MINUTES OF SENATE
ALGOMA UNIVERSITY
Sixth Regular Meeting of 2022-23
February 3, 2023

Faculty of Humanities and Social Science
L. Burnett, A-A. Deschenes, M. Graydon, D. Nyaga, S. Redmond [PTF], R. Torres, T. Tchir
[absent: A. Judge, A. Pinheiro]

Faculty of the School of Business and Economics
A. Aziz, G. Mahar, P. Matthews, K. Roberts [PTF], J. Ryan

Faculty of Cross-Cultural Studies
B. Gordon [PTF], P. Steeves, D. Woodman, L. Wyper
[regrets: S. Gruner]

Faculty of Science
L. Bloomfield [Speaker], W. Dew, P. Dupuis, J. Foote, E. Ho-Tassone [PTF], M. Garcia, D. Keough, C. Madliger, N. Shaw, C. Zhang
[regrets: C. Lemieux]

Other Members
D. Marasco [Secretary], L. Doxtater, T. Kakapshe, I. Imre, M. Piercey-Normore, M. Twiss, A. Vezina, W. Wei, T. Van Weerden, I. Withers
[regrets: N. Trudeau; absent: T. Spurway, H. Stevenson, M. Quayyum]

Guests
N. Murray, D. Rogers, Z. Rahman, U. Sengupta, M. Turco

The Speaker called the meeting of the Senate to order at 1:07 pm.

23.02.01   APPROVAL OF THE AGENDA

> ➢ *Moved [Burnett/Nyaga]: that the agenda for the February 3, 2023 meeting of the Senate be approved.*

Motion carried.

23.02.02   APPROVAL OF THE MINUTES from the previous meeting

> ➢ *Moved [Deschenes/Steeves]: that the Algoma University Senate approve the minutes from the Senate meeting of January 13, 2023.*

Motion carried.

23.02.03   BUSINESS ARISING (for action or information)

None

23.02.04   DECISION ITEMS (for action or information)
**   23.02.04.01   Curriculum Committee - motions**

FACULTY OF HUMANITIES AND SOCIAL SCIENCE

> ➢ *Moved [Deschenes/Steeves]: that the Algoma University Senate approve the following new course as submitted by the Department of Music and Visual Art:*

VISA 3056 Special Topics in Public Art
This part studio, part professional practice based course centres around themes related to Public Art as a Visual art practice. The course will survey contemporary art historical references and present-day examples of Public Art works. It will consider the myriad of ways in which visual artists, and partners can collaborate to create an art work intended for the public realm. You will be required to complete written responses as well as creative visual components, such as maquettes, in relation to the development and actualization of a public art project. Given that public art cannot be created in a silo, much of the course will be centred around communication, collaboration and cultivating partnerships. Students will focus on creative problem solving and organization of ideas as individuals and as a group. Prerequisites: VISA 1026/1027 or permission of the department [LEC/SEM 3] 3 cr

Rationale:

Over the past 2.5 years we have been running Special Topics courses in Public Art in collaboration with the City of Sault Ste. Marie. These courses are resulting in Public Art works created by students that are being installed in the city and surrounding areas. The City wishes to continue this collaboration to enhance the Public Art in the city and to help make the public more aware of the visual art course. By creating a course specifically for the Public Art projects this unique aspect of our program can be more easily highlighted as very few if any other Visual Art programs have courses like this one.

FACULTY OF CROSS-CULTURAL STUDIES

> ➤ *Moved [Steeves/Wyper]: that the Algoma University Senate approve the following program revision to the First Nations Social Policy in Community Development Certificate [FNSPCD] as submitted by the Department of Community Economic and Social Development [minor modification as per the IQAP]:*

From:
CESD 1006 *or 1007*; CESD 1206, CESD 1207, CESD 2016, CESD 2306, CESD 3216, CESD 2996 *or 2607*, CESD 2206, **COSC 1701, and 'One additional course in CESD'**

To:
CESD 1006 *or 1007*; CESD 1206, CESD 1207, CESD 2016, CESD 2306, CESD 3216, CESD 2996 *or 2607*, CESD 2206, **CESD 1806, and CESD 1807**

Rationale:

The first two modules in the ONWAA / CESD First Nations Social Service Administrators (FNSSAC) ONWAA certificate were accredited as AU courses last year and thus can now be counted within the FNSPCD certificate and used as a part of this certificate pathway. This means taking out two other courses (noted in change from above) to make room for them in the 10 course certificate. *The COSC course was also only to provide some basic computer skills but since 2020 FNSSAC has been 100% online and the students already have the basic computer skills prior to entering the FNSPCD certificate.*

FACULTY OF SCIENCE

> ➤ *Moved [Foote/Nyaga]: that the Algoma University Senate approve the following new courses as submitted by the Department of Biology:*

BIOL 3086 Projects in Biology
Students will complete a large collective group project in a rotating topic in Biology under the guidance of the Faculty instructor. During the seminar portion, students will locate, critique, and discuss literature relevant to the project, complete annotated bibliographies, and contribute to writing a final technical report or manuscript. During the lab portion, students will collect, process, and analyze data to answer the question in Biology. Prerequisites: BIOL 2056, 2556, third-year standing in Biology. Students may not retain credit for both BIOL 3086 and ENVS 3086 [SEM 3, LAB] 3 cr.

