, present tense and active voice)	Students examine changing perspectives on the relationship between biology and culture in Anthropology. Students explore core ideas from the main subfields of Biological Anthropology, including Paleoanthropology, Primatology, and Forensic Anthropology, as well as contemporary debates about the relative importance of evolutionary pressures in shaping human behaviour and the relationships between human beings and non-human organisms.
Course Prerequisite	
Course Corequisite	

Antirequisite	
List any restrictions or special notes for this course. <i>For example "This course is restricted to BPHE students".</i>	
Is this a Topic Course? <i>(Topic courses are courses that students can take more than once for credit.)</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Will this course have an Experiential Learning component? If so, please indicate the type(s).	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, click here to indicate type(s).
Hours of contact time expected per week, if applicable. <i>For example, two hours of lecture and one hour of laboratory work.</i>	3 hours per week.
Is this course Cross-Listed? If so, with what department?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, click here to enter department
Program Implications <i>For example, changing a required 6 credit course to 3 credit course.</i>	
Learning Outcomes <i>(6-8 points, visible, measurable and in active voice)</i> For detailed information on Learning Outcomes, please consult the Quality Assurance website .	Students who successfully complete this course will: <ol style="list-style-type: none"> 1) Identify core concepts in Biological Anthropology, including the subfields of Paleoanthropology, Primatology, and Forensic Anthropology. 2) Describe ongoing debates about the relationship between culture and nature in shaping human behaviour. 3) Discuss how anthropologists have engaged with evolutionary theory.

	<p>4) Apply anthropological perspectives on the relationship between human beings, other hominin species, and non-human primates.</p> <p>5) Engage with changing perspectives on the relationship between human beings and non-human organisms.</p> <p>6) Illustrate the interconnections between ecological and cultural theory over time.</p> <p>7) Describe how anthropologists have critically engaged with the concept of “race.”</p>
	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><i>If yes, please use the Departmental Curriculum Approval form to indicate the approval of all departments/disciplines whose programs are affected by this proposal.</i></p>
<p>Will additional resources be required? If so, please list them. <i>(ie. additional faculty, library resources or new laboratory space)?</i></p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Click here to enter additional resources</p>

Proposal for Major Modification

Motion: That ARCC approve the creation of the certificate Societies in Transition: Relationship, Reciprocity, and Reconciliation Histories

Current Program Name:	Societies in Transition: Relationship, Reciprocity, and Reconciliation Histories¹
If changing, Proposed Program Name:	
Academic Unit Proposing the Modification:	History Department and Indigenous Studies
Proposed Start Date:	Fall 2023
Submitted by:	Drs. Katrina Srigley, Nancy Stevens, and Tyson Stewart

Provide a brief summary of the proposed Major Modification.

Anchored in the Departments of History and Indigenous Studies, Societies in Transition (SIT) is a certificate in reciprocity, relationship, and reconciliation histories that establishes an interdisciplinary academic pathway within the Faculty of Arts & Science for students interested in deepening their understandings of diverse Indigenous histories, settler colonialism, and the processes of reparation, wellness, and reconciliation of societies in transition.

Explain the rationale for modifying the existing program. Why are these changes necessary? What does the program seek to accomplish by implementing these changes?

SIT deepens the Faculty of Arts & Science and Nipissing University's commitment to indigenization and decolonization. It responds to the Truth and Reconciliation Commission's Calls to Action (# 10, 24, 28, 62) and University's Canada Principles and Commitments to Action in Indigenous Education (#2, 3, 4, 5, 6, 8, 10, 11, 12) by centering Indigenous histories and ways of knowing and being, including enacting reciprocity and building relationships in a good way, in support of reconciliation.

¹ As a reflection of the relationships between this certificate, the university, and Nibisiing Nishnaabeg territory, we will approach a Nishnaabemwin (Ojibway language) steward to provide us with a suitable name for this certificate in the language. As this process takes time, we will submit it as a modification at a later date and have included honoraria for our work with a language steward in our start-up costs.

This certificate will appeal to at least four cohorts of students. First, it provides an interdisciplinary academic trajectory for students interested in expanding their understandings of Indigenous histories, settler colonialism, and the processes of reparation, wellness, and reconciliation of societies in transition. Importantly, this includes students for whom centering these histories and relationships will be a source of pride and identity; second, it is a form of accreditation *for all students* that will appeal to employers who must signify their commitment to the TRC Calls to Action and demonstrate their commitment to end systemic racism through action; third, it provides a crucial learning path for students in professional programs, including those in criminal justice, education, nursing, social work, and business whose future workplaces need people with this knowledge to challenge systemic racism; fourth, this certificate will appeal to non-degree professionals and has the potential as a revenue-generation stream for the university. From the outset, we intend to offer SIT courses as community-engagement courses through the e-ply system to begin generating revenue and interest among non-degree professionals and/or community members. We anticipate establishing alternative-delivery options for non-degree students (e.g. micro credentials offered on weekends or post baccalaureate diplomas) after processes are established by the Dean of Teaching and Learning.

We appreciate the PVPARs request that we consider a minor. At this stage, we respectfully argue that SIT best serves all students (degree and non-degree) as a certificate. In our present context, the nomenclature of certificates (rather than minors) are recognized as a form of accreditation that students, First Nations, Métis, and Inuit partners, universities, and employers can point to as a clear response to the TRC Calls to Action. While minors are not open to History and Indigenous Studies Majors (because it conflicts with existing degree requirements), a certificate is open to *all NU students*. Finally, the certificate establishes the framework for non-degree trajectories and revenue generation, especially community engagement courses, micro credentialing, post-baccalaureates and alternative forms of delivery (weekends; compressed) that respond to requests from our First Nations' partners (NUICE, June 2021) and reflect the direction of our present educational climate.

The SIT certificate differentiates Nipissing University from other universities in the country. It is one of only two certificates that creates an academic trajectory in support of reconciliation, with the other offered at First Nations University in Saskatchewan. Further to this, it is notable that SIT anchors students in Nishnaabeg territorial relationships and ways of knowing and being, unlike others that only focus on broader historical themes and processes such as the history of colonialism or institutions called residential schools.

Identify this modification's relationship to the University's Strategic Plan and the approved Strategic Mandate Agreement (SMA).

•Strategic Plan: https://www.nipissingu.ca/departments/presidents-office/strategic-plan/Documents/Nipissing%20Strat%20Plan-FINAL_8Jan15.pdf

•Strategic Mandate Agreement: <https://www.ontario.ca/page/all-college-and-university-strategic-mandate-agreements>

The SIT certificate has the following synergies with our Strategic Plan and Strategic Mandate Agreement.

Interdisciplinarity

SIT is interdisciplinary by design, establishing an academic trajectory in AS that involves eight different departments and disciplines. While this program does not involve collaboration with other faculties, we anticipate strong interest from students in professional programs.

Critical Inquiry Initiative Service/Experiential Learning

SIT is rooted in the histories, experiences, ways of knowing and being of the Nishnaabeg territories on which the university resides because, as Nbisiing Nishnaabeg Elders have long taught us, indigenizing and decolonizing our teaching and learning requires relationship and reciprocity. As such, SIT will provide experiential learning opportunities for students to establish or foster relationships with Elders and knowledge keepers, with lands and waterways, and those that call them home, consider their treaty rights and obligations, and explore the connections between the histories of Turtle Island and the diverse global Indigenous world. Through this learning they will establish relationships to and understandings of place, people, and histories that are essential to reconciliation in a good way and to challenging systemic racism in the 21st century.

Beyond the foundational reciprocal and experiential learning objectives of SIT, it is our intention to partner with the BCSL Biidaaban Service Learning program to establish service learning opportunities for students within the core courses. While the extent and nature of service learning will be determined as the program unfolds and in response to student interest, we anticipate at least one required course including a service learning component as part of course learning and assessment. While many of the courses already include experiential learning, particularly land-based learning, we include HIST 3806 for students interested in working with a faculty member to establish an experiential learning course tailored to their relationships, intentions, and learning goals.

Research Opportunities

Learning through doing, through asking and answering questions is foundational to SIT. Students will have research opportunities throughout their course work. For instance, the cumulative research assignment in HIST 1306 Animating the Land being offered next semester is a photovoice essay that mobilizes Indigenous ways of teaching and learning and engages first-year students in self-reflexive critical inquiry to understand the past and the present. With permission, students will share their final essays in an online exhibit in spring 2022. Students interested in independent research with a faculty member may choose to enroll in HIST 3806. Finally, as the teaching and learning of many of the faculty members involved in SIT is rooted in research partnerships, and the newly funded Centre for the Study of War, Atrocity, and Genocide is founded on and designed to

support them, we anticipate that the critical and independent inquiry that is at the centre of research will be fundamental to this program for students.

External Partnerships

Reciprocal teaching and learning relationships on Nibisiing Nishnaabeg territory with Nipissing First Nation, Dokis First Nation, and Temagami First Nation are at the heart of this certificate and make its development possible in a good way. Enacting, supporting, extending, and modelling these relationships is a core learning outcome and benefit of the certificate for students.

In the development of this certificate, we sent drafts to NFN Board of Governor's Representative Fran Couchie, Deputy Chief Muriel Sawyerban, and Education Director Nancy Allaire, all of whom strongly support the certificate. We shared the certificate with Elder John Sawyer who works closely with many faculty at Nipissing University. On October 29th, we sent the SIT certificate to the Office of Indigenous Initiatives requesting it be placed on the fall NUICE agenda, to extend our consultation with NU's Indigenous partners. We presented to NUICE in June 2021, receiving enthusiastic endorsement for this proposal and a request to also deliver it in a manner that would support professional development for staff within partner First Nations. We imagine offering the certificate (15 credits) in condensed format and with online options to respond to this request. We will pursue these opportunities once the certificate is in place.

Access for First Generation Students

By centering Indigenous histories, ways of knowing, being, teaching and learning, this certificate will appeal to Indigenous students for whom universities and university classrooms can be unwelcoming. Indigenous students represent a growing cohort at Nipissing University. It is our intention that relationships established or strengthened by, learning within, and knowledge shared through this certificate can be source of pride and identity.

Teaching and Learning Excellence

The SIT certificate emerges from more than ten years of innovative collaborative teaching and learning and strengthens relationships across departments within A&S (Dr. Carly Dokis, Erin Dokis, Dr. Kirsten Greer, Dr. Catherine Murton Stoehr, Dr. Cindy Peltier, Dr. Katrina Srigley, Dr. Nancy Stevens, Dr. Tyson Stewart) that centers the history of Nishnaabeg territories and ways of knowing and being through reciprocal teaching and learning relationships with Elders and knowledge keepers inside and outside the university.

Within the History Department, SIT deepens the department's long-term commitment to indigenization and decolonization and supports the mandate of the Centre for the Study of War, Atrocity, and Genocide (C-WAG). Our successful 2019 CFI application

funds a research centre and space to strengthen Nipissing University's relationships with our Indigenous partners and its commitment to indigenization and decolonization as outlined in Nipissing University's Strategic Research Plan (2019-2024). This means providing culturally- appropriate space (i.e. ventilation system for smudging, space for visiting and sharing in circle that includes windows to establish visual connection to the land) to conduct and host circle discussions, and, importantly, welcome Elders, knowledge keepers, community members, colleagues, and students.

The SIT supports NU's commitment to Equity Diversity and Inclusion (EDI) inside and outside classroom spaces, as outlined in our recent signing of the *Scarborough Charter on Anti-Black Racism and Black Inclusion in Canadian Higher Education* and Institutional Objectives, 2021-22. It is well established that university classrooms that are led by diverse faculty, welcoming to diverse knowledges, stories, approaches, and sources of expertise are more conducive to learning for a wider range of students - Indigenous, members of visible minorities, persons who are differently abled, women, and LGBTQ2S+ people. We imagine by highlighting this academic trajectory this certificate will make the AS undergraduate program more welcoming for a wider range of students.

Regional Need and Relevance

Reciprocal teaching and learning relationships on Nibisiing Nishnaabeg territory with Nipissing First Nation, Dokis First Nation, and Temagami First Nation are at the heart of this certificate and make its development possible in a good way. As such, this program is rooted in our region.

We received enthusiastic support for this certificate from our partner First Nations after presenting to NUICE in June 2021.

The SIT certificate differentiates Nipissing University from other universities in the country. It is one of only two certificates that creates an academic path in support of reconciliation, with the other offered at First Nations University in Saskatchewan. Further to this, it is notable that SIT anchors students in Nishnaabeg territorial relationships and ways of knowing and being, unlike others that only focus on broader historical themes and processes such as the history of colonialism or residential schools.

Environment and Sustainability

Relationships to land and environment are a core element of teaching and learning in the Nishnaabeg way and, as such, will form a core component of the courses in this certificate.

Further to this, at least two of the courses listed here, including the required anchor course HIST 1306, have been offered outside in relationship to lands and waterways. This is a unique feature of the pedagogy and learning in these courses. By way of example, we have offered HIST 1306 four times as a ten-day intensive summer institute in partnership with Nipissing First Nation. In 2021, it was offered outside.

<p>If any of the changes have been developed as a result of recommendation(s) from a cyclical program review, please identify those changes along with their associated recommendation(s) from the review.</p>
<p>These changes do not emerge from the History Department's most recent IQAP review; however, we note that our external reviewers endorsed this certificate and recognized the importance of the department both deepening the work we do in indigenization and decolonization and finding ways to market it to prospective students.</p> <p>The last IQAP review for Indigenous Studies stated clearly that the university needed to invest in this program before the next cyclical review. This certificate establishes interdisciplinary connections that support our colleagues and programming in Indigenous Studies.</p>
<p>Provide details of existing and new resources (human, physical and budgetary) required to modify the program.</p>
<p>Program Sustainability</p> <p>As we note above, the SIT certificate differentiates Nipissing University from other universities in the country, which is relevant for recruitment, revenue generation, and SMA discussions.</p> <p>SIT can be marketed to students as a form of accreditation that will appeal to employers who must signify their commitment to the TRC Calls to Action and demonstrate their commitment to end systemic racism through action.</p> <p>Once established, this certificate can be delivered in condensed and non-traditional forms to appeal to non-degree professionals as a micro-credential/professional development certificate or post-baccalaureate. We intend to offer SIT courses as community engagement courses (e-learn system already operating in AS) from the outset. As such, it has the potential as a revenue-generation stream for the university.</p> <p>Reciprocity is fundamental to teaching and learning in the Nishnaabeg way and, as such, a permanent budget line with gifting policies that are aligned with those of our partner Indigenous communities, will need to be established to support reciprocity. As noted by community members who provided us with feedback thus far, this funding must not be drawn from existing Indigenous programming funds.</p> <p>We enact reciprocity in a variety of ways, from a cup of tea to a meal to honoraria, but always in ways that gift the time and knowledge shared with us in respectful and culturally-appropriate ways. The SIT certificate requires NU to commit funds to gifting and honoraria in support of reciprocity and relationship. Based on the average budget for HIST 1306 Nishnaabeg histories, which includes gifting and honoraria for a course Elder and the participation of 3-4 visiting Elders/knowledge keepers, we anticipate \$3500-7000 for courses</p>

<p>taught with Course Elders and an additional \$1750-\$2100 for gifting and honoraria in other courses within this certificate (\$8000-10,000/academic year).</p>
<p>Include certification from the relevant Dean(s) that the modified program is an appropriate and desirable addition to the academic programs of the University, and that a proposed discontinuation is appropriate and in line with the strategic direction of the Faculty. As well, a clear commitment that the modified program will be appropriately resourced. For undergraduate programs, the relevant Dean(s) shall be the Dean(s) of the Faculty within which the program resides. For graduate programs, the appropriate Deans shall be both the Dean of Graduate Studies and the Dean(s) of the relevant Faculty or Faculties.</p>
<p>I fully support this initiative. The SIT Certificate is an important contribution to the TRC Calls to Action, blending interdisciplinary connections between History and Indigenous Studies programs with experiential education and community engagement. It also aligns with the Faculty of Arts and Science Recommendations and priorities. Furthermore, the proposed Certificate enhances Nipissing University's mission and contributes to our institutional differentiation. (PR)</p>
<p>If this proposal impacts the program's curriculum, please provide a copy of the current program requirements from the Academic Calendar, as well as a copy of how the proposed version would appear if approved. Please highlight the differences between the two versions of the program.</p>
<p>The proposal does not alter our existing curriculum. It establishes an academic path through existing programs and courses in Arts & Science, strengthening or establishing interdisciplinary connections, and supporting experiential learning and community engagement. Please see Appendix 1 for the proposed trajectory and anchor courses.</p>
<p>Please provide a copy of the current learning outcomes. If the proposal impacts the current learning outcomes, provide the proposed learning outcomes and highlight the differences between the two.</p>
<p>This certificate involves courses from a range of departments with diverse learning outcomes. To be included in this list, these courses result in the following overall certificate level expectations, as outlined by the Quality Assurance Council. See the attached list of courses in Appendix A.</p> <p>Depth and Breadth of Knowledge</p> <ul style="list-style-type: none"> • evince comprehensive knowledge of key themes in and approaches to the study of Indigenous histories and/or issues and topics of relevance to Indigenous lands, peoples, communities and nations. • identify and interpret key themes in the histories of and contemporary issues and topics of relevance to Indigenous peoples, communities, and nations. <p>Knowledge of Methodologies</p> <ul style="list-style-type: none"> • demonstrate comprehensive knowledge of approaches to intellectual inquiry through Indigenous ways of knowing and being and/or a decolonized lens.

- evaluate protocols and best practices for journalists, storytellers, artists, teachers, academics, researchers, and filmmakers who depict Indigenous content in their works
- apply approaches to intellectual inquiry through Indigenous ways of knowing and being and/or a decolonized lens.

Application of Knowledge

- evaluate colonial attitudes and ideologies within political, cultural, academic and medical institutions throughout Turtle Island
- analyze colonial attitudes and ideologies within various forms of communication (e.g. literature, film, news, storytelling)
- learn through reciprocal relationships with Elders, knowledge holders, lands, waterways, animals, plants, and spirit
- conduct independent research
- apply decolonial approaches to research

Communication Skills

- apply protocols in approaching Elders and knowledge holders for the purpose of building relationships.
- communicate knowledge clearly in writing, orally, or through other forms of creative practice

Awareness of Limits of Knowledge

- evaluate the impact of worldview (epistemology and ontology) on their learning
- assess silences and limitations in scholarly and non-scholarly conversations
- demonstrate humility

Autonomy and Professional Capacity

- exercise initiative, good judgement, personal responsibility, and accountability
- work effectively, respectfully, and collegially with others
- gauge their own learning needs and seek appropriate assistance when required

If this proposal impacts the faculty compliment, please provide a detailed explanation and rationale.

As this certificate establishes an academic trajectory through courses already taught in AS, this certificate does not impact faculty compliment. Aside from assuring that the program is marketed to NU students, required courses are regularly offered, and eligible courses are updated, the certificate should require minimal management. The History and Indigenous

Studies Departments will co-manage these aspects of the certificate, with each department taking the lead in three-year cycles.

As the creators of the certificate, the History Department will manage the certificate during its first three-year cycle (2023-2026) and work with the Deans of AS and Teaching and Learning develop revenue-generating options for this certificate after it is approved for degree students.

Outline the expected impact on continuing students, if any, and how they will be accommodated.

Once SIT is approved, the certificate will be introduced to all NU students. Upper-year NU students who have completed the required courses may petition to have SIT included on their transcript before they graduate.

If this proposal impacts the delivery mode, discuss the appropriateness of the proposed modes of delivery (i.e., means or medium used in delivering a program; e.g., lecture format, distance on-line, problem-based, compressed part-time, different campus, inter-institutional collaboration or other non-standard form of delivery) to meet the intended program learning outcomes. Explain why these are the most appropriate methods of delivery to help students achieve the proposed learning outcomes and improve student learning experience.

In its regular offering, SIT will not alter delivery format presently used in AS with courses from eight different disciplines taught in person and online in lecture and seminar, indoor and outdoor settings.

In response to requests from NFN and our First Nation's partners through NUICE, we imagine offering the certificate in condensed format or in a series of micro-credentials (individual courses) for professional development for non-students in online and in person formats. For example, HIST 1306 Animating the Land has already been offered as an in-person summer institute in an eight-day condensed format and twelve-week course, as well as a in a twelve-week online format. NFN staff have enrolled in the summer institute. NFN Education Director Nancy Allaire and NUICE and NU board representative Fran Couchie (who took the course in 2019) have asked us to consider offering the course for staff. Once this certificate is approved and processes are established at the university, we will work with NFN to discuss the best delivery format. From the outset, we intend to make SIT available to non-degree students through community-engagement courses.

If the Provost determines this Major Modification involves substantial changes to resources or infrastructure those submitting the Major Modification will be required to provide details to explain additional resources required. Areas discussed may include (but not be limited to) resources such as:

- Human, physical, and financial resources, and any institutional commitment to supplement these resources
- The planned faculty hiring schedule of a faculty complement that is competent to teach and/or supervise in the program

- The resources necessary to sustain the quality of scholarship produced by students, including library support, information technology support, and laboratory access (if applicable)

This information will be heard at AQAPC following Faculty Executive.

Appendix 1

Certificate Requirements:

The SIT Certificate will be 15 credits and will be open to all enrolled students. The Certificate in the Study of Societies in Transition: Reciprocity, Relationship, and Reconciliation Histories credits as outlined below:

All of:

HIST 1306 or INDG 1006	Animating the Land: Nbisiing Nishnaabeg Histories or Madjitang, in the Beginning	3
HIST 2447 or INDG 2906	Indigenous Treaties or Indigenous Philosophy - Inaadziwin	3

NINE credits of, with at least SIX credits at the 3000 level:

HIST 1506	The Idea of Canada	3
HIST 1236	Strong, Wise, and Beautiful: Women in 20 th Century Canada	3
INDG 1506	On the Land/From the Land: Indigenous Worldview	
INDG 1007	Intro to Indigenous Studies: Canadian Confederation to the Present	
INDG 1306	Ojibwe 1	3
INDG 1307	Ojibwe 2	3
ENG 1126	Literature and the Land	3
ANTH 2006	Ethnographic Imagination	3
ANTH 2026	Archaeology I	
HIST 2016	Colonialism and Resettlement in the Canadian West	3
INDG 2026	Indigenous Art and Creativity	3
INDG 2106	Oral and Literary Storywork	3
INDG 2206	Indigenous Screen Cultures	3
INDG 2406	Indigenous Families – Colonial Impacts and Contemporary Responses	3
INDG 2907	Indigenous Philosophy - Bimaadsiwin	3
RLCT 2096	Religion, Colonialism, and State Violence	3
ANTH 3006	Anthropology of Development in the Canadian North	3
ANTH 3027	Indigenous Peoples and the State	3
ENGL 3277	Topics in the Indigenous Literatures of North America	3
HIST 3346	First Nations in Historical Perspective	3

Commented [KS1]: New course pending approval.

