UNIVERSITY OF TORONTO SCARBOROUGH

OFFICE OF THE CAMPUS COUNCIL

FOR APPROVAL **PUBLIC** **OPEN SESSION**

TO: UTSC Academic Affairs Committee

SPONSOR: William Gough, Vice-Principal Academic and Dean
CONTACT INFO: 416-208-7027, vpdean@utsc.utoronto.ca

PRESENTER: Mark Schmuckler, Vice-Dean Undergraduate
CONTACT INFO: 416-208-2978, vicedean@utsc.utoronto.ca

DATE: February 6, 2018 for February 13, 2018

AGENDA ITEM: 3

ITEM IDENTIFICATION:

Minor Undergraduate Curricular Modifications [for approval]

JURISDICTIONAL INFORMATION:

University of Toronto Scarborough Academic Affairs Committee (AAC) "is concerned with matters affecting the teaching, learning and research functions of the Campus" (*AAC Terms of Reference, Section 4*). Under section 5.6 of its terms of reference, the Committee is responsible for approval of "Major and minor modifications to existing degree programs." The AAC has responsibility for the approval of Major and Minor modifications to existing programs as defined by the University of Toronto Quality Assurance Process (*UTQAP, Section 3.1*).

GOVERNANCE PATH:

1. **UTSC Academic Affairs Committee [For Approval] (February 13, 2018)**

PREVIOUS ACTION TAKEN:

No previous action in governance has been taken on this item.

HIGHLIGHTS:

This package includes minor modifications to undergraduate curriculum, submitted by the academic units identified below, which require governance approval. Minor

modifications to curriculum are understood as those that do not have a significant impact on program or course learning outcomes. They require governance approval when they modestly change the nature of a program or course.

- The Department of Biological Sciences (Report: Biological Sciences)
    - 8 minor program modifications
    - 5 new courses
- The Department of Management (Report: Management
    - 2 new courses
- The Department of Philosophy (Report: Philosophy)
    - 6 new courses

FINANCIAL IMPLICATIONS:

There are no net financial implications to the campus operating budget.

RECOMMENDATION:

Be It Resolved,

THAT the minor modifications to undergraduate programs, submitted by UTSC undergraduate academic units, described in Undergraduate Minor Curriculum Modifications for Approval, Report: Biological Sciences, dated January 25, 2018, and Undergraduate Minor Curriculum Modifications for Approval, Report: Management, dated January 25, 2018, and Undergraduate Minor Curriculum Modifications for Approval, Report: Philosophy, dated January 25, 2018, and recommended by the Vice-Principal Academic and Dean, Professor William Gough, be approved to be effective the academic year 2018-19.

DOCUMENTATION PROVIDED:

1. 2018-19 Curriculum Cycle: Undergraduate Minor Curriculum Modifications for Approval Report: Biological Sciences, dated January 25, 2018.
2. 2018-19 Curriculum Cycle: Undergraduate Minor Curriculum Modifications for Approval Report: Management, dated January 25, 2018.
3. 2018-19 Curriculum Cycle: Undergraduate Minor Curriculum Modifications for Approval Report: Philosophy, dated January 25, 2018.

UNIVERSITY OF TORONTO SCARBOROUGH

2018-19 Curriculum Cycle
Undergraduate Minor Curriculum Modifications for Approval
Report: Biological Sciences

(Revised) February 8, 2018

Biological Sciences (UTSC), Department of

8 Minor Program Modifications:

MAJOR PROGRAM IN BIOLOGY (SCIENCE)

Track Changes:

Enrolment Requirements

Students apply to the Major Program in Biology after completing a minimum of 4.0 full credits, including 1.0 credit in Biology(excluding BIOA11H3), 1.0 credit in Chemistry, and 0.5 credit in Mathematics (excluding MATA02H3) or Statistics. Students are admitted on the basis ~~and with a minimum cumulative grade point average (CGPA)~~ of academic performance ~~at least 1.85~~.

Application for admission is made to the Registrar through ACORN, in April/May and July/August. See the UTSC Registrar's website for more information on program selection at: http://www.utsc.utoronto.ca/registrar/programs .

Description of Proposed Changes:
Revised the enrolment requirements to remove the specified CGPA of 1.85 and replace it with "admitted on the basis of academic performance."

Rationale:
A specific CGPA does not provide an accurate reflection of students' abilities to complete our program; the revised enrolment requirements are more appropriate.

Impact:
It would provide a positive impact increasing the opportunity for students to be able to access our Major Program.

Consultation:
Date when the change was approved by DCC: September 7, 2017.
We have discussed this change with our Program Supervisors at our Departmental Curriculum Committee meeting and all support this change.

Resource Implications:
None.

MAJOR PROGRAM IN CONSERVATION AND BIODIVERSITY (SCIENCE)

Enrolment Requirements:
Previous:

Enrolment Requirements

Students apply to the Major Program in Conservation and Biodiversity after completing a minimum of 4.0 full credits, including 1.0 credit in Biology (excluding BIOA11H3), 1.0 credit in Chemistry, and 0.5 credit in Mathematics (excluding MATA02H3) or Statistics and with a minimum cumulative grade point average (CGPA) of at least 1.85.

Application for admission is made to the Registrar through ACORN, in April/May and July/August. See the UTSC Registrar's website for more information on program selection at: http://www.utsc.utoronto.ca/registrar/programs.

New:

Enrolment Requirements

Students apply to the Major Program in Conservation and Biodiversity after completing a minimum of 4.0 full credits, including 1.0 credit in Biology (excluding BIOA11H3), 1.0 credit in Chemistry, and 0.5 credit in Mathematics (excluding MATA02H3) or Statistics. Students are admitted on the basis of academic performance.

Application for admission is made to the Registrar through ACORN, in April/May and July/August. See the UTSC Registrar's website for more information on program selection at: http://www.utsc.utoronto.ca/registrar/programs.

Track Changes:

Enrolment Requirements

Students apply to the Major Program in Conservation and Biodiversity after completing a minimum of 4.0 full credits, including 1.0 credit in Biology(excluding BIOA11H3), 1.0 credit in Chemistry, and 0.5 credit in Mathematics (excluding MATA02H3) or Statistics. Students are admitted on the basis ~~and with a minimum cumulative grade point average (CGPA)~~ of academic performance ~~at least 1.85~~.

Application for admission is made to the Registrar through ACORN, in April/May and July/August. See the UTSC Registrar's website for more information on program selection at: http://www.utsc.utoronto.ca/registrar/programs .

Description of Proposed Changes:
Revised the enrolment requirements to remove the specified CGPA of 1.85 and replace it with "admitted on the basis of academic performance."

Rationale:
A specific CGPA does not provide an accurate reflection of students' abilities to complete our program; the revised enrolment requirements are more appropriate.

Impact:
It would provide a positive impact increasing the opportunity for students to be able to access our Major Programs.

Consultation:

Date when the changes were approved by DCC: September 7, 2017.
We have discussed this change with our Program Supervisors at our Departmental Curriculum Committee meeting and all support this change.

Resource Implications:
None.

MAJOR PROGRAM IN HUMAN BIOLOGY (SCIENCE)

Description:

Track Changes:

Supervisor :S.G ~~A~~. Reid ~~Ashok~~ *Email* : human-biology@utsc.utoronto.ca

The Major in Human Biology provides training and background in general biology with the opportunity to concentrate on courses in upper years that are related to human health. Upper year courses are available in physiology, cell and molecular biology, anatomy, microbiology, pathology, endocrinology, anthropology, psychology and biochemistry. This program is suitable for students with an interest in applied biology in health sciences or in social sciences related to human health.

Enrolment Requirements:

Track Changes:

Enrolment Requirements

Students apply to the Major Program in Human Biology after completing a minimum of 4.0 full credits, including 1.0 credit in Biology(excluding BIOA11H3), 1.0 credit in Chemistry, and 0.5 credit in Mathematics (excluding MATA02H3) or Statistics. Students are admitted on the basis ~~and~~ ~~with~~ ~~a~~ ~~minimum~~ ~~cumulative~~ ~~grade~~ ~~point~~ ~~average~~ ~~(CGPA)~~ of academic performance ~~at~~ ~~least~~ ~~1.85~~.

