

Science

*2019-2020 - UG - Major Program Modification (Remove Program or Program Component)

(A) Proposal summary

Home faculty*

Faculty of Science

Removal type*



Program



Program component

Brief summary of reason for removal*

The BSc (Hons) – Science program was designed primarily to:

be amenable to the creation of pathway/advanced entry programs increase, retention, in particular who are unsuccessful in certain higher-level core course in their discipline specific program, and be a viable option for students who do not want to specialize in a particular discipline.

Unfortunately, the above listed objectives are not being met, and there has been very little uptake in this program, through either program changes or advanced entry admissions.

Proposed semester of program or program component removal/close*

Fall 2019

Are you attaching any supporting documents?*



Yes



No

(B) Program information

Program or program component name*

Science

Program or program component description

Students are not currently being admitted to this program.

Students in the Science program must successfully complete 120 credit hours according to the following requirements.

Calendar copy*

First-year required science courses – 27 credit hours

BIOL 1010U Biology I: Molecular and Cellular Systems

[Right] or BIOL 1011U – Introductory Cell and Molecular Biology+

BIOL 1020U Biology II: Diversity of Life and Principles of Ecology

[Right] or BIOL 1021U – Introduction to Organismal Biology and Ecology+

CHEM 1010U Chemistry I

CHEM 1020U Chemistry II

MATH 1000U Introductory Calculus

[Right] or MATH 1010U – Calculus I++

MATH 1020U Calculus II

PHY 1010U Physics I

[Right] or PHY 1030U – Introductory Physics++

PHY 1020U Physics II

[Right] or PHY 1040U – Physics for Biosciences+++

CSCI 1030U Introduction to Computer Science

[Right] or CSCI 1040U – Introduction to Programming for Scientists++++

Additional core courses – 18 credit hours

These courses must include the following:

An additional second year level course (2000 series) in each of four of the six science disciplines (BIOL, CHEM, PHY, MATH, CSCI and ENVS). One of these four courses must include either [STAT 2010U – Statistics and Probability for Physical Science](#) or [STAT 2020U – Statistics and Probability for Biological Science](#).

An additional third or fourth year course (3000 or 4000 series) in each of two of the six science disciplines (BIOL, CHEM, PHY, MATH, CSCI, and ENVS).

Additional science courses – 51 credit hours

Students must successfully complete an additional 51 credit hours in courses offered by the Faculty of Science, in the areas listed below. Of these, at least 30 credit hours must be at the third (3000

series) or fourth (4000 series) year level, including at least 6 credit hours at the fourth (4000 series) year level.

Biology (BIOL);
Chemistry (CHEM);
Computing Science (CSCI);
Mathematics (MATH and STAT);
Environmental Science (ENVS);
Physics (PHY)

Liberal studies and non-science courses – 12 credit hours

Students must complete 12 credit hours in courses not taught within the Faculty of Science.

General electives – 12 credit hours

Students must complete an additional 12 credit hours in general electives. These courses may be in science or in non-science subjects.

Note:

⁺Students who wish to take upper-year Biology courses must take [BIOL 1010U](#) and [BIOL 1020U](#)

⁺⁺All students who have completed Grade 12 Advanced Functions (MHF4U) and, Calculus and Vectors (MCV4U) should take [MATH 1010U](#) and [PHY 1010U](#). Students without one of these high school courses or equivalent are directed to take [MATH 1000U](#) and [PHY 1030U](#).

⁺⁺⁺Students who wish to take upper-year physics courses must take [PHY 1020U](#). However, students who achieve a B standing or higher in [PHY 1040U](#) will be permitted to proceed to higher-level physics courses.

⁺⁺⁺⁺Students who wish to take upper-year computing science courses must take [CSCI 1030U](#).

(C) Detailed proposal information

Brief background on existing program*

The BSc (Hons) – Science program was developed in a restructuring of UOIT's BSc Physical Science program (major program modifications in 2015-16), and was designed primarily to:

be amenable to the creation of pathway/advanced entry programs increase, retention, in particular who are unsuccessful in certain higher-level core course in their discipline specific program, and be a viable option for students who do not want to specialize in a particular discipline.

The BSc (Hons) – Science program was intended to facilitate the creation of College diploma to university degree pathways. Currently, it services an advanced entry program from Durham College's three-year Pharmaceutical and Food Science Technology diploma program. This is the only advanced entry program that has been created involving the BSc (Hons) – Science program.

