FOR INFORMATION **PUBLIC** **OPEN SESSION**

TO: UTSC Academic Affairs Committee

SPONSOR: Prof. William Gough, Vice-Principal Academic and Dean
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PRESENTER: Prof. Katherine Larson: Vice-Dean Teaching, Learning & Undergraduate Programs
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DATE: March 16, 20222 for March 23, 2022

AGENDA ITEM: 8

ITEM IDENTIFICATION:

Minor Modification, Undergraduate Curriculum Changes – Humanities, Sciences, Management UTSC

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, 2021, Section 4*)." Under section 5.7 of its *Terms of Reference*, the Committee "receives annually from its assessors, reports on matters within its areas of responsibility."

GOVERNANCE PATH:

1. **UTSC Academic Affairs Committee [For Information] (March 23, 2022)**

PREVIOUS ACTION TAKEN:

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

HIGHLIGHTS:

The Office of the Vice-Principal Academic and Dean reports, for information, all curricular changes that do not impact program and course learning outcomes or mode of delivery. These include, but are not limited to:

- Adding, deleting or moving an optional course in a program;

- Adding, deleting or moving a required course in a program, as long the change does not alter the nature of the program;
- All course deletions; and
- Changes to course level and/or designator, requisites, enrolment limits and breadth requirement categories.

This package includes minor modifications to the undergraduate curriculum, submitted by the academic units identified below. The changes are in effect as of Fall 2022, for the 2022-23 academic year.

- The Department of Biological Sciences
    - 5 program changes
        - SPECIALIST (CO-OPERATIVE) PROGRAM IN MOLECULAR BIOLOGY AND BIOTECHNOLOGY (SCIENCE)
        - SPECIALIST PROGRAM IN CONSERVATION AND BIODIVERSITY (SCIENCE)
        - SPECIALIST PROGRAM IN HUMAN BIOLOGY (SCIENCE)
        - SPECIALIST PROGRAM IN INTEGRATIVE BIOLOGY (SCIENCE)
        - SPECIALIST PROGRAM IN MOLECULAR BIOLOGY AND BIOTECHNOLOGY (SCIENCE)
- The Department of Computer and Mathematical Sciences
    - 1 program change
        - SPECIALIST PROGRAM IN COMPUTER SCIENCE (SCIENCE)
    - 10 course changes
- The Department of Historical and Cultural Studies
    - 1 program change
        - MINOR PROGRAM IN CLASSICAL STUDIES (ARTS)
    - 32 course changes
- The Department of Language Studies
    - 6 program changes
        - MINOR PROGRAM IN ENGLISH AND CHINESE TRANSLATION (ARTS)
    - 9 course changes
- The Department of Management
    - 4 course changes
    - 2 course deletions
        - MGIC14H3
        - MGOD30H3
- The Department of Physical and Environmental Sciences
    - 2 program changes
        - MAJOR PROGRAM IN ENVIRONMENTAL STUDIES (ARTS)
        - MAJOR PROGRAM IN PHYSICAL SCIENCES (SCIENCE)
    - 1 course change

FINANCIAL IMPLICATIONS:

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

RECOMMENDATION:

This item is presented for information only.

DOCUMENTATION PROVIDED:

1. 2022-23 Curriculum Cycle: Undergraduate Minor Curriculum Modifications for Information Report: Minor Curriculum Modifications for Information, dated March 23, 2022

UNIVERSITY OF TORONTO SCARBOROUGH

2022-23 Curriculum Cycle
Undergraduate Minor Curriculum Modifications for Information
Report: Minor Curriculum Modifications for Information

March 23, 20222

Biological Sciences (UTSC), Department of

5 Minor Program Modifications:

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

Completion Requirements:

Program Requirements
The program requires students to complete a total of 14.5 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 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
[MATA35H3 Calculus II for Biological Sciences or 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 the second year)
PSYB07H3 Data Analysis in Psychology (this course could also be taken in the 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
BIOB38H3 Plants and Society
BIOB50H3 Ecology
BIOB51H3 Evolutionary Biology

BIOB90H3 Integrative Research Poster Project (CR/NCR 0.0 credit)*

* **Note** : Completion of BIOB90H3 is a graduation requirement for students in this program. Concurrent enrolment in at least one of the BIO B-level courses listed above is required for enrolment in BIOB90H3. Please see BIOB90H3 in the Calendar for important information.

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

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

Third Year

9. 3.5 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)

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
BIOC35H3 Principles of Parasitology
BIOC40H3 Plant Physiology
BIOC70H3 An Introduction to Bias in the Sciences
BIOD37H3 Biology of Plant Stress

BIOC90H3 Integrative Multimedia Documentary Project (CR/NCR 0.0 credit)*

* **Note** : Completion of BIOC90H3 is a graduation requirement for students in this program. Concurrent enrolment in one of the participating BIO C-level courses is required for enrolment in BIOC90H3. Please see BIOC90H3 in the Calendar for important information.

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
BIOD13H3 Herbology: The Science Behind Medicinal Plants
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 Vertebrate 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, [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. COPB50H3/(COPD01H3) – Foundations for Success in Arts & Science Co-op
- Students entering Co-op from outside of UTSC (high school or other postsecondary) will complete this course in Fall or Winter of their first year at UTSC. Enrolment in each section is based on admission category: Typically, students in Computer Science, Mathematics and Statistics enroll in the Fall semester while all other Arts & Science Co-op admission categories enroll in the Winter semester however this may vary year to year.
- Current UTSC students entering Co-op in April/May will complete this course in the Summer semester.
- Current UTSC students entering Co-op in July/August will complete this course in the Fall semester.

2. COPB51H3/(COPD03H3) – Preparing to Compete for your Co-op Work Term
- This course will be completed eight months in advance of the first scheduled work term.

3. COPB52H3/(COPD11H3) – Managing your Work Term Search & Transition to Work
- This course will be completed four months in advance of the first work scheduled work term.

4. COPC98H3/(COPD12H3) – Integrating Your Work Term Experience Part I
- This course will be completed four months in advance of the second scheduled work term.

5. COPC99H3/(COPD13H3) – Integrating Your Work Term Experience Part II
- This course will be completed four months in advance of the third scheduled work term (for programs that require the completion of 3 work terms and/or four months in advance of any additional work terms that have been approved by the

Arts and Science Co-op Office.

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

For information on fees, status in Co-op programs, and certification of completion of Co-op programs, see the 6B.5 Co-operative Programs section or the Arts and Science Co-op section in the UTSC *Calendar* .