Application for admission is made to the Registrar through ACORN, in April/May and July/August. See the UTSC Registrar's website for more information on program selection at: http://www.utsc.utoronto.ca/registrar/programs .

Completion Requirements:

Track Changes:

Program Requirements:
This program consists of 8.5 credits.

Required Courses and Suggested Course Sequence

First Year
1. **1.0 Credit of Introductory Biology Courses**
BIOA01H3 Life on Earth: Unifying Principles
BIOA02H3 Life on Earth: Form, Function and Interactions

2. **1.0 Credit in Introductory Chemistry Courses**
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms

3. **1.0 Credit in Introductory Psychology Courses**

PSYA01H3 ~~Introductory Psychology: Part I~~ Introduction to Biological and Cognitive Psychology
PSYA02H3 ~~Introductory Psychology: Part II~~ Introduction to Clinical, Developmental, Personality and Social Psychology

4. **0.5 Credit in Mathematics or Statistics**
Choose From:
MATA29H3 Calculus I for the Life Sciences
MATA30H3 Calculus I for Physical Sciences
STAB22H3 Statistics I
PSYB07H3 Data Analysis in Psychology

Second Year
5. **2.5 Credits of Biology Core Courses**
BIOB10H3 Cell Biology
BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
[BIOB34H3 Animal Physiology or (BIOB30H3) Mammalian Physiology I]
BIOB50H3 Ecology
BIOB51H3 Evolutionary Biology

6. **0.5 Credit in a Biology Core Lab**
Choose From:
BIOB32H3 Animal Physiology Laboratory
BIOB33H3 Human Development and Anatomy

Third/Fourth Years
7. **1.5 Credits of Additional C-Level Courses**
Choose From:
BIOC10H3 Cell Biology: Proteins from Life to Death
BIOC14H3 Genes, Environment and Behaviour
BIOC15H3 Genetics
BIOC16H3 Evolutionary Genetics and Genomics
BIOC17H3 Microbiology
BIOC19H3 Animal Developmental Biology
BIOC20H3 Principles of Virology
BIOC21H3 Vertebrate Histology: Cells and Tissues
BIOC32H3 Human Physiology I
[BIOC33H3 Human Physiology II: Lecture and Laboratory or BIOC34H3 Human Physiology II: Lecture]
BIOC39H3 Immunology
BIOC54H3 Animal Behaviour
BIOC58H3 Biological Consequences of Global Change
BIOC65H3 Environmental Toxicology
NROC61H3 Learning and Motivation
NROC64H3 Sensorimotor Systems
NROC69H3 Synaptic Organisation and Physiology of the Brain

8. **0.5 Credit of Additional D-Level Biology Courses**
Choose From:
BIOD07H3 Advanced Topics and Methods in Neural Circuit Analysis
BIOD08H3 Theoretical Neuroscience
BIOD12H3 Protein Homeostasis
BIOD17H3 Seminars in Cellular Microbiology
BIOD19H3 Epigenetics in Health and Disease
BIOD20H3 Special Topics in Virology
BIOD26H3 Fungal Biology and Pathogenesis
BIOD29H3 Pathobiology of Human Disease
BIOD33H3 Comparative Animal Physiology
BIOD35H3 Sports Science
BIOD43H3 Animal Movement and Exercise
BIOD59H3 Models in Ecology and Conservation

BIOD65H3 Pathologies of the Nervous System
BIOD95H3 Supervised Study in Biology (topic must be human-related and approved by the program supervisor)
NROD66H3 Drug Addiction
NROD67H3 Psychobiology of Aging

Description of Proposed Changes:
1) Revised the enrolment requirements to removed the specified CGPA of 1.85 and replace it with "admitted on the basis of academic performance."
2) Added BIOC20H3 and BIOC54H3 as optional courses to component 7 of the completion requirements.
3) Added BIOD07H3, BIOD12H3 and BIOD20H3 as optional courses to component 8 of the completion requirements.

Rationale:
1) A specific CGPA does not provide an accurate reflection of students' abilities to complete our program; the revised enrolment requirements are more appropriate.
2) Adding these courses to the C-level bin provides students with more options to stream in courses related to human biology.
3) Adding these courses to the D-level bin provides students with more options to stream in courses related to human biology.

Impact:
None.

Consultation:
Date when the changes were approved by DCC: September 7, 2017.
We have discussed this change with our Program Supervisors at our Departmental Curriculum Committee meeting and all support this change.

Resource Implications:
No impact.

MAJOR PROGRAM IN MOLECULAR BIOLOGY, IMMUNOLOGY AND DISEASE (SCIENCE)

Enrolment Requirements:

Track Changes:

Enrolment Requirements

Students apply to the Major Program in Molecular Biology, Immunology and Disease after completing a minimum of 4.0 full credits, including 1.0 credit in Biology(excluding BIOA11H3), 1.0 credit in Chemistry, and 0.5 credit in Mathematics (excluding MATA02H3) or Statistics. Students are admitted on the basis ~~and with a minimum cumulative grade point average (CGPA)~~ of academic performance ~~at least 1.85~~.

Application for admission is made to the Registrar through ACORN, in April/May and July/August. See the UTSC Registrar's website for more information on program selection at: http://www.utsc.utoronto.ca/registrar/programs .

Completion Requirements:

Track Changes:

Program Requirements
This program consists of 8.5 ~~8.0~~ credits.

First Year

1. **1.0 Credit of Introductory Biology Courses**

BIOA01H3 Life on Earth: Unifying Principles
BIOA02H3 Life on Earth: Form, Function and Interactions

2. **1.0 Credit of Introductory Chemistry Courses**

CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms

3. **0.5 Credit in Mathematics or Statistics**

Choose from:
MATA29H3 Calculus I for the Life Sciences
MATA30H3 Calculus I for Physical Sciences
STAB22H3 Statistics I
PSYB07H3 Data Analysis in Psychology

Second Year

4. **2.5 Credits of Biology Core Courses**

BIOB10H3 Cell Biology
BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
BIOB34H3 Animal Physiology
BIOB50H3 Ecology
BIOB51H3 Evolutionary Biology

5. **0.5 Credit in a Biology Core Lab**

Choose From:
BIOB12H3 Cell and Molecular Biology Laboratory
BIOB32H3 Animal Physiology Laboratory
BIOB33H3 Human Development and Anatomy

Third/Fourth Years

6. 1.5 ~~1.0~~ Credit of Required C-level Courses

BIOC17H3 Microbiology
BIOC20H3 Principles of Virology
BIOC39H3 Immunology

7. **1.0 Credit of Additional C-level Courses**

Choose from:
BIOC10H3 Cell Biology: Proteins from Life to Death
BIOC12H3 Biochemistry I: Proteins & Enzymes
BIOC13H3 Biochemistry II: Bioenergetics and Metabolism
BIOC14H3 Genes, Environment and Behaviour
BIOC15H3 Genetics
BIOC19H3 Animal Developmental Biology
BIOC31H3 Plant Development and Biotechnology

8. **0.5 credit of Additional D-level Biology Courses**

Choose from:
BIOD12H3 Protein Homeostasis
BIOD17H3 Seminars in Cellular Microbiology
BIOD19H3 Epigenetics in Health and Disease
BIOD20H3 Special Topics in Virology
BIOD23H3 Special Topics in Cell Biology
BIOD25H3 Genomics
BIOD26H3 Fungal Biology and Pathogenesis
BIOD27H3 Molecular Endocrinology
BIOD29H3 Pathobiology of Human Disease

Description of Proposed Changes:
1) Revised the enrolment requirements to removed the specified CGPA of 1.85 and replace it with "admitted on the basis of academic performance."
2) Add BIOC20H3 as a required course to 1.0 Credit component 6 of the completion requirements; change increases total credits for the component to 1.5
3) Add BIOD12H3 and BIOD20H3 as optional courses to component 8 of the completion requirements
4) Increase total credits to complete the program from 8.0 to 8.5

Rationale:
1) A specific CGPA does not provide an accurate reflection of students' abilities to complete our program; the revised enrolment requirements are more appropriate.
2) BIOC20H3 covers a major aspect of immunology and disease and this will fill a major gap in our Program; this changes increases the total credits for the component by 0.5 credit, and for the program to 8.5 credits - this brings the program requirements in line with our other major programs.
3) Adding BIOD12H3 and BIOD20H3 as optionals courses to the existing bin provides students with more options in the area of molecular biology immunology and disease.