Commented [KS2]: New course pending approval.

Commented [KS3]: This is soon to be renamed Archaeology of the Nipissings and Algonquins as per the wishes of former Chief Marianna Couchie and course instructor Ken Swayze.

HIST 3306	Canada's Forgotten War: Obwandiyag and the Defence	3
HIST 3307	Gaa Bi Kidwaad Maa Nbisiing: Nbisiing Nishnaabeg Histories	3
HIST 3806	Experiential Learning Course	3
INDG 3106	Indigenous Health and Wellness	3
INDG 3416	The News and First Peoples	3
INDG 3406	Colonialism in First Nations' Communities	3
INDG 3606	Special Topics in Indigenous Studies I	3
INDG 3607	Special Topics in Indigenous Studies II	3
GEND 3066	Invasion and Resistance	3
GEND 3216	Testimony and Witness	3
GEND 3227	Justice After Atrocity	3
GEND 3356	International Rights of Indigenous People	3
POLI 3216	Post Conflict Stabilization, Reconstruction, and Reconciliation	3
POLI 3236	Conflict, Power, and Persuasion: Indigenous Negotiations in Canada	3
SWFL 3406	Colonialism in First Nations	3
SWFL 3407	Social Development in First Nations	3

Commented [KS4]: New course pending approval.

Appendix 2

Budgetary Considerations:

The SIT Certificate requires the following financial commitments.

Start up	Item	Cost
2022-2023	Honoraria for Language Speaker We will offer semaa to a Nishnaabemwin speaker to review the certificate and with consideration of the spirit and intent of the certificate provide a name for it in Nishnaabemwin. The cost will depend on the time required for this to happen in a good way and will be set by the language speaker.	\$700 - \$1000
	Marketing we hope to market SIT to students and use it as a recruitment tool. When we develop opportunities for non-degree students, it will also be essential to have a marketing campaign.	unknown
Yearly		
	Course Elders* this cost will vary depending on whether courses are taught in partnership with	\$7000/year

	Elders with an anticipated maximum of two per year. Our anchor courses (HIST 1306 and INDG 1006) as well as ENG 1126 and HIST 3307 are taught in this way.	
	Visit Knowledge Holders and Elders* this cost will vary depending on the courses that engage with Elders and Knowledge Keepers. We note that sharing knowledge through these teaching and learning relationships is a cornerstone of decolonized pedagogies. We calculate this based on half day honoraria rates and the fact that we are aware that the following courses regularly engage Elders and knowledge holders (HIST 1306, INDG 1006, ENG 1126, HIST 2447, HIST 1236, HIST 3307, HIST 3346).	\$1750-2100/year
	Semaa, Cards, and Small gifts* given to visitors (25\$/gift)	\$250-300/year
Totals	*These costs have often been offset by research grants, but this is not sustainable in the long run.	\$9, 000-10, 400

CURRICULUM PROPOSALS
Approved by the Arts & Science Executive
February 11, 2022

For Consideration of the ACC

CURRICULUM PROPOSALS:

Moved by A. Weeks, seconded by K. Srigley that the Arts & Science Executive consider an omnibus motion to combine Motions #1 – 74.

CARRIED

Moved by C. Dokis, seconded by S. Srigley that the Arts & Science Executive recommend to the ACC the approval of Motions #1-74.

CARRIED

CURRICULUM PROPOSALS:

INDIGENOUS STUDIES

Motion #53: Non Substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC the **revision of the course description** for LEAD-2006 Indigenous Political Culture.

New Course Description

Students explore the contemporary cultural markers of Indigenous politics by examining distinctive patterns of Indigenous leadership, conceptions of community, and what the individual's place is in relation to the group. Indigenous political realities center on practices and perceptions as well as laws and institutions and are shaped by geographic location. Topics covered may include Indigenous models of federalism, potlatch and the gift economy, modes of resistance to and relations with settler societies. This course includes service learning.

Old Course Description

Political reality concerns practices and perceptions as well as laws and institutions. Students explore the cultural markers of Indigenous politics, with consideration to distinctive patterns of

Indigenous leadership, conceptions of what is a community and what is the person's place in relation to the group. Topics covered may include Indigenous models of federalism, potlatch and the gift economy, modes of resistance to and relations with settler societies. This course includes a service learning component.

Rationale:

The revised course description better reflects the content of the course.

Motion #57: Non Substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC the **revision of the course description** for LEAD-1006 Indigenous Political Culture.

New Course Description

Students explore the concepts and ethics of leadership in Indigenous contexts. Students study both traditional and contemporary Indigenous concepts of leadership, leadership qualities, and the ethical challenges that leaders face today. Issues of judgment, cultural conflict, meaningful engagement, and successful representation of constituents. This course includes a service learning component.

Old Course Description

Students explore both traditional and contemporary Indigenous concepts of leadership, leadership qualities, and the ethical challenges that leaders face. Topics include issues of judgment, cultural conflict, and successful representation of constituents. This course includes a service learning component.

Rationale: The previous course description was less than 50 words. The revised description better reflects the content of the course.

Course Code	INDG 3107
Course Title	Indigenous Research Methodologies
Course Credits	<input type="checkbox"/> 3 credits <input type="checkbox"/> 6 credits <input type="checkbox"/> Other Click here to specify
Course Description <i>(restricted to 50-75 words, present tense and active voice)</i>	Indigenous research by and for Indigenous communities requires a robust understanding of Indigenous methodologies, methods, ethics and protocols. Students engage in learning through discussion and applied projects to critically analyze theoretical and practical issues that impact the process of researching. Students explore Indigenous worldviews in relation to epistemological, ontological and axiological factors.
Course Prerequisite	INDG 1006 or permission of the instructor
Course Corequisite	None
Antirequisite	NATI 3607 if taken in 16FW
List any restrictions or special notes for this course. <i>For example "This course is restricted to BPHE students".</i>	None
Is this a Topic Course? <i>(Topic courses are courses that students can take more than once for credit.)</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Will this course have an Experiential Learning component? If so, please indicate the type(s).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Will include applied research projects that may include activities, such as creating and conducting interviews, surveys, etc.
Hours of contact time expected per week, if applicable. <i>For example, two hours of lecture and one hour of laboratory work.</i>	3 hours lecture/seminar
Is this course Cross-Listed ? If so, with what department ?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, click here to enter department
<u>Program Implications</u> <i>For example, changing a required 6 credit course to 3 credit course.</i>	Course is being created to add to current 3000 elective courses to satisfy the requirements of a major or minor in Indigenous Studies. When the program is able to offer an Honours degree option, this will be a required course.

<p>Learning Outcomes <i>(6-8 points, visible, measurable and in active voice)</i></p> <p>For detailed information on Learning Outcomes, please consult the Quality Assurance website.</p>	<p>Students who successfully complete this course will:</p> <ul style="list-style-type: none"> • Describe key characteristics of Indigenous research methods • Articulate critical features of Indigenous research ethics • Demonstrate awareness of locally-relevant Indigenous research and relationship-building protocols • Design components of a research project • Participate in conducting research and analysis of data • Assess and make recommendations on performance in the research process
<p>Will this request affect another faculty other than your own?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><i>If yes, please use the Departmental Curriculum Approval form to indicate the approval of all departments/disciplines whose programs are affected by this proposal.</i></p>
<p>Will additional resources be required? If so, please list them. <i>(ie. additional faculty, library resources or new laboratory space)?</i></p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Honoraria for elders, knowledge carriers, costs for transportation for field trips</p>

Course Code	INDG 4706
Course Title	Indigenous Knowledges Seminar – Special Topics
Course Credits	<input type="checkbox"/> 3 credits <input type="checkbox"/> 6 credits <input type="checkbox"/> Other Click here to specify
Course Description <i>(restricted to 50-75 words, present tense and active voice)</i>	Students learn about selected topics in Indigenous Studies not covered in other courses in the program. The theme and content of this course changes from year to year depending on the instructor's field of specialization. The specific topics and course descriptions are available to students during registration in each year of offering.
Course Prerequisite	Completion of any 54 credits including INDG 1006, or permission of the instructor.
Course Corequisite	None

Antirequisite	None
List any restrictions or special notes for this course. <i>For example "This course is restricted to BPHE students".</i>	None
Is this a Topic Course? <i>(Topic courses are courses that students can take more than once for credit.)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
Will this course have an Experiential Learning component? If so, please indicate the type(s).	<input type="checkbox"/> Yes <input type="checkbox"/> No Examples may include medicine walks, participating in ceremonies or learning fabrication methods for traditional items
Hours of contact time expected per week, if applicable. <i>For example, two hours of lecture and one hour of laboratory work.</i>	3 hours seminar instruction
Is this course Cross-Listed ? If so, with what department?	<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, click here to enter department
<u>Program Implications</u> <i>For example, changing a required 6 credit course to 3 credit course.</i>	Course is being created to increase current elective courses that students may take to satisfy major or minor requirements for an Indigenous Studies degree.
Learning Outcomes <i>(6-8 points, visible, measurable and in active voice)</i> For detailed information on Learning Outcomes, please consult the Quality Assurance website .	Students who successfully complete this course will: <ol style="list-style-type: none"> 1. Apply a breadth of theories to the understanding of a specific topic of indigenous studies. 2. Identify and use secondary sources to explain and contextualize indigenous issues. 3. Critically analyze diverse methodological approaches. 4. Synthesize and communicate key findings and themes in a specific topic of indigenous studies. 5. Evaluate key debates within a specific topic area of Indigenous Studies. 6. Identify connections between a specific topic of indigenous studies and wider social trends.

<p>Will this request affect another faculty other than your own?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><i>If yes, please use the Departmental Curriculum Approval form to indicate the approval of all departments/disciplines whose programs are affected by this proposal.</i></p>
<p>Will additional resources be required? If so, please list them. <i>(ie. additional faculty, library resources or new laboratory space)?</i></p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Honoraria for elders, knowledge carriers, costs for transportation for field trips</p>

CURRICULUM PROPOSALS
Approved by the Arts & Science Executive
February 11, 2022

For Consideration of the ACC

CURRICULUM PROPOSALS:

Moved by A. Weeks, seconded by K. Srigley that the Arts & Science Executive consider an omnibus motion to combine Motions #1 – 74.

CARRIED

Moved by C. Dokis, seconded by S. Srigley that the Arts & Science Executive recommend to the ACC the approval of Motions #1-74.

CARRIED

CURRICULUM PROPOSALS:

GENDER EQUALITY & SOCIAL JUSTICE

Motion #63: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for GEND-2147 be changed from Bodies, Borders and Belonging **to** Forced Migration.

Rationale:

This title better reflects the current content of the course and it aligns with the name of the body of literature/field of study. The original title is too elusive.

Motion #64: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **course title** for GEND-2246 be changed from Transforming Harm: Case Studies in Transformative Justice **to** Transformative Justice: Case Studies.

Rationale:

The new title is a more succinct way of identifying the topic area and content approach. Again, as with the above course, it will be more legible to students.

Motion #70: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC the revision of the **course description** for GEND-4205 Honours Seminar.

New Description:

Students focus on decolonial and feminist-informed social justice research methods by scholars who analyze interlocking systems of gender, sexuality, race, colonial, disability, age, and economic oppression. Students consider a range of arguments, methods and methodologies in order to learn how scholars and researchers undertake and produce high quality research. Students work together as well as independently on original research projects that will incorporate fundamental concepts from contemporary anti-oppression theories.

Old Description:

Studies in Gender Equality and Social Justice is an interdisciplinary program that examines the social and cultural construction of gender, and its role and impact on social relations, institutions, and related systems of knowledge. It offers students a range of interdisciplinary perspectives on the work, status, and lives of women in our local, national, and global communities, and the contributions of men and women to changing our social, political, economic, and legal status. This seminar will offer students advanced studies in topics related to these themes. The topics will change from year to year.

Rationale:

The revised course description better reflects the content of the course.

Motion #71: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC that the **prerequisites** for GEND-4205 Honours Seminar be changed as outlined below.

New Prerequisites:

Students must have completed 30 credits in any discipline including GEND 1006 OR GEND 1007.

Old Prerequisites:

Students must be in the Honours Gender Equality and Social Justice program and must have completed 24 credits in the program.

Rationale:

This change would align the pre-requisites for GESJ's 4th year offerings and it would open the Seminar both to Majors as well as students from other programs who might be interested in the course content.

Motion #72: Non-substantive

Moved by _____, seconded by _____ that the Arts & Science Executive recommend to the ACC to **rename** Gender Equality & Social Justice's Group 2, Power and Inequality **to** Power, Justice and Transformation.

Rationale:

Everyone likes it better, which while true, is not the only reason. It is a better reflection of the content of the stream. Please note – the groupings are cosmetic. They do not appear on transcripts – which we wish they did. They are a navigation tool for students to allow them to see the way the curriculum can be clustered and to allow them to concentrate their course selection in specific areas of interest to them.

Course Code	GEND 3137
Course Title	Re-Imagining Globalization
Course Credits	<input type="checkbox"/> 3 credits <input type="checkbox"/> 6 credits <input type="checkbox"/> Other Click here to specify
Course Description (restricted to 50-75 words, present tense and active voice)	Students undertake an anti-racist and decolonial feminist analysis of globalization through an exploration of the historic roots of globalization as well as the gendered impacts of specific issues like labour exploitation, global capital, environmental violence, and migration. Students analyze human rights as a form of globalization and investigate the limits and possibilities of using human rights as an instrument of justice. Students address activist strategies for building solidarities across diverse and intersecting positions.
Course Prerequisite	Any 18 credits
Course Corequisite	Click here to enter Course Corequisite
Antirequisite	GEND 3127
List any restrictions or special notes for this course. For example "This course is restricted to BPHE students".	Click here to enter Restriction
Is this a Topic Course? (Topic courses are courses that students can take more than once for credit.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Will this course have an Experiential Learning component? If so, please indicate the type(s).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Development of an activist toolkit
Hours of contact time expected per week, if applicable. For example, two hours of lecture and one hour of laboratory work.	3 hours per week for a total of 36 hours
<u>Is this course Cross-Listed? If so, with what department?</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Political Science, Sociology Include in the 9 credit choice option for the Human Rights Minor

<p>Program Implications</p> <p><u>For example, changing a required 6 credit course to 3 credit course.</u></p>	<p>Major revamp of existing course. No substantive Program implications. The course will replace the existing Group 3 (Human Rights and Social Justice) course GEND 3127.</p> <p>The course will be included in the 9 credit choice options for the Human Rights Minor.</p>
<p>Learning Outcomes (6-8 points, visible, measurable and in active voice)</p> <p>For detailed information on Learning Outcomes, please consult the Quality Assurance website.</p>	<p>Students who successfully complete this course will:</p> <ul style="list-style-type: none"> • Understand and Explain anti-racist and decolonial feminist conceptual frameworks • Critically reflect upon readings and actively participate in class activities and discussions • Synthesize and analyze information from a variety of sources • Select, integrate and analyze information from various sources for the development of research essay • Clearly communicate ideas and argument in written form • Work collaboratively to develop an activist toolkit
<p>Will this request affect another faculty other than your own?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If yes, please use the Departmental Curriculum Approval form to indicate the approval of all departments/disciplines whose programs are affected by this proposal.</p>
<p>Will additional resources be required? If so, please list them. (ie. additional faculty, library resources or new laboratory space)?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Click here to enter additional resources</p>

<p>Course Code</p>	<p>GEND 3216</p>
<p>Course Title</p>	<p>Testimony and Witness</p>
<p>Course Credits</p>	<p><input checked="" type="checkbox"/> 3 credits <input type="checkbox"/> 6 credits <input type="checkbox"/> Other Click here to specify</p>
<p>Course Description <i>(restricted to 50-75 words, present tense and active voice)</i></p>	<p>Students explore trauma theory, the ethics of recognition, Indigenous storytelling, transitional justice, and feminist perspectives to investigate the ethics of witnessing human rights abuses. Testimony to human rights abuse can play a powerful role in demands for justice, redress, and non-recurrence. Yet, testimony can also be met with denial, voyeurism, or misinterpretation. What conditions</p>

	influence and shape both the sharing of traumatic experiences and the witnessing of human rights testimony?
Course Prerequisite	Any 18 credits
Course Corequisite	Click here to enter Course Corequisite
Antirequisite	GEND 3057 if taken in 20FW
List any restrictions or special notes for this course. <i>For example "This course is restricted to BPHE students".</i>	Click here to enter Restriction
Is this a Topic Course? <i>(Topic courses are courses that students can take more than once for credit.)</i>	.. Yes <input type="checkbox"/> No
Will this course have an Experiential Learning component? If so, please indicate the type(s).	.. Yes <input type="checkbox"/> No If yes, click here to indicate the type.
Hours of contact time expected per week, if applicable. <i>For example, two hours of lecture and one hour of laboratory work.</i>	3 hours of lecture/seminar per week for a total of 36 hours
Is this course Cross-Listed ? If so, with what department?	.. Yes <input type="checkbox"/> No If yes, click here to enter department
<u>Program Implications</u> <i>For example, changing a required 6 credit course to 3 credit course.</i>	1.This course will count towards Group 3 Human Rights and Social Justice. 2.This course will count toward the 9 credit option list of courses in the interdisciplinary Human Rights Minor
Learning Outcomes <i>(6-8 points, visible, measurable and in active voice)</i> For detailed information on Learning Outcomes, please consult the Quality Assurance website .	Students who successfully complete this course will: <ul style="list-style-type: none"> • Demonstrate an ability to Identify and explain key concepts in the study of testimony and bearing witness; • Critically reflect on course readings and actively participate in class activities and discussions. • Analyze the foundational social, cultural and legal theories relating to practices of

	<p>giving testimony and bearing witness to individual and cultural trauma.</p> <ul style="list-style-type: none"> • Demonstrate a critical understanding of discourses of trauma, healing, and recognition and their impact on human rights practices. • Synthesize and apply the knowledge gained in the course in the context of legal, literary, digital, and other forms of witnessing and testimony; • Formulate clear and concise evidence based arguments in writing to support research in written assignments.
<p>Will this request affect another faculty other than your own?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><i>If yes, please use the Departmental Curriculum Approval form to indicate the approval of all departments/disciplines whose programs are affected by this proposal.</i></p>
<p>Will additional resources be required? If so, please list them. <i>(ie. additional faculty, library resources or new laboratory space)?</i></p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>This course will be part of the regular rotation of one of our tenured faculty members.</p>

<p>Course Code</p>	<p>GEND 2326</p>
<p>Course Title</p>	<p>Pets</p>
<p>Course Credits</p>	<p><input type="checkbox"/> 3 credits <input type="checkbox"/> 6 credits <input type="checkbox"/> Other Click here to specify</p>
<p>Course Description <i>(restricted to 50-75 words, present tense and active voice)</i></p>	<p>Students explore the cross-cultural history of pet keeping. With a substantive focus on research around the co-evolution of dogs and humans, as opposed to the latecomer cats, who apparently agree to live with us because it suits them, students consider such ideas as domestication, wildness, and the problems of feral animals; the economic and environmental implications of pet keeping; and the dilemma of keeping lions and tigers in our back yards.</p>
<p>Course Prerequisite</p>	<p>Any18 credits</p>

Course Corequisite	N/A
Antirequisite	N/A
List any restrictions or special notes for this course. <i>For example "This course is restricted to BPHE students".</i>	N/A
Is this a Topic Course? <i>(Topic courses are courses that students can take more than once for credit.)</i>	Yes No
Will this course have an Experiential Learning component? If so, please indicate the type(s).	Yes No If yes, click here to indicate the type.
Hours of contact time expected per week, if applicable. <i>For example, two hours of lecture and one hour of laboratory work.</i>	3 hours per week for a total of 36 hours
Is this course <u>Cross-Listed</u> ? If so, with what department?	Yes No If yes, click here to enter department
<u>Program Implications</u> <i>For example, changing a required 6 credit course to 3 credit course.</i>	This course will be added to Group 2 Power and Inequality
Learning Outcomes <i>(6-8 points, visible, measurable and in active voice)</i> For detailed information on Learning Outcomes, please consult the Quality Assurance website .	Students who successfully complete this course will: 1. Analyse the centrality yet historical contingency of the relationship between humans and the animals they keep as pets. 2. Demonstrate an ability to bring informed, scholarly and well reasoned arguments to bear on questions concerning the relationship between humans and their pets especially as this concerns controversial issues like their environmental and economic impacts. 3. Critically explore the ethical dimensions involved in pet keeping, including the ethics of keeping exotic animals. 4. Evaluate the way the notion of human/animal conflicts privilege the human and inform the lives of animals in important ways, especially animals kept as pets.

	<p>5. Compose in writing and orally critically informed analyses about pet keeping which take account of the complex ethical dimensions involved.</p> <p>6. Demonstrate an ability to develop a clear thesis, relevant to the course topics, and apply appropriate research methods to support and defend the thesis.</p>
Will this request affect another faculty other than your own?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, please use the Departmental Curriculum Approval form to indicate the approval of all departments/disciplines whose programs are affected by this proposal.</i>
Will additional resources be required? If so, please list them. (ie. additional faculty, library resources or new laboratory space)?	<input type="checkbox"/> Yes <input type="checkbox"/> No This course will be part of the regular rotation of a tenured faculty member.