Description of Proposed Changes:
1. Minor change to Math requirement, allowing students to combine one Calculus I and II course option rather than requiring 2 courses from each.
2. Adding BIOC70H3 (An Introduction to Bias in the Sciences) as options to: #11. 0.5 Credit of Cognate Biology Courses

Rationale:
1. The department has elected to allow students to combine any Calculus Part I course with any Calculus Part II course in order to allow for more flexibility in course enrolment and to mitigate any confusion around the current language in our calendar entry.
2. Adding BIOC70H3 (An Introduction to Bias in the Sciences) as an option:
BIOC70H3 requires students to engage in understanding scientific racism, colonialism in the exploitation and experimentation on marginalized groups, and how biases in STEMM can underpin racism. We believe that these are essential topics for consideration in all of our programs of study.

Impact:
1. This will provide students with greater flexibility and guidelines for their timetables and program completion.
2. The addition of this course will provide students with an additional C-level option.

Consultation:
DCC Approval: September 10, 2021

Resource Implications:
None.

SPECIALIST PROGRAM IN CONSERVATION AND BIODIVERSITY (SCIENCE)

Completion Requirements:

Program Requirements
This program consists of 14.5 required credits.

A. Required Courses

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 or MATA30H3 ~~and~~ ~~MATA35H3~~ Calculus I ~~II~~ for Physical ~~Biological~~ Sciences]
and ~~or~~
[MATA35H3 ~~MATA30H3~~ Calculus II ~~I~~ for Biological ~~Physical~~ Sciences or ~~and~~ MATA36H3 Calculus II for

Physical Sciences]

4. 0.5 Credit in Physics
Choose from:
PHYA10H3 Physics I for the Physical Sciences
PHYA11H3 Physics I for the Life Sciences

5. 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)

Second Year
6. 3.0 Credits of Biology Core Courses
BIOB10H3 Cell Biology
BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
BIOB34H3 Animal Physiology
BIOB38H3 Plants and Society
BIOB50H3 Ecology
BIOB51H3 Evolutionary Biology

BIOB90H3 Integrative Research Poster Project (CR/NCR 0.0 credit)*
* **Note** : Completion of BIOB90H3 is a graduation requirement for students in this program. Concurrent enrolment in at least one of the BIO B-level courses listed above is required for enrolment in BIOB90H3. Please see BIOB90H3 in the Calendar for important information.

7. 0.5 Credit of Biology Core Labs
BIOB52H3 Ecology and Evolutionary Biology Laboratory

8. 0.5 Credit in Statistics
Choose from:
STAB22H3 Statistics I
PSYB07H3 Data Analysis in Psychology

Third Year
9. 2.5 Credits of C-level Ecology and Evolution Foundation Courses
BIOC16H3 Evolutionary Genetics and Genomics
BIOC50H3 Macroevolution
BIOC52H3 Field Ecology
BIOC61H3 Community Ecology and Environmental Biology
BIOC63H3 Conservation Biology

Third/Fourth Year
10. 4.0 credits of C- & D-level courses from Bins 1 and 2 below. This must include at least 1.0 credit from each bin and at least 1.0 credit total at the D-level.

Bin 1: C- & D-level Ecology and Evolution Courses
Choose from:
BIOC51H3 Tropical Biodiversity Field Course
BIOC58H3 Biological Consequences of Global Change
BIOC60H3 Winter Ecology
BIOC65H3 Environmental Toxicology
(BIOC67H3) Inter-University Biology Field Course
BIOD25H3 Genomics
BIOD52H3 Biodiversity and Conservation
BIOD54H3 Applied Conservation Biology
BIOD55H3 Experimental Animal Behaviour
BIOD59H3 Models in Ecology, Epidemiology and Conservation
BIOD60H3 Spatial Ecology

BIOD62H3 Symbiosis: Interactions Between Species
BIOD63H3 From Individuals to Ecosystems: Advanced Topics in Ecology
BIOD66H3 Causes and Consequences of Biodiversity
BIOD67H3 Inter-University Biology Field Course
EESC04H3 Biodiversity and Biogeography

Bin 2: C- & D-level Organismal Biology Courses
Choose from:
BIOC29H3 Introductory Mycology
BIOC37H3 Plants: Life on the Edge
BIOC40H3 Plant Physiology
BIOC54H3 Animal Behaviour
BIOC59H3 Advanced Population Ecology
BIOC62H3 Role of Zoos and Aquariums in Conservation
BIOC70H3 An Introduction to Bias in the Sciences
BIOD26H3 Fungal Biology & Pathogenesis
BIOD34H3 Conservation Physiology
BIOD37H3 Biology of Plant Stress
BIOD43H3 Animal Movement and Exercise
BIOD45H3 Animal Communication
BIOD48H3 Ornithology
BIOD53H3 Special Topics in Animal Behaviour
EESC30H3 Environmental Microbiology

BIOC90H3 Integrative Multimedia Documentary Project (CR/NCR 0.0 credit)*
* **Note** : Completion of BIOC90H3 is a graduation requirement for students in this program. Concurrent enrolment in one of the participating BIO C-level courses is required for enrolment in BIOC90H3. Please see BIOC90H3 in the Calendar for important information.

B. Senior Research Courses (optional)
Students interested in graduate research are encouraged to take one or more of the independent research courses offered in Biological Sciences as part of their degree.
BIOD95H3 Supervised Study in Biology
BIOD98Y3 Directed Research in Biology
BIOD99Y3 Directed Research in Biology

Description of Proposed Changes:
1. Minor change to Math requirements, allowing students to combine one Calculus I and II course option rather than requiring 2 courses from each.
2. Adding BIOC29H3 (Introductory Mycology) and BIOC70H3 (An Introduction to Bias in the Sciences) as options to: #10. 4.0 credits of C- & D-level courses from Bins 1 and 2 below. Bin 2: C- & D-level Organismal Biology Courses

Rationale:
1. The department has elected to allow students to combine any Calculus Part I course with any Calculus Part II course in order to allow for more flexibility in course enrolment and to mitigate any confusion around the current language in our calendar entry.
2. Adding BIOC29H3 (Introductory to Mycology) as an option: BIOC29H will consider the unique features of organisms in the kingdom, Fungi. This taxonomic group is currently not included in our programs and both the Integrative Biology and Conservation and Biodiversity Program students would benefit greatly by expanding their organismal knowledge to include Fungi, as discussed in this new course.
Adding BIOC70H3 (An Introduction to Bias in the Sciences) as an option: This course requires students to engage in understanding scientific racism, colonialism in the exploitation and experimentation on marginalized groups, and how biases in STEMM can underpin racism. We believe that these are essential topics for consideration in all of our programs of study.