Impact:
No impact.

Consultation:
Date when the changes were approved by our DCC: September 7, 2017.
We have discussed this change with our Program Supervisors at our Curriculum Committee meeting and all support this change.

Resource Implications:
None.

MAJOR PROGRAM IN PLANT BIOLOGY (SCIENCE)

Enrolment Requirements:

Track Changes:

Enrolment Requirements

Students apply to the Major Program in Plant Biology after completing a minimum of 4.0 full credits, including 1.0 credit in Biology(excluding BIOA11H3), 1.0 credit in Chemistry, and 0.5 credit in Mathematics (excluding MATA02H3) or Statistics. Students are admitted on the basis ~~and with a minimum cumulative grade point average (CGPA)~~ of academic performance ~~at least 1.85~~.

Application for admission is made to the Registrar through ACORN, in April/May and July/August. See the UTSC Registrar's website for more information on program selection at: http://www.utsc.utoronto.ca/registrar/programs .

Description of Proposed Changes:
Revised the enrolment requirements to remove the specified CGPA of 1.85 and replace it with "admitted on the basis of academic performance."

Rationale:
A specific CGPA does not provide an accurate reflection of students' abilities to complete our program; the revised enrolment requirements are more appropriate.

Impact:
It would provide a positive impact increasing the opportunity for students to be able to access our Major Programs.

Consultation:

Date when the changes were approved by our DCC: September 7, 2017
We have discussed this change with our Program Supervisors at our Departmental Curriculum Committee meeting and all support this change.

Resource Implications:
None.

SPECIALIST (CO-OPERATIVE) PROGRAM IN MOLECULAR BIOLOGY AND BIOTECHNOLOGY (SCIENCE)

Completion Requirements:

Track Changes:

Program Requirements
The program requires students to complete a total of 14.5 ~~14.0~~ credits.

A. Course Requirements

First Year
1. **1.0 Credit of Introductory Biology Courses**
BIOA01H3 Life on Earth: Unifying Principles
BIOA02H3 Life on Earth: Form, Function and Interactions

2. 1.0 Credit of Introductory Chemistry Courses
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry I: Reactions and Mechanisms

3. 1.0 Credit in Mathematics
Choose from:
[MATA29H3 Calculus I for the Life Sciences and MATA35H3 Calculus II for Biological Sciences] or [MATA30H3 Calculus I for Physical Sciences and MATA36H3 Calculus II for Physical Sciences]

4. **1.0** Credit in Physics
[PHYA10H3 Physics I for the Physical Sciences or PHYA11H3 Physics I for the Life Sciences]
[PHYA21H3 Physics II for the Physical Sciences or PHYA22H3 Physics II for the Life Sciences]

5. 0.5 Credit in Statistics
Choose from:
STAB22H3 Statistics I (this course could also be taken in second year)
PSYB07H3 Data Analysis in Psychology (this course could also be taken in second year)

Second Year
6. **3.0 Credits of Biology Core Courses**
BIOB10H3 Cell Biology
BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
[BIOB34H3 Animal Physiology or (BIOB30H3) Mammalian Physiology I]
[BIOB38H3 Plants and Society or (BIOB31H3) Plant Physiology]
BIOB50H3 Ecology
BIOB51H3 Evolutionary Biology

7. 0.5 Credit of Biology Core Labs
BIOB12H3 Cell and Molecular Biology Laboratory

8. 1.0 Credit of Organic Chemistry Courses
CHMB41H3 Organic Chemistry I
CHMB42H3 Organic Chemistry II

Computer Science might be taken in this year and will enhance Co-op placement options.

Third Year
9. **3.5 ~~3.0~~ Credits of Biology C-level Courses**
BIOC12H3 Biochemistry I: Proteins and Enzymes
BIOC13H3 Biochemistry II: Bioenergetics and Metabolism
BIOC15H3 Genetics
BIOC17H3 Microbiology
BIOC20H3 Principles of Virology
BIOC23H3 Practical Approaches to Biochemistry
BIOC39H3 Immunology (can be completed in third or fourth year)

10. 0.5 Credit in Computer Science
Choose from:
CSCA08H3 Introduction to Computer Science I (most appropriate course for computer science students)
CSCA20H3 Introduction to Programming (most appropriate course for non-computer science students)
PSCB57H3 Introduction to Scientific Computing

Third/Fourth Year
11. **0.5 Credit of Cognate Biology Courses**
Choose from:
BIOC10H3 Cell Biology: Proteins from Life to Death
BIOC14H3 Genes, Environment and Behaviour
BIOC19H3 Animal Developmental Biology
BIOC21H3 Vertebrate Histology: Cells and Tissues
BIOC31H3 Plant Development and Biotechnology
BIOC40H3 Plant Physiology
BIOD37H3 Biology of Plant Stress

Fourth Year
12. **0.5 Credit in Advanced Molecular Techniques**
BIOD21H3 Advanced Molecular Biology Laboratory

13. 0.5 Credit of D-level Research-Oriented "Cell & Molecular" Course Work
Choose from:
BIOD12H3 Protein Homeostasis
BIOD17H3 Seminars in Cellular Microbiology
BIOD19H3 Epigenetics in Health and Disease
BIOD20H3 Special Topics in Virology
BIOD22H3 Molecular Biology of the Stress Response
BIOD23H3 Special Topics in Cell Biology
BIOD25H3 Genomics
BIOD26H3 Fungal Biology and Pathogenesis
BIOD27H3 Molecular Endocrinology
BIOD29H3 Pathobiology of Human Disease

BIOD30H3 Plant Research and Biotechnology: Addressing Global Problems
BIOD95H3 Supervised Study in Biology
BIOD98Y3 Directed Research in Biology
Note: Any of these courses not used to satisfy this requirement can be used to fulfill the '0.5 Credit of Cognate Biology Courses.'

Co-op Work Term Requirements

Students must satisfactorily complete two Co-op work terms, each of four-months duration. To be eligible for their first work term, students must be enrolled in the Specialist (Co-op) Program in Molecular Biology and Biotechnology and have completed at least 10.0 credits, including BIOA01H3, BIOA02H3, CHMA10H3, CHMA11H3, [(MATA20H3) and (MATA21H3)] or [MATA29H3 and MATA35H3] or [MATA30H3 and MATA36H3], [PHYA10H3 or PHYA11H3], BIOB10H3, BIOB11H3, BIOB12H3, CHMB41H3 and CHMB42H3.

In addition to their academic program requirements, Co-op students complete up to four Co-op specific courses. These courses are designed to prepare students for their job search and work term experience, and to maximize the benefits of their Co-op work terms. They cover a variety of topics intended to assist students in developing the skills and tools required to secure work terms that are appropriate to their program of study, and to perform professionally in the workplace. These courses must be completed in sequence, and are taken in addition to a full course load. They are recorded on transcripts as credit/no credit (CR/NCR) and are considered to be additive credit to the 20.0 required degree credits. No additional course fee is assessed as registration is included in the Co-op Program fee.

