

Major Program Modification Addition of Simple Pathway

Faculty: Faculty of Science	Date: October 30 th , 2015
Program: Pharmaceutical and Food Science Technology Diploma to B.Sc. (Hons) Science – Complementary Studies degree pathway	

Proposal Brief

The Faculty of Science is proposing a new pathway from the three year Pharmaceutical and Food Science Technology diploma program to the UOIT Bachelor of Science in Science – Complementary Studies program (pending approval). Students entering this pathway will receive 60 credits hours in transfer credits for their previous academic work, and will be able to complete the pathway in 4 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.

This pathway will serve to augment the technical and laboratory skills, which students have developed in the Pharmaceutical and Food Science Technology diploma program, with a broader conceptual and scientific knowledge base. Students admitted to the pathway will have the opportunity to further their knowledge and understanding in biology, chemistry, physics, environmental science, computing science, and mathematics, and examine both theoretical and practical problems in the pure and overlapping scientific fields. Graduates will have a well-developed technical skill set and scientific foundation.

All the courses in this pathway are already offered through our existing undergraduate programs. No new courses will need to be developed and offered at this time. Enrollment will be monitored and managed so new course sections will not be required to accommodate the students who are admitted to the program. Similarly, laboratory facilities are already in place for the courses in the pathway, so no additional laboratory facilities will be required. Students within the pathway have a variety of courses to select from in completing their degree requirements, so enrollment is anticipated to be spread over several courses/sections and will not have a significant impact on overall enrollment numbers.

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 B.Sc. (Hons) Science – Complementary Studies program (pending approval). 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 the B.Sc. (Hons) Science – Complementary Studies program only, and do not have the option to transfer into other programs/concentrations.

Proposed Implementation Date

The Faculty of Science is prepared to accept incoming students to this pathway program beginning the Fall 2016 academic term.

Program Map information

Transfer Credits Provided:

First-year Core Courses (12 credit hours)

BIOL 1010U Biology I

BIOL 1020U Biology II

CHEM 1010U Chemistry I

CHEM 1020U Chemistry II

Additional Science Courses (30 credit hours)

BIOL 2080U Biochemistry I

CHEM 2130U Analytical Chemistry for Bioscience

One 3rd year unspecified Chemistry course (CHEM 3XXX)

One 2nd year unspecified Biology course (BIOL 2XXX)

Four 2nd year unspecified Science courses (UNSP 2XXX – Science attribute)

Two 3rd year unspecified Science course (UNSP 3XXX – Science attribute)

General/Liberal Studies Electives (18 credit hours)

One 1st year Liberal Studies Electives (UNSP 1XXX – Liberal Studies attribute)

Two 2nd year Liberal Studies Elective (UNSP 2XXX – Liberal Studies attribute)

One 1st year General Elective (UNSP 1XXX – General elective attribute)

Two 2nd year General Electives (UNSP 2XXX – General elective attribute)

Total Transfer Credits: 60 credit hours

Pathway – Program Map (B.Sc.(Hons) Science – Complementary Studies)

Year 1

Fall Semester (15 credit hours)

MATH 1000U Introductory Calculus or MATH 1010U Calculus I

PHY 1010U Physics I or PHY 1030U Introductory Physics

BIOL 2010U Introductory Physiology

BIOL 2030U Cell Biology

Elective* (Liberal Studies Elective)

Winter Semester (15 credit hours)

MATH 1020U Calculus II

PHY 1040U Physics for Bioscience

ENVS 2010U Introductory Environmental Science OR PHY 2900U Astronomy I

BIOL 3650U Fundamentals of Nutrition****

Elective* (recommended BIOL 2020U or BIOL 2060U)**

Year 2

Fall Semester (15 credit hours)

STAT 2020U Statistics for Bioscience

CSCI 1040U Introduction to Programming for Scientists

BIOL 3020U Principles of Pharmacology and Toxicology

BIOL 3080U Biochemistry II

One 3rd year Science course (recommend BIOL 3610U, BIOL 3640U, BIOL 3660U, or CHEM 3140U)***