Impact:

1. It will provide students with greater flexibility and guidelines for their timetables and program completion.
2. These two courses will provide students with additional options.

Consultation:
DCC Approval: September 10, 2021.

Resource Implications:
None

SPECIALIST PROGRAM IN HUMAN BIOLOGY (SCIENCE)

Completion Requirements:

Program Requirements
This Program consists of 15.0 credits.

Required Courses and Suggested Course Sequence

First Year
1. 1.0 credit in 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 Mathematics
[MATA29H3 Calculus I for the Life Sciences or MATA30H3 ~~and~~ ~~MATA35H3~~ Calculus I ~~II~~ for Physical ~~Biological~~ Sciences]
and ~~or~~
[MATA35H3 ~~MATA30H3~~ Calculus II ~~I~~ for Biological ~~Physical~~ Sciences or ~~and~~ MATA36H3 Calculus II for Physical Sciences]

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

5. 0.5 credit in Statistics
Choose From:
STAB22H3 Statistics I
PSYB07H3 Data Analysis in Psychology

Second Year
6. 3.0 credits in Biology Core Courses
BIOB10H3 Cell Biology
BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
BIOB34H3 Animal Physiology
BIOB38H3 Plants and Society
BIOB50H3 Ecology
BIOB51H3 Evolutionary Biology

BIOB90H3 Integrative Research Poster Project (CR/NCR 0.0 credit)*
* **Note** : Completion of BIOB90H3 is a graduation requirement for students in this program. Concurrent enrolment in at least one of the BIO B-level courses listed above is required for enrolment in BIOB90H3. Please see BIOB90H3 in the Calendar for important information.

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

8. 1.0 credit in Organic Chemistry Courses
CHMB41H3 Organic Chemistry I
CHMB42H3 Organic Chemistry II

Third/Fourth Years
9. 2.5 credits in C-level Biology Core Courses
Choose From:
BIOC15H3 Genetics
BIOC17H3 Microbiology
BIOC20H3 Principles of Virology
BIOC32H3 Human Physiology I
BIOC34H3 Human Physiology II
BIOC39H3 Immunology

10. 1.5 credits in 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
BIOC35H3 Principles of Parasitology
BIOC40H3 Plant Physiology
BIOC58H3 Biological Consequences of Global Change
BIOC65H3 Environmental Toxicology
BIOC70H3 An Introduction to Bias in the Sciences
BIOC90H3 Integrative Multimedia Documentary Project (CR/NCR 0.0 credit)*
* **Note** : Completion of BIOC90H3 is a graduation requirement for students in this program. Concurrent enrolment in one of the participating BIO C-level courses is required for enrolment in BIOC90H3. Please see BIOC90H3 in the Calendar for important information.

11. 1.0 credit in D-level Biology Courses
Choose From:
BIOD07H3 Advanced Topics and Methods in Neural Circuit Analysis
BIOD12H3 Protein Homeostasis
BIOD13H3 Herbology: The Science Behind Medicinal Plants
BIOD17H3 Seminars in Cellular Microbiology
BIOD19H3 Epigenetics in Health and Disease
BIOD20H3 Special Topics in Virology
BIOD25H3 Genomics
BIOD26H3 Fungal Biology and Pathogenesis
BIOD27H3 Vertebrate 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, Epidemiology and Conservation
BIOD65H3 Pathologies of the Nervous System

12. 0.5 credit in Psychology or Health Studies

Choose From:
HLTA02H3 Foundations in Health Studies I
HLTA03H3 Foundations in Health Studies II
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 Introduction to Biological and Cognitive Psychology
PSYA02H3 Introduction to Clinical, Developmental, Personality and Social Psychology

Description of Proposed Changes:
1. Minor change to Math requirement, allowing students to combine one Calculus I and II course option rather than requiring 2 courses from each.
2. Adding BIOC70H3 (An Introduction to Bias in the Sciences) as an option to #10. 1.5 credits in Additional C-level Biology Courses:
3. Adding BIOD07H3 (Advanced Topics and Methods in Neural Circuit Analysis) and BIOD25H3 (Genomics) as options in #11. 1.0 credit in D-level Biology Courses.

Rationale:
1. The department has elected to allow students to combine any Calculus Part I course with any Calculus Part II course in order to allow for more flexibility in course enrolment and to mitigate any confusion around the current language in our calendar entry.
2. Adding BIOC70H3: This course requires students to engage in understanding scientific racism, colonialism in the exploitation and experimentation on marginalized groups, and how biases in STEMM can underpin racism. We believe that these are essential topics for consideration in all of our programs of study.
3. Adding BIOD07H3: Important insights in human health are gained through the use of model organisms. Optogenetics and imaging techniques developed in model organisms such as the zebrafish have led the way in our understanding of neural circuits. This course is hence an important and intuitive addition that builds on courses in anatomy, physiology and cellular biology that are foundation courses in this Specialist program.
Adding BIOD25H3: This program emphasizes, in upper years, issues related to human health. Given that many human health relevant studies are conducted using genomic data and specifically computational analysis of genomic data, BIOD25H3 would be an excellent fit for students in this Specialist program.

Impact:
1. This change will provide students with greater flexibility and guidelines for their timetables and program completion.
2. Adding these courses will provide students with additional options.

Consultation:
DCC Approval: September 10, 2021.

Resource Implications:
None

SPECIALIST PROGRAM IN INTEGRATIVE BIOLOGY (SCIENCE)

Completion Requirements:

Program Requirements
This program consists of 14.5 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 or MATA30H3 ~~and~~ ~~MATA35H3~~ Calculus I ~~II~~ for Physical ~~Biological~~ Sciences]
and ~~or~~
[MATA35H3 ~~MATA30H3~~ Calculus II ~~I~~ for Biological ~~Physical~~ Sciences or ~~and~~ MATA36H3 Calculus II for Physical Sciences]

4. 0.5 Credit in Physics
Choose from:
PHYA10H3 Physics I for the Physical Sciences
PHYA11H3 Physics I for the Life Sciences

5. 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)

Second Year
6. 3.0 Credits of Biology Core Courses
BIOB10H3 Cell Biology
BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
BIOB34H3 Animal Physiology
BIOB38H3 Plants and Society
BIOB50H3 Ecology
BIOB51H3 Evolutionary Biology

BIOB90H3 Integrative Research Poster Project (CR/NCR 0.0 credit)*
* **Note** : Completion of BIOB90H3 is a graduation requirement for students in this program. Concurrent enrolment in at least one of the BIO B-level courses listed above is required for enrolment in BIOB90H3. Please see BIOB90H3 in the Calendar for important information.