Course Code	GENG 3357
Course Title	The Opioid Crisis
Course Credits	<input type="checkbox"/> 3 credits <input type="checkbox"/> 6 credits <input type="checkbox"/> Other Click here to specify
Course Description (restricted to 50-75 words, present tense and active voice)	Students examine the complex health and social impacts of opioid use as well as public health strategies for reducing harm. Opioids killed nearly 14,000 and hospitalized close to 17,000 Canadians between 2016 and 2019. The COVID-19 pandemic significantly expanded and accelerated these losses representing a parallel if largely invisible public health emergency.
Course Prerequisite	Any 18 credits
Course Corequisite	N/A
Antirequisite	GENG 3057 in taken in winter 2021
List any restrictions or special notes for this course. <i>For example "This course is restricted to BPHE students".</i>	Click here to enter Restriction
Is this a Topic Course? (Topic courses are courses that	<input type="checkbox"/> Yes <input type="checkbox"/> No

<p><i>students can take more than once for credit.)</i></p>	
<p>Will this course have an Experiential Learning component? If so, please indicate the type(s).</p>	<p>Yes No If yes, click here to indicate type(s).</p>
<p>Hours of contact time expected per week, if applicable. <i>For example, two hours of lecture and one hour of laboratory work.</i></p>	<p>3 hours of lecture/seminar per week for a total of 36 hours</p>
<p>Is this course Cross-Listed? If so, with what department?</p>	<p>Yes No If yes, click here to enter department</p>
<p><u>Program Implications</u> <i>For example, changing a required 6 credit course to 3 credit course.</i></p>	<p>Include under Group 3 Human Rights and Social Justice Include under 9 credit choice options in Human Rights Minor</p>
<p>Learning Outcomes <i>(6-8 points, visible, measurable and in active voice)</i></p> <p>For detailed information on Learning Outcomes, please consult the Quality Assurance website.</p>	<p>Students who successfully complete this course will:</p> <ol style="list-style-type: none"> 1. Develop an ability to critically assess the ways in which attitudes to addictions and drug use are embedded in political, social and historical contexts related to health and disease. 2. Examine and identify some of the key events and ideas within the western intellectual and health traditions which have shaped ideas of drug use from antiquity to the present. 3. Compare some of the ways indigenous cultures understand health and disease as they relate to notions of mental health and addictions. 4. Compose reasoned, evidence based verbal and written debate surrounding controversial issues related to the Opioid Crisis and the violent consequences of othering that flows from it. 5. Identify and be able to clearly articulate some of the ethical dimensions of viewing drug use as a: (a) a health issue,(b) an issue of criminal justice and policing and (c) a moral issue. 6. Compose evidence based written work in response to key questions assigned or developed in class.

Will this request affect another faculty other than your own?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, please use the Departmental Curriculum Approval form to indicate the approval of all departments/disciplines whose programs are affected by this proposal.</i>
Will additional resources be required? If so, please list them. (ie. additional faculty, library resources or new laboratory space)?	<input type="checkbox"/> Yes <input type="checkbox"/> No Click here to enter additional resources

Old Requirements:

Students must complete the required 3 credits of introductory GEND with a minimum grade of 60%.

Students must complete 120 credits including 60 credits in the Honours Specialization as follows:		
GEND 1000 level		3 cr.
Group 1		6 cr.
Group 2		6 cr.
Group 3		6 cr.
GEND 3306	Ideas of Power	3 cr.
GEND 4005	Honours Essay or	6 cr.
GEND 4205	Honours Seminar	
GEND upper level courses or courses cross-listed with GEND		30 cr.

New Requirements

Students must complete X credits as follows:	
GEND 1000 level	Up to 6 credits
*GEND upper level courses or courses cross-listed with GEND	27-30 cr *

Note: * Students who complete 3 credits of 1000-level GEND are required to take 30 credits of upper level GEND. Students who complete 6 credits of 1000- level GEND are required to take 27 credits of upper level GEND.

Proposed Language for the Specialization

Students must complete X credits as follows:	
GEND 1000 level	Up to 6 credits
*GEND upper level courses or courses cross-listed with GEND	27-30 cr.

Note: Students who complete 3 credits of 1000-level GEND are required to take 30 credits of upper level GEND. Students who complete 6 credits of 1000- level GEND are required to take 27 credits of upper level GEND.

Proposed Language for the Major

Students must complete X credits as follows:	
GEND 1000 level	Up to 6 credits
*GEND upper level courses or courses cross-listed with GEND	12-15 cr.

Note: Students who complete 3 credits of 1000-level GEND are required to take 15 credits of upper level GEND. Students who complete 6 credits of 1000- level GEND are required to take 12 credits of upper level GEND.

Old Requirements

Program Requirements:

Students must complete 18 credits in Gender Equality and Social Justice as follows:	
GEND 1000 level	3 cr.
GEND upper level	15 cr.

Note: Cross-listed courses may not count towards a Minor in Gender Equality and Social Justice.

New Requirements

Program Requirements:

Students must complete 18 credits in Gender Equality and Social Justice as follows:

GEND 1000 level	Up to 6 credits.
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GEND upper level	12-15 cr.
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Note: 3 credits of cross listed courses may count towards a Minor in Gender Equality and Social Justice.

School of Criminology and Criminal Justice

Non substantive:

The prerequisite for CRJS 3506 Criminology of Serial Murder be changed as outlined below:

New Prerequisites:

None

Old Prerequisite:

CRJS 2086

Rationale: CRJS 3506 currently requires the prerequisite of CRJS 2086 Intro to Criminological Theory. CRJS 3506 has now been offered for three Spring/Summer Terms and has become a popular course for nurses in the Registered Practical Nurse (RPN) to Bachelor of Science Nursing (BSCN) Bridging program. The bridging students have been allowed into the course without the prerequisite and have been quite successful. Removal of the prerequisite would allow these students and others to register without special approval, which for the past two summers have required over 30 prerequisite exemption requests.

Motion 25:

That the Academic Curriculum Committee recommend to Senate that the program requirements for the Bachelor of Arts Criminal Justice, School of Criminology and Criminal Justice be changed as outlined below.

Rationale: The Bachelor of Arts is available to students pursuing a Stream in Criminology, Criminal Justice, Policing, Corrections and Legal Studies & Administration. Proposed changes to the program are designed to align course offerings with current requirements for employment in the field particularly in the case of policing and corrections. As an applied program, students need to be aware of current topics and trends relevant to the field. For example, the addition of CRJS 2126 Interpreting Criminal Justice Research will expose students to research methods, analysis and reporting used in the criminal justice field and provide them with the necessary skills to interpret both qualitative and quantitative presentation of research results. Similarly, CRJS 3046 Interpersonal Communications in Criminal Justice is consistent with the applied nature of our program and every major functional job analysis conducted on the job of police

officer recognizes communication as an essential competency. Lastly, CRJS 3356 Vulnerable Populations teaches students the nature of vulnerability and how to respond to the unique needs of the most prevalent vulnerable populations. This is an extremely relevant course that should be included in any contemporary criminal justice program as recognized by the latest IQAP review.

Summary of changes

Remove:

- From the courses required by all students regardless of stream: Remove: SOCI 2126 Introduction to Sociological Research Methods and SOCI 2127 Quantitative Research Methods
- From the required courses in the Corrections stream: Remove CRJS 3086 Law & Society and CRJS 3087 Law & Society II
- From the required courses in the Policing stream: Remove CRJS 3086 Law & Society and CRJS 3087 Law & Society II

Add:

- From the courses required by all students regardless of stream: Add CRJS 3436 Racialization and the Politics of Judicial Typecasting.
- From the required courses in the *Criminal Justice* stream: Add CRJS 2126 Interpreting Criminal Justice Research and to the Criminal Justice Electives list, Add: CRJS 3086 Law & Society and CRJS 3087 Law & Society II and Add CRJS 3046 Interpersonal Communications in Criminal Justice and require one less elective from the Electives list (from 45 to 42).
- From the required courses in the *Corrections* stream: Add CRJS 2126 Interpreting Criminal Justice Research and CRJS 3356 Vulnerable Populations and to the Corrections Elective list add: CRJS 3046 Interpersonal Communications in Criminal Justice and require one less elective.
- From the required courses in the *Policing* stream: Add CRJS 2126 Interpreting Criminal Justice Research and CRJS 3356 Vulnerable Populations and to the Policing Electives list add CRJS 3046 Interpersonal Communications in Criminal Justice.
- From the required courses in the *Criminology* stream: Add SOCI 2126 Introduction to Sociological Research Methods, SOCI 2127 Quantitative Research Methods and CRJS 4466 Program Policy Evaluation and to the Criminology Electives list add: CRJS 3046 Interpersonal Communications in Criminal Justice

New Requirements

Required Courses for all Criminal Justice Students (24 credits)

Students must complete 120 credits including the following required courses in the Criminal Justice program:		
CRJS 1087	Introduction to Canadian Criminal Justice System	3 cr.
CRJS 1206	Introduction to Canadian Law	3 cr.
SOCI 1016	Introduction to Sociology	3 cr.

PSYC 1106	Introduction to Psychology I	3 cr.
PSYC 1107	Introduction to Psychology II	3 cr.
CRJS 2086	Introduction to Criminology	3 cr.
CRJS 3206	Canadian Criminal Law and Criminal Proceedings	3 cr.
CRJS 3436	Racialization and Politics of Judicial Typecasting	3 cr.

Legal Studies and Administration (84 credits)

Students must complete all of the following:		
CRJS 2106	Psychology and the Law	3 cr.
CRJS 2216	Civil Law & Civil Procedure	3 cr.
CRJS 3086	Law and Society	3 cr.
CRJS 3087	Law and Society II	3 cr.
CRJS 4347	Applied Criminological Theory	3 cr.
Credits from Legal Studies		30 cr.
Plus:		
Electives		39 cr.

Criminal Justice Studies (84 Credits)

Students must complete all of the following:		
SOCI 2016	Classical Sociological Theory	3 cr.
CRJS 2127	Interpreting Criminal Justice Research	3 cr.
CRJS 2106	Psychology and the Law	3 cr.
CRJS 4937	Seminar in Professional Development	3 cr.
Criminal Justice Studies Stream Electives:		27 cr.
Plus:		
Electives		45 cr.

Criminology (84 Credits)

Students must complete all of the following:		
SOCI 2016	Classical Sociological Theory	3 cr.
SOCI 2126	Introduction to Sociological Research Methods	3 cr.
SOCI 2127	Quantitative Research Methods	3 cr.
CRJS 3086	Law and Society I	3 cr.
CRJS 3087	Law and Society II	3 cr.
CRJS 3106	Forensic Psychology I	3 cr.
CRJS 3107	Forensic Psychology II	3 cr.
CRJS 4347	Applied Criminological Theory	3 cr.
CRJS 4466	Program and Policy Evaluation	3 cr.
CRJS 4467	Advanced Criminological Theory	3 cr.
CRJS 4937	Seminar in Professional Development	3 cr.
Criminal Justice Studies Stream Electives:		15 cr.
Plus:		
Electives		36 cr.

Corrections (84 Credits)

Students must complete all of the following:		
CRJS 2106	Psychology and the Law	3 cr.
CRJS 2127	Interpreting Criminal Justice Research	3 cr.
CRJS 3356	Vulnerable Populations	3 cr.
CRJS 3936	Youth in Conflict with the Law	3 cr.
CRJS 4347	Applied Criminological Theory	3 cr.
CRJS 4356	Community Corrections	3 cr.
CRJS 4477	Penology	3 cr.
Community and Justice Courses: Canadore College		30 cr.
Plus:		
Electives		33 cr.

Policing (84 Credits)

Students must complete all of the following:		
CRJS 2106	Psychology and the Law	3 cr.
CRJS 2127	Interpreting Criminal Justice Research	3 cr.
CRJS 3356	Vulnerable Populations	3 cr.
CRJS 4347	Applied Criminological Theory	3 cr.
CRJS 4916	Policing and Society	3 cr.
CRJS 4917	Criminal Investigation	3 cr.
Police Foundations Courses: Canadore College		30 cr.
Plus:		
Electives		36 cr.

Criminal Justice Studies Elective List

ADMN 2307	Commercial Law
ANTH 3027	Indigenous Peoples and the State
CRJS 2216	Civil Law and Civil Procedure
CRJS 2306	Taking Criminological Theory to the Movies
CRJS 2316	Introduction to Organized Crime
CRJS 2926	An Introduction to Forensic Science
CRJS 3086	Law and Society I
CRJS 3087	Law and Society II
CRJS 3106	Forensic Psychology I
CRJS 3107	Forensic Psychology II
CRJS 3336	Women and the Criminal Justice System
CRJS 3356	Vulnerable Populations

CRJS 3046 **Interpersonal Communications in Criminal Justice**

CRJS 3416	Indigenous Legal Studies
CRJS 3426	Terrorism
CRJS 3506	Criminology of Serial Homicide
CRJS 3626	Victimology
CRJS 3926	Special Topics in Criminal Justice I
CRJS 3927	Special Topics in Criminal Justice II
CRJS 3936	Youth in Conflict with the Law
CRJS 4926	Advanced Topics in Criminal Justice I
CRJS 4927	Advanced Topics in Criminal Justice II
HIST 3286	Human Rights in Canada
PSYC 2807	Introduction to Social Psychology
PSYC 3606	Psychopathology I
PSYC 3607	Psychopathology II
PSYC 3807	Applied Social Psychology
SOCI 3006	The Sociology of Collective Behaviour
SOCI 4016	Advanced Classical Sociological Theory

Criminology Elective List

ADMN 2307	Commercial Law
ANTH 3027	Indigenous Peoples and the State
CRJS 2106	Psychology and the Law
CRJS 2216	Civil Law and Civil Procedure
CRJS 2306	Taking Criminological Theory to the Movies
CRJS 2316	Introduction to Organized Crime
CRJS 2926	An Introduction to Forensic Science
CRJS 3336	Women and the Criminal Justice System
CRJS 3356	Vulnerable Populations

CRJS 3046 **Interpersonal Communications in Criminal Justice**

CRJS 3416	Indigenous Legal Studies
CRJS 3426	Terrorism

CRJS 3506	Criminology of Serial Homicide
CRJS 3626	Victimology
CRJS 3926	Special Topics in Criminal Justice I
CRJS 3927	Special Topics in Criminal Justice II
CRJS 3936	Youth in Conflict with the Law
CRJS 4006	Issues in Forensic Mental Health
CRJS 4016	Issues in Family Law
CRJS 4026	Criminal Organizations
CRJS 4346	Field Placement
CRJS 4356	Community Corrections (if not used to satisfy the Corrections stream requirements)
CRJS 4466	Program Policy and Evaluation
CRJS 4477	Penology
CRJS 4916	Policing and Society
CRJS 4917	Criminal Investigation
CRJS 4926	Advanced Topics in Criminal Justice I
CRJS 4927	Advanced Topics in Criminal Justice II

HIST 3286	Human Rights in Canada
PSYC 2807	Introduction to Social Psychology
PSYC 3606	Psychopathology I
PSYC 3607	Psychopathology II
PSYC 3807	Applied Social Psychology
SOCI 3006	The Sociology of Collective Behaviour
SOCI 4016	Advanced Classical Sociological Theory
SOCI 4127	Advanced Social Data Analysis

Old Requirements

Bachelor of Arts (Honours and Four-year)

Criminal Justice

Program Requirements:

The Bachelor of Arts (Honours) is available to students pursuing a Stream in Criminology, Corrections, Policing, or Legal Studies & Administration. Students completing the Bachelor of Arts in Criminal Justice (Honours) must achieve a minimum average of 70% in the program.

The Bachelor of Arts (Four-year) is available to students pursuing the Criminal Justice Studies Stream. Students completing the Bachelor of Arts in Criminal Justice (four-year) must achieve a minimum average of 60% in the program.

Students must complete 120 credits including the following required courses in the Criminal Justice program:

CRJS 1087	Introduction to the Canadian Criminal Justice System
CRJS 1206	An Introduction to Canadian Law
SOCI 1016	Introduction to Sociology
PSYC 1106	Introduction to Psychology I
PSYC 1107	Introduction to Psychology II
SOCI 2126	Introduction to Sociological Research Methods
SOCI 2127	Quantitative Research Methods
CRJS 2086	Introduction to Criminological Theory
CRJS 3206	Canadian Criminal Law and Criminal Proceedings

In addition to the required courses listed above, students in the Criminal Justice program must complete one of the following streams: Legal Studies and Administration; Corrections; Criminology; Criminal Justice Studies; or Policing.

Note:

** The block of 30 credits for the Corrections and Policing Streams are offered in collaboration with Canadore College and represent one academic year of study at the college.

It is recommended that students include [ACAD 1601](#) in their first 30 Nipissing credits. [ACAD 1601](#) will count towards three credits of the Humanities requirements.

Legal Studies and Administration Stream

Students completing the BA (Honours) Criminal Justice - Legal Studies Stream must achieve a minimum 70% average in the program. This stream is available only to students with a diploma in a Law Clerk program from an Ontario Community College. In addition to the block of credits received from the Law Clerk program, students must also complete the following:

CRJS 2106	Psychology and Law	3 cr.
CRJS 2216	Civil Law & Civil Procedure	3 cr.

CRJS 3086	Law and Society	3 cr.
CRJS 3087	Law and Society II	3 cr.
CRJS 4347	Applied Criminological Theory	3 cr.
Legal Studies Block		30 cr.
Plus:		
Electives		36 cr.

Corrections Stream

Students completing the BA (Honours) Criminal Justice - Corrections Stream must achieve a minimum 70% average in the program.

Students must complete all of the following:		
CRJS 2106	Psychology and Law	3 cr.
CRJS 3086	Law and Society	3 cr.
CRJS 3087	Law and Society II	3 cr.
CRJS 3936	Youth in Conflict with the Law	3 cr.
CRJS 4347	Applied Criminological Theory	3 cr.
CRJS 4356	Community Corrections	3 cr.
CRJS 4477	Penology	3 cr.
Community and Justice Courses: Canadore**		30 cr.
Electives		30 cr.

Criminology Stream

Students completing the BA (Honours) Criminal Justice - Criminology Stream must achieve a minimum 70% average in the program.

Students must complete all of the following:		
SOCI 2016	Classical Sociological Theory	3 cr.
SOCI 2017	Contemporary Sociological Theory	3 cr.
CRJS 3086	Law and Society	3 cr.
CRJS 3087	Law and Society II	3 cr.
CRJS 3106	Forensic Psychology I	3 cr.

CRJS 3107	Forensic Psychology II	3 cr.
CRJS 4347	Applied Criminological Theory	3 cr.
CRJS 4467	Advanced Criminological Theories	3 cr.
CRJS 4937	Honours Seminar in Professional Development	3 cr.
CRJS 4000 level		3 cr.
*Criminology and Criminal Justice Stream electives list		15 cr.
Plus:		
Electives		36 cr.

Group Requirements:

Criminology stream electives

ADMN 2307	Commercial Law
ANTH 3027	Indigenous Peoples and the State
CRJS 2106	Psychology and the Law
CRJS 2216	Civil Law and Civil Procedure
CRJS 2306	Taking Criminological Theory to the Movies
CRJS 2316	Introduction to Organized Crime
CRJS 2926	An Introduction to Forensic Science
CRJS 3106	Forensic Psychology I
CRJS 3107	Forensic Psychology II
CRJS 3336	Women and the Criminal Justice System
CRJS 3356	Vulnerable Populations
CRJS 3416	Indigenous Legal Studies
CRJS 3426	Terrorism
CRJS 3506	Criminology of Serial Homicide
CRJS 3626	Victimology
CRJS 3926	Special Topics in Criminal Justice I
CRJS 3927	Special Topics in Criminal Justice II
CRJS 3936	Youth in Conflict with the Law
CRJS 4006	Issues in Forensic Mental Health

Criminology stream electives

CRJS 4016	Issues in Family Law
CRJS 4026	Criminal Organizations
CRJS 4346	Field Placement
CRJS 4356	Community Corrections (if not used to satisfy the Corrections stream requirements)
CRJS 4466	Program Policy and Evaluation
CRJS 4477	Penology
CRJS 4916	Policing and Society
CRJS 4917	Criminal Investigation
CRJS 4926	Advanced Topics in Criminal Justice I
CRJS 4927	Advanced Topics in Criminal Justice II
HIST 3286	Human Rights in Canada
PSYC 2807	Introduction to Social Psychology
PSYC 3606	Psychopathology I
PSYC 3607	Psychopathology II
PSYC 3807	Applied Social Psychology
SOC 3006	The Sociology of Collective Behaviour
SOC 4016	Advanced Classical Sociological Theory
SOC 4127	Advanced Social Data Analysis

Criminal Justice Studies Stream

Students completing the BA (Four-year) Criminal Justice - Criminal Justice Studies Stream must achieve a minimum 60% average in the program.

Students must complete all of the following:

SOC 2016	Classical Sociological Theory	3 cr.
SOC 2017	Contemporary Sociological Theory	3 cr.
CRJS 2106	Psychology and Law	3 cr.
CRJS 4937	Seminar in Professional Development	3 cr.
*Criminal Justice Studies list of stream electives		24 cr.

Plus:

Electives

45 cr.

Group Requirements:

Criminal Justice Studies stream electives

<u>ADMN 2307</u>	Commercial Law
<u>ANTH 3027</u>	Indigenous Peoples and the State
<u>CRJS 2216</u>	Civil Law and Civil Procedure
<u>CRJS 2306</u>	Taking Criminological Theory to the Movies
<u>CRJS 2316</u>	Introduction to Organized Crime
<u>CRJS 2926</u>	An Introduction to Forensic Science
<u>CRJS 3106</u>	Forensic Psychology I
<u>CRJS 3107</u>	Forensic Psychology II
<u>CRJS 3336</u>	Women and the Criminal Justice System
<u>CRJS 3356</u>	Vulnerable Populations
<u>CRJS 3416</u>	Indigenous Legal Studies
<u>CRJS 3426</u>	Terrorism
<u>CRJS 3506</u>	Criminology of Serial Homicide
<u>CRJS 3626</u>	Victimology
<u>CRJS 3926</u>	Special Topics in Criminal Justice I
<u>CRJS 3927</u>	Special Topics in Criminal Justice II
<u>CRJS 3936</u>	Youth in Conflict with the Law
<u>CRJS 4926</u>	Advanced Topics in Criminal Justice I
<u>CRJS 4927</u>	Advanced Topics in Criminal Justice II
<u>HIST 3286</u>	Human Rights in Canada
<u>PSYC 2807</u>	Introduction to Social Psychology
<u>PSYC 3606</u>	Psychopathology I
<u>PSYC 3607</u>	Psychopathology II
<u>PSYC 3807</u>	Applied Social Psychology
<u>SOCI 3006</u>	The Sociology of Collective Behaviour

Criminal Justice Studies stream electives

[SOCI 4016](#) Advanced Classical Sociological Theory

Policing Stream

Students completing the BA (Honours) Criminal Justice - Policing Stream must achieve a minimum 70% average in the program.

Students must complete all of the following:

CRJS 2106	Psychology and Law	3 cr.
CRJS 3086	Law and Society	3 cr.
CRJS 3087	Law and Society II	3 cr.
CRJS 4347	Applied Criminological Theory	3 cr.
CRJS 4916	Policing and Society	3 cr.
CRJS 4917	Criminal Investigation	3 cr.
Police Foundations Courses: Canadore**		30 cr.
Plus:		
Electives		33 cr.

Non Substantive:

That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee that the School of Criminology & Criminal Justice be renamed as the School of Criminal Justice

Rationale: The name change will distinguish the School from academic Criminology programs that are found in Sociology programs, and better reflect the reality that we are an applied criminal justice program, with a primary focus on preparing students for careers in the field of criminal justice. The rationale for the name change is consistent with the views found in the major journal in Canada for criminology and criminal justice, the Canadian Journal of Criminology, and with other applied criminal justice programs in Ontario and Canada. The curriculum of the program and course codes will be unaffected by the name change. The Nipissing University website and brochure will remain unchanged except for the change in the name. Finally, the name change is in line with the recent IQAP Review in clarifying the orientation of the program as an applied criminal justice program.