Co-op Preparation Course Requirements:

1. COPD01H3 – Navigating the World of Work
- Students entering Co-op from outside of UTSC (high school or other postsecondary) will complete this course in fall of their first year at UTSC
- Current UTSC students entering Co-op in April/May will complete this course in the summer term
- Current UTSC students entering Co-op in July/August will complete this course in the fall term

2. COPD03H3 – Job Search Preparation
- Prerequisite: COPD01H3
- This course will be completed eight months in advance of the first scheduled work term

3. COPD11H3 – Job Search Competition I
- Prerequisite: COPD03H3
- This course will be completed four months in advance of the first work scheduled work term

4. COPD12H3 – Job Search Competition II
- Prerequisite: COPD11H3 and one Co-op work term
- This course will be completed four months in advance of the second scheduled work term

Students must be available for work terms in each of the Fall, Winter and Summer sessions and must complete at least one of their required work terms in either a Fall or Winter session. This in turn requires that students take courses during at least one Summer session.

For information on fees, status in Co-op programs, and certification of completion of Co-op programs, see Section 6B.5 of the UTSC Calendar.

Description of Proposed Changes:
1) Add BIOC20H3 to the 3.0 Credits of Biology C-level Courses bin and increase bin to 3.5 Credits of Biology C-level Courses.
2) Add BIOD12H3 and BIOD20H3 to the 0.5 Credit of D-level Research-oriented "Cell and Molecular" Course Work bin
3) Increase program requirements from 14.0 to 14.5

Rationale:
1) BIOC20H3 covers a major aspect of molecular biology and will fill a gap in our program.
2) Adding BIOD12H3 and BIOD20H3 to the existing bin provides students with more options in the area of molecular biology.
3) To accommodate the addition of BIOC20H3 as a required course in the C-level bin. This makes the program requirements consistent with our other Specialists.

Impact:
No impact.

Consultation:
Date when the changes were approved by our DCC: September 7, 2017
We have discussed these changes with our Program Supervisors at the Departmental Curriculum Committee meeting and all support these changes.

Resource Implications:
None.

SPECIALIST PROGRAM IN HUMAN BIOLOGY (SCIENCE)

Description:

Track Changes:

Supervisor :S.G ~~A~~. Reid ~~Ashok~~ *Email* : human-biology@utsc.utoronto.ca

The Specialist in Human Biology provides a solid foundation of introductory science courses and core biology courses while emphasizing, in the upper years, issues related to human health, the nature of humans and their culture as well as the interaction of the human species with the environment. The first year of the program emphasizes introductory courses in biology, chemistry, calculus, physics and psychology. The second year of the program emphasizes core courses in cell biology, molecular biology, physiology, ecology, evolution and anatomy that provide the basis for continued specialization in the third and fourth years. The upper years of the program emphasize specialized courses in anatomy, biochemistry, endocrinology, immunology, microbiology, physiology, psychology, pathology and pathobiology. This program is suited for those students who wish to go onto health-related fields such as medicine, dentistry, nursing, pharmacy, physiotherapy and health policy/management or graduate studies in these, and other, areas such as physiology, medicine and endocrinology.

Completion Requirements:

Track Changes:

Program Requirements
This Program consists of 14.5 ~~15.5~~ credits.

Required Courses and Suggested Course Sequence

First Year
1. **1.0 credit in ~~Credit~~ ~~of~~ Introductory Biology Courses**
BIOA01H3 Life on Earth: Unifying Principles
BIOA02H3 Life on Earth: Form, Function and Interactions

2. **1.0 credit in ~~Credit~~ ~~of~~ Introductory Chemistry Courses**
CHMA10H3 Introductory Chemistry I: Structure and Bonding

CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms

3. **1.0 credit in ~~Credit~~ ~~of~~ Mathematics**
Choose one:
[MATA29H3 Calculus I for the Life Sciences and MATA35H3 Calculus II for Biological Sciences] or
[MATA30H3 Calculus I for Physical Sciences and MATA36H3 Calculus II for Physical Sciences]

4. **1.0 credit in ~~Credit~~ ~~of~~ Introductory Physics Courses**
PHYA11H3 Physics I for the Life Sciences
PHYA22H3 Physics II for the Life Sciences

5. 0.5 credit in Statistics ~~1.0~~ ~~Credit~~ ~~of~~ ~~Introductory~~ ~~Psychology~~ ~~Courses~~
Choose From ~~PSYA01H3~~ ~~Introductory~~ ~~Psychology~~:
STAB22H3 Statistics ~~Part~~ I
PSYB07H3 Data Analysis in ~~PSYA02H3~~ ~~Introductory~~ Psychology~~:~~ ~~Part~~ ~~II~~

Second Year
6. **3.0 credits in ~~Credits~~ ~~of~~ Biology Core Courses**
BIOB10H3 Cell Biology
BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
[BIOB34H3 Animal Physiology or (BIOB30H3) Mammalian Physiology I]
[BIOB38H3 Plants and Society or (BIOB31H3) Plant Physiology]
BIOB50H3 Ecology
BIOB51H3 Evolutionary Biology

7. **1.0 credit in ~~Credit~~ ~~of~~ Biology Core Labs**
BIOB32H3 Animal Physiology Laboratory
BIOB33H3 Human Development and Anatomy Laboratory

8. **1.0 credit in ~~Credit~~ ~~of~~ Organic Chemistry Courses**
CHMB41H3 Organic Chemistry I
CHMB42H3 Organic Chemistry II

Third/Fourth Years

9. 2.0 credits in ~~Credits~~ ~~of~~ C-level Biology Core Courses
Choose From:
BIOC15H3 Genetics
BIOC17H3 Microbiology
BIOC20H3 Principles of Virology
BIOC32H3 Human Physiology I
BIOC39H3 Immunology

10. 1.5 credits in ~~Credits~~ ~~of~~ Additional C-level Biology Courses
Choose From:
BIOC10H3 Cell Biology: Proteins from Life to Death
BIOC12H3 Biochemistry I: Proteins and Enzymes
BIOC13H3 Biochemistry II: Bioenergetics and Metabolism
BIOC14H3 Genes, Environment and Behaviour
BIOC16H3 Evolutionary Genetics and Genomics
BIOC19H3 Animal Developmental Biology
BIOC21H3 Vertebrate Histology: Cells and Tissues
[BIOC33H3 Human Physiology II: Lecture and Laboratory or BIOC34H3 Human Physiology II: Lecture]
BIOC40H3 Plant Physiology
BIOC58H3 Biological Consequences of Global Change
BIOC65H3 Environmental Toxicology

11. 1.0 credit in ~~Credit of~~ D-level Biology Courses
Choose From:
BIOD12H3 Protein Homeostasis
BIOD17H3 Seminars in Cellular Microbiology
BIOD19H3 Epigenetics in Health and Disease
BIOD20H3 Special Topics in Virology
BIOD26H3 Fungal Biology and Pathogenesis
BIOD27H3 Molecular Endocrinology
BIOD29H3 Pathobiology of Human Disease
BIOD33H3 Comparative Animal Physiology
BIOD35H3 Sports Science
BIOD37H3 Biology of Plant Stress
BIOD43H3 Animal Movement and Exercise
BIOD59H3 Models in Ecology and Conservation
BIOD65H3 Pathologies of the Nervous System

12. ~~0.5 Credit in Statistics~~
~~Choose From:~~
~~STAB22H3 Statistics I~~
~~PSYB07H3 Data Analysis in Psychology~~

0.5 credit ~~Credit~~ in Psychology or Health Studies
Choose From:
HLTA02H3 Foundations in ~~any B , C or D-level Psychology course, or from the~~ Health Studies I
HLTA03H3 Foundations in Health Studies II ~~courses listed below:~~
HLTB15H3 Introduction to Health Research Methodology
HLTB16H3 Introduction to Public Health
(HLTB17H3) Conceptual Models of Health
HLTB20H3 Contemporary Human Evolution and Variation
(HLTB21H3) Infectious Diseases
HLTB22H3 Biological Determinants of Health
HLTB40H3 Health Policy and Health Systems
PSYA01H3 ~~Introductory Psychology: Part I~~ Introduction to Biological and Cognitive Psychology
PSYA02H3 ~~Introductory Psychology: Part II~~ Introduction to Clinical, Developmental, Personality and Social Psychology

Description of Proposed Changes:
1. Move the 0.5 Statistics requirement from Third/Fourth year components to First Year components.
2. Move PSYA01H3 and PSYA02H3 from the First Year components to the Third/Fourth Year components (0.5 Credit in Psychology or Health Studies bin); courses change from required to optional.
3. Add BIOC20H3 to the 2.0 Credits of C-level Biology Core Courses in the Third/Fourth Year components.
4. Add BIOD12H3 and BIOD20H3 to the 1.0 Credit of D-level Biology Courses bin in the Third/Fourth Year components.
5. Add HLTA02H3 and HLTA03H3 to the 0.5 Credit in Psychology or Health Studies bin in the Third/Fourth Year components
6. Total credits to complete the program decreases from 15.5 to 14.5.