ENVS 3086 Projects in Environmental Science

Students will complete a large collective group project in a rotating topic in environmental science under the guidance of the Faculty instructor. During the seminar portion, students will locate, critique, and discuss literature relevant to the project, complete annotated bibliographies, and contribute to writing a final technical support or manuscript. During the lab portion, students will collect, process, and analyze data to answer the question in Environmental Science. Prerequisites: BIOL 2056, ENVS 2556, third-year standing in Environmental Science. Students may not retain credit for both ENVS 3086 and BIOL 3086 [SEM 3, LAB] 3 cr.

Rationale:

This course will accomplish a number of important goals. This course will:
1. Give students the opportunity to work on a major research project as a group, increasing teamwork, writing, data collection, and analysis skills
2. Allow faculty to work with students to advance research in the field of Biology/Environmental Science
3. Be used to collaborate with City Studio on biological issues of local importance
4. Prepare students for internship projects and the Honours thesis but will also give those students who do not elect to take either of those routes to develop their research skills
5. Expand experiential learning in the Biology and Environmental Science programs
6. Increase the quantity of faculty and student publications and conference presentations

➤ ***Moved [Garcia/Nyaga]: that the Algoma University Senate approve the following new courses as submitted by the School of Computer Science and Technology:***

COSC 5XXX Machine Learning
The intent of this course is to introduce machine learning basics and a set of tools used in machine learning. Students will learn different supervised and unsupervised learning algorithms including linear regression, gradient descent, polynomial regression, regularization, logistic regression, Naïve Bayes, k-nearest neighbors, support vector machines (SVMs), decision trees, ensemble learning and random forests, k-Means clustering, Gaussian mixture model (GMM), Principal Component Analysis (PCA), tSNE, feature extraction and selection. Topics include applications in image processing, natural language processing, computer vision, bioinformatics, and genomics. Prerequisites: Permission from the School of Computer Science and Technology. (LEC 3) (3 cr).

Rationale:
The course should provide the students with a good understanding of the topics in machine learning. Program level learning outcomes include:
● Be proficient with the fundamental and advanced knowledge in machine learning.
● Apply specialized, effective, and efficient machine learning techniques.

- Be proficient with fundamental knowledge in at least one area of research.
- Apply reasoning and technical skills to solve problems with minimal guidance and the support of advanced computing applications.
- Perform integration by applying advanced knowledge of computer science.
- Critically analyze a body of current, published research in an area of computer science.

COSC 5XXX Neural Networks and Deep Learning

The intent of this course is to introduce the fundamentals of neural networks and deep learning with Keras and TensorFlow. Students will learn to build, train, and deploy fully connected deep neural networks, including convolutional neural networks (CNN), recurrent neural networks (RNN), and reinforcement learning. Applications of deep learning to computer vision, processing sequences, natural language processing, and others. Students will also learn representation learning and generative learning using autoencoders and GANs. Prerequisites: Python programming or permission from the School of Computer Science and Technology. (LEC 3) (3 cr).

Rationale:

The course should provide the students with a good understanding of the topics in machine learning. Program level learning outcomes include:

- Be proficient with the fundamental and advanced knowledge in machine learning.
- Apply specialized, effective, and efficient machine learning techniques.
- Be proficient with fundamental knowledge in at least one area of research.
- Apply reasoning and technical skills to solve problems with minimal guidance and the support of advanced computing applications.
- Perform integration by applying advanced knowledge of computer science.
- Critically analyze a body of current, published research in an area of computer science.

COSC 5XXX Advanced Topics of Computer Networks

Computer systems critically rely on the Internet for communication, data access, and information dissemination. This course will emphasize on the architecture, algorithms, and protocols of the Internet. Topics include local area networking, routing, congestion control, network security, and applications such as peer-to-peer and content distribution networks. New technologies such as software-defined networking will also be introduced. Students will work on projects to learn how to build Internet applications as well as network protocols. Within these projects, students are challenged to solve advanced problems beyond the scope expected for undergraduates. Prerequisite: Permission from the School of Computer Science and Technology. [LEC/SEM 3] 3 cr

Rationale:

The course should provide the students with an in-depth understanding of the basic architecture and underlying principles of computer networks. Program level learning outcomes include:

- Exhibit an in-depth understanding of the basic architecture and underlying principles of computer networks.
- Apply the concepts of layered models and network technologies to understand how computer networks and their various components work and perform for several performance metrics.
- Comprehend various protocols, IP addressing classes, subnetting and forwarding strategies of computer networks.
- Apply knowledge of mathematics and science to the analysis and design of computer networks and solve computer networking problems.