Course Code	CRJS 2127
Course Title	<i>Interpreting Criminal Justice Research</i>
Course Credits	<input checked="" type="checkbox"/> 3 credits <input type="checkbox"/> 6 credits <input checked="" type="checkbox"/> Other Click here to specify
Course Description <i>(restricted to 50-75 words, present tense and active voice)</i>	This course provides an introduction to the qualitative and quantitative research methods and data analysis techniques commonly reported in criminal justice research articles and reports. Ethical, professional and substantive issues in researching, analyzing and reporting on crime and criminal behaviour are examined.
Course Prerequisite	CRJS 1087 and CRJS 2086
Course Corequisite	Click here to enter Course Corequisite
Antirequisite	CRJS 2126
List any restrictions or special notes for this course. <i>For example "This course is restricted to BPHE students".</i>	This course will be a required course for ALL students in the Policing, Corrections and Criminal Justice streams of the Criminal Justice program. Students enrolled in the Criminology stream will continue to be required to complete SOCI 2126 Sociological Research Methods and SOCI 2127 Quantitative Research Methods. Legal Studies and Administrative Stream remains unchanged.
Is this a Topic Course? <i>(Topic courses are courses that students can take more than once for credit.)</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Will this course have an Experiential Learning component? If so, please indicate the type(s).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No via the use of (1) applied research projects, or (2) case studies, or (3) interactive simulations of different types of data analyses
Hours of contact time expected per week, if applicable. <i>For example, two hours of lecture and one hour of laboratory work.</i>	36
Is this course Cross-Listed ? If so, with what department?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, click here to enter department
Program Implications <i>For example, changing a required 6 credit course to 3 credit course.</i>	This course will be a required course for ALL students in the Policing, Corrections and Criminal Justice streams of the Criminal Justice program. CRJS 2126 will replace the six credits of SOCI 2126 and SOCI 2127 currently required. Consequently, students in the Policing, Corrections and Criminal Justice streams will now have available 3 credits which they can use to take

	CRJS 3436 <i>Racialization of the Politics of Judicial Typecasting</i>
<p>Learning Outcomes <i>(6-8 points, visible, measurable and in active voice)</i></p> <p>For detailed information on Learning Outcomes, please consult the Quality Assurance website.</p>	<p>Students who successfully complete this course will:</p> <ul style="list-style-type: none"> • describe qualitative and quantitative methods used by criminal justice researchers to collect data on crime and criminal behaviour • identify qualitative and quantitative techniques used by criminal justice researchers to analyze data on crime and criminal behaviour • explain ethical and methodological requirements and procedures for reporting the results of criminal justice studies of crime and criminal behaviour • analyze, summarize and report on the findings from criminal justice research articles and reports • identify professional, ethical and substantive issues in reporting on crime and criminal behaviour • evaluate the social merit and value of research articles and reports on crime and criminal justice behaviour • communicate a structured argument in written and in oral form
<p>Will this request affect another faculty other than your own?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>SOCI 2126 Sociological Research Methods and SOCI 2127 Quantitative Research Methods would no longer be required courses for students in the newly approved 2 years college/2 years Nipissing Policing and Corrections streams.</p>
<p>Will additional resources be required? If so, please list them. <i>(ie. additional faculty, library resources or new laboratory space)?</i></p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>

Students who successfully complete this course will:

- discuss the importance of communication skills in professions found in the field of criminal justice
- analyze the different types of communications
- describe the process of communication
- examine the flow of communication in organizations in the field of criminal justice
- prepare *Briefing Notes, Information Notes, and Operational Notes*
- describe the generational, cultural, and ethnic challenges and strategies for successful communications
- construct an appropriate argument to a problem using the legal parameters of communications in the justice system.
- examine how the principles of effective communication apply within the context of leadership principles and mentoring

Yes No

Yes No

School of Nursing

Report of the Academic Regulations and Curriculum Committee Faculty of Education and Professional Studies January 21, 2022

Motion 2:

That the EPS ARCC recommend to the Academic Curriculum Committee that the restrictions for NSGD 3336 Culture and Nursing Practice are changed as below:

From:

This course is restricted to students enrolled in the RPN to BScN Blended Learning Program.

To:

This course is restricted to students enrolled in the RPN to BScN Blended Learning Program, **students enrolled in the collaborative BScN and collaborative RPN-BScN program.**

And prerequisites

from:

ACAD 1601, BIOL 1011, NSGD 2116, NSGD 2117, NSGD 2147, NSGD 2216, NSGD 2007, NSGD 2017

To:

ACAD 1601, BIOL 1011, NSGD 2116, NSGD 2117, NSGD 2147, NSGD 2216, NSGD 2007, NSGD 2017 **OR all BScN NURS courses at the 2000-level with a minimum grade of 60% or SAT, or all RPN to BScN NURS courses at the 2000-level with a minimum grade of 60% or SAT.**

Rationale: This change will enable students currently enrolled in the Collaborative BScN program to take is course as an elective. At present, there are very few nursing elective opportunities for these students that fit with their schedule. The online delivery modality of the course allows for greater flexibility.

Report of the Academic Regulations and Curriculum Committee Faculty of Education and Professional Studies February 11, 2022

Motion 1: That the Education and Professional Studies Executive recommend to the Academic

Curriculum Committee the **restrictions** for **NURS 1006, NURS 1016, NURS 1037** be changed as outlined below:

New Restriction:

This course is restricted to students in the on-campus BScN program.

Old Restriction:

Enrollment in the Collaborative BScN Program.

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program

YEAR 2 MOTIONS:

Motion 2: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **restrictions** for **NURS 2037** be changed as outlined below:

New Restriction:

This course is restricted to students in the on-campus BScN.

Old Restriction:

Enrollment in the Collaborative BScN or RPN to BScN OnCampus Bridging Program.

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 3: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee that the **restrictions** for **NURS 2016, NURS 2047, NURS 2036** be changed as outline below:

New Restriction:

This course is restricted to students in the on-campus BScN program or the on-campus RPN-BScN program

Old Restriction:

Enrollment in the Collaborative BScN or RPN to BScN OnCampus Bridging Program.

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 4: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee that the **prerequisites** for **NURS 2016** be changed as outline below:

New Prerequisites:

All NURS courses at the 1000 level in the on-campus BScN program with 60% minimum or SAT, and SOCI 1016; or enrolment in the on-campus RPN-BScN Program

Old Prerequisites:

All NURS courses at the 1000 level with a minimum grade of 60% or SAT, [BIOL 1011](#) and [BIOL 2707](#); or enrollment in the RPN to BScN Program.

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 5: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **corequisites** for **NURS 2016** be changed as outline below:

New Corequisites:
none

Old Corequisites:
NURS 2026, NURS 2526

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 6: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **prerequisites** for **NURS 2706** be changed as outline below:

New Prerequisites:

All NURS courses at the 1000 level in the on-campus BScN program with 60% minimum or SAT, and SOCI 1016; or enrolment in the on-campus RPN-BScN Program

Old Prerequisites:

All NURS courses at the 1000 level in the on-campus BScN program with 60% minimum or SAT, BIOL 1011, BIOL 1022, and SOCI 1016; or enrolment in the on-campus RPN-BScN Program

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program .

Motion 7: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **prerequisites** for **NURS 2037** be changed as outline below:

New Prerequisites:

NURS 2706 and NURS 2016 with a minimum grade of 60% or SAT, PSYC 2506, BIOL 2116, ACAD 1601, and enrolment in the on-campus BScN program

Old Prerequisites:

All NURS courses at the 1000 level with a minimum grade of 60% or SAT; [BIOL 1011](#) and [BIOL 2707](#)

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 8: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **prerequisites** for **NURS 2517 and NURS 2707** be changed as outlined below:

New Prerequisites:

NURS 2706 and NURS 2016 with a minimum grade of 60% or SAT, PSYC 2506, BIOL 2116, ACAD 1601, and enrolment in the on-campus BScN program; or NURS 2706, NURS 2016, with a minimum grade of 60% or SAT, BIOL 1011, BIOL 2116 and enrolment in the on-campus RPN-BScN program

Old Prerequisites:

NURS 2706, NURS 2016, PSYC 2506, BIOL 2116, ACAD 1601, and enrolment in the on-campus BScN program; or NURS 2706, NURS 2016, BIOL 1011, BIOL 2116 and enrolment in the on-campus RPN-BScN program

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 9: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **prerequisites** for **NURS 2036** be changed as outlined below:

New Prerequisites:

NURS 2706 and NURS 2016 with a minimum grade of 60% or SAT, PSYC 2506, BIOL 2116, ACAD 1601, and enrolment in the on-campus BScN program; or NURS 2706, NURS 2016, with a minimum grade of 60% or SAT, BIOL 1011, BIOL 2116 and enrolment in the on-campus RPN-BScN program

Old Prerequisites:

All NURS courses at the 1000 level with a minimum grade of 60% or SAT, BIOL 1011, BIOL 2707, SOCI 1016, or enrollment in the RPN to BScN Program.

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program

Motion 10: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **prerequisites** for **NURS 2047** be changed as outline below:

New Prerequisites:

NURS 2706 and NURS 2016 with a minimum grade of 60% or SAT, PSYC 2506, BIOL 2116, ACAD 1601, and enrolment in the on-campus BScN program or NURS 2706, NURS 2016, with a minimum grade of 60% or SAT, BIOL 1011, BIOL 2116 and enrolment in the on-campus RPN-BScN program

Old Prerequisites:

All NURS courses at the 1000 level with a minimum grade of 60% or SAT, [BIOL 1011](#) and [BIOL 2707](#); or enrollment in the RPN to BScN Program.

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

YEAR 3 MOTIONS:

Motion 11: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **restrictions** for **NURS 3017, NURS 3116, NURS 3117, NURS 3007** be changed as outline below:

New Restriction:

This course is restricted to students in the on-campus BScN program or the on-campus RPN-BScN program

Old Restriction:

Enrollment in the Collaborative BScN or RPN to BScN On-Campus Bridging Programs.

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 12: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **restrictions** for **NURS 3036** be changed as outline below:

New Restriction:

This course is restricted to students in the on-campus BScN program or the on-campus RPN-BScN program

Old Restriction:

None

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program

Motion 13: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **prerequisites** for **NURS 3017** be changed as outline below:

New Prerequisites:

All NURS courses at the 2000 level in the on-campus BScN program with a minimum grade of 60% or SAT; or NURS 2517, NURS 2707, NURS 2047, NURS 2036, with a minimum grade of 60% or SAT, ACAD 1601 and enrolment in the on-campus RPN-BScN program

Old Prerequisites:

All NURS courses at the 2000-level with a minimum grade of 60% or SAT, or enrolment in the RPN to BScN Program.

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 14: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **corequisites** for **NURS 3017** be changed as outline below:

New Corequisites:

None

Old Corequisites:
NURS 3217

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 15: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **prerequisites** for **NURS 3116** be changed as outline below:

New Prerequisites:

All NURS courses at the 2000 level in the on-campus BScN program with a minimum grade of 60% or SAT; or NURS 2517, NURS 2707, NURS 2047, NURS 2036, with a minimum grade of 60% or SAT, ACAD 1601 and enrolment in the on-campus RPN-BScN program

Old Prerequisites:

All NURS courses at the 2000-level with a minimum grade of 60% or SAT, or all RPN to BScN courses at the 2000-level with a minimum grade of 60% or SAT; [BIOL 2116](#), [SOCI 1016](#).

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program

Motion 16: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **prerequisites** for **NURS 3117** be changed as outline below:

New Prerequisites:

NURS 3706, NURS 3017, NURS 3116, NURS 3516, with a minimum grade of 60% or SAT, MATH 1267

Old Prerequisites:

All NURS courses at the 2000-level with a minimum grade of 60% or SAT; [NURS 3116](#) (Nursing Research 1); [MATH 1257](#).

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 17: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **prerequisites** for **NURS 3036** be changed as outline below:

New Prerequisites:

NURS 3706, NURS 3017, NURS 3116, NURS 3516, with a minimum grade of 60% or SAT, MATH 1267

Old Prerequisites:

All BScN courses at the 2000-level with a minimum grade of 60% or SAT, or all RPN to BScN courses at the 2000-level with a minimum grade of 60% or SAT; [SOCI 1016](#) and [PSYC 1036](#)

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 18: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **antirequisites** for **NURS 3036** be changed as outline below:

New Antirequisites:
NSGD 3036, NSGD 3336

Old Antirequisites:
NSGD 3036

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 19: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **prerequisites** for **NURS 3007** be changed as outline below:

New Prerequisites:

NURS 3017, NURS 3116, NURS 3706, and NURS 3516 with a minimum grade of 60% or SAT and MATH 1267

Old Prerequisites:

All BScN courses at the 2000-level with a minimum grade of 60% or SAT, or all RPN to BScN courses at the 2000-level with a minimum grade of 60% or SAT; [BIOL 2116](#), [SOCI 1016](#)

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 20: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **corequisites** for **NURS 3007** be changed as outline below:

New Corequisites:
NURS 3707

Old Corequisites:
NURS 3027

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

YEAR 4 MOTIONS

Motion 21: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **restrictions** for **NURS 4036**, **NURS 4436**, **NURS 4067**, **NURS 4126** be changed as outline below:

New Restriction:

This course is restricted to students in the on-campus BScN program or the on-campus RPN-BScN program

Old Restriction:

Enrollment in the Collaborative BScN or RPN to BScN On-Campus Bridging Programs.

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 22: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **prerequisites** for **NURS 4036** be changed as outline below:

New Prerequisites:

NURS 3036, NURS 3536, NURS 3707, NURS 3117; and NURS 3007 or NURS 3517 or NURS 3207 with minimum grade of 60% or SAT

Old Prerequisites:

All NURS courses at the 3000-level with a minimum grade of 60% or SAT.

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 23: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **corequisites** for **NURS 4036** be changed as outline below:

New Corequisites:

None

Old Corequisites:

NURS 4026, NURS 3117

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 24: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **prerequisites** for **NURS 4436** be changed as outline below:

New Prerequisites:

NURS 3036, NURS 3536, NURS 3707, NURS 3117; and NURS 3007 or NURS 3517 or NURS 3207 with minimum grade of 60% or SAT

Old Prerequisites:

All NURS courses at the 3000-level with a minimum grade of 60% or SAT.

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 25: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **corequisites** for **NURS 4436** be changed as outline below:

New Corequisites:
None

Old Corequisites:
NURS 4067, NURS 4026 and NURS 4036

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 26: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **prerequisites** for **NURS 4067** be changed as outline below:

New Prerequisites:
NURS 3036, NURS 3536, NURS 3707, NURS 3117; and NURS 3007 or NURS 3517 or NURS 3207 with minimum grade of 60% or SAT

Old Prerequisites:
All NURS courses at the 3000-level with a minimum grade of 60% or SAT.

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 27 : That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **corequisites** for **NURS 4067** be changed as outline below:

New Corequisites:
None

Old Corequisites:
NURS 4026 , NURS 4036, NURS 4436

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 28 : That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **prerequisites** for **NURS 4126** be changed as outline below:

New Prerequisites:
NURS 4036, NURS 4067, NURS 4436 and NURS 4706 with a minimum grade of 60% or SAT

Old Prerequisites:
All NURS courses at the 3000-level with a minimum grade of 60% or SAT, NURS 4026, NURS 4036, NURS 4067, NURS 4436.

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program

Motion 29: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **corequisites** for **NURS 4126** be changed as outline below:

New Corequisites:
NURS 4704

Old Corequisites:
NURS 4024

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Motion 30: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee the **corequisites** for **NURS 4704** be changed as outline below:

New Corequisites:
NURS 4126

Old Corequisites:
none

Rationale: housekeeping to ensure consistency of restrictions and requisites across revised BScN program.

Schulich School of Education

Report of the Academic Regulations and Curriculum Committee Faculty of Education and Professional Studies February 11, 2022

Motion 1: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee that the course title for EDUC 1535 be changed from English as a Second Language, Part I to Teaching English Language Learners, Part I.

Motion 2: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee that the course title for EDUC 2535 be changed from English as a Second Language, Part II to Teaching English Language Learners, Part II.

Motion 3: That the Education and Professional Studies Executive recommend to the Academic Curriculum Committee that the course title for EDUC 3535 be changed from English as a Second Language, Part III (Specialist) to Teaching English Language Learners, Part III (Specialist).

Rationale for motions 1 - 3: The Ontario College of Teachers has changed the title to the course guidelines for this Additional Qualification.

Course Code	EDUC-1585
Course Title	International Languages, Portuguese, Part I
Course Credits	<input type="checkbox"/> 3 credits <input checked="" type="checkbox"/> 6 credits <input type="checkbox"/> Other Click here to specify
Course Description <i>(restricted to 50-75 words, present tense and active voice)</i>	Students develop awareness and understanding of classroom theory and practice in International Languages. They examine various strategies for planning, assessment, and evaluation within an International Languages classroom. Focus is placed on effective learning strategies, differentiation, and collaboration. Candidates examine resources and tools for International Language integration, in the context of a 21 st century classroom.
Course Prerequisite	Certificate of Qualification and Registration. Candidates are required to successfully complete a Portuguese Language Proficiency Test.
Course Corequisite	Click here to enter Course Corequisite
Antirequisite	Click here to enter Antirequisite
List any restrictions or special notes for this course. <i>For example "This course is restricted to BPHE students".</i>	Click here to enter Restriction
Is this a Topic Course? <i>(Topic courses are courses that students can take more than once for credit.)</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Will this course have an Experiential Learning component? If so, please indicate the type(s).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Personal reflection of candidate as educator. Professional online dialogue/critique with course colleagues.
Hours of contact time expected per week, if applicable. <i>For example, two hours of lecture and one hour of laboratory work.</i>	12 hours (online format)
Is this course Cross-Listed? If so, with what department?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, click here to enter department
Program Implications <i>For example, changing a required 6 credit course to 3 credit course.</i>	

<p>Learning Outcomes <i>(6-8 points, visible, measurable and in active voice)</i></p> <p>For detailed information on Learning Outcomes, please consult the Quality Assurance website.</p>	<p>Students who successfully complete this course will:</p> <ul style="list-style-type: none"> • explore an overview of International Languages programs in Ontario • reflect on authentic ways to integrate student voice and interest in the International Languages classroom • explore authentic ways to embed culturally appropriate content that is representative of students' lived experiences, including those with Portuguese-language heritage and/or experience, First Nations, Métis, or Inuit backgrounds, those with Special Education designations, and other diverse members of our communities • examine and discuss the emphasis on oral communication and the use of the target language in International Languages classrooms • review the necessary steps for creating an International Languages program, and reflect on experiences with second language learning • create a bank of community resources/agencies that can support International Languages classes
<p>Will this request affect another faculty other than your own?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><i>If yes, please use the Departmental Curriculum Approval form to indicate the approval of all departments/disciplines whose programs are affected by this proposal.</i></p>
<p>Will additional resources be required? If so, please list them. <i>(ie. additional faculty, library resources or new laboratory space)?</i></p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Qualified course instructor (part-time faculty) will be required.</p>

Course Code	ADMN 1007
Course Title	Business Economics
Course Credits	<input checked="" type="checkbox"/> 3 credits <input type="checkbox"/> 6 credits <input type="checkbox"/> Other Click here to specify
Course Description <i>(restricted to 50-75 words, present tense and active voice)</i>	Today's managers rely on a multitude of sources to make business decisions. Behavioural, microeconomics and macroeconomics play a role in business decisions and strategy formulation. Whether formulating strategy at the functional, business or corporate level, business professionals must have a basic understanding of economics and its impact on business. This course introduces behavioural economics, microeconomics, and macroeconomics as input for making business decisions.
Course Prerequisite	None
Course Corequisite	None
Antirequisite	None
List any restrictions or special notes for this course. <i>For example "This course is restricted to BPHE students".</i>	This course is restricted to students in the accounting concentration.
Is this a Topic Course? <i>(Topic courses are courses that students can take more than once for credit.)</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Will this course have an Experiential Learning component? If so, please indicate the type(s).	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, click here to indicate type(s).
Hours of contact time expected per week, if applicable. <i>For example, two hours of lecture and one hour of laboratory work.</i>	Three hours of lecture per week.
Is this course Cross-Listed ? If so, with what department?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, click here to enter department
Program Implications <i>For example, changing a required 6 credit course to 3 credit course.</i>	Students registered in the accounting concentration may substitute ECON 1006 and ECON 1007 with ADMN 1007. Students who choose to do this are required to take three additional credits of electives.

<p>Learning Outcomes <i>(6-8 points, visible, measurable and in active voice)</i></p> <p>For detailed information on Learning Outcomes, please consult the Quality Assurance website.</p>	<p>Students who successfully complete this course will:</p> <ul style="list-style-type: none"> . apply some of the behavioural and canonical models of modern economics as they relate to business management. . apply behavioural models of modern economics to novel business situations and appreciate their implications vis-a-vis current public policy issues. . illustrate how microeconomics influences the decisions made by individual households and firms and their allocative implications. . interpret how macroeconomics deals with economy-wide phenomena such as the total size of an economy, unemployment, inflation and the interaction between national economies. . describe how behavioural economics affects organizations and how behavioural economics may be more relevant than traditional economics for business decision-making. . apply appropriate economic models to business situations for decision-making.
<p>Will this request affect another faculty other than your own?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><i>If yes, please use the Departmental Curriculum Approval form to indicate the approval of all departments/disciplines whose programs are affected by this proposal.</i></p>

<p>Will additional resources be required? If so, please list them. (ie. additional faculty, library resources or new laboratory space)?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>None other than the instructor to teach it.</p>
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APPENDIX 1: COMPARATIVE DATA

PROPOSED COURSE: Business Economics

Comparative Data: *(Strongly recommended but not required)*

Please list course numbers and titles. Course descriptions are NOT necessary.

University	Equivalent Course(s) and Titles	Non-Equivalent but 50% or more overlap
Toronto	SCS 0980 – Economics, Introductory	N/A
Waterloo	COMM 103 - Principles of Economics	N/A
Western	BUS 4505 - Global Macroeconomics for Managers	N/A
York	CSAC 1010 - Micro- & Macro- Economics	N/A

Note: Universities are moving toward offering a single introduction to managerial accounting course to meet CPA requirements. All courses listed above meet the CPA requirements with respect to economics.

Motion 35:

Moved by Douglas Gosse, seconded by Mercedes Parsons, that the Academic Curriculum Committee recommend to Senate to change the wording in the Academic Calendar as seen below.