Winter Semester (15 credit hours)

Two or three 3rd year Science courses (recommend ENVS3110U, PHY3900U, CHEM 3830U, STAT3010U, or BIOL 3040U)***

Two or three 4th year Science courses (recommend BIOL 4050U, BIOL 4031U, or BIOL 4080U)***

***Elective Requirements:**

All pathway students must complete 6 elective credit hours (2 courses) in addition to the transfer credits acquired from their diploma. Of these 6 credit hours, at least 3 credit hours (1 course) must be offered outside the Faculty of Science (Non-Science/Liberal Studies Elective). The other 3 elective credit hours may be from either inside or outside the Faculty of Science.

****Elective:** In the winter of Year 1, the student may choose to take BIOL 2060U or BIOL 2020U as a general elective if they wish to expand the options of courses open to them in their final year of the program.

*****3rd and 4th year Science courses:**

The student must have all course prerequisites to take a course. Course choices made in previous semesters may limit which courses can be taken. All pathway students must take 27 credit hours (9 courses) at the 3rd or 4th year level, in addition to the transfer credits acquired from their diploma. Listed core 3rd year courses are included in the 27 credit hours. At least six of these credit hours (2 courses) must be at the 4th year level.

Note: If BIOL 2050 is taken in Y1 Winter, then BIOL 3060 can be taken in Y2 Winter
If BIOL 2060 is taken in Y2 Winter, then BIOL 4031 can be taken in Y2 Winter
If BIOL 2020 is taken in Y2 Winter, then BIOL 3051 can be taken in Y2 Fall,
and/or BIOL 3620U (Conservation Biology) can be taken in Y2 Winter
If BIOL 3610 is taken in Y2 Fall, then BIOL 4620 can be taken in Y2 Winter
If BIOL 3660 is taken in Y2 Fall, then BIOL 4660 can be taken in Y2 Winter

******Pre-requisites for BIOL 3650 Fundamentals of Nutrition:** Pathway students have sufficient background to take this course, and will be allowed to do so, although they have not technically satisfied the pre-requisites.

Note: No more than 42 credit hours may be at the first-year level (combination of transfer credits and degree courses).

Calendar Copy

Year 1

Fall Semester (15 credit hours)

MATH 1000U Introductory Calculus⁺ or MATH 1010U Calculus I⁺
PHY 1010U Physics I⁺ or PHY 1030U Introductory Physics⁺
BIOL 2010U Introductory Physiology
BIOL 2030U Cell Biology
Elective* (Liberal Studies Elective)

Winter Semester (15 credit hours)

MATH 1020U Calculus II
PHY 1040U Physics for Bioscience
ENVS 2010U Introductory Environmental Science OR PHY 2900U Astronomy I
BIOL 3650U Fundamentals of Nutrition
Elective* (recommended BIOL 2020U or BIOL 2060U)

⁺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.

Year 2

Fall Semester (15 credit hours)

STAT 2020U Statistics for Bioscience
CSCI 1040U Introduction to Programming for Scientists
BIOL 3020U Principles of Pharmacology and Toxicology
BIOL 3080U Biochemistry II
One 3rd year Science Elective (recommend BIOL 3610U, BIOL 3640U, BIOL 3660U, or CHEM 3140U)**

Winter Semester (15 credit hours)

Two or three 3rd year Science Electives (recommend ENVS3110U, PHY3900U, CHEM 3830U, STAT3010U, or BIOL 3040U)**
Two or three 4th 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 2060U or BIOL 2020U as their general elective, in order to increase the number of 3rd and 4th year science electives open to them.

****3rd and 4th 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.

APPROVAL DATES

Date of submission	November 2 nd , 2015
Curriculum Committee approval	November 4 th , 2015
Faculty Council approval	November 11 th , 2015
CPRC approval	December 4 th , 2015
Academic Council approval	