COSC 5XXX Design and Analysis of Advanced Computer Algorithms
The intent of this course is to introduce advanced algorithms methodology for designing efficient algorithms. Topics include space and time complexity, asymptotic bounds on the performance of algorithms, advanced data structures, advanced design and analysis techniques, multithreaded algorithms, linear programming and reductions, NP-complete problems, Coping with NP-completeness, and approximation algorithms. Prerequisites: Permission from the School of Computer Science and Technology. [LEC 3] 3 cr

Rationale:
The course should provide the students with a good understanding of the advanced topics in designing efficient algorithms for software development. Program level learning outcomes include:

- Be proficient with the fundamental and advanced knowledge in algorithm designs.
- Apply specialized, effective, and efficient algorithm design and analysis techniques.
- Be proficient with fundamental knowledge in at least one area of research.
- Apply reasoning and technical skills to solve problems with minimal guidance and the support of advanced computing applications.
- Perform integration by applying advanced knowledge of computer science.
- Critically analyze a body of current, published research in an area of computer science.

23.02.04.02   Academic Planning and Priorities - Master in Computer Science

➤ *Moved [Garcia/Nyaga]: that the Algoma University Senate approve the Master of Computer Science [MCS] as submitted by the School of Computer Science and Technology.*

Executive Summary

This is a course-based master's program designed for Bachelor degree graduates in computer science, information technology (IT) and related areas. Its aim is to prepare students to develop expertise with sufficient breadth and depth in the areas of software engineering, cybersecurity, software systems, data analytics, artificial intelligence and IT. This is based on current provincial and regional organizations and institutions' IT and computer science needs and requirements, including requirements of the expertise of highly qualified computer scientists. Our rationale for that aim is that our Master's program will cover areas that require highly-skilled graduates (e.g. applied artificial intelligence, cybersecurity) and individuals with skills in those areas that are currently in high demand locally and provincially. In addition, some of those areas are critical for our diversified economy and support organizations and companies that constantly require higher-level software development (e.g. software development project management) and data analytics.

Opportunities for further study:

Graduates from our Bachelor and certificate programs could continue studying in our Master's degree since they should have the necessary background to do so. In addition, graduates from our Master's program will have the opportunity to study a PhD degree elsewhere, providing enough breadth and depth for starting a Computer Science PhD in any of the areas taught in the program, including advanced software engineering, software systems, artificial intelligence, and computer networks.

We will initially offer the Master's program in our Sault Ste. Marie campus to apply our existing resources and gain experience in allowing students to conduct experiential learning activities with the local companies and organizations. This will also allow to improve the program quality before it is offered in other campuses. We could offer the master degree in all the campuses (Brampton, Timmins and Sault Ste. Marie) depending on the future computer science full-time faculty hirings and student demand in those campuses, also depending on the capacity of the facilities on other campuses such as the computer science labs and library resources, which could be expanded to accommodate our Master degree students along with their existing undergraduate students

Objectives

Our proposed Master of Computer Science will be offered as a course-based program.
The aim of this program is to prepare students to develop expertise with sufficient breadth and depth in the areas of software engineering, artificial intelligence (AI), cybersecurity, software systems, data analytics and information technology. This is supported by advanced theoretical and practical computing knowledge. The curriculum is aligned with current requirements and needs from IT and computing industries, as well as requirements from IT areas from local and provincial organizations and institutions.

This is a two-year program, which will be particularly attractive to our existing Computer Science students who already hold a bachelor degree and are currently taking a postgraduate certificate and to students who graduate from our Bachelor of Computer Science, not to mention our alumni and students who already graduated from our computer science programs. The number of courses required for the completion of this program is eight required and two elective courses (30 credits).

In our program, students will be able to conduct short-term experiential-learning projects in conjunction with Algoma University professors and/or the industry and computing/IT sector. The nature of the projects is based on the need of local IT companies and organizations of students who specialize in areas such as computer systems, artificial intelligence and others.

The program strengths include the following:

- The program will be supported by our existing state-of-the-art computer science labs from Sault Ste. Marie Campus, consisting of 12 high-end iMac computers, and 104 desktop computers running Linux and Windows operating systems. There are two game technology labs consisting of the latest video game consoles and high-end gaming computers, where students can conduct assignments or projects in that area. The Brampton campus has two computer science labs with 20 high-end computers each, classrooms and meeting areas. In the computer labs, students will have the opportunity to design, develop and test complex computer programs and systems with advanced hardware and software tools. The labs also contain materials such as microcontroller boards, electronic components, and other pieces of technology that students can use in their projects and assignments in hands-on computer system development activities. The computer science labs from both campuses are also equipped for teaching.

- This Master's program will offer courses especially designed according to the local employers' requirements and provincial/global computing trends (e.g. https://www.computer.org/publications/tech-news/trends/2022-report) , which may also appeal future students, such as these courses: Advanced Human-Computer Interaction, Introduction to Cybersecurity, Advanced Cryptography and Cryptanalysis, Neural Networks and Deep Learning , Advanced Software Engineering, and others.