Carried

New Requirements:

To graduate with a Bachelor of Business Administration (Honours) or a Bachelor of Business Administration (four-year), students must complete 120 credits, including **66 credits of** core requirements as outlined below. Students may also complete a concentration, along with their core BBA requirements. Available Concentrations are as follows: Accounting, Entrepreneurship and Innovation Leadership, Finance, Human Resource Management, Marketing, and International Business.

BBA Core Requirement Change

ECON 1006 and ECON 1007	Introduction to Microeconomics and Introduction to Macroeconomics	3 cr. 3 cr.
Or		
ADMN 1007	Business Economics (Option for Accounting concentration only)***	3 cr.

*****Students registered in the accounting concentration may substitute ECON 1006 and ECON 1007 with ADMN 1007. Students who choose to do this are required to take three additional credits of electives.**

Old Requirements:

To graduate with a Bachelor of Business Administration (Honours) or a Bachelor of Business Administration (four-year), students must complete 120 credits, including 66 credits of core requirements as outlined below. Students may also complete a concentration, along with their core BBA requirements. Available Concentrations are as follows: Accounting, Entrepreneurship and Innovation Leadership, Finance, Human Resource Management, Marketing, and International Business.

ECON 1006	Introduction to Microeconomics	3 cr.
ECON 1007	Introduction to Macroeconomics	3 cr.

Rationale: CPA Ontario requires a series of steps to become a chartered professional accountant. The first two steps are the CPA-PREP (prerequisite and preparatory courses) and CPA-PEP (professional education program). Currently, Nipissing University is a CPA-recognized post-secondary institution that provides the necessary courses and degree requirements for students to be exempted from the CPA-PREP portion of the certification and to be able to directly enter into the second step -- the CPA-PEP.

The CPA periodically changes and updates the course requirements for its recognized post-secondary institutions (e.g., Nipissing University), and these institutions are required to update their curriculum to remain recognized. The addition of the following course helps accommodate recent changes to the CPA requirements.

In the Nipissing University School of Business, 90-95% of accounting students seek to secure the CPA designation. Recently the CPA mandated the requirement of data analytics. In order to keep the course workload of business students pursuing the CPA designation from becoming overwhelming, the CPA often balances the competencies required. Thus, the addition of the required data analytics is offset by the CPA allowing post-secondary institutions to combine the two economics courses into a single course to meet the required CPA competencies.

Course Code	ACCT 3906
Course Title	Data Analytics for Accounting
Course Credits	<input checked="" type="checkbox"/> 3 credits <input type="checkbox"/> 6 credits <input type="checkbox"/> Other Click here to specify
Course Description <i>(restricted to 50-75 words, present tense and active voice)</i>	This course introduces data analytics skills that accounting professionals need to analyze and evaluate data for making decisions. Students learn to use common data analytics tools, to prepare, analyze, and model financial data. Students apply analytic tools to address various accounting, finance, and general business problems.
Course Prerequisite	ADMN 2606
Course Corequisite	None
Antirequisite	None
List any restrictions or special notes for this course. <i>For example "This course is restricted to BPHE students".</i>	Click here to enter Restriction
Is this a Topic Course? <i>(Topic courses are courses that students can take more than once for credit.)</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Will this course have an Experiential Learning component? If so, please indicate the type(s).	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, click here to indicate type(s) .
Hours of contact time expected per week, if applicable. <i>For example, two hours of lecture and one hour of laboratory work.</i>	Three hours of lecture per week.
Is this course Cross-Listed ? If so, with what department?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, click here to enter department
Program Implications <i>For example, changing a required 6 credit course to 3 credit course.</i>	Click here to enter Program Implications.

<p>Learning Outcomes <i>(6-8 points, visible, measurable and in active voice)</i></p> <p>For detailed information on Learning Outcomes, please consult the Quality Assurance website.</p>	<p>Students who successfully complete this course will:</p> <ol style="list-style-type: none"> 1. recognize how and when data analytics can address business questions 2. comprehend the process needed to clean and prepare the data before analysis 3. recognize what is meant by data quality, be it completeness, reliability, or validity 4. perform basic analysis to understand the quality of the underlying data and their ability to address the business question 5. manipulate data in a manner that allows enhanced analysis 6. identify and implement an approach that will use statistical data analysis to draw conclusions and make recommendations on a timely basis 7. report and interpret results of analysis in an accessible way to each varied decision maker and their needs
<p>Will this request affect another faculty other than your own?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><i>If yes, please use the Departmental Curriculum Approval form to indicate the approval of all departments/disciplines whose programs are affected by this proposal.</i></p>
<p>Will additional resources be required? If so, please list them. <i>(ie. additional faculty, library resources or new laboratory space)?</i></p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>None other than the instructor to teach it.</p>

APPENDIX 1: COMPARATIVE DATA

PROPOSED COURSE: Data Analytics for Accounting

Comparative Data: *(Strongly recommended but not required)*

Please list course numbers and titles. Course descriptions are NOT necessary.

Note: This CPA curriculum change is recent and only some of the universities have implemented the update while others such as Nipissing University are in the process.

University	Equivalent Course(s) and Titles	Non-Equivalent but 50% or more overlap
Carlton University	BUSI 3040 - Data Analytics and Information Systems for Accounting	N/A
University of Toronto	RSM 326 - Analytical Insights using Financial Accounting Data	N/A
Redeemer University	BUS 425 – Data Analytics and Information Systems	N/A

All courses listed above meet the CPA requirements with respect to Data Analytics.

Co-op Internship Option for Post Baccalaureate program

During their program, Post Baccalaureate students can take part in one optional Co-op Internship. Co-op Internship will be 4 months in length. Co-op Internship will be of minimum 12 weeks duration (minimum 420 hours), in work placements. Entry into Co-op Internship is NOT automatic. **In order to be eligible to enter Co-op Internship, students must have completed 24 credits with a minimum average of 70%.** To select the Co-op Internship option, students must apply by the end their first academic year of the Post Baccalaureate program. Students cannot take any courses during Co-op Internship.

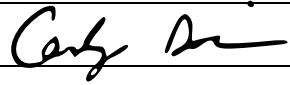
The aim of the work term is to provide Canadian work experience to students and the credits for this course will not be counted towards the graduation.

Students must complete 3 credits as follows:

ADMN 3406	Work Placement I (Co-op)	3 cr.
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DEPARTMENTAL CURRICULUM APPROVAL FORM

(to be used to substantiate the approval of any department/discipline/program affected by proposed curriculum changes)

DEPARTMENT/ DISCIPLINE	NAME (print)	SIGNATURE	DATE
Anthropology	Carly Dokis		December 8, 2021


DEPARTMENTAL CURRICULUM APPROVAL FORM

(to be used to substantiate the approval of any department/discipline/program affected by proposed curriculum changes)

DEPARTMENT/ DISCIPLINE	NAME (print)	SIGNATURE	DATE
Social Welfare and Social Development	MANUEL LITALIEN	<i>Manuel Litalien</i>	6 December 2021

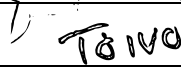
DEPARTMENTAL CURRICULUM APPROVAL FORM

(to be used to substantiate the approval of any department/discipline/program affected by proposed curriculum changes)

DEPARTMENT/ DISCIPLINE	NAME (print)	SIGNATURE	DATE
Religions & Cultures	Susan Srigley		December 3/21


DEPARTMENTAL CURRICULUM APPROVAL FORM

(to be used to substantiate the approval of any department/discipline/program affected by proposed curriculum changes)

DEPARTMENT/ DISCIPLINE	NAME (print)	SIGNATURE	DATE
Political Science	Toivo Koivukoski		Dec. 3/2021


DEPARTMENTAL CURRICULUM APPROVAL FORM

(to be used to substantiate the approval of any department/discipline/program affected by proposed curriculum changes)

DEPARTMENT/ DISCIPLINE	NAME (print)	SIGNATURE	DATE
Indigenous Studies	Tyson Stewart		December 3, 2021

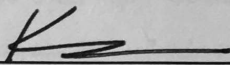
DEPARTMENTAL CURRICULUM APPROVAL FORM

(to be used to substantiate the approval of any department/discipline/program affected by proposed curriculum changes)

DEPARTMENT/ DISCIPLINE	NAME (print)	SIGNATURE	DATE
GESJ	Sal Renshaw		Dec 6, 2021

DEPARTMENTAL CURRICULUM APPROVAL FORM

(to be used to substantiate the approval of any department/discipline/program affected by proposed curriculum changes)

DEPARTMENT/ DISCIPLINE	NAME (print)	SIGNATURE	DATE
English Studies	Kristin Lucas		Dec 2/21

**Report of the
ACADEMIC QUALITY ASSURANCE AND PLANNING COMMITTEE
Academic Year 2021-2022**

February 18, 2022

The fifth meeting of the Academic Quality Assurance and Planning Committee of was held on Friday, February 18, 2022 via Zoom conference.

COMMITTEE MEMBERS:

Carole Richardson	Stephen Tedesco	Kristina Karvinen
Pat Maher	Nancy Black	Cameron McFarlane
Jim McAuliffe	James Abbott	Jamie Murton
John Nadeau	Rob Breton	Prasad Ravi
Pavlina Radia	Steven Cairns	Mercedes Fichaud
Debra lafrate	Ron Hoffman	

Regrets: Stuart Kidd, Joe McIntosh

Guest: Sarah Tedesco

Recording Secretary: S. Landriault

Under Business Arising from the Minutes of the January 28, 2022 AQAPC meeting, the presentation of the mandatory Indigenous Breadth requirement proposal that was presented at the last AQAPC meeting was discussed. It was noted that the presentation was included along with the AQAPC Report in the February 11 Senate Agenda for information purposes only. During Question Period, two motions were presented and approved that Senate affirm in principle the creation of an Indigenous breadth requirement, and that Senate direct the Academic Curriculum Committee (ACC) to develop, in consultation with NUICE, an Indigenous breadth requirement for all undergrads pursuing a degree at Nipissing University.

Members discussed how best to honour the motions and reviewed the processes necessary to consider the recommendations and move them forward. It was noted that the AQAPC does not have the authority to direct the various degree programs as to what courses must be included as this is not part of the governance model of the University. The breadth requirement needs to be more clearly understood as there are many programs that already have Indigenous courses as part of their degree program requirements.

Members agreed of the importance of further consultation with the Faculty Councils, Ad Hoc Indigenous Committee, the Indigenous Steering Committee and NUICE, before the Indigenous breadth requirement is brought through the regular curriculum development process.

Review of the IQAP 2-Year Follow-up Reports

The Chair advised that review of the IQAP 2-Year Follow-up Report is part of the institutional IQAP protocol. The reports will be forwarded to Quality Council after they have been received and approved at AQAPC and at Senate. The review is an opportunity to look at how a program that has gone through the cyclical review is responding to the recommendations that have been made in the Implementation Report. The template and these submissions are the opportunity to ensure that we have consistent reporting and an opportunity to ask questions.

Members discussed streamlining the template for clarification and consistency to facilitate the process. Follow up is a priority and part of the broader IQAP process.

Moved by C. McFarlane, seconded by P. Ravi that the following IQAP 2-Year Follow-up Reports be received and approved.

- Business
- MSc Mathematics
- Nursing
- Sociology
- Education
- MES MEd Environment
- Geography

CARRIED

The IQAP 2-Year Follow-up Reports will be included in the March 11, 2022 Senate Agenda.

The next AQAPC meeting is scheduled for Friday, March 18, 2022 at 1:00 p.m. by Zoom conference.

Respectfully submitted,



Carole Richardson, PhD
Chair, Academic Quality Assurance and Planning Committee

Motion 1: That Senate receive the Report of the Academic Quality Assurance and Planning Committee dated February 18, 2022.

Motion 2: That Senate approve the attached Business IQAP 2-Year Follow-up Report.

Motion 3: That Senate approve the attached MSc Mathematics IQAP 2-Year Follow-up Report.

Motion 4: That Senate approve the attached Nursing IQAP 2-Year Follow-up Report.

Motion 5: That Senate approve the attached Sociology IQAP 2-Year Follow-up Report.

Motion 6: That Senate approve the attached Education IQAP 2-Year Follow-up Report.

Motion 7: That Senate approve the attached MES MEd Environment IQAP 2-Year Follow-up Report.

Motion 8: That Senate approve the attached Geography IQAP 2-Year Follow-up Report.

TWO (2) YEAR POST CYCLICAL PROGRAM REVIEW FOLLOW-UP REPORT

Your next cyclical review is scheduled for 2026/27

PROGRAM OVERVIEW

PROGRAM	IQAP REVIEW DATE	SENATE APPROVED
School of Business -Bachelor of Business Admin -Bachelor of Commerce	March 19, 2019	September 13, 2019

PROGRESS OF RECOMMENDATIONS

RECOMMENDATION	% COMPLETE	RESPONSIBLE MEMBER/UNIT	STATUS IF NOT COMPLETED, PLEASE PROVIDE PROJECTED COMPLETION DATE
#1 - Develop a new School vision statement	100%	Director School of Business Faculty Members	Present School of Business vision statement is up to date. Nipissing university is developing its new strategic planning. The School of Business will redevelop / refine our vision statement within the context of the university's new Strategic Plan, after it is complete.
#2, 12 - Map potential connections to other departments for curricula development		Director School of Business & School of Nursing Other Schools	As Dean Richardson commented in the last progress report, with limited resources, the School of Business needs to ensure that Post Bac (and proposed MBA) programs are well established before we can begin to consider developing shared curricula with other departments. Some students from other Schools are taking Business Management courses.

We plan to propose a joint program between Nursing School and Human Resources Area of the School of Business, as suggested by the rep of Indian agent.

If other Schools / departments wants School of Business to develop any tailor-made program for their students, we are open to that.

#3 - Develop a benchmarking document	100%	Director, Teaching & Student Experience (TSE) Committee Faculty members	<p>School of Business develops benchmarking documents, based on projects on hand.</p> <p>Our Post Bac program was benchmarked with similar programs at other Universities (Business Schools) in Canada comparable to ours.</p> <p>Similarly individual areas are benchmarked with programs at other Business Schools.</p> <p>Currently, the School is engaged in developing a Letter of Intent for MBA program. We are benchmarking this program against successful MBA programs offered by similar Universities across Canada.</p> <p>Faculty members on their part are continuously upgrading the content of their course based on the changes in the market, industry, and trends in the other Universities</p> <p>Online courses that have been identified for revision are being revised in a phased manner, due to limited budget.</p>
#4, 5 - Develop a learning outcomes document to distinguish programmes/streams	100%	Director TSE committee Faculty Members	<p>Learning outcomes for Programs and streams were developed during Program revision of BBA & B comm programs in 2018-19.</p>

Learning outcomes of programs and courses are up to date.

This is an ongoing activity at the School of Business and TSE Committee is actively involved in this process.

The School of Business faculty are about to start working on critically evaluating prerequisite requirements for all courses to streamline them. This project is expected to be completed during 2022-23.

As suggested by Dean Richardson, for future, we will also make use of institutional guidance on Undergraduate degree Level expectations, as and when provided by ACC.

#6 - Contribute to institutional SEM planning	Registrar's office may be able to quantify the progress	Director Registrar	Worked with the Registrar/ Registrar's office on all projects covering School of Business.
#7 - Develop a communication plan on student advising by the School	100%	Director Faculty Members Coop & Project Coordinator	As mentioned in the Dean Richardson's last follow up report, it is recommended that Academic Advising, as specialists need to continue doing this job. In the School of Business, all Faculty members include student consultation hours in all courses they are teaching. Director is organizing and participating in several student activities like Open Houses, Welcome back Huddle, NUBC activities etc. and sharing information. Industry organizations like CPA representatives are participating in information sessions to students, organized by School of Business.

Coop coordinator is sharing all information about Coop, ILEAD projects, Job Opportunities and more with students daily.

All these are in addition to services provided Academic Advising and student services.

#8 - Map experiential learning opportunities within the School	70%	Director, TSE Committee Faculty members Coop & Project coordinator	<p>Coop for BBA program was implemented in 2021. 4 students completed their 1st Coop placements successfully.</p> <p>Coop of one term is proposed for Post Bac program. Will be implemented from 2022-23, if approved.</p> <p>On average, 5 to 8 iLEAD projects have been implemented each semester, in the last three years.</p> <p>However, School is unable to send students to case study competitions or ENACTUS events due to lack of budgetary support.</p>
#9 - Establish faculty course lead for each course	50%	Director, Faculty Members	<p>Normally, Full time faculty members are acting as course leads for courses they teach.</p> <p>With a small number of fulltime faculty it is not possible for the School of Business to meet this recommendation.</p> <p>Finance Area does not have a fulltime faculty. Technology Management area does not have a fulltime faculty. We requested for new TT positions in these areas.</p> <p>Many courses are being taught by parttime faculty. Those courses do not have a faculty</p>

			<p>lead, as service is not part of their contract.</p> <p>To have a course lead for every single course is not practical unless we have a full-time faculty for each course.</p> <p>The Director is maintaining an oversight, for courses where there is no fulltime faculty.</p>
#10 - Carry out a task analysis within the School with the goal of identifying shared resources and efficiencies	100%	<p>Director Coop Coordinator</p> <p>Manager College Partnerships and Distance Programs</p>	<p>Coop Coordinator position was approved in 2020-21 as a temporary position. This has been converted into a full-time position in 2021-22. The Coop coordinator is looking after all administrative tasks and coordination of Coop and iLEAD Projects.</p> <p>Coordinates all College Partnership programs, Distance programs and Pathways.</p> <p>APS Manager of Partnership position was not replaced and B Comm coordinator is on leave since 2016, except one year in between.</p> <p>Currently there is no B Comm coordinator.</p>
#11 - As part of the academic plan, propose a forward-looking strategy for faculty renewal	70%	<p>Director TSE Committee Faculty members</p>	<p>School of Business Faculty Members have discussed staffing strategy in every School of Business meeting since 2016.</p> <p>School of Business lost 5 faculty members during last 5 years due to resignation or retirement. School of Business received two Tenure track positions for the academic year 2020-21, one in Accounting and one in HR/OB area.</p> <p>Still 3 positions have not been replaced.</p> <p>One of our faculty is on phased retirement, with reduced Teaching workload.</p>

Our Post Bac programs is proving to be a successful program and is attracting good number of international students. Our strategy for Faculty renewal includes the projected growth.

In our academic planning and budget planning this year, the School of Business requested for 3 Tenure Track positions and One LTA position in the coming year.

SUMMARY OF PROGRESS TO DATE

From the above detailed information, it can be seen that the School of Business has addressed and acted on all the recommendations from the external reviewers. Most of them of them have been completed.

Some other recommendations like faculty planning need approvals and support from University Administration.

LIST OF ACTION ITEMS LEADING UP TO NEXT REVIEW

1. Develop a new School vision statement or refine existing statement after the strategy development of university, which is underway, is complete.
2. Map potential connections to Nursing School for a Joint program in HR/ OB and curricula development, subject to approval from Administration (after our proposed MBA Program Development and availability of resources)

CONCLUSIONS/RECOMMENDATIONS/NEXT STEPS – PLEASE ADD CONCLUDING SUMMARY REGARDING NEXT STEPS

Please add concluding summary regarding next steps, etc.

1. Request approval for TT track faculty positions to replace retired / resigned faculty from all areas.
2. Request approval for MBA program, as strongly recommended by our Indian agent.
3. Request Approval for Data Analytics and Supply Chain Management Areas as suggested by our Indian agent, as part of new program/ curriculum development.
4. Request budgetary support for sending student teams for case competitions and other experiential learning activities.
5. Request the budgetary support for renewing ENACTUS membership.
6. Request approval for proposing a joint program in Human Resources area with Nursing School as suggested by the representative of Indian agent, after completing the development of MBA program.

TWO (2) YEAR POST CYCLICAL PROGRAM REVIEW FOLLOW-UP REPORT

PROGRAM OVERVIEW

PROGRAM	IQAP REVIEW DATE	SENATE APPROVED
MSc. Mathematics	February 12, 2019	September 13, 2019

PROGRESS OF RECOMMENDATIONS

RECOMMENDATION	% COMPLETE	RESPONSIBLE MEMBER/UNIT	STATUS
			IF NOT COMPLETED, PLEASE PROVIDE PROJECTED COMPLETION DATE
#1, 5, 7 - Development of the Strategic Plan for Graduate Studies	100	Dean of Graduate Studies	
#2, 4 - Contribute to the development of the institutional SEM planning with an articulation of a recruitment strategy	50	Registrar with Department	
# 3 - Developing a more flexible and comprehensive course structure in mathematics	100	Department	
#6 - Prepare a report on possible collaborations with other Northern Universities	0	Department submit to Dean	
#8 - Develop a plan for communicating with other graduate programs	100	Department	

SUMMARY OF PROGRESS TO DATE

Since May 2019, the department has taken a number of initiatives to revise the MSc program in Mathematics. We proposed to create a new stream in our program to emphasize applied and computational mathematics. This proposal has been turned down by our PVPAR. As a result, we made changes to our thesis route and introduced the following requirements. These new requirements are as follows.

New requirements:

MATH 6100	Thesis in Mathematics	12 cr.
MATH 5066	General Topology	3 cr.
MATH 5086	Functional Analysis	3 cr.
MATH 6206	Seminar in Mathematics I	3 cr.
MATH 6207	Seminar in Mathematics II	3 cr.

OR

MATH 6100	Thesis in Mathematics	12 cr.
MATH 5236	Advanced Numerical Methods	3cr.
MATH 5246	Optimization	3cr.
MATH 6206	Seminar in Mathematics I	3 cr.
MATH 6207	Seminar in Mathematics II	3 cr.

With these new requirements, the thesis and seminars constitute 18 credits out of 24 credits. Consequently, students and their respective supervisors will have a lot of flexibility to build a program of study based on student interests. While this report was being written, a new course proposal on Computational Thinking and further adjustments to program requirements have been discussed by the department and the graduate faculty.

#1, 5, 7 - Development of the Strategic Plan for Graduate Studies

The Strategic Plan for graduate studies for 2020-2025 places a particular emphasis on increasing graduate student enrollment. One of the action items of the plan is development of an engaging, dynamic, and informative website. Among other actions, it suggests enhancing and coordinating graduate recruitment strategies and efforts across the university, and increasing graduate student funding. This, in turn, should bring more international students to Nipissing and to MSc Math in particular.

In recent years, we had a number of applications from international students which resulted in several international students being accepted to our MSc Mathematics program (currently, we have one student from Iran and one from Ghana). Unfortunately, the COVID pandemic slowed this positive momentum. For example, two students, one from Sri Lanka and one from USA, who initially accepted our latest offers, subsequently decided not to come. We hope, however, that the end of the pandemic will re-ignite the interest of international students in our program.

