

## ACADEMIC COUNCIL REPORT

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### ACTION REQUESTED:

- Recommendation   
Decision   
Discussion/Direction   
Information

**DATE:** 23 January 2024

**FROM:** Undergraduate Studies Committee

**SUBJECT:** Major Program Modification – Bachelor of Science in Computer Science program and Data Science and Digital Media specializations (for approval)

Minor Program Adjustment – Bachelor of Science in Computer Science program and Data Science and Digital Media specializations (for information)

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### COMMITTEE MANDATE:

In accordance with the Undergraduate Studies Committee (USC) Terms of Reference, USC has the responsibility “to examine proposals for new undergraduate degree programs and major changes to existing programs and to recommend their approval, as appropriate, to the Academic Council”. Additionally, USC has the responsibility “to approve minor program adjustments and report them to Academic Council for information.”

The Undergraduate Studies Committee is presenting a Major Program Modification for approval and a Minor Program Adjustment for information.

### MOTION FOR CONSIDERATION:

That pursuant to the recommendation of the Undergraduate Studies Committee, Academic Council hereby approves the Major Program Modification to the Bachelor of Science in Computer Science program and the Data Science and Digital Media specializations, to amend the program map and alter the elective credit hour requirements.

### BACKGROUND/CONTEXT & RATIONALE:

The Faculty is proposing to:

- Reorganize 3000 and 4000 level Computer Science courses into areas
- Revise the program map for year 3 and 4
- Adjust the credit hour requirements for general electives

The Computer Science program map has been incrementally updated over the years, making it difficult to navigate for students, especially in Year 3/4. After consultation with Academic Advising, which captured the student perspective, and numerous discussions with the Computer Science faculty, the Faculty has determined that a better organization of senior Computer Science courses, and a more structured set of elective requirements will help the students to design their program map and the learning experience.

*For Minor Program Adjustment (information only):  
The Faculty proposed to:*

- *Add two new course options for first year students: CSCI 1062U – Accelerated Programming Workshop, and CSCI 1063U – Computer Programming Project*
- *Adjust prerequisites in CSCI 3055U and CSCI 2010U*
- *Change the program map to reflect addition of CSCI 1062U and CSCI 1063U*

*As Ontario Tech grows, the Faculty is seeing a noticeable increase in the quality of incoming students. It is necessary to update the program to account for the fact that many first year computer science students already have experience in programming and are not the intended audience for the introductory programming topics taught in CSCI 1060U. The majority of the top ranking Computer Science programs at Canadian universities offer multiple pathways for new students based on their level of competence. This program adjustment is aimed to help with retention of students who have a higher existing knowledge level of programming upon arriving at Ontario Tech.*

*By offering two paths for incoming computer science students, the program will continue to support incoming students who do not have any programming experience, preparing them to meet the learning outcomes in CSCI 1061U that are necessary for upper year courses. For students with prior programming experience, they may find the CSCI 1062U -> CSCI 1063U path to be more appropriate for their level of competence while still receiving two semesters of practical programming courses. A diagnostic test offered in the first week of CSCI 1062U will help students correctly assess whether or not they should transfer into the CSCI 1060U -> CSCI 1061U path.*

### **RESOURCES REQUIRED:**

No financial/physical resource changes expected for the Major Program Modification.

*For Minor Program Adjustment (information only):*

*Because this program adjustment is intended to filter students out of CSCI 1060U and CSCI 1061 into CSCI 1062U and CSCI 1063U, the reduced number of sections needed for those courses should mean there is not a significant resource change to offering sections for the alternate course path. Offering CSCI 1062U as a retention course in the Spring/Summer will support students who fail CSCI 1061U in Winter. It will also provide an option for students who enter the program outside of the Fall intake and are looking to acquire a necessary prerequisite for second year Computer Science courses, without waiting until the following year's offering of CSCI 1061U in Winter.*

### **TRANSITION PLAN:**

These changes come into effect in Fall 2024. The new program map impacts primarily Year 3 and 4. Furthermore, the new program map is mostly backward compatible with the previous version. There is minimal impact to students if they wish to remain in the previous program map. However, due to the user-friendliness of the new program map, we encourage all students to switch to the new program map whenever possible.

*For Minor Program Adjustment (information only):*

*Courses will be available to 2024 cohort. Earlier cohorts will have taken CSCI 1060U and CSCI 1061U and will still meet their credit requirements for graduation and for upper year course prerequisites.*

#### **CONSULTATION AND APPROVAL:**

Major Modification:

- ✓ FSc Curriculum Committee: 5 December 2023
- ✓ Faculty Council: 5 December 2023
- ✓ Undergraduate Studies Committee (Recommendation): 19 December 2023
- Academic Council (Approval): 23 January 2024

Faculty retreat discussion on November 10, 2023 and consultation with Academic Advising team on November 14, 2023.

*Minor Program Adjustment:*

- ✓ FSc Curriculum Committee: 26 October 2023
- ✓ Faculty Council: 7 November 2023
- ✓ Undergraduate Studies Committee (Approval): 21 November 2023
- Academic Council (Information): 23 January 2024

#### **NEXT STEPS:**

Pending the approval of Academic Council, the Major Modification will be included in the 2024-2025 Academic Calendar.

#### **SUPPORTING REFERENCE MATERIALS:**

For Approval:

- [Major Program Modification – Computer Science](#)
- [Major Program Modification – Computer Science, Data Science specialization](#)
- [Major Program Modification - Computer Science, Digital Media specialization](#)
- [New Course Proposal: CSCI 4052U](#)
- [New Course Proposal: CSCI 4055U](#)

For Information:

- [Minor Program Adjustment – Computer Science](#)
- [Minor Program Adjustment – Computer Science, Data Science specialization](#)
- [Minor Program Adjustment - Computer Science, Digital Media specialization](#)
- [New Course Proposal: CSCI 1062U](#)
- [New Course Proposal: CSCI 1063U](#)
- [Course Change: CSCI 1060U](#)
- [Course Change: CSCI 1061U](#)
- [Course Change: CSCI 2010U](#)
- [Course Change: CSCI 3055U](#)