- The program will contain experiential learning activities where students will learn how to solve real-world problems with computing technology, applying both practical skills and theory. These experiential learning activities will be carried out in the form of coursework and course projects. This program has courses aligned with the IT industry needs. The Computing Project course and other courses include a limited applied research project in computing and IT. In the Computing Project course, research and analytical/interpretive skills are developed, and demonstrated through research reports. This is in compliance with the COU's Principles for Graduate Study at Ontario's Universities(https://cou.ca/reports/graduate-study-principles/). In the experiential learning activities from our program, students will have the opportunity to participate in short-term projects with local and regional companies, institutions and organizations. Students will be able to develop projects integrating computer science with computing engineering and automation with local industries. Our University has signed academic cooperation agreements and memoranda of understanding with a number of organizations and companies.

- This program will teach highly-sought computer science skills (see **Appendix 7**) such as advanced Python programming and others. These areas are among computer science trends that are recently sought by companies and organizations, for example:

https://www.computerscience.org/resources/computer-science-trends/
https://www.computer.org/publications/tech-news/trends/2022-report

- The number of job opportunities in the province of Ontario (including the Northern region) for software development graduates is positive for 2021-2023 according to the Government of Canada's Job Bank:
https://www.jobbank.gc.ca/marketreport/outlook-occupation/5485/ON;jsessionid=694708EFF3809EA8B9F5A0360547FB92.jobsearch74

- Students will have the opportunity to carry out short-term projects supervised by our school faculty in any of these areas (non-exhaustive list):
  ◦ Dr. Simon Xu: Software Engineering and evolution, program analysis and understanding, cognitive models of software development processes.
  ◦ Dr. George Townsend: Brain-Computer Interfaces.
  ◦ Dr. Miguel Garcia-Ruiz: Human-Computer Interaction, video game testing, video game artificial intelligence, olfactory interfaces.
  ◦ Dr. Yi Feng: Formal hardware verification, computer system design.
  ◦ Dr. Zamilur Rahman: Graph theory and its applications, complex network analysis, big graph data and data science.
  ◦ Dr. A B M Bodrul Alam: Cloud computing, optimization, reliability analysis, and reliable resource management.
  ◦ Dr. Ajmery Sultana: Radio resource management in device-to-device (D2D) communication and for Internet of Things (IoT), machine learning for communication and networking systems, and blockchain-enabled resource management for 5G and beyond networks.
  ◦ Dr. Mahreen Nasir: Data Mining & Big Data Analytics (E-Commerce Product Recommendations), Machine Learning, Intrusion Detection, Social Media, and Web Accessibility.
  ◦ Other faculty members who will join our school.

Consistency with Algoma University's Special Mission / Strategic Plan

The proposed program is well aligned with Algoma University's vision, special mission and the current institutional strategic plan, and builds on existing strengths:

1. Algoma University's vision "offers a transformative education through a student-centred approach to teaching and learning". Our proposed program will pursue a transformative education by teaching state-of-the-art computing and IT courses such as artificial intelligence, supported by educational activities tailored to students, including hands-on activities on advanced software systems development coordinated by our faculty members.

2. Algoma University's Special Mission states that it should "be a teaching-oriented university that provides programs in the liberal arts and sciences and professional programs, primarily at the undergraduate level.'' In particular, the use of the word "primarily" is an acknowledgement that Algoma University should offer some limited postgraduate programming. The fact that Algoma has already offered post-graduate programming in Computer Games Technology via

cooperation with another institution (with Abertay University in Scotland), also supports the pursuit of the creation of a new computer science graduate program.

3. In terms of Equity, Diversity and Inclusion (EDI), the SCST will work in conjunction with the Algoma University Diversity and Equity Committee to support Algoma University's EDI Mandate: "Algoma University (AU) commits to embedding equity, diversity, and inclusion to foster a welcoming environment on our campuses. EDI values must be transversal in the entire organization to fulfill Algoma University's commitment to undoing systemic and institutional discrimination and to be publicly transparent and accountable. We also acknowledge that racism and discrimination exists and affects the five targeted designated groups in disproportionate, distinct and complex ways (women, Indigenous, Black and other racialized persons, persons with invisible and visible disabilities, and 2 LGBTQIIA+ persons)." In addition, Algoma University's Special Mission also states the following: "Cultivate cross-cultural learning between Indigenous communities and other communities, in keeping with the history of Algoma University and its geographic site". This will be addressed by allowing students to learn to work and collaborate with diverse populations and cultures that Northern Ontario and generally the province of Ontario have. Our program will allow students to design cross-culturally relevant software by applying technical and software engineering skills in the software development process and its research, including human-computer interaction methodologies that incorporate cross-cultural aspects in software design. Students from both the course-based and project options will also be exposed to project development that should involve cross-cultural aspects. According to Keller et al. (2006), this could be achieved by building software systems that are adaptive to the cultural preferences of a user and be able to work effectively in an environment where differences in culture exist. This is in line with the acquisition of the following soft skills in our program, among others: provide students tools to engage with diverse and Indigenous populations (effective communication skills across diverse populations and with diverse team members); effective collaborative team work to address the needs of the communities with and for whom students will work.
Sources:
- Keller, B., Pérez-Quiñones, M. A., & Vatrapu, R. (2006, July). Cultural issues and opportunities in computing education. In *9th International Conference on Engineering Education* (pp. 23-28).
- Seniuk Cicek, J., Steele, A., Gauthier, S., Adobea Mante, A., Wolf, P., Robinson, M., & Mattucci, S. (2021). Indigenizing Engineering education in Canada: critically considered. *Teaching in Higher Education*, *26*(7-8), 1038-1059.
- Benjamin, R. (2019). *Race after technology: Abolitionist tools for the new jim code*. *Social forces*. Medford, MA: Polity Books.