#3: All faculty members of the Department of Mathematics and Computer Science must work cooperatively in developing a more flexible and comprehensive course structure in mathematics.

Another objective from the Strategic Plan is to streamline delivery of graduate programming. This objective is also related to external reviewers' Recommendation #3: All faculty members of the Department of Mathematics and Computer Science must work cooperatively in developing a more flexible and comprehensive course structure in mathematics. We addressed this recommendation by changing the requirements for the thesis route in the MSc Mathematics program. Namely, we introduced graduate seminar courses (3 cr + 3 cr) and replace some of the course work requirements with the graduate seminar requirement, making the thesis route more research-oriented. Moreover, we make the other course requirements in the thesis route more flexible and more appealing to those applicants who have an undergraduate degree in areas other than mathematics (but related to mathematics, such as engineering or computer science) and/or who are looking for research projects in applied mathematics. In the near future, we also plan to re-submit a (revised) proposal for a computational stream in the MSc Mathematics program.

#2, 4 - Contribute to the development of the institutional SEM planning with an articulation of a recruitment strategy

The changes to our program requirements as outlined above are part of our departmental plan to recruit students who are interested in applied and computational mathematics. During the last 2 years, we had applications from students with backgrounds in engineering, physics, computer science and education. Currently, we have students with backgrounds in mathematical economics and engineering. We are currently working on new proposals to make the program more attractive to international students.

On the other hand, we have not been asked by any office to be involved in the development of any institutional SEM plans as a department. When such opportunity arises, we would be willing to contribute. We note that Dr. Ali Hatef served in the committee which prepared the Internationalization Plan which was approved by the Senate last spring.

#6 - Prepare a report on possible collaborations with other Northern Universities

We do not have such a report for several reasons. In order for us to work on such collaborations, we needed to establish contacts with our counterparts at Algoma, Laurentian, and Lakehead. Since the start of the pandemic in March 2020, we have been focusing on the delivery of our own courses. In addition, Laurentian University, which is closest to us, eliminated their mathematics programs and most of their mathematics faculty. Consequently, initiating any discussion on such collaborations has been postponed. Currently, as a department we are focusing on our upcoming undergraduate program reviews. Once these reviews are completed, we will have time to work on such collaborative efforts. We may need help from our administrators to start such discussions by engaging with their counterparts in Northern institutions.

#8 - Develop a plan for communicating with other graduate programs

As we indicated in our response to the reviewers' recommendations, we are always open to collaboration with other departments. In particular, we allow students from other graduate programs to take MATH graduate courses. We also encourage our students to take courses in other departments. However, communication and efforts to build such relationship must be reciprocal. We hope that other graduate programs in our institution will communicate with our department.

We note that recently we began a research collaboration with the School of Social Work. This project involves Dr. Mary Pat Sullivan (School of Social Work, Nipissing), Dr. Christina Victor (Brunel University, UK), Dr. Alex Karassev (Mathematics, Nipissing), Dr. Murat Tuncali (Mathematics, Nipissing), and Bright Effah, our graduate student. This work will constitute part of Bright Effah's Master's thesis. We expect that such collaborations will increase in the near future.

Faculty members from the Department of Computer Science and Mathematics participate in delivery of graduate courses in other programs, and in other institutions. For instance, faculty are currently involved in supervising PhD students in Mexico and Iran. Such collaborations add to our research seminars which graduate students are required to attend.

With the changes made to our thesis route requirements, we expect to create opportunities for our students to work on projects in partnership with local companies. Recently, we began a collaboration with the SafeSight Exploration, an engineering firm based in North Bay. We plan to apply for a multi-year grant from NSERC, which will help attract more graduate students and provide funding for them. It may also open opportunities for other graduate programs to collaborate on some joint projects.

LIST OF ACTION ITEMS LEADING UP TO NEXT REVIEW

Our intention is to complete some of the initiatives we have started and make our program more flexible and attractive. We have new course proposals which should help attract students who are interested in computational mathematics and data science. In addition, when possible, we would like to work with our administration to contribute to SEM plan as well as initiate discussions to collaborate with other Northern universities.

Currently, we are focusing on our undergraduate program review. The outcome of this review is expected to inform our actions concerning our graduate program initiatives as well.

CONCLUSIONS/RECOMMENDATIONS/NEXT STEPS – PLEASE ADD CONCLUDING SUMMARY REGARDING NEXT STEPS

We as a department took a number of steps to address the recommendations in the program review report. We will continue to work on the implementation of them as outlined above.

To address some of the recommendations such as #2, 4 and 6 we need help from the administration.

We also hope that our website will be updated as soon as possible to reflect the changes we introduced. We will be asking for website and calendar updates to reflect our program correctly.

TWO (2) YEAR POST CYCLICAL PROGRAM REVIEW FOLLOW-UP REPORT

PROGRAM OVERVIEW

PROGRAM	IQAP REVIEW DATE	SENATE APPROVED
School of Nursing	June 17, 2019	December 13, 2019

PROGRESS OF RECOMMENDATIONS

RECOMMENDATION	% COMPLETE	RESPONSIBLE MEMBER/UNIT	STATUS IF NOT COMPLETED, PLEASE PROVIDE PROJECTED COMPLETION DATE
#1 - Select Director to start July 1, 2020	100%	School of Nursing	Completed
#2 - Ensure consistency of degree policies, incl. progression requirements. Bring changes to Academic Curriculum Committee	80%	School of Nursing	This has been delayed due to pandemic priorities and dissolution of the collaborative program -we are in the process of updating policies as part of drafting handbook etc for our standalone BScN and ensuring consistency (where relevant) across programs – Dec 2022 The School of Nursing implemented a curriculum committee to consider programmatic changes as well as a policy and procedures committee to consider program and policy specific changes that are brought to SoN council prior to being submitted to senate approval process.
#4 - Address student participation in School committees	100%	School of Nursing	Completed
#5, 6 - Develop School of Nursing mission, vision, and values to align with Nipissing’s mission, vision and values	100%	School of Nursing	Completed
#7 - Suspend applicant interviews	100%	Dean’s office	Completed

#8 - Further diversify clinical placement opportunities	50%	Director, program managers, CPC	We will continue working on diversifying placements and considering more creative ways to provide experiential learning. The pandemic and dissolution have delayed this action point, this is an ongoing initiative.
#9 - Appoint all Nursing faculty to the School of Nursing	100%	Provost	Completed
#12 - Develop visual articulations of student advising in the School programmes	70%	School of Nursing	We have recently recruited a program assistance clerk for a 12-month position to support improved lines of communication between students and the School, a clearly articulated path for students seeking support for programmatic changes and revision of all student handbooks.
#13 - Clarify expectations in SPP	100%	School of Nursing	Evaluation criteria and rubrics were reviewed and revised where relevant.
#15, 16 - Apply for staff positions through the established process	100%	School of Nursing	Completed
#20 - Continue to support undergraduate research	50%	School of Nursing	We continue to explore opportunities for students to engage in research and are currently drafting an application for a graduate program within the School of Nursing. This action point has been delayed due to the impacts of the COVID-19 pandemic.

SUMMARY OF PROGRESS TO DATE

The School of Nursing selected a Director (Dr Williams) for a 3-year tenure starting May 2020. Since then, the School implemented a new governance structure with a school wide council and distinct committees (curriculum, student affairs, program evaluation & quality assurance, research, policy & procedures) across programs and representation faculty (full-and part-time), staff, administrative staff, and students. As part of this process we also approved revised mission, vision and value statements across the School to align with the University's statements. The policy & procedures committee remit includes reviewing consistency of policies and requirements, and we continue to address any inconsistencies through the appropriate academic processes, although the pandemic has slowed this work down somewhat.

We continue to diversify placement opportunities, particularly in view of our standalone BScN program starting September 2022, again the pandemic situation has made this more difficult, but we are currently reviewing placement opportunities.

As part of recent CNO program approval submissions, we have reviewed rubrics and evaluations, SPP in particular has revised rubrics and evaluation components to ensure expectations are clear to students. An Open Forum and specific review of semester documents, including evaluation measures and rubrics are shared in scheduled sessions each semester to ensure clarity in assignments, rubrics and workload amongst learners and faculty in support of a collaborative learning environment.

The teaching hub has recruited several new staff members to support the delivery of online programs, such as the RPN-BScN blended program. The additional staff include instructional designers. We are also currently planning a School-wide workshop in collaboration with the Teaching Hub to review the delivery of our Blended program. In addition, all exams for the Blended program have moved online.

The pandemic has impacted many academic initiatives, including undergraduate research, and our ability to initiate interest in research by students to build capacity for nursing research. We plan to offer travel bursaries for students not on campus to attend the undergraduate research conference once this takes place face to face again. In addition, we continue to offer undergraduate nursing students opportunities to work on both internal and external funded projects and are currently drafting a letter of intent leading to a full application for a graduate program within the School of Nursing.

LIST OF ACTION ITEMS LEADING UP TO NEXT REVIEW

Our strategic priorities align with the wider University's strategy and focus on:

1. Continued high quality teaching and evaluation of teaching effectiveness

We have implemented a School of Nursing wide QA/ program evaluation committee and curriculum committee to provide guidance on best practices and an overall evaluation framework. We continue to ensure that there is consistency and clarity in policies, communication with students and expectations. As part of this endeavor we also look to diversity placements to offer our students the best possible practice learning opportunities.

2. Addressing the TRC Calls to Action and EDI

We are reviewing our curricula to ensure that all of our programs include a specific course on Indigenous Health and Wellness, including education on impact of colonization and include anti-racist pedagogy within our programs. We have established a working group to focus initiatives across the School.

3. Research and Scholarship

Our reformed research committee aims to support strategic support for research initiatives across the school, foster mentorship and scholarly debate amongst faculty. We continue to offer opportunities to include students in research projects as RAs and are in the process of drafting an application for a graduate program.

CONCLUSIONS/RECOMMENDATIONS/NEXT STEPS – PLEASE ADD CONCLUDING SUMMARY REGARDING NEXT STEPS

The School of Nursing has now fully implemented a revised governance structure, with specific strategic short and long-term priorities. We continue to evolve as a School as we add new programs, increase our research output and strive to provide high quality nursing education across the province. We will evaluate our teaching, research and service contribution as a school.

TWO (2) YEAR POST CYCLICAL PROGRAM REVIEW FOLLOW-UP REPORT

PROGRAM OVERVIEW

PROGRAM	IQAP REVIEW DATE	SENATE APPROVED
Sociology -Four Year B.A. in Sociology	March 5, 2019	September 13, 2019

PROGRESS OF RECOMMENDATIONS

RECOMMENDATION	% COMPLETE	RESPONSIBLE MEMBER/UNIT	STATUS
			IF NOT COMPLETED, PLEASE PROVIDE PROJECTED COMPLETION DATE
#3 - Address faculty renewal through academic planning	100%	VPAR with Dean of A&S and Unit.	Ongoing. The Unit has identified priorities for faculty renewal and has submitted requests for faculty positions in the Unit's annual Academic Plans.
#4 - Map opportunities for curricula collaboration at NU	100%	Unit	Ongoing. The Unit has undertaken a systematic review of our program to identify opportunities for curricula collaboration. The Unit is collaborating in the development of interdisciplinary degrees in Health Studies, Environmental Studies, and Liberal Arts. The Unit will prioritize expanding opportunities for curricula collaboration with Indigenous Studies. The Unit is also working to facilitate college/Indigenous-Institute pathways into the Sociology degree program.
#5 - Identify institutionally shared resources for expanding blended and other formats	100%	Unit with Dean of A&S and Dean of Teaching	Ongoing. The Unit offers numerous online courses in Sociology and blended, and online formats have been expanded in response to the

			COVID-19 pandemic. The Unit works closely with the LTS team, Dean of A&S, and the Teaching Hub to support and expand innovative pedagogical approaches.
#6 - Examine best practices for EL in sociology in Canada	100%	Unit with the Dean of A&S	Ongoing. The Unit has identified and implemented opportunities for students to engage in EL throughout their degree. Students engage in applied research in second, third, and fourth-year courses, and through faculty research programs. The RDC provides unique opportunities for experiential learning, though this has at times been limited by the physical and IT infrastructure in the RDC. Faculty have secured CFI funding to expand physical and IT infrastructure within the RDC beginning in the summer of 2022. The Unit is working with Statistics Canada to expand experiential learning opportunities and placements.
#7 - Develop a resource document for teaching large classes	75%	Unit with the Dean of Teaching	The Unit has adopted innovative and interactive pedagogies for large classes and for assessing students including digital and creative projects (multi-media, podcasts, digital stories, games, etc.), applied primary research projects, as well as written and oral assignments and tests. The Unit will work with the Dean of Teaching to document resources available to faculty for incorporating innovative and interactive pedagogies and assessment strategies into course planning.
#8 - Explore the possibility of interdisciplinary capstone courses	100%	Unit	The Unit has explored the possibility of an interdisciplinary capstone course. The Unit has reviewed our degree architecture and course offerings and has developed a plan to cycle our fourth-year seminar courses.

				In effect, our fourth-year seminar course will serve as a capstone course, providing students with the opportunity to develop and apply methodological and theoretical skills to a specific area of study.
#9, 10 - Review of degree architecture	100%	Unit with Registrar's Office		The Unit has undertaken a systematic review of our current course offerings and degree architecture. The review has resulted in 49 curriculum changes. The Unit has developed a course cycling plan to provide predictability in course planning and to open opportunities for developing and offering more elective courses in Sociology.
#1, 19 - Review needs for faculty	100%	VPAR with Dean of A&S and Unit		The Unit has identified priority areas for faculty hires in our annual Academic Plans.
#18 - When next hiring, the department should clearly identify their strategy for fulfilling EDI expectations	100%	PVPAR with Dean of A&S and Unit		The Unit has identified priority areas for fulfilling EDDI expectations in faculty hiring in our annual Academic Plans.

SUMMARY OF PROGRESS TO DATE

In May and June 2021, the Unit held a series of retreats in response to the recommendation by the external reviewers in the 2019 Sociology IQAP review (Recommendation 1). The Departmental retreats had a number of specific objectives including a) to engage in a review of current course offerings to assess their contribution to the Sociology program with the opportunity to modify, bank, or re-name courses currently offered by the Department; b) to assess any gaps in current course offerings and potential for the development of new courses; c) to engage in a review of the Sociology degree architecture including a review of the number of required courses, and potential “streams,” certificates or micro-credentials that might draw students to Sociology; d) to explore student pathways (for example college-university pathways, pathways for double-degrees, or BA. to MA. pathways) that could lead to Sociology degrees; e) to explore opportunities for innovative programming that could enhance community-based engagement, experiential learning, or applied skills. The outcomes of the retreat included the following curricula changes: modifications of pre-requisites for 26 courses, title changes for 12 courses, revised course descriptions for 3 courses, banking or deleting 4 courses, and adding 4 new courses. The Unit has also developed an internal committee to explore student college/Indigenous Education Institute pathways that could lead to Sociology degrees at both the undergraduate and graduate level.

The 2019 IQAP review indicated that recruitment and retention of majors could be enhanced by the development of new courses and a greater offering of electives. Historically, the Unit has not been able to offer a full array of electives because faculty have been engaged in teaching required courses. The Department has reduced the number of sections of required courses and has developed a course cycling plan that will allow for increased capacity to offer a breadth of elective courses in a predictable way. The Unit has worked with the Office of the Registrar to communicate our course cycling plan to students so that they can plan their courses accordingly.

The Unit has liaised with Institutional Planning and conducted our own assessment to better understand Sociology student demographics. In comparison to the general student population at NU, Sociology has a high percentage of Indigenous students, mature and transfer students, and students who identify as male. The Department has identified a number of opportunities for re-organizing curriculum that might facilitate student pathways for Sociology degrees including collaboration in the development of programs in Health Studies, Environmental Studies, Liberal Arts, and deepening our collaboration with Indigenous Studies. Further, the Unit sees opportunities for generating college-university pathways and pathways with Indigenous Education Institutes that may include advanced placements for students. The Unit will liaise with the Dean of Teaching to explore opportunities for advanced placements further. The unit is also working to develop BA-MA pathways that would identify strong students in the early years of their BA and streamline their admission to the MA program.

The Unit has continued to advance opportunities for experiential learning. The RDC has and will continue to provide many real-world data analysis experiences. Both undergraduate thesis as well as graduate students have had the unique opportunity of acquiring data analysis skills while at the same time working with Statistics Canada's confidential data files. We currently have only two workstations in the NU RDC. As a network (Canadian Research Data Centre Network), we have successfully been awarded CFI IF funding to update all of the computers and additional IT infrastructure in all of the RDC's across Canada. As part of this rejuvenation process, we are going to expand the number of workstations in the NU RDC to 8 in the summer of 2022. This will enable both our 4th advanced statistics as well as our graduate level statistics courses to hold their classes within the RDC. These will be unique training opportunity for our students, as they will gain extensive experience working in a secure data lab with many of the same data sources that are used in the research and policy sectors upon graduation. The NU RDC includes a Statistics Canada employee that must be present at all times when the centre is open. This position has been awarded to numerous students in our undergraduate and graduate programs. This opportunity of real employment in the federal government is incredibly unique and sets the stage for more permanent work once our students graduate. These RDC experiential learning opportunities have been successful - two of our RDC Statistical Assistants have gone on to secure full-time employment with Statistics Canada, and postdoctoral researchers have secured full-time analyst and researcher positions with Statistics Canada. The Unit is keen to further leverage our working relationship with Statistics Canada (via the RDC and many faculty connections) to continue to explore options about how we can create experiential learning opportunities with Statistics Canada at the undergraduate and graduate levels. Discussions took place in the Winter of 2020, but their face-to-face nature have meant that they have been put on hold during the pandemic. These initiatives include giving students hands-on experience working with the CATI (computer-assisted telephone interviewing) equipment alongside Statistics Canada interviewers at the Sturgeon Fall's Statistics Canada Regional Office.

The Unit also builds experiential and applied learning opportunities into course curricula and assessments. For example, students in SOCI 3036, 3226, 4217 and 5217 develop their own original research proposals and gain practical skills on how to analyze data through their own projects. Students also learn how to disseminate the results of surveys and data analysis to wider audience by practicing presentation in public. Additional experiential learning courses/activities include supervising students' research in IND and Thesis courses. In these courses, students learn proposal writing, literature review, data analysis, writing research report and manuscripts, and dissemination of the results to scholarly communities and policy makers. For example, one of our students completed an Undergraduate thesis with Dr. Erfani, where the student's findings appeared in a public hearing session of the Ontario Parliament regarding changing the lighting system of school bus in Ontario to prevent accidents. We have also placed graduate students with the North Bay Parry Sound District Health Unit to evaluate data on opioid addiction during the COVID-19 pandemic and to explore obstacles to postnatal care. These experiential learning opportunities and community outreach result in enhanced opportunities for students, strengthened relationships with community partners, and the ability to meaningfully address unique regional and northern needs in research and policy development.

The Unit takes seriously the Truth and Reconciliation Commission of Canada's Calls to Action and our responsibilities in the post-secondary sector to foster spaces of inclusion and anti-racism. The Unit is committed to Indigenizing and decolonizing the academy through decolonial and anticolonial approaches to teaching and research, the inclusion of Indigenous knowledges in pedagogy, increased recruitment of Indigenous faculty and staff, students, and fostering relationships between students, faculty, Indigenous knowledge keepers, and community. The Unit continues to develop curriculum and pedagogical approaches that promote inclusion, diversity, and anti-racism in multiple forms.

LIST OF ACTION ITEMS LEADING UP TO NEXT REVIEW

- a) Strike an internal working group to explore opportunities for generating college-university pathways and pathways with Indigenous Institutes to facilitate the transfer of students from colleges/institutes into the Sociology program. The Department will also strike an internal working group to explore the creation of a BA-MA pathway for students in the undergraduate Sociology and Anthropology programs into the MA in Sociology – Applied Social Research.
- b) Proceed with increasing experiential learning opportunities through the Research Data Centre (RDC) and Statistics Canada as well as through increased partnerships with community organizations such as the North Bay Parry Sound Health Unit, the North Bay Police Service, the Indigenous Hub, and others.
- c) Continue to diversify Sociology curriculum by expanding the number of elective courses and working to further incorporate EDDI content throughout the Sociology curricula.
- d) Continue to work with the Teaching Hub and the Dean of Teaching to enhance opportunities for innovative technology and pedagogies throughout our program.
- e) Enhance student engagement through the revival of the Sociology and Anthropology student club, and by fostering opportunities for community-building within our program.

CONCLUSIONS/RECOMMENDATIONS/NEXT STEPS – PLEASE ADD CONCLUDING SUMMARY REGARDING NEXT STEPS

With the above listed action items, the Sociology program looks forward to strengthening and expanding student recruitment and retention, and to continue to our work to develop innovative learning opportunities for students.

TWO (2) YEAR POST CYCLICAL PROGRAM REVIEW FOLLOW-UP REPORT

PROGRAM OVERVIEW

PROGRAM	IQAP REVIEW DATE	SENATE APPROVED
Schulich School of Education -Bachelor of Education -Master of Education (Curriculum & Leadership) -PhD in Education (Educational Sustainability)	November 29, 2018	September 13, 2019

PROGRESS OF RECOMMENDATIONS

RECOMMENDATION	% COMPLETE	RESPONSIBLE MEMBER/UNIT	STATUS
			IF NOT COMPLETED, PLEASE PROVIDE PROJECTED COMPLETION DATE
#1 - Faculty renewal plan	75%	Dr. Daniel Jarvis, Director, SSoE	Ongoing discussions
#2,3,4 and 15 - Curriculum changes	50%	Dr. Daniel Jarvis, Director, SSoE	Ongoing discussions
#5 - ITEP and TILSL	95%	Chris Hachkowski, Principal, Indigenous Programs	Pending NU Senate and OCT approvals
#6 - PD on professionalism	100%	Dr. Daniel Jarvis, Director, SSoE; Dr. Pat Maher, Dean of Teaching	Completed
#7 - Student feedback on practica	100%	Dr. Daniel Jarvis, Director, SSoE	Completed
#8 - Grading	50%	Dr. Daniel Jarvis, Director, SSoE	Ongoing discussions
#9, 10 - Alignment of learning outcomes with degree expectations	25%	Dr. Blaine Hatt, GSE Chair	Ongoing discussions

#11 - Educational sustainability	50%	Dr. Blaine Hatt, GSE Chair	Ongoing discussions
#12 - PD programme for supervisors	10%	Dr. Blaine Hatt, GSE Chair	Ongoing discussions
#13 - PD programme for students	10%	Dr. Blaine Hatt, GSE Chair	Ongoing discussions
#14 - International Recruitment as per Annual Academic Plan 2019-20	50%	Dr. Daniel Jarvis, Director, SSoE; Dr. Blaine Hatt, GSE Chair	Ongoing discussions

SUMMARY OF PROGRESS TO DATE

Recommendation #1: Faculty Renewal

The Nipissing faculty complement is comprised almost entirely of full-time faculty members and they are “aging up” with a large percentage set to retire in the next 10 years. Planning for faculty renewal is important to maintain capacity to deliver the BEd program.