Similarly, the BSc (Hons) – Science program was intended to help with retention by providing students an alternative pathway to satisfying the requirements of a degree in Science. Previously, this option had been achieved through a 3-year Science pass degree (non-Honours) which was closed in 2015, as it was not providing sufficient value to the students. The broader scope of the BSc (Hons) – Science degree was also to provide an option for students who prefer to study a broader range of fields in Science.

To date, there has been one student to graduate from the BSc (Hons) Science program (Winter 2017; transferred from Chemistry program). Currently there one registered student in the program (via the Pharmaceutical and Food Science Technology Advanced Entry).

Rationale for removal of program or program component*

The above listed objectives of the BSc. (Hons) – Science program are not being met. Unfortunately, there has been very little uptake in this program, through either program changes or advanced entry admissions.

While the broader scope of the program was intended to provide students struggling in their major subject with an alternative path to complete their Bachelor of Science degree, the BSc (Hons) Science program does not provide an easily attainable route for students to achieve its degree requirements. Students switching into the program often do not have the breadth of courses required to obtain a BSc (Hons) Science degree without an additional year of study. As such, the program has not been fittingly utilized for several years. Since the creation of the BSc (Hons) – Science program, there have new institutional retention initiatives developed, such as the GAS-S program, which have reduced the need for a more generalized "completion" program. Similarly, many of the Faculty of Science programs have

undergone significant curriculum changes geared towards improving student progression and retention, particularly in Biological Science, Chemistry, Physics, and Computer Science. These changes have helped struggling students remain in their chosen major by continuing on a reduced course load, and thereby have further reduced interest and need for the BSc (Hons) – Science program. Students see a generalized Science program as more limiting in terms of future study and/or employment, and are preferring to stay in their original major subjects and utilize other academic supports available to them.

As a mechanism for pathway/advanced entry program development, there has been little uptake. Currently, the advanced entry program from Durham College's three-year Pharmaceutical and Food Science Technology diploma program is the only one. There has been little interest and enrollment in that program as well. We feel that the general nature of the program, and lack of a clear area of specialization, is not as attractive to prospective students as we originally hoped it would be.

Following review and consultation, the Faculty of Science has decided to close both the BSc (Hons) – Science program and its corresponding Advanced Entry program. The Faculty is committed to investigating other program options within our existing degrees (double majors, combined honours, embedded minors) to support breadth in learning. The Faculty also feels that, with the changes we have made to our program curriculum, new Advanced Entry programs may now be possible, and is committed to looking into their development.

Faculty members*

There are no faculty members specifically associated with the BSc (Hons) Science program, or the corresponding Advanced Entry program.

Non-academic human resources*

There is no impact on non-academic human resources with the removal of this program.

Courses*

There are no specific courses solely associated with the BSc (Hons) Science degree, or corresponding Advanced Entry program. All courses which can be applied toward the degree's requirements are core or elective courses within other Faculty of Science programs.

Students*

There is currently one student registered in the BSc (Hons) – Science through the Advanced Entry program. She is on track to graduate at the end of Winter 2019. No additional change of programs into the BSc (Hons) – Science program will be accepted as of Winter 2019. The Advanced Entry – Science program has been advertised for the 2019-2020 academic year. The Faculty of Science will honor admissions, if any, into that Advanced Entry program for the Fall 2019, after which no further applications will be accepted. As needed courses will

continue to be offered through other programs, the Faculty of Science will continue to work with any incoming or existing Advanced Entry students to complete their degree requirements.

Enrolments*

The Advanced Entry – Science program has been advertised for the 2019-2020 academic year. The Faculty of Science will honor admissions, if any, into that Advanced Entry program for the Fall 2019, after which no further applications will be accepted. As needed courses will continue to be offered through other programs, the Faculty of Science will continue to work with any incoming or existing Advanced Entry students to complete their degree requirements.

External agencies*

The closure of the Advanced Entry - Science program following the 2019-2020 academic year will be communicate to Durham College through the UOIT admissions office.

Detailed timeline*

Winter 2019 - no further Change of Program requests to the BSc (Hons) Science program, from existing students, will be accepted after this term.

Fall 2019 - no further admissions to the Advanced Entry - Science program will be processed after this terms. There are no direct admissions to the BSc (Hons) - Science outside the Advanced Entry program.

Should any new students be admitted for Fall 2019, the expected closure date for the BSc (Hons) - Science and Advanced Entry program would be Winter 2021 (final students graduating Winter 2021)

Administrative steps*

Following approval, the BSc (Hons) - Science and Advanced Entry - Science will be removed from recruitment and admissions documentation (electronic and hard copies) for the 2020-2021 academic year. Similarly, they will be removed from the 2020-2021 Undergraduate Academic Calendar.