4. Algoma University's special mission contains a mandate to "…focus on the needs of Northern Ontario". At this time, its capacity to do so at the postgraduate level is limited. Increasingly, economic innovation relies on science; consequently, a community with increased scientific literacy and training is desirable from an economic standpoint. The proposed Master of Computer Science program will increase the capacity to prepare students in computer science and IT aspects relevant to the economic and social development of our region. Our new program will teach the development and testing of software using state-of-the-art graduate-level knowledge and techniques, which can benefit the region.

5. The present 7-year Strategic Plan (2016-2023) lists planning for the development of graduate programming under objective 2.3. One aspiration listed in our 2020-2025 Strategic Mandate Agreement establishes that: "with the passage in 2019 of Bill 132 (Schedule 5), Algoma University is granted the authority to "confer degrees and award certificates and diplomas in any and all branches of learning." With that expanded degree-granting authority we have under development select Master's-level programs (for example, in Biology and Computer Science)."
Source:
https://www.ontario.ca/page/2020-2025-strategic-mandate-agreement-algoma-university
Additionally, the Computer Science program is highlighted as one of five strategic areas of program strength and expansion in the Strategic Mandate Agreement. The Strategic Plan also mentions to: "develop a relevant suite of contemporary and demand-based master's degrees and interdisciplinary master's degrees".

6. The University Strategic Plan identifies one of the objectives of the University as "the pursuit of learning through scholarship, teaching, and research within a spirit of free inquiry and expression". This program will increase the scholarship and research capacity for Algoma University students and faculty. Having graduate students will also increase the research opportunities for undergraduate students, which will allow faculty in the School of Computer Science and Technology to pair undergraduate students with Master of Computer Science students to work on local research and development projects collaboratively.

Considerations of Equity, Diversity and Inclusion

Section 2.b explains that the SCST will work in conjunction with the Algoma University Diversity and Equity Committee to support Algoma University's EDI Mandate: "Algoma University (AU) commits to embedding equity, diversity, and inclusion to foster a welcoming environment on our campuses. EDI values must be transversal in the entire organization to fulfill Algoma University's commitment to undoing systemic and institutional discrimination and to be publicly transparent and accountable. We also acknowledge that racism and discrimination exists and affects the five targeted designated groups in disproportionate, distinct and complex ways (women, Indigenous, Black and other racialized persons, persons with invisible and visible disabilities, and 2 LGBTQIIA+ persons)." In addition, Algoma University's Special Mission also states the following: "Cultivate cross-cultural learning between Indigenous communities and other communities, in keeping with the history of Algoma University and its geographic site".
This will be addressed by allowing students to learn to work and collaborate with diverse populations and cultures that Northern Ontario and generally the province of Ontario have. Our program will allow students to design cross-culturally relevant software by applying technical and software engineering skills in the software development process and its research, including human-computer interaction methodologies that incorporate cross-cultural aspects in software design. Students from both the course-based and project options will also be exposed to project development that should involve cross-cultural aspects. According to keller (2006), this could be achieved by building software systems that are adaptive to the cultural preferences of a user and be able to work effectively in an environment where differences in culture exist. This is in line with the acquisition of the following soft skills in our program, among others: provide students tools to engage with diverse and Indigenous populations (effective communication skills across diverse populations and with diverse team members); effective collaborative team work to address the needs of the communities with and for whom students will work.

Learning Outcomes

By the end of this program, students should be able to:
1. Be proficient with the fundamental and advanced knowledge in algorithms, coding, and computer architecture.
2. Apply advanced software engineering and software systems skills and knowledge required for designing, developing and testing high-quality software.
3. Select and apply specialized, effective and efficient computing algorithms to solve practical problems.
4. Perform system integration by applying advanced knowledge of computer science.
5. Demonstrate the advanced ability to evaluate algorithmic and/or software-based solutions to a given problem using the tools defined by the computer science discipline.
6. Model, evaluate and specify the correct tools in software engineering projects.
7. Communicate effectively through technical or research papers, the presentation of concepts or projects and collaboration with peers.
8. Critically analyze current technical advancements, state-of-the-art in hardware and software methodologies, scopes and limitations on and approaches in the field of computer science.
9. Use effective strategies for technical writing and editing in areas such as computer science and information technology.
10. Use collaborative software and hardware tools effectively for the project-based development of software and hardware applications and systems.