We are expecting an intake of 480 students, which, when added to our current 524 Year 1s (assuming they all return), means potentially 1024 teacher candidates in next year’s BEd program, the largest group we’ve ever had on North Bay campus. Given the high number of sabbatical applications, and two recent retirements, this means that many part-time faculty who work in local school systems, or are retired educators, will again have to be hired to cover teaching requirements. As per the Academic Plan (Fall 2021) submission, we have identified several key areas where strategic hiring could most benefit our projected needs (e.g., Curriculum Design, Assessment/Evaluation, and Proactive/Inclusive Classroom Management in the BEd; Curriculum (Assessment/Evaluation), Educational Leadership, and Indigenous Studies in Education in the MEd/PhD). We await word on tenure-track or LTA positions.

Recommendation #2: Classroom Management

Consider how to make it possible for all BEd students take a course on classroom management. This is typically an area of great concern for teacher candidates and we have understood that it is currently an elective course that not all students can take.

Proactive and Inclusive Classroom Management (EDUC 4762) was approved as a required course for all BED students entering the program after September of 2020. As a result, Technology Enhanced Teaching and Learning (EDUC 4766) became a popular elective course. Given that the Ontario College of Teachers (OCT) is now strongly encouraging robust technology instruction (i.e., instructional technology, and also pedagogical implications for online/hybrid instruction), we may wish to re-introduce a required technology course during the upcoming program review process.

Recommendation #3: Indigenous Education

We heard that Indigenous Education is “seeping into courses” rather than being specifically planned for broad inclusion. We believe faculty members are very open to increasing their capacity in this area and recommend a curriculum specialist or other strategies to help faculty members Indigenize curriculum and their teaching.

The Chair in Indigenous Teacher Education has continued to discuss suggestions for a broader inclusion of Indigenous content in the BEd programs. A stand-alone course in Indigenous Education might be considered as an option, although this approach involves the challenge of finding sufficient qualified instructors for such a course, and would also need to displace some other course within our relatively prescriptive professional certification program.

Recommendation #4: Climate Change Education

Our world urgently needs to tackle climate change. To do so will require many transformations, both technical and cultural. We heard that teaching about climate change may be encountered in the IS science course and the elective course in Environmental Education. We recommend that the Faculty consider how all teacher candidates can learn to incorporate climate change teaching in the divisions and subjects they will teach.

Work continues, with the assistance of the Chair of Indigenous Education, on the possibility of introducing a seasonal, land-based experience for all BEd students that would naturally integrate Indigenous content and environmental education in an educationally sustainable way, and which would feed nicely into our MEd and PhD programs.

Recommendation #5: ITEP 3rd Summer

The change to the length of teacher education programs in Ontario has caused challenges to ITEP delivery that may be met through adding a third summer. This is under consideration and we encourage the Faculty to continue working on a plan that works optimally for ITEP students. Alumni survey results suggest that TILSL students may prefer to have enhanced supports for success in the online courses rather than another summer; the decision around program structure for these courses will not be easy.

#5 – Since the IQAP review, a permanent full-time Student Success Programs – Indigenous Education Program was approved, providing year-round support for all Indigenous students enrolled in on-campus and off-campus Indigenous Education programming. Additional technology resources were developed (ex., program-specific informative videos, dedicated Peer Support Leaders) to support students with online programming. These were extremely beneficial with the transition to full-online programming due to Covid-19 in 2019/2020 and 2020/2021.

In the fall of 2021, documentation was submitted through the academic approval process at Nipissing University to change the 2-year schedule for ITEP and TILSL into a 3-year program. It is expected that this change will receive Senate approval in the winter semester of 2022.

Recommendation #6: Workshops

Students suggested that workshops to help them understand things such as professionalism, including the interview process, MEd possibilities and AQ courses, would be helpful. We recommend tasking the Teacher Candidate Advisory Council with determining student demand for possible workshop topics and then considering which could be offered to enhance the program and student experience.

Students have continued to have workshops made available to them each year through the Professional Learning Centre (PLC), during the designated Professional Learning Week/Days, and via the new Teaching Hub. Topics typically include professionalism, resume writing, the interview process, MEd possibilities, and AQ courses. These opportunities have been regularly communicated to students by the PLC and through the Teacher Candidate Advisory Committee (TCAC). During the pandemic, many of these offerings were made available via online participation.

Recommendation # 7: Practicum Feedback

Consider implementing a mechanism to encourage student feedback on their practicum experience. While we believe that most students are satisfied with their associate teachers and we acknowledge the challenges in finding associate teachers, they are critical to teacher education programs, and it is important that they support teacher candidates and the program. In cases where there are student concerns about the associate teacher, an avenue to voice the concerns is needed.

The Practicum Office maintains an open-door policy for student concerns about practicum and all email communication received from students along these lines are dealt with expeditiously, sometimes involving the SSoE Director, as appropriate. Although rare, practicum placements have been modified when circumstances warrant. Regular surveys of teacher candidates have been conducted regarding practicum placement, and Practicum Office staff also regularly meet with students online within the Practicum courses to discuss relevant issues and concerns.

Recommendation #8: Grading

BEd graduating averages appear to be considerably inflated compared to entrance or concurrent program averages. This is a common phenomenon at many Faculties of Education across Ontario. While many justifications are typically provided (not just at Nipissing), such as more chances for mastery learning or better instruction, it is generally recognized that when the average marks on exit are in the high 80s, grades have substantially lost their meaning as conveyors of information to students and others. Changing the culture of grading at a Faculty of Education can be a very painful process. Consideration should be given as to the benefits versus the drawbacks. Benefits may include modelling that is closer to what we hope teacher candidates will do as teachers, and more accurate feedback regarding teacher candidate competency. We recommend that the Faculty consider whether to pursue a reset of grading practices, proceeding if there is wide agreement to do so.

Assessment and evaluation in the BEd program has continued to be a difficult issue. The option of moving to a pass/fail system, as is done in some BEd programs, has been discussed but not adopted. Modelling authentic assessment is a valid goal, but this is made somewhat more difficult given the structure of the BEd program which involves, by necessity, mid-course practicum blocks, congested assignment due date windows around these blocks, and relatively large class sizes (40+). This topic will continue to be addressed in our upcoming program review.

Recommendation #9: Introduce Different Concentrations/Specializations for the MEd

Within each of the three available routes for the MEd, students, at present, choose between four and seven course electives. Over twenty electives are listed in BEd/PhD Table 4.3. While it is very unlikely that all these courses are available all the time, even if only ten of these were available students nonetheless would have a rather broad choice. While some choice is good, many students may appreciate the opportunity to focus. We suggest introducing different concentrations, each with clearly defined learning outcomes. When selecting a concentration, students would then need to choose a certain number of courses from a more limited group of courses. This change would help students build expertise in an area of interest.

The MEd and PhD have seen a tremendous increase in applications since the IQAP Review of September 2019. For example, for the Academic Year 2021-2022, there was in excess of 30 applicants for the MEd program (Full-time and flex-time) and 25 applicants for the 10 spots in the PhD program. As of today's date, there are 20 applicants for the MEd program (18 full-time and 2 flex-time) with more applications expected in the coming days. There are 19 applications on file for 10 spots in the PhD program. When all documents have been received and files created, this number is expected to be in excess of 20.

At present, in the MEd program, there are set themes (i.e., Literacy, Adult Ed) available to students that are largely reflective of a traditional education focus. We continue to explore the possibility of reducing our MEd to two routes rather than three by discontinuing the MRP route and only offering the Thesis and Course Routes.

As we consider where our students are coming from (i.e., education, nursing, business, etc.) it is vital that we review and refresh the structure and programming of the MEd degree as we reconsider what we want to be known for moving forward in the 21st century. Toward that end, the entire Agenda of the CSE Curriculum Committee Meeting, 12 November 2021, was directed to a discussion of MEd Concentrations. The committee has four recommendations to make to the February 2022 GSE Meeting:

Recommendation 1: Discontinuation of EDUC 5196 as a Core Course

EDUC 5196: Understanding Education as a Core Course be discontinued as a core course in the MEd program in all three available routes and be offered as an elective course. The rationale for including this course as Core given the refocusing of the MEd program beyond curriculum and leadership was discussed and felt to be irrelevant at this time which resulted in a recommendation to remove EDUC 5196 as a Core Course.

Recommendation 2: Required courses for a Concentration

The number of courses required to constitute a concentration if EDUC 5196 was to remain as a Core, would be three (3) three credit-hour courses and if EDUC 5196 was removed as a Core, then four (4) three credit-hour courses would be required for a concentration.

Recommendation 3: Concentrations within the MEd programs

The discussion regarding identifying of concentrations within the MEd programs was very rich and included consideration of faculty workload and succession plans, faculty expertise, phasing in of concentrations, marketing and promotion of revised MEd programs, etc. An overriding principle in identifying concentrations was to choose cluster titles that were inclusive of MEd students coming from disciplines outside but in addition to Education rather than being exclusive or viewed as limiting. The Committee decided on the following concentrations in the MEd program:

- 1) Educational Leadership and Lifelong Learning (ELLL)
- 2) Curriculum Studies (CS)
- 3) Imagination Creativity Education (ICE)
- 4) Equity, Diversity, Inclusion & Decolonization (EDID)
- 5) General Studies in Education (GSE)

Recommendation 4: Implementation of Concentrations

It is recommended by the Committee that:

- Program learning outcomes be clearly established for each concentration
- A minimum of three GSE Faculty Members be identified as instructors within each concentration
- Each course be identified as belonging to a concentration or concentrations and that the concentration(s) be clearly identified in the scheduling of each course (e.g. *EDUC 5536: Issues in First Nations Education (EDID)*)
- Courses be offered within each concentration on a regular cyclical basis
- The Master of Education Degree Certificate clearly indicate the Concentration(s) the graduate student has earned
- All recommendations of the Committee be forwarded to the Dean of Education and Professional Studies for information and be presented for a full discussion at the February 2023 GSE meeting
- The revised MEd Program (with Concentrations) be implemented, assuming OCT approval for the Fall 2023.

At present, we are accredited to offer an MEd in curriculum leadership; the proposed changes to Concentrations would, in all likelihood, require reapplication to COU to broaden the scope and sequence of our program beyond a traditional, foundational, education focus.

Recommendation #10: Clarify Different Expectations for MEd and PhD Students on MEd Level Grad Courses

Although it is appropriate that doctoral students take master level courses, we recommend determining the expectations, learning outcomes and assessments associated with these courses for Doctoral students versus MEd students.

Recommendation # 10 has not been dealt with to date by GSE Faculty. However, it will appear as an item of discussion on the Agenda for the February 2022 GSE meeting.

It is recognized that there needs to be a clear means of engaging PhD students in graduate courses. PhD students would need to identify themselves as such in each graduate course and additional learning tasks would be included in the course for PhD students such as moderation, planning, leadership, and fostering a more critical perspective in course work.

Recommendation #11: Change Core of PhD Program to Better Reflect (and Justify) the Focus on ‘Sustainability’

We were surprised to see that the core courses of the doctoral program do not demonstrate a clear and strong focus on educational sustainability. If educational sustainability is indeed the distinctive aspect of the Nipissing PhD in education, one might argue that one or two core courses should take up that theme. It is also not entirely clear from the self-study, the website and conversations we had with colleagues how the notion of educational sustainability is interpreted. The self-study states that the program seeks to prepare for educational sustainability through an emphasis on inclusivity and wellness, ethical leadership, inquiry-based professional growth and multiple literacies. While we do recognize the linkages between sustainability and these concepts, we feel that these linkages need to be clarified. A course or two that explicitly help students understand the meaning and importance of sustainability to the field of education would strengthen the program.

In the Fall 2020, a new course specifically designed for PhD students was added to the Grad Course offerings. The Course, *EDUC 6118 Inquiry-Based Growth & Development in Educational Sustainability*. The course provides graduates students with an opportunity to focus on professional growth as a career-long pursuit of personal inquiry and knowledge creation and to focus on educationally sustainable development that influences cultural, social, ecological, political, and educational perspectives of self and Other. In a collaborative and creative context, students explore aspects of theory and practice in adult and professional fields and apply acquired learning to individual and collective experiential perspectives on educational sustainability.

The conception and implementation of EDUC 6118 is the beginning within Graduate Studies in Education of providing students and GSE Faculty with the knowledge, skills, and attitudes to speak and write confidently and competently about educational sustainability. Additional strategies for growth and development in the field of educational sustainability within GSE include:

- 1) Make EDUC 6118 a required course for all PhD students which is presently offered on an elective course for PhD students in the Fall term,
- 2) Implement ways to ensure that the focus on educational sustainability is made more explicit in all required courses,
- 3) During Week 1 of the Summer Institute, provide a Workshop on Educational Sustainability for PhD students that assists them to understand the meaning and importance of educational sustainability in various settings, contexts, and fields not simply those deemed as formal education,
- 4) In the revision to the PhD Handbook include an Introductory Section entitled What is Educational Sustainability? and,
- 5) Provide an opportunity for GSE Faculty to review the overall focus of the PhD program, to review progress, outcomes, potential for growth and open a communication to build faculty wide competence, confidence, and capacity in Educational Sustainability.

Recommendations #12: Consider Introducing a PD Program for Supervisors (Both Programs, especially PhD)

Co-teaching seems to be a common practice on the PhD programs during the residencies. We are not sure whether the idea of team teaching extends to graduate supervision, especially at PhD level. If it does, great; if not, this is something the University may wish to consider. Not only do students benefit from differences in perspectives or areas of expertise held by the two supervisors but the practice of graduate supervision is also learned best through observation and socialization. Setting up a mentoring program whereby more experienced supervisors are paired with less experienced supervisors is recommended. In addition, we recommend that the Faculty of Graduate Studies in collaboration with the new Dean of Teaching develop a professional development program for supervisors addressing the pedagogical, ethical and regulatory/policy components of graduate supervision.

GSE recognizes the importance of collaborative teaching, mentorship and co-supervision and actively encourages Faculty to incorporate one or more of these elements in each aspect of the PhD program. To date, all core courses within the PhD

Summer Institute involve collaborative and/or team-teaching. A number of PhD Supervisory Committees include co-supervisors; usually an experienced supervisor teamed with an emergent supervisor. The School of Graduate Studies and Research has reached out to the Dean of Teaching and are in the planning stages of striking a Panel Presentation to be offered through the Teaching Hub on How to be a Good Supervisor. It is anticipated that the Panel will include faculty from various NU graduate programs and NU graduate student alumni. The intended audience is Nipissing University Graduate Faculty Membership.

GSE will continue to work with Graduate Studies and Research to formalize a recommended set of guidelines for students and supervisors. It is anticipated that this document will be detailed and balanced to provide support for supervisors and students.

Recommendations #13: Consider Formalizing PD Opportunities for PhD students

We commend Nipissing university for affording graduate students many learning opportunities outside the regular academic classroom. Yet, we recommend that the Faculty of Graduate Studies in collaboration with the new Dean of Teaching consider developing a formalized co-curricular program for graduate students similar to the 'transferable skills' programs in the UK. The idea is that the most competitive graduate programs are those that prepare students not just for an academic career, let alone for a single job elsewhere, but for adaptability, flexibility and success in all areas of life (for example, how can research findings be communicated to non-academic audiences, how can doctoral level research expertise be communicated to future employers, etc.)

In the past, GSE has introduced several initiatives to support graduate student culture including monthly meetings, a graduate student blog, graduate student orientation. However, COVID 19 for the past two years has greatly hindered progress in building collegiality among the PhD cohorts. Year 1 and Year 2 cohorts continue to informally meet via social media to build, strengthen, and encourage each other in their PhD journeys. However, contact is often dependent on the perspective and willingness of cohort members to be engaged in the development of a community of learnership.

The PhD Summer Institute is immersive and expected to be onsite for 2022. During the 2022 institute, graduate student culture will be built collaboratively with each cohort through social gatherings, outside events, and wellness sessions.

Additionally, GSE will work directly with the School of Graduate Studies to explore formal opportunities for PhD students to participate in courses to teach, labs to instruct, articles researched and written for publication, and identification of sustained funding for conferences and presentations.

Recommendation #14: Develop recruitment and retention strategies for international students, MEd and PhD

At present, the percentage of international students studying at Nipissing University is very small. We recommend investing in recruitment strategies to attract more international students and also in retention strategies to support these international students once they have arrived. The strong online component in both the MEd and PhD programs might be a deterrent for international students on scholarships or those wishing to immigrate into Canada, who, when applying for a post-degree work permit, typically need to have taken face-to-face courses to demonstrate they were in Canada. We suggest exploring the possibility of an on-campus program option.

Nipissing U has hired Laura Solano Moya to focus specifically on International Students. There have been meetings with EPS administration, Laura, and the SSoE Director to discuss the possibility of recruiting several cohorts of international students, particularly because the 2-year Study Visa would coincide nicely with our 2-year BEd program. The addition of such students from different countries would no doubt enrich our program, but will also require careful planning around accommodations, practicum placements, Ontario Curriculum/School familiarity, etc. These important issues are beginning to be explored by a BEd Program and Curriculum Committee.

In November 2021, the Chair of GSE put out a request to Graduate Faculty Members to engage their interest in and commitment to bringing a cohort of international students on campus beginning in the Fall 2023. To date, several Faculty have indicated a desire to teach in an onsite offering of graduate courses for international students, but none have volunteered to be on a committee to investigate the possibility and potential of creating an international graduate student cohort. The formation of an International Committee will appear as an item on the Agenda for the GSE Meeting in February 2022.

The recruitment and retention of international students is certainly worth investigating but it must be financially self-sustaining. Additionally, recruiting international students will require additional supports at the university-level, particularly with regard to flexibility in terms of start dates, onsite courses required, potential language issues, residency requirements, social and cultural community support networks, etc.

LIST OF ACTION ITEMS LEADING UP TO NEXT REVIEW

- Faculty renewal based on retirements and projected needs
- Development of a seasonal, land-based experience for TCs involving indigenous/environmental education
- Addressing assessment/evaluation concerns during upcoming program review
- SSoE restructuring to best address workload realities of those in administrative/support positions

CONCLUSIONS/RECOMMENDATIONS/NEXT STEPS – PLEASE ADD CONCLUDING SUMMARY REGARDING NEXT STEPS

Next steps leading up to a future review cycle include the annual hiring of new faculty in light of program needs; the stabilizing of our maximum intake numbers given the current teacher shortage in Ontario; the expansion of our Practicum Office staff in order to efficiently support such large numbers of students; and the modification of our SSoE staffing/administrative positions to best address the realities of workload following the recent faculty restructuring. Further work also remains to be done in assessment (grading), curriculum (required courses), international student recruitment (careful preparation), and the graduate programs (concentrations, supports).

TWO (2) YEAR POST CYCLICAL PROGRAM REVIEW FOLLOW-UP REPORT

PROGRAM OVERVIEW

PROGRAM	IQAP REVIEW DATE	SENATE APPROVED
MES/MESc Environment -MA program in Environmental Studies -MSc program in Environmental Science	April 8, 2019	December 13, 2019

PROGRESS OF RECOMMENDATIONS

RECOMMENDATION	% COMPLETE	RESPONSIBLE MEMBER/UNIT	STATUS IF NOT COMPLETED, PLEASE PROVIDE PROJECTED COMPLETION DATE
External Reviewers Recommendation #1: marketing & recruitment strategy	In progress	Marketing Recruitment Registrar's Office Office of the Dean of Graduate Studies	The university is in the process of developing its new strategic and academic plans. As noted in the PVPAR's response to the recommendation, the university is continuously working on improving its marketing and recruitment strategy. Due to the COVID pandemic, all recruitment was done virtually. During 2021-2022, recruitment continues to be done virtually through information sessions, promotional videos of respective programs, and liaising with prospective students. Furthermore, an international recruitment manager was hired to increase international enrolments. An annual update to the MES/MESc website and brochure was facilitated by Marketing in summers 2020 and 2021.
Recommendations #2: GS faculty membership; program structure; and	July 2020 – In progress	Dean of Arts and Science; Dean of Graduate	In consultation with the faculty and the Deans, a new GS coordinator was appointed-- Dr. April James, Professor of Geography (former CRC in Watershed Analysis and Modelling). Dr.

administrative oversight
(GS coordinator)

Studies and
Research

James has spearheaded many improvements to the MES/MESc program, including a review of the MES/MESc curriculum; streamlining of the Perspectives Course; and a review of GS faculty participation in the program. The course structure and delivery of GS programs continues to be addressed at the GS Committee level.

In September 2020, a new Terms of Reference document was approved by MES/MESc membership, creating a Steering Committee of 5 faculty to oversee administration of the program. This committee has successfully implemented addition of a new elective (e.g. ENST 5106 Multispecies Ethnography), developed a program student funding policy (approved Nov 2021), added the flextime option for the MRP route (Senate approved Nov 2021) and a January start for both Thesis and MRP routes (pending Senate approval).

Additional review of MES/MESc program structure, core courses and delivery, potential for communal graduate courses with other programs and development of program specific policies are ongoing.

External Reviewers Recommendation #3:
Being a program without a departmental home creates some challenges and opportunities that we identify throughout the report.

In progress

Dean of Arts and
Science
PVPAR

Currently, the MES/MESc program sits under the Graduate Studies programs overseen by the Dean of the Faculty of Arts and Science and the Dean of Graduate Studies. The option of establishing a School of Environment has been discussed during the Arts and Science Retreats in the summer of 2020 and 2021. The consultation with faculty resulted in developing an undergraduate program in Environmental Science and Studies (in progress). Once the programs have gone through the curriculum processes and approved by the QAC and Ministry, the School or Department of Environment can be further considered. For the time being, the program is overseen by the Department of Geography and the Department of Biology and Chemistry and the MES/MESc Steering committee.

External Reviewers Recommendation #4:
The combination of two degrees (MES and MESc) and two tracks (1 year MRP option; 2 year thesis option) places strain on program resources and

In progress

Dean of
Graduate
Studies and
Research

The MES/MESc Steering committee is currently initiating a review of comparator programs to support consideration of sustainable program structure. Currently the program is primarily research-based with the 2-year thesis option well integrated into and supporting faculty membership research programs and training environments. Review

causes confusion/dissatisfaction among students. We identify specific concerns and offer suggestions on how to address these in SECTION C.

will aim to clarify options (e.g. more flexible program structure and continued focus on 2-yr thesis; professionalization of 1-yr MRP and/or course option) to determine the best fit for overall program sustainability specific to Nipissing University.