7. 0.5 Credit of Biology Core Labs
Choose from:
BIOB12H3 Cell and Molecular Biology Laboratory
BIOB32H3 Animal Physiology Laboratory
BIOB33H3 Human Development and Anatomy Laboratory
BIOB52H3 Ecology and Evolutionary Biology Laboratory

8. 0.5 Credit in Statistics
Choose from:
STAB22H3 Statistics I
PSYB07H3 Data Analysis in Psychology

Third/Fourth Year
9. 2.5 Credits of Biology Foundation Courses
BIOC15H3 Genetics
BIOC17H3 Microbiology
[BIOC37H3 Plants: Life on the Edge or BIOC40H3 Plant Physiology]
BIOC54H3 Animal Behaviour
BIOC61H3 Community Ecology

10. 1.0 Credit of Advanced Courses in Cellular and Organismal Biology
Choose from:
BIOC12H3 Biochemistry I: Proteins and Enzymes
BIOC13H3 Biochemistry II: Bioenergetics and Metabolism
BIOC20H3 Principles of Virology
BIOC21H3 Vertebrate Histology: Cells and Tissues
BIOC23H3 Practical Approaches to Biochemistry
BIOC29H3 Introductory Mycology
BIOC32H3 Human Physiology I
BIOC34H3 Human Physiology II
[BIOC37H3 Plants: Life on the Edge or BIOC40H3 Plant Physiology; whichever course is not used to fulfill Biology Foundation course requirement]
BIOC39H3 Immunology
BIOC65H3 Environmental Toxicology
BIOC70H3 An Introduction to Bias in the Sciences
NROC34H3 Neuroethology

11. 1.0 Credit of Advanced Courses in Ecology and Conservation
Choose from:
BIOC50H3 Macroevolution
BIOC51H3 Tropical Biodiversity Field Course
BIOC52H3 Ecology Field Course
BIOC58H3 Biological Consequences of Global Change
BIOC59H3 Advanced Population Ecology
BIOC60H3 Winter Ecology
BIOC62H3 Role of Zoos and Aquariums in Conservation
BIOC63H3 Conservation Biology
(BIOC67H3) Inter-University Biology Field Course
EESC04H3 Biodiversity and Biogeography

12. 1.0 Credit of Advanced Courses in Genes and Development
Choose from:
BIOC10H3 Cell Biology: Proteins from Life to Death
BIOC14H3 Genes, Environment and Behaviour
BIOC16H3 Evolutionary Genetics and Genomics
BIOC19H3 Animal Developmental Biology
BIOC31H3 Plant Development and Biotechnology

BIOC90H3 Integrative Multimedia Documentary Project (CR/NCR 0.0 credit)*
* **Note** : Completion of BIOC90H3 is a graduation requirement for students in this program. Concurrent enrolment in one of the participating BIO C-level courses is required for enrolment in BIOC90H3. Please see BIOC90H3 in the Calendar for important information.

13. 1.0 Credit of D-Level Biology Courses
Choose from:
Any BIO D-level course offered by the Biological Sciences department.

Description of Proposed Changes:
1. Minor change to Math requirement, allowing students to combine one Calculus I and II course option rather than requiring 2 courses from each.
2. Adding BIOC29H3 (Introductory Mycology) and BIOC70H3 (An Introduction to Bias in the Sciences) as options to: #10. 1.0 Credit of Advanced Courses in Cellular and Organismal Biology

Rationale:
1. The department has elected to allow students to combine any Calculus Part I course with any Calculus Part II course in order to allow for more flexibility in course enrolment and to mitigate any confusion around the current language in our calendar entry.

2. Adding BIOC29H3 (Introductory Mycology) and BIOC70H3 (An Introduction to Bias in the Sciences) as options: BIOC29H will consider the unique features of organisms in the kingdom, Fungi. This taxonomic group is currently not included in our programs and both the Integrative Biology and Conservation and Biodiversity Program students would benefit greatly by expanding their organismal knowledge to include Fungi, as discussed in this new course. BIOC70H3 requires students to engage in understanding scientific racism, colonialism in the exploitation and experimentation on marginalized groups, and how biases in STEMM can underpin racism. We believe that these are essential topics for consideration in all of our programs of study.

Impact:
1. This will provide students with greater flexibility and guidelines for their timetables and program completion.
2. The addition of these courses will provide students with additional options.

Consultation:
DCC Approval: September 10, 2021

Resource Implications:
None.

SPECIALIST PROGRAM IN MOLECULAR BIOLOGY AND BIOTECHNOLOGY (SCIENCE)

Completion Requirements:

Program Requirements
This program consists of 14.5 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 or MATA30H3 ~~and~~ ~~MATA35H3~~ Calculus I ~~II~~ for Physical ~~Biological~~ Sciences]
and ~~or~~
[MATA35H3 ~~MATA30H3~~ Calculus II ~~I~~ for Biological ~~Physical~~ Sciences or ~~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]
and
0.5 Credit in Statistics
Choose from:
STAB22H3 Statistics I (this course could also be taken in the second year)
PSYB07H3 Data Analysis in Psychology (this course could also be taken in the 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

BIOB38H3 Plants and Society
BIOB50H3 Ecology
BIOB51H3 Evolutionary Biology

BIOB90H3 Integrative Research Poster Project (CR/NCR 0.0 credit)*
* **Note** : Completion of BIOB90H3 is a graduation requirement for students in this program. Concurrent enrolment in at least one of the BIO B-level courses listed above is required for enrolment in BIOB90H3. Please see BIOB90H3 in the Calendar for important information.

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 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)
(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
BIOC35H3 Principles of Parasitology
BIOC40H3 Plant Physiology
BIOC70H3 An Introduction to Bias in the Sciences
BIOD37H3 Biology of Plant Stress

BIOC90H3 Integrative Multimedia Documentary Project (CR/NCR 0.0 credit)*
* **Note** : Completion of BIOC90H3 is a graduation requirement for students in this program. Concurrent enrolment in one of the participating BIO C-level courses is required for enrolment in BIOC90H3. Please see BIOC90H3 in the Calendar for important information.