Program Requirements

We compared our program design to other Computer Science Masters programs in Ontario. The program has the same duration (2 years) as others that offer the Master of Computer Science. This is also consistent with the program length of 3 to 5 semesters stated in the Ontario Qualifications Framework (Ontario Qualifications Framework | ontario.ca). Two years (4 semesters) will be enough for covering both the eight core courses and the two elective courses, based on the depth and breadth of the courses.
Students are required to take eight core courses and two elective courses within two years of study in order to complete the degree. 15 courses (79% of the total courses) have graduate level (including core and elective courses) and two (10% of the total courses) are cross-listed with our upper-year Bachelor of Computer Science courses.

Admission

The admission requirements will be a four-year Computer Science program or equivalent from an accredited university and have the necessary undergraduate prerequisites (see the course prerequisites note below) for the graduate courses the student intends to pursue, with at least a 75% (B) average in the last two years of study.

The following are course prerequisites (or equivalent ones) that the applicants should have completed in the bachelor's degree in computer science or a closely related field in order to take the master's degree core courses:

- Introductory programming
- Introductory statistics
- Computer organization
- Data structures II
- Theory of computing
- Computer networks

Candidates holding an undergraduate degree other than computer science or a related field, who have some computer science background, either academic or professional, may be admitted. They will be requested to either prove that they have taken at least four equivalent courses (two of which are at the third-year or fourth-year level) or they may be required to complete make-up courses at undergraduate level, as recommended by the School of Computer Science and Technology, to enhance their background after the admission. The course topics are listed as follows:

- Discrete Mathematics
- Introductory programming
- Data Structures
- Operating Systems
- Computer Organization
- Software Engineering
- Theory of Computing
- Analysis of Algorithms
- Introductory statistics
- Computer networks

Meeting the minimum requirements does not necessarily lead to automatic admission, but it depends on the availability of places in the program and on an assessment by the School of the applicant's aptitude for graduate studies.

Proficiency in the English language is required for international students where English is not their primary language of instruction. One of the following minimum requirements must be met in order to be eligible for graduate admission (reviewed by Algoma University's International Admissions Officer, Office of the Registrar):

- IELTS Academic: 6.5 overall, no band lower than 6.0
- TOEFL (IBT): 88 overall, CBT: 230 overall
- Cambridge Assessment Test (CAE):C1 Advanced or C2 Proficiency with a Cambridge Score of 176 or more
- CAEL: 70 Overall with no component score below 60
- PTE Academic - Pearson Test of English: 63 overall
- CanTEST: 4.5 overall, no part below 4
- 3 or more years of full-time studies in an approved postsecondary school (outside Canada) where English is the primary language of instruction
- 3 or more years of full-time studies in a recognized postsecondary institution in Canada
- Duolingo English Test (DET) with a minimum overall score of 110, in addition to a minimum score of 90 in each band.

The program learning outcomes are aligned with the successful completion of an undergraduate

degree and the requirement of good academic standing are clear prerequisites for success. Previous research experience may not be required for the students who take this program.

In this program, students should have a strong computer science foundation (reflected in the students' average of at least 75% or "B"), since most of the learning outcomes are based on designing, developing, testing and deploying complex computer systems. It is also required that the students' English language proficiency should be high, since most of the learning outcomes require reading and analyzing highly-technical computing materials written in English. Some learning outcomes require communicating effectively through writing technical papers and presenting information to peers, also requiring a high level of English proficiency.

Motion carried.

23.02.04.03   Academic Planning and Priorities Committee
Exceptional Transfer Agreement

➤ *Moved [Marasco/Burnett]: that the Algoma University Senate approve the exceptional articulation agreement with Northern College's Addiction and Mental Health Worker diploma program to the Bachelor of Social Work at Algoma University [major modification as per the IQAP]. For maximum transfer credit, students must achieve a minimum overall average of 3.30 GPA in their respective diploma program.*

60 transfer credits awarded with a minimum 3.30 GPA from the Addictions and Mental Health Worker diploma program at Northern College towards the Bachelor of Social Work degree [BSW].

Students will continue to receive:

15 transfer credits awarded with a minimum 2.5-2.99 GPA from the Addictions and Mental Health Worker diploma program at Northern College towards the Bachelor of Social Work degree [BSW].

45 transfer credits awarded with a minimum 3.00-3.29 GPA from the Addictions and Mental Health Worker diploma program at Northern College towards the Bachelor of Social Work degree [BSW].

Rationale:
The School of Social Work at Algoma University, the Department of Community Services at Northern College and the University Registrar worked closely in revising the diploma program to ensure the college courses were closely aligned with the Bachelor of Social Work degree requirements and Canadian Association of Social Work Education (CASWE) accreditation policy. To address Algoma University's calls for equity, diversity, and inclusion while aligning with the CASWE plan on anti-oppressive and social justice practice, teaching, and learning. To diversify the classroom by encouraging cross-cultural teaching and learning between Indigenous and

other marginalized students. To increase student enrolment and be in line with Algoma University strategic plan.

The goal of the exceptional agreement is to provide opportunity for students to achieve the benefits of combining a college diploma and university degree. The fundamental means embodied in the agreement is the recognition of prior learning and a credit transfer system that will optimize a pathway for degree studies and minimizes unnecessary duplication of students' learning and avoids barriers to student mobility.