Rationale:
1. and 2. A large number of upper level biology courses require our students to build a strong foundation in statistical analyses prior to entering their third year of study. Hence statistics needed to be incorporated into 1st or 2nd year of study. To allow this change and to provide some flexibility in student schedules in the first two years of study, we have removed the PSYA01H3 and PSYA02H3 in 1st year and added them to the 0.5 Credit in Psychology or Health Studies bin.
3. A newly proposed course, BIOC20H3 (Principles of Virology), will discuss the replication strategies of pathogenic viruses as well as the development of vaccines and therapeutics against several human pathogens. Given that these topics are highly relevant to the understanding of the human biology's defense mechanisms and the pathological consequences of infection for various tissues and organs, this course is germane to student learning in the Human Biology Specialist Program. Hence, we propose the addition of BIOC20H3 as an optional requirement in this program.

4. BIOD12H3 will develop student understanding of protein folding and associated consequences for human development and disease. BIOD20H3 will help students hone their understanding of viral disease and antiviral therapeutic development. These topics are likely to be of considerable interest to students in our Human Biology Program and hence we propose adding both BIOD12H3 and BIOD20H3 to this bin.
5. As all the Health Studies courses currently listed in this bin require these two courses (HLTA02H3 and HLTA03H3) as prerequisites, this is our attempt to eliminate hidden prerequisites for our students.
6. We have reduced the program requirements to 14.5 to accommodate the move of statistics into second year and the removal of the 1.0 Credit of Introductory Psychology courses. This brings the total number of credits in line with other Specialist programs offered by the department.

Impact:
None.

Consultation:
Date when the changes were approved by our DCC: September 7, 2017
We have consulted with the Program Advisor in Health Studies as well as the Psychology Department.

Resource Implications:
No impact.

SPECIALIST PROGRAM IN MOLECULAR BIOLOGY AND BIOTECHNOLOGY (SCIENCE)

Completion Requirements:

Track Changes:

Program Requirements

This program consists of 14.5 ~~14.0~~ required credits.

First Year
1. **1.0 Credit of Introductory Biology Courses**
BIOA01H3 Life on Earth: Unifying Principles
BIOA02H3 Life on Earth: Form, Function and Interactions

2. **1.0 Credit of Introductory Chemistry Courses**
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms

3. **1.0 Credit in Mathematics**
Choose from:
[MATA29H3 Calculus I for the Life Sciences and MATA35H3 Calculus II for Biological Sciences] or
[MATA30H3 Calculus I for Physical Sciences and MATA36H3 Calculus II for Physical Sciences]

4. **1.0 Credit in Physics**
[PHYA10H3 Physics I for the Physical Sciences or PHYA11H3 Physics I for the Life Sciences]
[PHYA21H3 Physics II for the Physical Sciences or PHYA22H3 Physics II for the Life Sciences]
0.5 Credit in Statistics
Choose from:
STAB22H3 Statistics I (this course could also be taken in second year)
PSYB07H3 Data Analysis in Psychology (this course could also be taken in second year)

Second Year
5. **3.0 Credits of Biology Core Courses**
BIOB10H3 Cell Biology
BIOB11H3 Molecular Aspects of Cellular and Genetic Processes

[BIOB34H3 Animal Physiology or (BIOB30H3) Mammalian Physiology I]
[BIOB38H3 Plants and Society or (BIOB31H3) Plant Physiology]
BIOB50H3 Ecology
BIOB51H3 Evolutionary Biology

6. **0.5 Credit of Biology Core Labs**
BIOB12H3 Cell and Molecular Biology Laboratory

7. **1.0 Credit of Organic Chemistry Courses**
CHMB41H3 Organic Chemistry I
CHMB42H3 Organic Chemistry II

Third Year
8. **3.5 ~~3.0~~ Credits of Biology C-level Courses**
BIOC12H3 Biochemistry I: Proteins & Enzymes
BIOC13H3 Biochemistry II: Bioenergetics and Metabolism
BIOC15H3 Genetics
BIOC17H3 Microbiology
BIOC20H3 Principles of Virology
BIOC23H3 Practical Approaches to Biochemistry
BIOC39H3 Immunology (can be completed in third or fourth year)

9. **0.5 Credit in Computer Science**
Choose from:
CSCA08H3 Introduction to Computer Science I (most appropriate course for computer science students)
CSCA20H3 Introduction to Programming (most appropriate course for non-computer science students)
PSCB57H3 Introduction to Scientific Computing
(computer science could also be taken in an earlier year)

Third/Fourth Year
10. **0.5 Credit of Cognate Biology Courses**
Choose from:
BIOC10H3 Cell Biology: Proteins from Life to Death
BIOC14H3 Genes, Environment and Behaviour
BIOC19H3 Animal Developmental Biology
BIOC21H3 Vertebrate Histology: Cells and Tissues
BIOC31H3 Plant Development and Biotechnology
BIOC40H3 Plant Physiology
BIOD37H3 Biology of Plant Stress

Fourth Year
11. **0.5 Credit in Advanced Molecular Techniques**
BIOD21H3 Advanced Molecular Biology Laboratory

12. 0.5 credit of D-level Research-oriented "Cell & Molecular" Course Work
Choose from:
BIOD12H3 Protein Homeostasis
BIOD17H3 Seminars in Cellular Microbiology
BIOD19H3 Epigenetics in Health and Disease
BIOD20H3 Special Topics in Virology
BIOD22H3 Molecular Biology of the Stress Response
BIOD23H3 Special Topics in Cell Biology
BIOD25H3 Genomics
BIOD26H3 Fungal Biology and Pathogenesis
BIOD27H3 Molecular Endocrinology
BIOD29H3 Pathobiology of Human Disease
BIOD30H3 Plant Research and Biotechnology: Addressing Global Problems

BIOD95H3 Supervised Study in Biology
BIOD98Y3 Directed Research in Biology
Note: Any of these courses not used to satisfy this requirement may be used to fulfill the '0.5 Credit of Cognate Biology Courses'.

Description of Proposed Changes:
1) Add BIOC20H to the 3.0 Credits of Biology C-level Courses bin and increase bin to 3.5 Credits of Biology C-level Courses.
2) Add BIOD12H3 and BIOD20H3 to the 0.5 Credit of D-level Research-oriented "Cell & Molecular" Course Work bin
3) Increase program requirements from 14.0 to 14.5

Rationale:
1) BIOC20H covers a major aspect of molecular biology and will fill a gap in our program.
2) Adding BIOD12H3 and BIOD20H3 to the existing bin provides students with more options in the area of molecular biology.
3) We increased the program requirements to accommodate the addition of BIOC20H3 as a required course in the C-level bin. This makes the program requirements consistent with our other Specialist Programs.

Impact:
No impact.

Consultation:
Date when the changes were approved by our DCC: September 7, 2017.
We discussed these changes with our Program Supervisors at the Departmental Curriculum Committee meeting and all support this change.

Resource Implications:
None.

5 New Courses:

BIOB35H3: Essentials of Human Physiology

Contact Hours:

Description:

An exploration of the normal physiology of the human body. Emphasis will be placed on organ systems associated with head and neck, especially nervous, respiratory, muscular, digestive, cardiovascular, and endocrine. The interrelationship among organ systems and how they serve to maintain homeostasis and human health will also be discussed.