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
BIOD13H3 Herbology: The Science Behind Medicinal Plants
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 Vertebrate 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. Minor change to Math requirement, allowing students to combine one Calculus I and II course option rather than requiring 2 courses from each.
2. Adding BIOC70H3 (An Introduction to Bias in the Sciences) as an option to: #10. 0.5 Credit of Cognate Biology Courses

Rationale:
1. The department has elected to allow students to combine any Calculus Part I course with any Calculus Part II course in order to allow for more flexibility in course enrolment and to mitigate any confusion around the current language in our calendar entry.
2. Adding BIOC70H3 (An Introduction to Bias in the Sciences) as an option: BIOC70H3 requires students to engage in understanding scientific racism, colonialism in the exploitation and experimentation on marginalized groups, and how biases in STEMM can underpin racism. We believe that these are essential topics for consideration in all of our programs of study.

Impact:
1. This will provide students with greater flexibility and guidelines for their timetables and program completion.
2. The addition of this course will provide students with an additional C-level option.

Consultation:
DCC Approval: September 10, 2021

Resource Implications:
None.

1 Minor Program Modification:

SPECIALIST PROGRAM IN COMPUTER SCIENCE (SCIENCE)

Completion Requirements:

Program Requirements
The program requirements comprise a core of 18 courses (9.0 credits), common to all streams and additional requirements which depend on the stream, for a total of 27 courses (13.5 credits) for the Comprehensive, Software Engineering, and Entrepreneurship streams, and 29 courses (14.5 credits) for the Information Systems stream.

Note: Many Computer Science courses are offered both at U of T Scarborough and at the St. George campus. When a course is offered at both campuses in a given session, U of T Scarborough students are expected to take that course at U of T Scarborough. The Department of Computer Science at the St. George campus cannot guarantee space for U of T Scarborough students in their courses, especially those offered at both campuses.

Core (9.0 credits)

1. Writing Requirement (0.5 credit)*
0.5 credit from the following: ANTA01H3, ANTA02H3, (CLAA02H3), (CTLA19H3), CTLA01H3, ENGA10H3, ENGA11H3, ENGB06H3, ENGB07H3, ENGB08H3, ENGB09H3, ENGB17H3, ENGB19H3, ENGB50H3, (ENGB51H3), GGRA02H3, GGRA03H3, GGRB05H3, (GGRB06H3), (HISA01H3), (HLTA01H3), ACMA01H3, (HUMA01H3), (HUMA11H3), (HUMA17H3), (LGGA99H3), LINA01H3, PHLA10H3, PHLA11H3, WSTA01H3.
***Note:** It is recommended that this requirement be satisfied by the end of the second year.

2. A-level courses (3.0 credits)
CSCA08H3 Introduction to Computer Science I
CSCA48H3 Introduction to Computer Science II
CSCA67H3 Discrete Mathematics
MATA22H3 Linear Algebra I for Mathematical Sciences
MATA31H3 Calculus I for Mathematical Sciences
MATA37H3 Calculus II for Mathematical Sciences

3. B-level courses (3.5 credits)
CSCB07H3 Software Design
CSCB09H3 Software Tools and Systems Programming
CSCB36H3 Introduction to the Theory of Computation
CSCB58H3 Computer Organization
CSCB63H3 Design and Analysis of Data Structures
MATB24H3 Linear Algebra II
STAB52H3 Introduction to Probability

4. C-level courses (1.5 credits)
CSCC43H3 Introduction to Databases
CSCC69H3 Operating Systems
CSCC73H3 Algorithm Design and Analysis

5. D-level courses (0.5 credit)
CSCD03H3 Social Impact of Information Technology

A. Comprehensive Stream

This stream requires a total of 27 courses (13.5 credits). In addition to the core requirements 1-5 common to all streams, 9 other distinct courses (4.5 credits) must be chosen to satisfy all of the following requirements:

6. Additional required courses (2.5 credits)
CSCC24H3 Principles of Programming Languages
CSCC37H3 Introduction to Numerical Algorithms for Computational Mathematics
CSCC63H3 Computability and Computational Complexity
CSCD37H3 Analysis of Numerical Algorithms for Computational Mathematics
MATB41H3 Techniques of the Calculus of Several Variables I

7. Electives from courses on computer systems and applications (1.0 credit)
Choose from:
CSCC01H3 Introduction to Software Engineering
CSCC09H3 Programming on the Web
CSCC10H3 Human-Computer Interaction
CSCC11H3 Introduction to Machine Learning and Data Mining
CSCC46H3 Social and Information Networks
CSCC85H3 Fundamentals of Robotics and Automated Systems
CSCD01H3 Engineering Large Software Systems
CSCD18H3 Computer Graphics
CSCD25H3 Advanced Data Analysis
CSCD27H3 Computer and Network Security
CSCD43H3 Database System Technology
CSCD58H3 Computer Networks
CSCD70H3 Compiler Optimization
CSCD84H3 Artificial Intelligence
CSC320H Visual Computing
CSC321H Introduction to Neural Networks and Machine Learning
CSC401H Natural Language Computing
CSC469H Operating Systems Design and Implementation
CSC485H Computational Linguistics
CSC488H Compilers and Interpreters

8. Electives from courses related to the theory of computing (0.5 credit)
Choose from:
MATC09H3 Introduction to Mathematical Logic
MATC32H3 Graph Theory and Algorithms for its Applications
MATC44H3 Introduction to Combinatorics
MATD16H3 Coding Theory and Cryptography
CSC438H Computability and Logic
CSC448H Formal Languages and Automata
CSC465H Formal Methods in Software Design

9. CSC, MAT, or STA elective (0.5 credit)
Any C- or D-level CSC, MAT, or STA course, excluding MATC82H3, MATC90H3, STAC32H3, STAC53H3 and STAD29H3.