Transfer includes [minimum 3.30 GPA]:

Addictions and Mental Health [AMH]
Minimum GPA [3.30]
ANII 1006 Anishinaabe Peoples and our Homelands I SWRK 2356 Basic Helping Skills in Social Work Practice: A Northern Perspective SWRK 2406 Human Behaviour in the Social Environment: Critical Perspectives on Identity, Culture and Society SWRK 3206 Anti-oppressive Social Work Practice: Anishinaabe, Structural and Feminist Perspectives SWRK 3856 Crisis Intervention SWRK 4600 Field Practicum I [6 credits] 39 credits of non-equivalent electives at the first-year and second-year level
60 credits

Motion carried.

23.02.04.04   Academic Planning and Priorities

Bachelor or Arts in Psychology at Brampton

➢ *Moved [Dupuis/Nyaga]: that the Algoma University Senate approve the offering of the Bachelor of Arts in Psychology [Honours] degree program at Brampton for the next academic year 2023-24.*

Rationale:

The department of psychology would like to offer the honours degree in Brampton. We want students there to have the same opportunities to study and complete the similar degree options that exist in SSM. This is also going to provide our faculty with similar opportunities to supervise honours thesis projects, which will help students prepare for graduate studies. Psychology students in years 1-3 will also be able to participate in these projects, providing an opportunity to better understand research and the procedures involved.

Summary:

The changes proposed are considered a major modification of a program. As such, we will be offering additional courses that are required to complete the honours degree. These courses will permit students with an opportunity to develop scientific thinking, planning, and execution of a research project. They will undertake hands-on research training, writing, and the presentation of their results. These opportunities are essential for students wishing to pursue graduate studies. The goal of offering psychology in Brampton was to eventually offer the honours degree option, so this request before you is our proposal to do just that, bringing the program there in line with SSM. The learning outcomes are critical in developing students' research skills and increasing their competitiveness in pursuing graduate studies.

The rationale is to offer the same degree options in Brampton that currently exist in SSM. This proposed degree modification will provide students with similar training in the development and execution of a research project in their 4th year of studies. They will also be required to complete additional course requirements (e.g., advanced research methods, advanced statistics) that help facilitate the acquisition of research skills. The culmination of the additional training will make them adequately prepared and competitive for graduate studies. It will also provide an opportunity to develop critical life skills (e.g., critical thinking, experimental design). Thus, the learning outcomes are consistent across campuses and the students themselves are equally prepared for their futures both in and outside of academia.

The impact of the proposed modifications on the existing program in Brampton will be positive. We currently have students interested in completing the honours degree at that campus. The addition of the proposed modifications will provide them with the degree option they wish to pursue. Additionally, they will also be competitive in their applications to graduate studies. The proposed modification will bring the two campuses in alignment for the degree options and post-graduate opportunities. Ultimately, this will permit a more aggressive recruitment strategy for Brampton as we can notify prospective students that they can complete the 4-year BA or the

4-year BA honours degrees at this location. I believe that this will make us more competitive in southern Ontario and will also create a better recognition of our educational institution.

The proposed modification is consistent with our special mission. More specifically, we are proposing to offer a degree in Brampton that is teaching oriented at the undergraduate level but extends our geographical region to include southern Ontario. I also believe that this is consistent with the second point of our special mission, that we will provide our students in Brampton with the opportunity to facilitate cross-cultural experiences that will include engagement with their peers in Sault Ste. Marie.

Regarding our vision, the proposed modification to our program will better align us to create an equal opportunity for students to complete the same degree that is offered to their peers in Sault Ste. Marie, with students from all parts of the world. We will remain committed to providing a welcome, inclusive, safe, and respectful learning community across all campuses.

The strategic/academic plan outlines several goals that will be partly achieved with the approval of our proposed modification. For example, we will be a multi-campus university that offers the same programs at all locations. Moreover, this will ensure growth in psychology at the Brampton campus, with local and international students having the ability to earn a degree (honours) that is essential for graduate studies. We will have opportunities for faculty and students to conduct research, offering various teaching and learning opportunities as well as experiential learning. Ultimately, this degree option will guarantee that our students are competitive upon graduation, contributing to their academic and personal success.

As described above, the approval of our proposed modification to the department of psychology will have a significant impact on student employment/post-graduate success. An honours degree offers students an opportunity to develop and evaluate advanced research methodologies as they design their thesis project. One of the unique opportunity's students have in the honours program in Sault Ste. Marie is the ability to design a study of their choosing. This core skill will further enhance their critical thinking skills, their ability to work independently and collaboratively with the faculty and their peers, as well as make them prepared for post-graduate studies. Student's will also learn advanced statistical techniques, which will be used to analyse the data they collect as a part of the honour's degree requirements. The culmination of this degree is the participation in the psychology thesis conference. Students will present their findings to the faculty, their peers, their family, and to members of the AU community. Overall, these opportunities help ensure they are competitive and prepared to succeed in graduate school. Moreover, they also possess skills that are desirable to many employers (e.g., critical thinking, work independently, organization, and preparedness). Given the success we have had in Sault Ste. Marie with students successfully entering graduate studies, we want to make sure our Brampton students will also be able to reap the benefits of an honours degree.