Prerequisites:
BIOA01H3 or BIOA11H3

Exclusions:
BIOC32H3, BIOC33H3, BIOC34H3, PSL201Y1, BIO210Y5

Note:
Priority will be given to students in the Specialist Program in Psycholinguistics (Co-op and Non co-op). Additional students will be admitted if space permits.

Breadth Requirements:
Natural Sciences

Rationale:
Students who complete the Specialist Program in Psycholinguistics at UTSC often apply for entry into a graduate program in Speech-Language Pathology. Such programs usually require (or strongly recommend) that students have completed a course in human physiology to be considered for admission (or to feel prepared to meet the academic challenges of the program). UTSC currently offers two courses in human physiology (BIOC32H3 and BIOC34H3); however, the prerequisite for both courses is animal physiology (BIOB34H3). In turn, the prerequisites for BIOB34H3 are Life on Earth:

Unifying Principles (BIOA01H3), Life on Earth: Form, Function, and Interactions (BIOA02H3), Introductory Chemistry I (CHMA10H3), and Introductory Chemistry II (CHMA11H3). Therefore, students wishing to take a course in human physiology in order to be eligible and/or well-prepared for admission into a speech-language pathology program would need to complete 5 additional courses. The proposed course (BIOB35H3) would allow students to take a course in human physiology while taking only 1 additional course (BIOA11H3; or no additional courses if they have BIOA01H3 or BIOA11H3), allowing students to meet the requirements for a human physiology course while staying focused on their core curriculum. This course may also be of interest to students looking to meet the requirements for a human physiology credit for admission into programs such as nursing, dental hygiene, audiology, and occupational therapy. Students enrolled in Health Studies may also be interested in this course to broaden their Biology background. Students in the Biology Minor may also wish to enrol in this course.

Consultation:
Date on which the course code was approved by the Registrar's Office: August 28, 2017
Date on which the proposal was approved by our DCC: September 7, 2017
This proposal was requested of Biological Sciences by the Centre for French and Linguistics for their Psycholinguistics program.
The Undergraduate Assistant in the Centre for French and Linguistics has consulted with the Program Advisor in Health Studies to see if this may be a course of interest for their students. Their DCC met on September 20, 2017 and they are in support of offering this course as an option for their students.
The Undergraduate Assistant in the Centre for French and Linguistics has also consulted with the Dean's Office (April 4, 2017), with Susan Wagner from Speech and Language Pathology UTSG (May 3, 2017), Biological Sciences (May 17, 2017) and at the CFL Retreat on August 29, 2017.

Resources:
Instruction: This course will be taught by a sessional lecturer from the Department of Biological Sciences.
The Centre for French and Linguistics will request funding from the Dean's Office.
T.A. Support: Assuming the enrolment is approximately 75 students, the estimated TA support will be 70 hours.
The Centre for French and Linguistics will request funding from the Dean's Office.
Space/Infrastructure: Other than a classroom, no additional space/infrastructure needs exist.

BIOC20H3: Principles of Virology

Contact Hours:

Description:

This course introduces viruses as infectious agents. Topics include: virus structure and classification among all kingdoms, viral replication strategies, the interactions of viruses with host cells, and how viruses cause disease. Particular emphasis will be on human host-pathogen interactions, with select lectures on antiviral agents, resistance mechanisms, and vaccines.

Prerequisites:
BIOB11H3

Exclusions:
BIO475H5, CSB351Y1, MGY378H1

Breadth Requirements:
Natural Sciences

Rationale:
Viruses are obligate intracellular parasites. Meaning viruses cannot multiply independently of a host cell, therefore, they must parasitize their host to ‘hijack’ host cell machinery to support their replication. This course will serve to establish these fundamental and distinguishing properties of viruses, including molecular mechanisms of viral infection, and host responses to infection. This course will discuss plant, animal, and human viruses, with a particular emphasis on human disease, highlighting viral pathogenesis at the cellular and organismal level, and antiviral host responses.
This course is unique as it is the only concentrated virology course offered at UTSC, thus, it is an integral component to the holistic teaching of students in 4 different programs within the Department of Biological Sciences: 1) Molecular Biology, Immunology and Disease, 2) Molecular Biology and Biotechnology, 3) Human Biology, and 4) Integrative Biology. It is designed to give students a broad overview of virology, and will serve as a prerequisite for a more selected

study in the newly proposed D-level course, 'Special Topics in Virology' (BIOD20), also taught by Dr. Guzzo. This is a subject area that Biology programs have been lacking and will fill a major gap in the current curriculum.

Consultation:
Date on which the course code was approved by the Registrar's Office: August 16, 2017
Date on which the proposal was approved by our DCC: September 7, 2017
We have discussed this new course proposal with our Program Supervisors at our curriculum committee meeting and all support this new course.

Resources:
Instruction: The course will be taught by a new, full-time, faculty member, Dr. Christina Guzzo. This course is part of Dr. Guzzo's regular teaching load.
T.A. Support: Due to the expected enrollment of 200 students, 140 hours of T.A. support is needed. The T.A. will assist the instructor with marking quizzes and midterm/final exams, as well as grades administration. This support is not included in the Department's existing T.A. budget, and will be requested. Additional TA support approved by the V-D Undergraduate and Assistant Dean, November 13, 2017.
Space/Infrastructure: The course will include one lecture per week (2 hours each), to be offered in the Fall term. No additional space/infrastructure needs exist.

BIOD07H3: Advanced Topics and Methods in Neural Circuit Analysis

Contact Hours:

Description:

This course will survey different fields in neural circuit research ranging from sensory systems to motor control. Emphasis will be placed on new methodologies used to deconstruct circuit function, including advanced functional imaging, optogenetics, anatomical reconstruction and the latest behavioural approaches.

Prerequisites:
BIOC32H3 or NROC34H3 or NROC64H3 or NROC69H3

Recommended Preparation:

Enrolment Limits:
35

Breadth Requirements:
Natural Sciences

Rationale:
The field of neural circuit analysis is rapidly expanding and is an intense area of investment by governments around the world. This course will provide students with a broad snapshot of the current state of the field and will be unique across the U of T campuses. The course would compliment and extend the breadth of the Human Biology and Neuroscience curriculum at UTSC.
The course is distinctive in that it will provide undergraduates with a state of the art understanding on how neural circuits operate and how neuroscientists dissect their function. The emphasis on new technologies for circuit analysis will provide students with a unique perspective on how modern neuroscience research is conducted.

Consultation:
Date on which course code was approved by the Registrar's Office: July 5, 2017
Date on which proposal was approved by DCC: September 7, 2017
We have discussed this new course proposal with our Program Supervisors at our curriculum committee meeting and all support this new course.
We also consulted with the Psychology Department (September 18, 2017)

Resources:
Instruction: This course will be taught by a full-time faculty member, Dr. Tod Thiele and will be part of his teaching load.
TA Support: 35 hours of TA support is needed. The TA will grade critiques and part of the exams. These hours are not included in the Department's existing TA budget, and will be requested. Additional TA support request approved by the V-

D Undergraduate and Assistant Dean, November 13, 2017.
Space/Infrastructure: This course does not require any space/infrastructure support that is not covered by the unit's budget.

BIOD12H3: Protein Homeostasis

Contact Hours:

Description:

A lecture/seminar course on the cellular mechanisms of protein quality control. Animal and plant models will be used to highlight the mechanisms of action of selected protein folding and degradation machineries critical to cell functions. Primary literature in protein homeostasis and possible consequence of malfunction in eukaryotic cells will also be discussed.

Prerequisites:
BIOC10H3 or BIOC12H3

Enrolment Limits:
35

Breadth Requirements:
Natural Sciences

Rationale:
This course will discuss mechanisms that control protein function and/or enzyme activity at the post-translational level with a focus on regulated protein folding and degradation pathways. It introduces to students the concepts and a deep understanding of the molecular machineries that collectively control the function and fate of most cellular proteins after synthesis. Proteins are the macromolecules that drive most of the cellular processes, and their general structures, functions and cellular distributions are discussed in several B- and C-level courses. This D-level course will expand the students' knowledge base and further their understanding of the complicated regulation on protein structure and function in the field of protein biochemistry.