B. Software Engineering Stream
This stream requires a total of 27 courses (13.5 credits). In addition to the core requirements 1-5 common to all streams, 9 other distinct courses (4.5 credits) must be chosen to satisfy all of the following requirements:

6. Additional required courses (3.0 credits)
CSCC01H3 Introduction to Software Engineering
CSCC24H3 Principles of Programming Languages
CSCC37H3 Introduction to Numerical Algorithms for Computational Mathematics
CSCC63H3 Computability and Computational Complexity
CSCD01H3 Engineering Large Software Systems
MATB41H3 Techniques of the Calculus of Several Variables I

7. Electives from courses on computer systems and applications (1.5 credits)
Choose from:
CSCC09H3 Programming on the Web
CSCC10H3 Human-Computer Interaction
CSCC11H3 Introduction to Machine Learning and Data Mining
CSCC46H3 Social and Information Networks
CSCC85H3 Fundamentals of Robotics and Automated Systems
CSCD18H3 Computer Graphics
CSCD25H3 Advanced Data Analysis
CSCD27H3 Computer and Network Security
CSCD43H3 Database System Technology
CSCD58H3 Computer Networks
CSCD70H3 Compiler Optimization
CSCD84H3 Artificial Intelligence
CSC320H Visual Computing
CSC321H Introduction to Neural Networks and Machine Learning
CSC401H Natural Language Computing
CSC469H Operating Systems Design and Implementation
CSC485H Computational Linguistics
CSC488H Compilers and Interpreters

C. Information Systems Stream
This stream requires a total of 29 courses (14.5 credits). In addition to the core requirements 1-5 common to all streams, 11 other distinct courses (5.5 credits) must be chosen to satisfy all of the following requirements:

6. Required management courses (1.5 credits)
MGTA01H3 Introduction to Business
MGTA02H3 Managing the Business Organization
MGHB02H3 Managing People and Groups in Organizations

7. Additional required mathematics and computer science courses (3.0 credits)
CSCC01H3 Introduction to Software Engineering
CSCC37H3 Introduction to Numerical Algorithms for Computational Mathematics
CSCC63H3 Computability and Computational Complexity
CSCD01H3 Engineering Large Software Systems
CSCD43H3 Database System Technology
MATB41H3 Techniques of the Calculus of Several Variables I

8. Electives from courses on computer systems and applications (1.0 credit)
Choose from:
CSCC09H3 Programming on the Web
CSCC10H3 Human-Computer Interaction
CSCC11H3 Introduction to Machine Learning and Data Mining
CSCC46H3 Social and Information Networks
CSCC85H3 Fundamentals of Robotics and Automated Systems
CSCD18H3 Computer Graphics
CSCD25H3 Advanced Data Analysis
CSCD27H3 Computer and Network Security
CSCD58H3 Computer Networks
CSCD70H3 Compiler Optimization
CSCD84H3 Artificial Intelligence
CSC320H Visual Computing
CSC321H Introduction to Neural Networks and Machine Learning
CSC401H Natural Language Computing
CSC469H Operating Systems Design and Implementation
CSC485H Computational Linguistics
CSC488H Compilers and Interpreters

D. Entrepreneurship Stream
This stream requires a total of 27 courses (13.5 credits). In addition to the core requirements 1-5 common to all streams, 9 other distinct courses (4.5 credits) must be chosen to satisfy all of the following requirements:

6. Additional required courses (3.0 credits)
CSCC01H3 Introduction to Software Engineering
CSCC37H3 Introduction to Numerical Algorithms for Computational Mathematics
CSCC63H3 Computability and Computational Complexity
CSCD01H3 Engineering Large Software Systems
CSCD54H3 Technology Innovation and Entrepreneurship
CSCD90H3 The Startup Sandbox

7. Electives from courses in computer science, mathematics, and statistics (1.5 credits)
Choose from:
CSCC09H3 Programming on the Web
CSCC10H3 Human-Computer Interaction
CSCC11H3 Introduction to Machine Learning and Data Mining
CSCC24H3 Principles of Programming Languages
CSCC46H3 Social and Information Networks
CSCC85H3 Fundamentals of Robotics and Automated Systems
CSCD18H3 Computer Graphics
CSCD25H3 Advanced Data Analysis
CSCD27H3 Computer and Network Security
CSCD43H3 Database System Technology
CSCD58H3 Computer Networks
CSCD70H3 Compiler Optimization
CSCD84H3 Artificial Intelligence
MATB41H3 Techniques of the Calculus of Several Variables I
STAB57H3 Introduction to Statistics
CSC320H Visual Computing
CSC321H Introduction to Neural Networks and Machine Learning
CSC401H Natural Language Computing
CSC469H Operating Systems Design and Implementation
CSC485H Computational Linguistics
CSC488H Compilers and Interpreters

Description of Proposed Changes:
Adding CSCD25H3 to list of electives in all 4 streams. Change applies to non-coop and coop versions of the CS Specialist program.

Rationale: Adding CSCD25H3 to the program elective lists is a housekeeping matter. The program was not updated in 2021-22 (when CSCD25H3 was introduced).

Impact: None

Consultation: Approved by DCC on October 14, 2021.

Resource Implications: None

10 Course Modifications:

CSCD18H3: Computer Graphics

Exclusions:(CSC418H1) / CSC317H1

Rationale:
The St. George campus recently changed their CSC418H1 course to be CSC317H1 – the course is not significantly changed, rather the course code change was an administrative issue.

Therefore, until any students who may have taken CSC418H1 have completed their programs, we need to have both CSC418H1 and CSC317H1 as exclusions for our CSCD18H course. Once all students who may have taken CSC418H1 have graduated, we can remove CSC418H1 and leave only CSC317H1 as an exclusion.
As of this writing, UTM does not have a computer graphics course equivalent to D18.

Consultation: Approved by the DCC on October 14, 2021.

Resources: None

MATC34H3: Complex Variables

Exclusions: MAT334H , MAT354H

Rationale: The course exclusion have added MAT3543H due to the significant content overlap with this course

Consultation: DCC Approval: October 14, 2021.

Resources: None

MATD10H3: Topics in Mathematics

Prerequisites:
Permission of the instructor is required . Typically this will require that the student has completed courses such a s MATC01H3 and[(MATC35H3)or MATC37H3]and [MATC15H3 or MATD02H3] but the instructor may specify alternative course requirements.

Rationale:
MATD10H3 is a high-level mathematics course with content that changes year to year. Students need to have prerequisites for the specific year the course is offered. The requirements may vary based on the topic provided, which can change from semester to semester. Instructors always specify alternative requirements on an equitable basis.

Consultation: DCC Approval: October 14, 2021.

Resources: None

MATD11H3: Topics in Mathematics

Prerequisites:

Permission of the instructor is required . Typically this will require that the student has completed courses such a s MATC01H3 and[(MATC35H3)or MATC37H3]and [MATC15H3 or MATD02H3] but the instructor may specify alternative course requirements.

Rationale:
MATD11H3 is a high-level mathematics course with content that changes year to year. Students need to have prerequisites for the specific year the course is offered. The requirements may vary based on the topic provided, which can change from semester to semester. Instructors always specify alternative requirements on an equitable basis.