The proposed modification will give the Brampton campus an opportunity to carve their own unique research opportunities that will make them competitive with other universities in southern Ontario, but it also ensures that they are equally as competitive as those institutions. In the past, we have lost students from attending AU Brampton campus because we did not offer an honours degree. We want to make sure this doesn't happen in the future. We also want

to make sure we have a competitive program that can provide students with the skills they need to become competitive in graduate school and in the workforce. While it is not necessarily unique at its inception, it is the bare minimum to make us competitive with other universities (and will provide an opportunity to engage community organizations with prospective research collaborations, which could make this experience unique).

As mentioned above, the additional courses required to complete the degree will make sure that students develop competitive skills that are essential for life-long learning. For instance, advanced research methods and advanced statistics are invaluable courses that teach students to critically evaluate data, how to best design and interpret research results, as well as how to write and present the findings to their peers. These skills are essential for post-graduate studies and are desirable for gaining meaningful employment.

The proposed modification should not have any impact on other programs, academic units, or university resources (or at least it would be very minimal). The department of psychology is in the process of hiring an individual on tenure-track and another on a 3-year CLTA for Brampton Campus. These individuals will help reduce university resources by being able to assist with offering of the honours degree in Brampton. For instance, these individuals will teach courses that are currently being advertised to part-time faculty. Moreover, we have experienced challenges hiring part-time faculty, for various reasons, and as a result staff are reposting these jobs repeatedly. Having 2 more faculty join our Brampton campus will alleviate this burden on staff and the department. Thus, I am confident that offering the honours degree will not have much of an impact on the aforementioned programs and resources.

Motion carried.

23.02.04.05   Graduate Council - Transfer of Credit Policy [GR-510]

➢ *Moved [Imre/Nyaga]: that the Algoma University Senate approve the Transfer of Credit Policy for Graduate Studies [GR 5.10] as submitted by the Graduate Council.*

Motion carried.

23.02.04.06   Graduate Council - Submission and Examination of Master Theses [GR-511]

➢ *Moved [Marasco/Foote]: that the Algoma University Senate approve the Submission and Examination of Master's Theses Policy [GR 5.11] as submitted by the Graduate Council.*

Motion carried.

23.02.04.07   Graduate Council - External Examiner's Policy [GR-512]

➢ *Moved [Marasco/Matthews]: that the Algoma University Senate approve the Master's Thesis External Examiner Policy [GR 5.12] as submitted by the Graduate Council.*

Motion carried.

23.02.04.08   Graduate Council - Special Student Policy [GR-513]

➢ *Moved [Torres/Nyaga]: that the Algoma University Senate approve the Graduate Special Student Policy [GR 5.13] as submitted by the Graduate Council.*

Motion carried.

23.02.04.09   Graduate Council - Transfer to Part-time Status Policy [GR-514]

➢ *Moved [Imre/Dew]: that the Algoma University Senate approve the Policy on Transfer to Part-Times Status for Graduate Students [GR 5.14] as submitted by the Graduate Council.*

Motion carried.

23.02.04.10   Senate Executive Committee
**   Senate Adjunct Professor Policy [revised] [SE-510]**

➢ *Moved [Nyaga/Imre]: that the Algoma University Senate approve the revision to the Senate Adjunct Professorship Policy [SE 5.10] as submitted by the Senate Executive Committee.*

Motion carried.

23.02.04.11   Decanal Search Committee
**   Faculty of Humanities and Social Science**
**   Faculty of Cross-Cultural Studies**

➢ *Moved [Graydon/Nyaga]: that the meeting of the Senate be moved in camera.*

Motion carried.

➤ *Moved [Burnett/Twiss]: that the meeting of the Senate be moved out of camera.*

Motion carried.

The Speaker reminded Senators that what was discussed in closed session should be considered confidential.

The Speaker asked for a motion to approve the motions that were approved while in camera.

➤ *Moved [Garcia/Withers]: that the motions approved by the University Senate while in camera be approved in open session.*

Motion carried.

23.02.05   **INFORMATION ITEMS (for action or information)**
                 23.02.05.01   COU - Academic Colleague Report

Dr. Burnett provided the Senate with a written report.

23.02.06   **STANDING REPORTS**
                 23.02.06.01   Board of Governors Representative

Dr. Dupuis provided the Senate with a written report.

23.02.06.02   Decanal Report

The Deans provided the Senate with a written report.

23.02.06.03   Vice-President Academic and Research

The VPAR provided the Senate with a written report.

23.02.06.04   President and Vice-Chancellor

The President provided the Senate with a written report.

23.02.07   DISCUSSION AND QUESTION PERIOD

None

23.02.08   OTHER BUSINESS/NEW BUSINESS

None.

23.02.09   ANNOUNCEMENTS

23.02.10   ADJOURNMENT

> ➤ *Moved [Keough/Imre]: that the Senate adjourn.*

Motion carried. [Senate adjourned at 2:09 pm]