This new course will provide an opportunity for students who want to deepen their understanding of the field of protein biochemistry that was introduced in BIOB11 and further advanced in two C-level courses BIOC12 and BIOC10. Class presentation and discussion as well as proposal writing will also train students on how to work in a team and independently to develop critical reading and thinking skills and enhance their ability to synthesize ideas.

Modern biochemical, biophysical and molecular biology techniques will also be introduced to students in this D-level course and this will benefit students who want to work in the field of protein biochemistry after graduation. Individual and group work will be emphasized and class size will therefore be consistent with our lecture/seminar/discussion fourth year courses and expected to be a maximum of 35 students.

The course will introduce mechanisms that control protein homeostasis at the molecular and atomic levels, discuss potential outcomes of unbalanced protein homeostasis, and train students on critical thinking by reading and criticizing primary literature. This course will prepare students for graduate studies as well as provide the necessary background for future careers in the field of protein biochemistry, molecular biology and biotechnology. It will fill an important niche in programs such as Molecular Biology and Biotechnology, Molecular Biology, Immunology and Disease, Human Biology and Integrative Biology.

Consultation:
Date on which course code was approved by the Registrar's Office: August 16, 2017
Date on which proposal was approved by DCC: September 7, 2017

We have discussed this new course proposal with our Program Superivsors at our Departmental Curriculum Committee meeting and all suppor this new course.

Resources:
Instructor: The course will be taught by an existing faculty member, Dr. Rongmin Zhao. Currently, Dr. Zhao is teaching BIOC12H3 and BIOC23H3.
It is expected that BIOC23H3 will be either taught on overload by another faculty member, or a future new hire or sessional lecturer. The additional stipend was approved by the V-D Undergraduate on December 1, 2017.

T.A. Support: 35 hours of T.A. support is needed. The T.A. will assist the instructor with marking assignments, term test, final exams, and the student presentations. This support is not included in the Department's existing T.A. budget, and will be requested. Additional TA support request approved by V-D Undergraduate and Assistant Dean, November 13, 2017.

Space/Infrastructure: The course will include one lecture section per week (2 hours), as well as a one-hour tutorial section. A classroom that can accommodate 35 students is required.

BIOD20H3: Special Topics in Virology

Contact Hours:

Description:

This is a lecture/seminar course that will discuss advanced topics in human virology. The course focus will be on human viruses, pathogenicity in human hosts, and current literature on emerging pathogens.

Prerequisites:
BIOC20H3

Exclusions:
MGY440H1

Enrolment Limits:
35

Breadth Requirements:
Natural Sciences

Rationale:
This course will offer advanced study in Virology, subsequent to student's completion of the newly proposed 'Principles in Virology' C-level course (BIOC20H3) that will also be taught by Dr Guzzo. This course will discuss advanced topics in human virology, with a particular emphasis on current scientific literature and related laboratory techniques. The course focus will be on human viruses, pathogenicity in human hosts, and current events in emerging/re-emerging pathogens. Studies of emerging/re-emerging pathogens will be used to emphasize the importance of science in society and in the daily lives of students. There will be considerable flexibility for students to guide topics of group study based on collective interest of the class, hopefully generating genuine and intrinsic reward for term work performed. Optional participation studies will guide students to science outreach activities, where they can apply their scientific knowledge to the education of others, practicing communication skills while also developing a sense of responsibility for science communication.
This course will be of interest to students in 5 different programs within the Department of Biological Sciences: 1) Molecular Biology, Immunology and Disease, 2) Molecular Biology and Biotechnology, 3) Human Biology (Major and Specialist), and 4) Integrative Biology. It is designed to give students a deeper sense of primary research in virology, with attention to select laboratory techniques, in anticipation that many students in the class will be better informed of the role of science in society, and may pursue graduate studies in related fields. Students will develop critical thinking skills that can be applied to life-long learning endeavours.The course fills a gap in the current curriculum for upper year students.

Consultation:
Date on which course code was approved by the Registrar's Office: August 16, 2017
Date on which proposal was approved by DCC: September 7, 2017
We have discussed this new course proposal with our Program Supervisors at our departmental curriculum committee meeting and all support this new course.

Resources:
Instructor: The course will be taught by a new, full-time, faculty member, Dr. Christina Guzzo. This course is part of Dr. Guzzo's teaching load.
T.A. Support: Due to the expected enrollment of 35 students, 35 hours of T.A. support is needed. The T.A. will assist the instructor with group project support (1hr per week in class), marking participation assignments and the final exam, as well as grades administration. This support is not included in the Department's existing T.A. budget, and will be requested. Additional TA support request approved by V-D Undergraduate and Assistant Dean, November 13, 2017.
Space/Infrastructure: The course will include one lecture per week (2 hours each), ideally in the Winter term. No additional space/infrastructure needs exist.

UNIVERSITY OF TORONTO SCARBOROUGH

2018-19 Curriculum Cycle
Undergraduate Minor Curriculum Modifications for Approval
Report: Management

January 25, 2018

Management (UTSC), Department of

2 New Courses:

MGEC22H3: Behavioural Economics

Contact Hours:

Description:

Intermediate level development of the principles of behavioural economics. Behavioural economics aims to improve policy and economic models by incorporating psychology and cognitive science into economics. The course will rely heavily on the principles of microeconomic analysis.

Prerequisites:
MGEB02H3

Recommended Preparation:
Grade B or higher in MGEB02H3. MGEC02H3 and the basics of game theory would be helpful.

Enrolment Limits:
20

Note:
Priority will be given to students who have completed MGEC02H3.

Breadth Requirements:
Social & Behavioural Sciences

Rationale:
Behavioural economics is now a standard subfield of economics that studies how actual decision making deviates from the stylized models that characterize standard economics. It has significantly influenced public policy, both informally and formally. It presents its own challenges regarding welfare assessment, and has applications in numerous subfields of economics such as industrial organization, finance, development economics, macroeconomics, etc.
The proposed course will fill an academic gap in the current offerings in Economics for Management Studies. Given behavioural economics' prominent and important position in the field, and that many fields of application of behavioural economics relate to managerial decision making (e.g. loss-framed contracts, curse of knowledge, behaviour in social dilemmas) our current offerings are incomplete.

Consultation:
Within the academic unit, including the DCC, Hugh Laurence, Vice Chair, Management, Michael Krashinsky, Area Coordinator, Economics (Business Economics), Pankaj Aggarwal, Area Coordinator, Marketing, Sam Maglio (Marketing), as well as Julie McCarthy (HR/OB). Proposal was approved by the DCC on September 22, 2017.
Course code approved by Registrar's Office on October 2, 2017.

Resources:
TA for general course assistance will be calculated at 85% of the enrollment if enrollment exceeds 30. This will be covered by the unit's existing budgets.

MGSD40H3: Principles of Corporate Social Responsibility

Contact Hours:

Description:

This course will examine the role of business in society including stakeholder rights and responsibilities, current important environmental and social issues (e.g., climate change, ethical supply chains, etc.) and management practices for sustainable development. It is designed for students who are interested in learning how to integrate their business skills with a desire to better society.

Prerequisites:
Completion of 10.0 credits, including MGTA05H3 or [MGTA01H3 and MGTA02H3]

Corequisites:

Enrolment Limits:
30

Breadth Requirements:
History, Philosophy & Cultural Studies

Rationale:
Understanding sustainability issues is a vital core competence for tomorrow's business leaders.Corporate social responsibility and sustainability is a topic of significant importance and interest in current society, and it is common for businesses to consider, act, and communicate to their stakeholders how they will address their social and environmental impacts. Interest in sustainability has manifested itself at the undergraduate level at Canadian universities, and many business programs offer courses in sustainability. The proposed course therefore fills a gap in the offerings at UTSC.

Consultation:
Proposal approved by DCC: May 16, 2017. Registrar's office course code approved on September 22, 2017.