Communication plan*

The expected program closure date will be communicated to the current student as well as any incoming students for Fall 2019. Information about the program closure has already been communicated to the Faculty of Science members.

Transition plan*

The current registered student is on track to graduate at the end of Winter 2019. Any incoming Advanced Entry students will from Fall 2019, will have access to the courses they need to complete their degree requirements as they are offered as part of other Faculty of Science programs.

Additional supporting information, if applicable

(D) Consultation

We have consulted with all impacted areas* Yes N/A

Science – Advanced Entry for Pharmaceutical and Food Science Technology graduates

***2019-2020 - UG - Major Program Modification (Remove Program or Program Component)**

(A) Proposal summary

Home faculty*

Faculty of Science

Removal type*



Program



Program component

Brief summary of reason for removal*

The BSc (Hons) – Science program was designed primarily to:

be amenable to the creation of pathway/advanced entry programs increase, retention, in particular who are unsuccessful in certain higher-level core course in their discipline specific program, and be a viable option for students who do not want to specialize in a particular discipline.

Unfortunately, the above listed objectives are not being met, and there has been very little uptake in this program, through either program changes or advanced entry admissions. Currently, this program has one advanced entry program from Durham College's three-year Pharmaceutical and Food Science Technology diploma program. Due to insufficient interest/enrolment and the program not meeting its intended objectives, the Faculty of Science is closing the BSc (Hons) - Science, and it's corresponding Advanced Entry program.

Proposed semester of program or program component removal/close*

Fall 2019

Are you attaching any supporting documents?*



Yes



No

(B) Program information

Program or program component name*

Science – Advanced Entry for Pharmaceutical and Food Science Technology graduates

**Program or
program
component
description**

Calendar copy*

General information

The Bachelor of Science (Honours) program enables students entering this pathway to receive 60 credits hours in transfer credits for their previous academic work, and will be able to complete the pathway in four terms of study. This pathway is based on the Durham College three-year Pharmaceutical and Food Science Technology diploma program, but other colleges with similar programs may also be eligible.

Admission requirements

Graduates from the Durham College three-year Pharmaceutical and Food Science Technology diploma program with an overall B average (73% average) or better, will be considered for admission to the BSc (Hons) program. Admission to the pathway is competitive based on the cumulative GPA in the diploma program. The minimum cumulative GPA for entry into the pathway could be higher on a year to year basis depending upon the demand for the pathway and the availability of space in the pathway. Once admitted to the pathway students must follow all the UOIT academic and non-academic regulations. Students approved for admission to this pathway program are accepted into a BSc (Hons) program with no specific major or concentration. Students do not have the option to transfer into other programs/concentrations.

Degree requirements

The requirements for the degree completion program are detailed in the following program map.

Year 1**Fall semester (15 credit hours)**

[Before] Elective* (Liberal Studies elective)

BIOL 2010U Human Physiology

BIOL 2030U Cell Biology

[Before] One of:

MATH 1000U Introductory Calculus

[Right] + or

MATH 1010U Calculus I

[Right] +

[Before] One of:

PHY 1010U Physics I

[Right] + or

PHY 1030U Introductory Physics

[Right] +

[After]

+All students who have completed Grade 12 Advanced Functions (MHF4U) and Calculus and Vectors (MCV4U) should take MATH 1010U and PHY 1010U. Students without one of these high school courses or equivalent are directed to take MATH 1000U and PHY 1030U.

Winter semester (15 credit hours)

[Before] Elective* (recommend BIOL 2020U or BIOL 2060U)

BIOL 3650U Fundamentals of Nutrition

MATH 1020U Calculus II

PHY 1040U Physics for Biosciences

[After] One of:

ENVS 2010U Introductory Environment Science

[Right] or

PHY 2900U Astronomy I

Year 2

Fall semester (15 credit hours)

[Before] One third-year Science elective (recommend BIOL 3610U, BIOL 3640U, BIOL 3660U, or CHEM 3140U)**

BIOL 3020U Principles of Pharmacology and Toxicology

BIOL 3080U Biochemistry II
 CSCI 1040U Introduction to Programming for
 Scientists
 STAT 2020U Statistics and Probability for Biological
 Science

Winter semester (15 credit hours)

Two or three third-year Science electives
 (recommend [BIOL 3040U](#), [CHEM 3830U](#), [ENVS 3110U](#),
[PHY 3900U](#), or [STAT 3010U](#))**

Two or three fourth-year Science electives (recommend
[BIOL 4050U](#), [BIOL 4031U](#), or [BIOL 4080U](#))**

* Elective and breadth requirements:

Students must complete 6 elective credit hours. Of these 6 credit hours, at least 3 credit hours must be a course offered outside the Faculty of Science (non-science/liberal studies elective). The remaining 3 elective credit hours must be in a general elective (offered by the Faculty of Science or outside the Faculty of Science). Students are recommended to take either [BIOL 2020U](#) or [BIOL 2060U](#) as their general elective, in order to increase the number of third and fourth year science electives open to them.