External Reviewers Recommendation #5:
Review of resources

April 2020

Dean of Arts and Science; Dean of GS and Research

The program has a new GS coordinator and Steering committee. The coordinator in consultation with the Faculty Dean annually adjust the budget aiming to reflect the program's needs (in alignment with broader institutional demands).

External Reviewers Recommendation #6:

Although most of our recommendations target specific issues within the program, the vision of/for the program could use some reflection and clarification.

In progress

Dean of Arts and Science;
Dean of GS and Research

The program is research-based, with professionalization opportunities for students at the seminar and speaker series level. As the strategic and academic plans are in the process of being developed, further discussion regarding a professional stream will unfold, supported in part by the program intercomparison review being initiated by the MES/MESc Steering committee.

With the development of the new BSc Environmental Science and BA Environmental Studies, the Faculty Dean in collaboration with the Departments of Geography and Biology and Chemistry is working on creating direct pathways from undergraduate A&S programs to the MES/MESc programs. Additional pathways of post bacheloriolate in Environmental Sciences and Environmental Studies are also being considered.

External Reviewers Recommendation #7:
Current resource constraints (limited teaching capacity, limited student funding/relatively high tuition) seem to limit the prospects for future program growth.

November 2021; in progress.

Dean of Arts and Science;
Dean of GS and Research

Discussion of further streamlining of the program's structure is ongoing and will be informed by the program intercomparison review. Addition of flextime option for the MRP has been completed and a January start to existing programs will also facilitate access to the programs. In consultation with the new GS coordinator and Steering committee, faculty participation in the program and course offerings are increasing.

In 2019, a proposal for a new Tier II CRC in Climate and Environmental Change was submitted by the Department of Geography and was selected by the administration for approval. In fall 2020/winter 2021 the search committee interviewed and selected a candidate. The candidate submitted their proposal for the CRC in fall 2021 and we are awaiting approval (anticipated in April 2022).

This candidate will be cross-appointed between Depts of Geography and Biology/Chemistry. The candidate will bring expertise in mercury fate and transport, landscape biogeochemistry at interfaces of terrestrial and aquatic ecosystems. They will be an excellent addition to both undergraduate and graduate programming in Environmental Sciences.

SUMMARY OF PROGRESS TO DATE

Most of the recommendations outlined above have been addressed or are in progress with consideration of impacts on faculty time due to COVID-19 disruptions. The program structure has been reviewed and is being further evaluated and/or adjusted. A new GS coordinator was put in place in July 2020 and the MES/MESc Steering committee approved in September 2020. The faculty membership has been reviewed and the GS coordinator/Steering committee continues to streamline teaching contributions to the program/s. At present, the MES/MESc program is overseen by the Department of Geography and the Department of Biology and Chemistry, with the GS Coordinator, and in consultation with the Dean of the Faculty of Arts and Science and the Dean of Graduate Studies and Research. The Dean of Arts and Science and the GS Coordinator review the budget and resources annually. Furthermore, following recruitment data and student interest in environmental issues, the Dean of Arts and Science struck a committee to develop a BA Environmental Studies and BSc Environmental Science programs to strengthen the intake the graduate studies level and to establish pathways to the MES/MESc programs. The program proposals are currently going through the institutional curriculum approval process and post bacheloriare options are being considered.

The Dean of Graduate Studies and Research initiated a review of all GS programs at Nipissing University and is currently working on streamlining course requirements across the existing NU graduate programs. A flex-time for MRP option in MES/ MESc to align with the rest of Arts and Science graduate programs has been approved by on November 12, 2021 and a second motion for January start is pending, that will support more flexible program access.

A new CRC in Climate and Environmental Change is anticipated to join the program in Summer 2022 (pending approval from the federal government) and will contribute to supporting undergraduate programs in Environmental Sciences and the MES/MESc program.

LIST OF ACTION ITEMS LEADING UP TO NEXT REVIEW

- Establishing the School of Environment as an administrative body that will have oversight over environment-related programs.
- Considering of program structural revisions (e.g. more flexible program structure and continued focus on 2-yr thesis; professionalization of 1-yr MRP and/or course option) to differentiate the MES/MESc programs at Nipissing University

CONCLUSIONS/RECOMMENDATIONS/NEXT STEPS – PLEASE ADD CONCLUDING SUMMARY REGARDING NEXT STEPS

The MES/MESc programs continue to strengthen its interdisciplinary mandate. While the program structure is being iteratively addressed, further discussion regarding administrative oversight will unfold once the strategic and academic planning processes have been concluded.

TWO (2) YEAR POST CYCLICAL PROGRAM REVIEW FOLLOW-UP REPORT

PROGRAM OVERVIEW

PROGRAM	IQAP REVIEW DATE	SENATE APPROVED
Geography -Bachelor of Arts – Environmental Geography -Bachelor of Arts – Geography -Bachelor of Science – Environment and Physical Geography	April 9, 2019	September 13, 2019

PROGRESS OF RECOMMENDATIONS

RECOMMENDATION	% COMPLETE	RESPONSIBLE MEMBER/UNIT	STATUS
			IF NOT COMPLETED, PLEASE PROVIDE PROJECTED COMPLETION DATE
#1 - Role of grad TAs in undergraduate teaching	0	Dean of Graduate Studies & Research	Unknown
#2 - Articulate a position on the School of Environmental Studies	50	Dean of Arts & Science	Anticipate a decision within the next academic year.
#4 - Policy on labs	100	Department of Geography	See Section #4 (completed)
#5 - New programme proposal must follow NU-IQAP	80	Department of Geography and contributing units	Anticipate submission of Stage 2 approvals in Winter term 2022 (BSc Environmental Science; BA Environmental Studies; and Post-Baccalaureate Diplomas)
#8 - Review of Honours thesis guidelines	100	Department of Geography	Completed (but regularly updated)
#9 - Review of programme delivery	100	Department of Geography	Completed

#11 - Contribute to SEM plan	100	Department of Geography	This is an ongoing process. All Arts and Science programs liaise with the Registrar and Recruitment regarding strategic enrolment mandate.
#12 - Review 4000-level programme requirements	100	Department of Geography	Completed

SUMMARY OF PROGRESS TO DATE

Recommendation #1: TAs in the classroom. The reviewers feel that integrating a small number of graduate students into the classroom as teaching assistants will enhance both the undergraduate experience and graduate training. Admittedly, there are collective bargaining issues that need to be resolved, but this will provide a way of funding graduate students beyond very small general assistantships.

Department: We are in support of TAs in the classroom but are unable to act upon this recommendation as it currently falls outside the responsibility of departments. We believe such a change in policy falls under the purview of the Dean of Graduate Studies and Research and, moreover, would likely need to be addressed within the new collective agreement. To date we have not received any updates regarding this matter and, although supportive of this idea, we are concerned about the planning of these positions in light of the low graduate student enrollment numbers particularly those having a geography background.

Dean of A&S: Given the program size and enrolments (and the primarily undergraduate nature of Nipissing University), the Office of the Dean, Faculty of Arts and Science, provides a variety of TA supports in the classroom through annual budgetary allocations. While the TAs are primarily upper-level year undergraduate students, the rationale for undergraduate TAs is to provide students with experiential learning and undergraduate research opportunities. During 2021-2022, the Office of the Dean of Graduate Studies and Research redeployed GAs as Teaching Assistantships at the undergraduate level. Since our graduate student pool is limited, we hope to continue balancing GA-ships and undergraduate student TAs.

Dean of GS: As mentioned in the Faculty Dean's comments, Graduate Assistantships (GAs) are assigned as Teaching Assistantships (TAs). The number of GAs are allotted equitably across the six masters programs. If a student declines a GA, the GA is first reallocated to an eligible student within the program and the redistributed to other programs if necessary. The Geography programs are partly supported through the GA allocation provided to the Master of Environmental Science/Studies (MES/Sc) program. The MES/Sc program is an interdisciplinary program and GAs are shared with other undergraduate programs in the Faculty of Arts and Science.

Recommendation #2: School of Environment and faculty renewal. The formalization of interdisciplinary collaboration already happening in many ways may be enhanced with the creation of a School of Environment. The majority of faculty was open to discussing the potential in a new structure that would facilitate new program development and address enrolment issues. Faculty renewal may be more easily recognized in a larger unit that could accommodate a climatologist more readily and utilize expensive CFI assets that are currently dormant.

The Department of Geography has been supportive of the concept of a School of the Environment which has been identified as a key objective by our Dean. The development of the new BES and BESc programs, the ongoing support for the MES/MESc programs and the recent cross appointment of the new CRC in Climate Change are, from our perspective, all encouraging developments towards the establishment of a School of the Environment. From our perspective, the challenge going forward lies in determining whether the establishment of the School is simply for the purpose of advertisement or whether it will involve, similar to Schools in the Faculty of Professional Studies, the creation of an actual administrative unit run by a director. If the push is towards the later, we anticipate push back

from both current departmental units and the Faculty of Arts and Science as a whole. Since no such schools currently exist in the Faculty of Arts & Science, there may be many questions as to how it would fit within the current Faculty of Arts & Science (e.g. voting, budget, executive representation, ...).

Dean of A & S: As noted above, further discussions regarding optimal structures in Arts and Science have been underway since 2019. Unfortunately, the COVID-19 pandemic has had an impact on furthering this initiative as other priorities needed to be addressed. Nonetheless, numerous discussions have been held with the Arts and Science Executive, the Faculty of Arts and Science, and the PVPAR about establishing the School of Environment as an administrative unit. These discussions will resume this spring/summer during the Arts and Science Faculty Annual Retreat. Further discussions with the PVPAR will also continue.

Recommendation #3: CRC transition plan. The University has pursued time limited CRCs for new faculty. As these CRCs end, a transition plan for faculty will be necessary. A transition plan may include bridging resources to maintain research and course release as faculty build toward a full teaching load. Failure to address the transition risks 'burnout' and retention of faculty.

With the completion of her CRC (with a two three-credit course load), Dr. April James moved to a Research intensive workload (four three-credit courses or equivalent). Dr. James is currently teaching three three-credit courses and has taken on the role of program coordinator for the MES/MESc graduate program. Moreover, she holds an NSERC DG (extended with service as a reviewer for Geosciences 1506 Discovery Grant program) and a research contract with the Ontario Ministry of Environmental Conservation and Parks. According to Dr. James, the need for faculty to contribute a wide range of service duties prevents a more ideal transition to avoid issues such as burnout.

Dean of A&S: The Dean of Arts and Science liaised with the Dean of Graduate Studies and Research on a CRC transition plan. The Transition Plan consisting of a gradual return to normal workload with an option for a research-intensive workload has been approved by the Dean of GS and Research, (...Graduate Studies Council and the Research Council?).

Dean of GS and Research: The transition plan has been reviewed and approved by the Senate Research Committee.

Recommendation #4: Reintroduction of labs. Introducing lab components to courses in second year is supported by both faculty and students. However, this must be done with adequate resources (lab instructors and/or teaching assistants).

Since the IQAP review, the Department has successfully included second year labs for all of the physical geography courses, namely GEOG 2106, GEOG2107 and GEOG2126. Justification for these additions was based on a review of existing courses offered by various departments across Canada.

Recommendation #5: New program development in Environmental Science/Studies. The development of new major programs (BSc in Environmental Science) is warranted. Clearly, Nipissing has the capacity to deliver such a program and could explore the idea of developing a complementary program, BA in Environmental Studies.

Over the last few years, faculty members from the Department of Geography have not only initiated these programs but are also responsible for their completion. Specifically, Drs. April James and James Abbott are the leads for the proposals for the BESC and BES programs, respectively. The proposed programs are being developed based on a comparison with current programs offered in Canada with a particular emphasis on smaller institutions (e.g. Bishops, Wilfred Laurier) that have comparable resources. For both programs, extensive consultation with outside units has been carried out. In particular, there has been ongoing dialogue with the international office, other departmental units (e.g. biology, history, indigenous studies, etc.) and the Dean of Arts and Science. We are close to the submission of a stage 2 joint document and are currently addressing associated minors, and a post-graduate diploma. One of our main concerns, which we hope will be addressed by the Registrar's Office, is the potential for scheduling conflicts, particularly at the first and second year of study within the proposed BESC program.

Dean of A&S: I can confirm that the new BSc Environmental Science program has been approved by the Academic Curriculum Committee and is now going through the regular NU curriculum process. We anticipate submitting the proposal to the Quality Assurance Council in the upcoming months. The new BA Environmental Studies program proposal is now moving to the first stages of the curriculum approval process. Further initiatives include Post-Baccalaureate Diplomas in Environmental Studies and Environmental Sciences geared specifically for international students.

Recommendation #6: Opening Geomatics. There is potential to open Geomatics certification and instruction to non-geography students at Nipissing and the broader community as professionals seek training opportunities. Similarly, we hope to see Geomatics faculty continue to develop the already significant networks with the local community.

Since the IQAP review, we have changed the pre-requisite for the introductory courses (GEOG 2017-GIS and Earth from Space) in order to encourage all Nipissing students to enroll in these particular courses. We have also included required geomatics training as part of the new proposed environmental studies and science programs with the BESC students highly encourage to pursue the Geomatics Certificate. We recently lost both the second 10-month geomatics lab instructor position and the geomatics technician and unsure how this will impact our geomatics support post-COVID. Given geomatics essentially deals with large geo-spatial digital datasets, we have supportive of the notion of contributing our courses to the new data science programs but, for some unknown reason, were never considered part of these programs.

Recommendation #7: Increased support staff and Lab Instructors. To maintain research and teaching capacities, a physical geography technician would service multiple research programs in the unit. The loss of a lab instructor has also been a burden on the remaining instructor. Administrative support at the unit level to assist faculty and advise students would also be of benefit. The reviewers recognize that this would likely only be feasible for a larger unit (e.g. School of Environment).

Due to budgetary constraints, we have only been able to temporarily address this issue. Specifically, with the loss of our second full-time (10 month) contract lab instructor we have been able to maintain a temporary part-time geomatics lab instructor for fall terms only (4 months) based on a per course contract approach. NUFA currently does not support a half lab instructor position. Additionally, we were able to pivot our remaining 10-month lab instructor into serving as the instructor for the new second year physical geography labs (Recommendation #4).

Dean of Arts and Science: Further interdisciplinary initiatives spearheaded by the new BSc Environmental Science and BA Environmental Studies program proposals have been put forward to generate further enrolments and opportunities for Geomatics to grow at NU and expand into other Humanities, Social Sciences, and Sciences areas.

Recommendation #8: Honours thesis guidelines. The Department can establish some strong guidelines and supports for honours thesis students and supervisors. Clearly defined expectations for students and supervisors, common dates for progression (e.g., proposal, first draft, submission), and formal presentations of findings to the Department would streamline the thesis program.

Over the years we have periodically revisiting the undergraduate thesis guidelines. However, the number of students engaged in the thesis remains extremely low in comparison to past decades, typically two a year but sometimes none. We believe the lack of interest has resulted from a shift by faculty from undergraduate to graduate thesis supervision since the inception of MES/MESc programs. Moreover, we believe COVID regulations and the push towards internship type courses (experiential learning) will further hinder undergraduate thesis recruitment.

Dean of Arts and Science: Further discussions will continue as the Faculty of Arts and Science programs are working towards balancing flexibility, experiential opportunities, and undergraduate research. We do not see any issues with the existing Honours Thesis Guidelines as they are regularly updated by the department.

Recommendation #9: Development of online courses. We encourage the department to develop online courses in response to demand from majors and non-majors and professional programs in a planned and measured fashion. Support needs to be provided to develop the capacity and careful analysis of what courses should be offered online undertaken. Given the size of the department online offerings should be developed incrementally.

Since the IQAP review, all regularly taught courses have been offered as online due to COVID measures. However, the Department continues to experiment with new ways of online teaching. For example, Dr. O'Hagan is considering offering a pre-packaged course which would allow students the flexibility of completing the lecture materials and exams at their own leisure. Specifically, such a course could possibly be completed within a two-week period or over several months and enrolled at any time during the year (i.e., not restricted to a particular academic term). However, there are concerns with this mode of delivery which we hope will be addressed by registrar office such as implications on OSAP eligibility, and graduation date requirements.

Recommendation #10: Outdoor storage capacity. The reviewers felt the case was made for an outdoor storage unit that includes space to maintain and clean the equipment after a field season. Again, such a facility could include an outdoor lab component and is best proposed in conjunction with multiple faculty who require such space.

The Department is still seeking outdoor storage capacity. Dr. April James has been actively engaging in discussions with the Office of Graduate Studies and Research in this regard. Moreover, due to COVID measures, The Faculty of Arts & Science has recently, and quite successfully, engaged in outdoor classroom instruction. The Department is planning on teaching one course (GEOG 1016) outdoors in the fall of 2022.

Recommendation #11: Greater collaboration with the Registrar's Office. We encourage the Department to work closely with recruitment and admissions in the Registrar's office to support efforts to increase interest from High School and other applicants. Further, the Department should engage with the office to ensure that students are receiving the most current and accurate program information.

The Department continues to work with the registrar's office on all recruitment and admissions activities, from online open house presentations to *Unibuddy* chats with students. Most recently, the Department collaborated on three recruitment videos (BA Geog, BA Env Geog, BSc E&PG) which we believe has greatly improved recruitment efforts with an observed 109% increase in applications this year alone. We are also currently in discussion with the registrar's office in regard to potential college credit transfers as well as international recruitment. We are also seeking to create official ties with the College of Urban Science at the University of Seoul.

Recommendation #12: Re-assess 4000 level program requirements. The program should re-examine program requirements at the 4000 level requirements as 18 credits seems excessive. Further, an up-to-date 'checklist' with program requirements should be created for students as they plan their progress through programs.

Even with the recent loss of two full-time faculty members (appointment to Assoc. Dean and a retirement) the Department has been able to maintain a core number of both 3000 and 4000 level courses. Although we are now offering fewer 4000 level courses we continue to examine new innovative ways of engaging/training our geography majors. For example, we have recently developed and are currently offering a Professional Internship course (GEOG4506). As for decreasing the number of fourth year courses we strongly believe the current structure and flow through is justified. We do not consider 18 credits of 120 credit required program (GEOG & E&PG) as excessive.

LIST OF ACTION ITEMS LEADING UP TO NEXT REVIEW

Recommendation #1

The process for allocation of GAs has been established and reconfirmed by the Graduate Studies Committee each year (November GSC meeting) (see above).

Recommendation #2

This recommendation is in the process of consultation with departments, faculties, and the PVPAR.

Recommendation #3

This recommendation has been addressed.

Recommendation #4

This recommendation has been addressed.

Recommendation #5

This recommendation is being addressed. [The Stage 2 documents for both the BES and BESC programs should be submitted soon. See above]

Recommendation #6

This recommendation has been addressed. However, we must note the recent challenges in offering geomatics online particularly the ongoing technical issues related with the virtual geomatics lab.

Recommendation #7

This has been temporarily addressed.

Recommendation #8

We will continue to address these regulations in a more regular manner.

Recommendation #9

This recommendation has been addressed.

Recommendation #10

Our first attempt for an outdoor course is planned for the fall of 2022. We continue to maintain an active dialogue with the Dean of Graduate Studies and Research for opportunities to secure a permanent storage facility for equipment.

Recommendation #11

We continue to support the Registrar's initiatives and continue to consider new opportunities such as potential college credit transfers into our programs.

Recommendation #12

This has been addressed.

CONCLUSIONS/RECOMMENDATIONS/NEXT STEPS – PLEASE ADD CONCLUDING SUMMARY REGARDING NEXT STEPS

As a department we do believe we have addressed those recommendations which fall within our area of responsibility. Even with the COVID crisis and the recent loss of two full-time faculty members, the Department has successfully pivoted online, submitted new curriculum in light of the IQAP recommendations and continues to lead the development of both the new BES and BESC programs. We must also acknowledge continued support from the Dean of Arts and Science in this regard.

NIPISSING UNIVERSITY

REPORT OF THE TEACHING AND LEARNING COMMITTEE

January 13, 2022

The following members participated:

Graydon Raymer (Chair), Pat Maher (Dean of Teaching), Alex Karassev, John Allison, Roxana Vernescu, Nancy Black, Veronika Williams, Mercedes Fichaud, Lorrie Tunney Maxwell (Recording Secretary).

Guests: Debra lafrate, Sarah Pecoskie-Schweir

Absent: Madalyn Murray

In the January meeting of The Teaching and Learning Committee (TLC), committee members continued discussion of an updated Academic Integrity (AI) policy for the University. TLC members had worked on the draft AI policy since November, and the January meeting served to finish with the TLC's involvement on this policy. The Registrar thanked TLC members for their time and effort and agreed that the AI policy will next be going to the Provost group, to the Grad Studies Committee, Student Development Services, as well as NUSU (not necessarily in that order). Ultimately it will go to AQAPC and Senate for review/approval. Once the new AI policy is approved, the Teaching Hub and Student Development Services are planning to refine and develop resources to support students and instructors in understanding the policy.

MOTION: The TLC approved that the draft Academic Integrity policy be sent to the Registrar for further review.

Moved by Veronika Williams, seconded by John Allison. Approved.

Next, the TLC continued discussion on the report previously sent to the TLC from the Registrar on the late submission of grades. The report provided a summary of data indicating that, across many programs, the median length of time of final grade submission is well in excess of the "7-day" deadline (median of 15 days) in the current grade submission policy. The TLC identified a number of challenges related to the accuracy and/or interpretation of the data in the report (such as, when take-home exams are assigned and therefore the deadline for grade submission is based on the final day of class, not the exam), and identified that at the very least, an updated Grade Submission Policy should be accompanied by a better way to track final grade submissions. Nevertheless, the TLC was in agreement that there is a need to update the policy and find a way to support the timely submission of final grades as the effects of late grade submissions on students in January (e.g., registration/deregistration issues) and June (e.g., approval to graduate) are real. The TLC will endeavor to develop an updated Grade Submission Policy at its February meeting, as well as to discuss ways to support instructors and improve record keeping.

Finally, the Dean of Teaching reported that one of the projects that was put through the Teaching Hub for the Ministry's Micro-Credential Challenge Fund was successful (Promoting Indigenous Health and Wellness in the Anishinabek Communities). Also, the second round of Virtual Learning Strategies proposals have 4 Nipissing-lead projects going in, and about 10

where NU is a collaborator on. And, Heather Carroll will be present at the February TLC meeting to provide a final update on the new institutional syllabus template.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "G. Raymer". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

G. Raymer
Chair
Teaching and Learning Committee

MOTION 1: That Senate receive the Report of the Teaching and Learning Committee dated January 13, 2022.