Consultation: DCC Approval: October 14, 2021.

Resources: None

MATD12H3: Topics in Mathematics

Prerequisites:

Permission of the instructor is required . Typically this will require that the student has completed courses such a s MATC01H3 and[(MATC35H3)or MATC37H3]and [MATC15H3 or MATD02H3] but the instructor may specify alternative course requirements.

Rationale:

MATD12H3 is a high-level mathematics course with content that changes year to year. Students need to have prerequisites for the specific year the course is offered. The requirements may vary based on the topic provided, which can change from semester to semester. Instructors always specify alternative requirements on an equitable basis.

Consultation: DCC Approval: October 14, 2021.

Resources: None

MATD34H3: Complex Variables II

Exclusions: ~~MAT354H ,~~ (MATC65H3)

Rationale: The course content of MAT354H is significantly different from MATD34H3 and should no longer be listed as in exclusion.

Consultation: DCC Approval: October 14, 2021.

Resources: None

STAB22H3: Statistics I

Exclusions: ANTC35H3, MGEB11H3/(ECMB11H3),(POLB11H3), PSYB07H3, (SOCB06H3), STAB23H3, STAB52H3, STAB57H3, STA220H, (STA250H)

Rationale: STA250H is now retired so brackets have been placed around the course code in the Exclusions to indicate this.

Consultation: Approved by DCC on October 14, 2021.

Resources: None

STAB27H3: Statistics II

Exclusions: MGEB12H3/(ECMB12H3), STAB57H3, STA221H, (STA250H)

Rationale: STA250H is now retired so brackets have been placed around the course code in the Exclusions to indicate this.

Consultation: Approved by DCC on October 14, 2021.

Resources: None

STAC50H3: Data Collection

Description:
The principles of proper collection of data for statistical analysis, and techniques to adjust statistical analyses when these principles cannot be implemented. Topics include:relationships among variables, causal relationships, confounding, random sampling, experimental designs, observational studies, experiments, causal inference, meta-analysis. Statistical analyses using SAS or R.
Students enrolled in the Minor program in Applied Statistics should take STAC53H3 instead .

Prerequisites: STAB57H3 or STA261H1. Students enrolled in the Minor program in Applied Statistics should ~~must~~ take STAC53H3.

Rationale: The addition of the statement "Students enrolled in the Minor program in Applied Statistics should take STAC53H3 instead." to the course description is to alert students of important information. This additional note will prevent confusion and ensure students are enrolling in the correct course.

Consultation: DCC Approval: October 14, 2021.

Resources: None

STAD80H3: Analysis of Big Data

Prerequisites: STAC58H3 and STAC67H3 and CSCC11H3

Rationale: This course should have had STAC58H3 as a prerequisite from the start but this was missed. So, this change is to simply correct a past error to ensure that students have the appropriate background for the course.
Consultation: Approved by DCC on October 14, 2021.
Resources: None

1 Minor Program Modification:

MINOR PROGRAM IN CLASSICAL STUDIES (ARTS)

Completion Requirements:

Program Requirements
Students must complete 4.0 credits, as follows:

1. Introduction
CLAA04H3 / HISA07H3 The Ancient Mediterranean World
Note : Students who have completed both (CLAA02H3) and (CLAA03H3) may substitute one of the courses for CLAA04H3.

2. History and Culture
CLAB05H3 / HISB10H3 History and Culture of the Greek World
CLAB06H3 / HISB11H3 History and Culture of the Roman World

3. Mythology and Religion
CLAA06H3 Ancient Mythology II: Greece and Rome
Note : Students who were enrolled at UTSC prior to the 2009 Summer Session may substitute one of (CLAA02H3) or (CLAA03H3) for CLAA06H3.

4. Literature (0.5 credit from the following courses)
CLAC11H3 Classical Literature I: Poetry
CLAC12H3 Classical Literature II: Prose

5. Electives (1.5 credits from the following courses, including at least 1.0 credit at the C or D-level; before choosing their electives, students need to take at least 1.0 credit at the A-level, 1.0 credit at the B-level, and 0.5 credit at the C-level):
Classical Studies
CLAA05H3 Ancient Mythology I: Mesopotamia and Egypt
(CLAB10H3) Greek and Latin for Scientists
CLAB09H3 / HISB09H3 Between Two Empires : The World of Late Antiquity
CLAB20H3 / HISB12H3 The Ancient ~~Classical~~ World in Film
CLAC01H3 Selected Topics in Classical Literature
CLAC02H3 Selected Topics in Classical Civilization
CLAC05H3 /
HISC10H3 Beyond Cleopatra : Decolonial Approaches to Ancient ~~Environment~~ , ~~Society~~ ~~and~~ ~~Economy~~ ~~in~~ ~~Ptole~~ ~~maic~~ ~~and~~ ~~Roman~~ Egypt
CLAC11H3 Classical Literature I: Poetry if not taken as a required course
CLAC12H3 Classical Literature II: Prose if not taken as a required course
CLAC22H3 Religions of the Ancient Mediterranean
CLAC24H3 / HISC11H3 Race ~~Multiculturalism~~ and Ethnicity ~~Cultural~~ ~~Identities~~ in
the Ancient Mediterranean ~~Greek~~ and West Asian ~~Roman~~ Worlds
CLAC26H3 / HISC16H3 Indigeneity and the Classics
CLAC67H3/HISC67H3 Early Islam: Perspectives on the Construction of a Historical Tradition
CLAC68H3/HISC68H3/ANTC58H3 Constructing the Other: Orientalism through Time and Place
CLAC94H3 / HISC94H3 The Bible and the Qur'an
CLAD05H3 / HISD10H3 Dripping Histories : Water ~~Management~~ in the Ancient
Mediterranean and West Asian Worlds
~~World~~

Art History
(VPHB41H3) The Human Figure in Greek Art (8th-4th cent. B.C.)
(VPHB52H3) Ancient Art and Architecture (ca 900 B.C.-300 A.D.)
(VPHB76H3) Religion in the Arts: The Judeo-Christian Traditions
(VPHC46H3) Topics in Art of the Ancient World
VPHC53H3 The Silk Routes

English
ENGB30H3 Classical Myth and Literature
ENGC16H3 The Bible and Literature I
ENGC17H3 The Bible and Literature II
ENGC26H3 Drama: Tragedy
ENGC27H3 Drama: Comedy