** Third and fourth year Science elective requirements:

Students must complete 18 elective credit hours in courses offered by the Faculty of Science, at the third- and fourth-year level. At least 6 of these credit hours must be at the fourth-year level. Course choices made in previous semesters may limit which courses can be taken. Students are recommended to consult with their academic advisor to determine an academic plan for their two years of study.

(C) Detailed proposal information

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 program*

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Enrolments* The Advanced Entry – Science program has been advertised for the 2019-2020 academic year. The Faculty of Science will honor admissions, if any, into that Advanced Entry program for the Fall 2019, after which no further applications will be accepted. As needed courses will continue to be offered through other programs, the Faculty of Science will continue to work with any incoming or existing Advanced Entry students to complete their degree requirements.

External agencies* The closure of the Advanced Entry - Science program following the 2019-2020 academic year will be communicate to Durham College through the UOIT admissions office.

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Transition plan* The current registered student is on track to graduate at the end of Winter 2019. Any incoming Advanced Entry students will from Fall 2019, will have access to the courses they need to complete their degree requirements as they are offered as part of other Faculty of Science programs.

Additional supporting information, if applicable

(D) Consultation

We have consulted with all impacted areas* Yes N/A



FACULTY OF SCIENCE

Memorandum

TO: Curriculum and Program Review Committee

RE: Closure of the BSc (Hons) – Science program, and corresponding Advanced Entry program.

DATE: December 2018

Upon detailed review and consideration, the Faculty of Science has decided to close the BSc (Hons) – Science program, and its corresponding Advanced Entry program. This decision has been discussed and approved at the Faculty of Science Undergraduate Curriculum Committee, and Faculty Council.

The final intake of students to the Advanced Entry – Science program will be Fall 2019. There is no direct admission to the BSc (Hons) – Science degree outside of the Advanced Entry program, but Change of Program requests from existing students will not be accepted after Winter 2019. The Faculty of Science will ensure that any existing and incoming Fall 2019 students can complete their degree requirements.

Sincerely,

A handwritten signature in black ink, appearing to read 'G. Crawford'.

Greg Crawford
Dean – Faculty of Science
University of Ontario Institute of Technology

**SCHEDULE D
PROGRAM 1.2**

Program of Study: _____ Science – Advanced Entry
 UOIT Faculty: _____ Science
 UOIT Degree: _____ Bachelor of Science (Honours)
 Year of Implementation: _____ September 2016

Durham College Requisite Programs

Ontario College Advanced diploma (3-year) program in Pharmaceutical and Food Science Technology.

Application Procedures and Natural Intake

The applicant will apply through the Ontario University Application Centre (OUAC) website utilizing the code ‘DSS’. The full-time intake is a September (fall semester) start.

Admission Requirements

- (a) Applicant shall be a graduate of a requisite program with a minimum average of “B” (73-76%) for admission consideration into the Bachelor of Science (Honours).
- (b) Applicant will be evaluated for admission to the UOIT program, recognizing that admission based on minimum admission requirements is not guaranteed, and that UOIT will give preference to the applicants with the best qualifications.

Credit Transfer Agreement

Students will receive 60 credit hours as transfer credits toward the Bachelor of Science (Honours).

Specific credits will be awarded to correctly reflect an applicant’s previous academic credential and years of study. Lists of specific credits will be on file within the Registrar’s Office. It is advised that students discuss his or her transfer credits with the applicable faculty.

The above transfer credits are equivalent to 2 years of full-time study, or 20 courses out of a 40-course honours degree, within the Bachelor of Science (Honours).

If a student changes into another degree program, all transfer credits detailed in this agreement will not apply. Prior to changing degree program, it is advised that the student discuss his or her academic program requirements with the applicable academic advisor.

Time Frame

Students can complete the Bachelor of Science (Honours), using the following schedule, assuming full-time studies:

Year	1			2	
	S1	S2	S3	S1	S2
Credit Hours	15.00	15.00		15.00	15.00
(Number of Courses)	(5)	(5)		(5)	(5)

S1 = Semester 1 (fall); S2 = Semester 2 (winter); S3 = Semester 3 (spring/summer)