Resources:
This course will be taught by a part- time or sessional faculty with expertise in the area of study. The field of corporate social responsibility is continually evolving, and students will receive the most benefit from instructors who can bring current real life experience into the classroom. The costs associated with this will covered by the unit's existing budgets.

UNIVERSITY OF TORONTO SCARBOROUGH

2018-19 Curriculum Cycle
Undergraduate Minor Curriculum Modifications for Approval
Report: Philosophy

January 25, 2018

Philosophy (UTSC), Department of

6 New Courses:

PHLC07H3: Death and Dying

Contact Hours:
Lecture: 3

Description:

An intermediate-level study of the ethical and legal issues raised by death and dying. Topics may vary each year, but could include the definition of death and the legal criteria for determining death, the puzzle of how death can be harmful, the ethics of euthanasia and assisted suicide, the relationship between death and having a meaningful life, and the possibility of surviving death.

Prerequisites:
Any 4.5 credits and [an addtional 1.5 credits in PHL courses, of which 0.5 credit must be from the Value Theory area of focus, see Table 1.0 for reference]

Exclusions:
PHL381H1

Breadth Requirements:
History, Philosophy & Cultural Studies

Rationale:
The study of death and dying has been growing in prominence as a philosophical sub-discipline, but existing course offerings do not provide an in-depth study of the issue. UTSG and UTM both offer a death and dying course, and we have received many requests from our students to have a similar course. So beyond being an important topic in contemporary philosophy, there is high demand for this course from our students. This topic is also pertinent to students wishing to focus in Bioethics, and we envision the course to be a core requirement of a minor program in Bioethics, which is currently under development for proposal.

Consultation:
Approved by the curriculum committee on September 26, 2017. The course code was approved on October 3, 2017.

Resources:
No additional resources required.

PHLC10H3: Topics in Bioethics

Contact Hours:
Lecture: 3

Description:

An intermediate-level study of bioethical issues. This course will address particular issues in bioethics in detail. Topics will vary from year to year, but may include such topics as reproductive ethics, healthcare and global justice, ethics and mental health, the patient-physician relationship, or research on human subjects.

Prerequisites:
Any 4.5 credits and [an addtional 1.5 credits in PHL courses, of which 0.5 credit must be from the Value Theory area of focus, see Table 1.0 for reference]

Recommended Preparation:
PHLB09H3 is strongly recommended

Breadth Requirements:
History, Philosophy & Cultural Studies

Rationale:
There is currently no successor to the department's introductory-level study of biomedical ethics. A topics in bioethics class will create the opportunity for students to further develop their understanding of bioethics. The introductory biomedical ethics class is in high demand (with enrolments around 600-700 per year). An intermediate level class will help meet strong student interest in this philosophical subfield. Importantly, this C-level Bioethics course is also envisioned as part of the core requirements of a minor program in Bioethics that is currently under development for proposal.

Consultation:
Approved by the curriculum committee on September 26, 2017. The course code was approved on October 3, 2017.

Resources:
No additional resources required.

PHLC31H3: Topics in Ancient Philosophy: Plato

Contact Hours:
Lecture: 3

Description:

This course examines the foundational work of Plato in the major subject areas of philosophy: ethics, politics, metaphysics, theory of knowledge and aesthetics.

Prerequisites:
Any 4.5 credits and [an additional 1.5 credits in PHL courses, of which 0.5 credit must be from the History of Philosophy area of focus, see Table 1.0 for reference]

Exclusions:
PHL303H1

Recommended Preparation:
PHLB31H3 is strongly recommended

Breadth Requirements:
History, Philosophy & Cultural Studies

Rationale:
Ancient Philosophy is foundational for the study of Philosophy. We have not had specialized C and D level courses in Ancient Philosophy at UTSC because we did not have a faculty member whose specialization was in Ancient Philosophy. We are hiring an assistant professor (tenure track) this year with the aim of offering thorough grounding in Ancient Philosophy for philosophy students in all three of our programs – especially our major and specialist programs, but for the minor program as well. We are replacing our one C level course 'PHLC32H3: Ancient Philosophy' with two more in-depth

courses appropriate for the study of philosophy 'PHLC31H3: Topics in Ancient Philosophy: Plato' and 'PHLC32H3: Topics in Ancient Philosophy: Aristotle'.

Consultation:
Approved by the curriculum committee on September 26, 2017. The course code was approved on October 3, 2017.

Resources:
No resources required.

PHLD09H3: Advanced Seminar in Bioethics

Contact Hours:
Lecture: 3

Description:

This advanced seminar will delve deeply into an important topic in bioethics. The topics will vary from year to year. Possible topics include: a detailed study of sperm and ovum donation; human medical research in developing nations; informed consent; classification of mental illness.

Prerequisites:
3.5 credits in PHL courses, including [PHLC10H3 and 0.5 credit at the C-level]

Breadth Requirements:
History, Philosophy & Cultural Studies

Rationale:
Currently there is only one B-level course in bioethics at UTSC. Along with our two proposed C-level courses (‘Death and Dying’ and ‘Topics in Bioethics’), this D-level advanced seminar will address the growing student demand for courses in this field, while also providing a linear trajectory for course selection. As a D-level advanced seminar, this course will offer students an opportunity to focus on a topic in bioethics at an advanced level. Importantly, we envision this course to be a core requirement of a minor program in Bioethics, which is currently under development for proposal.

Consultation:
Approved by the curriculum committee on September 26, 2017. The course code was approved on October 3, 2017.

Resources:
No additional resources required.

PHLD31H3: Advanced Seminar in Ancient Philosophy

Contact Hours:
Lecture: 3

Description:

This course offers in-depth examination of selected topics from the philosophy of Plato and Aristotle, as well as the Epicurean and Stoic schools of thought. Topics will range from the major areas of philosophy: metaphysics, epistemology, ethics, politics and aesthetics.

Prerequisites:
3.5 credits in PHL courses, including [PHLC31H3 or PHLC32H3] and an additional 0.5 credit at the C-level

Recommended Preparation:
It is strongly recommended that students take both PHLC31H3 and PHLC32H3.

Breadth Requirements:
History, Philosophy & Cultural Studies

Rationale:
Ancient Philosophy is foundational for the study of philosophy. We have not had an advanced D level course in Ancient Philosophy at UTSC because we have not had a faculty member whose specialization was in Ancient Philosophy. We are hiring an assistant professor (tenure track) this year with the aim of offering thorough grounding in Ancient Philosophy for

philosophy students in all three of our programs – especially our major and specialist programs, but for the minor program as well. The Advanced Seminar in Ancient Philosophy PHLD32 will focus on key topics in the philosophy of Plato and Aristotle, and it will also provide the opportunity to study other major schools in Hellenistic Philosophy such as Epicurianism and Stoicism.

Consultation:
Approved by the curriculum committee on September 26, 2017. The course code was approved on October 3, 2017.

Resources:
None.

PHLD36H3: Advanced Seminar in Empiricism

Contact Hours:
Lecture: 3

Description:

In this course, we will explore in depth certain foundational topics in the philosophy of Berkeley and Hume, with an eye to elucidating both the broadly Empiricist motivations for their approaches and how their approaches to key topics differ. Topics may address the following questions: Is there a mind-independent world? What is causation? Is the ontological or metaphysical status of persons different from that of ordinary objects? Does God exist?

Prerequisites:
3.5 credits in PHL courses, including [PHLC36H3 and an additional 0.5 credit at the C-level]

Breadth Requirements:
History, Philosophy & Cultural Studies

Rationale:
The department currently has an advanced seminar in Rationalism (PHLD35H3), but no corresponding advanced seminar in Empiricism. This course will build upon PHLC36H3, and offer students the opportunity to study these topics at a more advanced level. Additionally, this will increase the department's number of available D-level courses, thereby offering students greater course selection while improving their ability to meet program requirements.

Consultation:
Approved by the curriculum committee on September 26, 2017. The course code was approved on October 3, 2017.

Resources:
None.