Languages
(LGGA50H3) Introductory Latin I
(LGGA51H3) Introductory Latin II
(LGGA54H3) Introductory Sanskrit I
(LGGA55H3) Introductory Sanskrit II
(LGGB54H3) Intermediate Sanskrit I
(LGGB55H3) Intermediate Sanskrit II

Philosophy
PHLB16H3 Political Philosophy: Ancient Greece and the Middle Ages
PHLB31H3 Introduction to Ancient Philosophy
PHLC32H3 Topics in Ancient Philosophy: Aristotle

Religion
(RLGB01H3) The "Holy Book" in Judaism, Christianity and Islam
(RLGC01H3) The Five Books of Moses
(RLGC02H3) The Gospels
(RLGC03H3) Paul and the Invention of Christianity
(RLGC04H3) Hindu Epic
RLGC05H3 The Qu'ran in Interpretive and Historical Context

Anthropology
(ANTB04H3) Artifacts and Prehistory
(ANTB12H3) Introduction to World Prehistory: The Rise of Civilization

Description of Proposed Changes:
1. In Component 5 of the Program Requirements: CLAC94H3/HISC94H3, CLAC26H3/HISC16H3 and CLAB09H3/HISB09H3 have been added as course options
2. Double numbered course codes have been added for CLAA04H3, CLAB05H3, CLAB06H3, CLAB20H3, CLAC24H3, CLAC05H3, CLAD05H3
3. Updates for course titles have been made for CLAB20H3/HISB12H3, CLAC05H3/HISC10H3, CLAC24H3/HISC11H3, CLAD05H3/HISD10H3

Rationale:
1. CLAC94H3/HISC94H3, CLAC26H3/HISC16H3 and CLAB09H3/HISB09H3 have been added as course options because they are new courses and will provide greater options for students to complete the program.
2. Double numbered course codes have been added for CLAA07H3, CLAB05H3, CLAB06H3, CLAB20H3, CLAC24H3, CLAC05H3 and CLAD05H3 because this was not done previously. The change will clarify that double-numbered course codes can also be used towards the program.
3. Updates for course titles have been made for CLAB20H3/HISB12H3, CLAC05H3/HISC10H3, CLAC24H3/HISC11H3 and CLAD05H3/HISD10H3 to accurate reflect the new titles for each course

Impact: None

Consultation: Proposal approved by HCS DCC on October 7, 2021
Resource Implications: None

32 Course Modifications:

CLAB20H3: The Classical World in Film

Title: The Ancient ~~Classical~~ World in Film
Abbreviated Title: The Ancient ~~Classical~~ World in Film
Rationale: The new title is more in line with the program's positioning, as well as with current trends within Classics and Antiquity-related fields.
Consultation: Proposal was approved by HCS DCC on October 7, 2021.
Resources: None

CLAC05H3: Environment, Society and Economy in Ptolemaic and Roman Egypt

Title: ~~Environment , Society and Economy in Ptolemaic and Roman Egypt~~ Beyond Cleopatra : Decolonial Approaches to Ancient Egypt
Abbreviated Title: ~~Env Soc and Eco Ptol / Rom Egypt~~ Decolon . Approach Anct Egypt
Description: This course focuses on ~~provides~~ ~~a~~ ~~review~~ ~~of~~ the History of ancient Egypt ~~environmental~~ , with a focus on the Hellenistic to early Arab periods (4th c . BCE to 7th c . CE) . Lectures will emphasize the key role played by Egypt's diverse environments in the shaping of its socio-cultural ~~social~~ and economic features as well as in the policies adopted by ruling authorities . Elements of continuity and change will be emphasized and a variety of primary sources and sites will be discus sed . Special attention will also be dedicated ~~Egypt~~ ~~from~~ ~~332~~ ~~BC~~ to the role played by imperialism , Orientalism , and modern identity politics in the emergence and trajectory of the fields of Graeco-Roman Egyptian history , archaeology , and papyrology ~~642~~ ~~AD~~ . Same as(IEEC52H3), HISC10H3.
Prerequisites: 2.0 credits in CLA or HIS courses, including 1.0 credit from ~~2~~ ~~of~~ the following : ~~[~~ CLAA04H3/HISA07H3 or CLAB05H3/HISB10H3 or CLAB06H3/HISB11H3~~]~~
Exclusions: HISC10H3 ,(IEEC52H3)~~and~~ ~~HISC10H3~~
Rationale: 1. The course title and description have been revised to be in line with current trends within Classics and Antiquity-related fields. It also better reflects the topics and content covered in this course. 2. The prerequisite has been revised for grammatical purposes 3. The course exclusion has been revised to remain consistent with Calendar formatting
Consultation: DCC Approval: October 7, 2021.
Resources: None

CLAC24H3: Multiculturalism and Cultural Identities in the Greek and Roman Worlds

Title: Race ~~Multiculturalism~~ and Ethnicity ~~Cultural~~ ~~Identities~~ in the Ancient Mediterranean ~~Greek~~ and West Asian ~~Roman~~ Worlds
Abbreviated Title: ~~Multiculturalism Greek Roman~~ Race and Ethnicity Ancient Med
Description: A critical examination of multiculturalism and cultural identities in the Greek and Roman worlds. Special attention will be dedicated to the evidences through which these issues are documented and to their fundamental influence on the formation

and evolution of ancient Mediterranean and West Asian societies and cultures. Same as HISC11H3
Prerequisites: 1.0 ~~One~~ ~~full~~ credit in CLA ~~Classics~~ or HIS courses. ~~History~~
Rationale: The new title is more in line with the program's positioning, as well as with current trends within Classics and Antiquity-related fields. It also better reflects the topics and content covered in this course.
Consultation: Proposal was approved by HCS DCC on October 7, 2021.
Resources: None

CLAD05H3: Water Management in the Ancient Mediterranean World

Title: Dripping Histories : Water ~~Management~~ in the Ancient Mediterranean and West Asian Worlds ~~World~~
Description: This seminar type course addresses issues related to the relationships between ancient Mediterranean and West Asian societies and their hydric environments ~~in~~ ~~the~~ ~~Mediterranean~~ from 5000 BC to 600 AD. Same as HISD10H3
Prerequisites: Any 11.0 ~~11~~ ~~full~~ credits including 2.0 ~~2~~ ~~full~~ credits in CLA ~~Classical~~ ~~Studies~~ or HIS courses. ~~History.~~
Enrolment Limits: ~~15~~
Rationale: The new title is more in line with the program's positioning, as well as with current trends within Classics and Antiquity-related fields. It also better reflects the topics and content covered in this course.
Consultation: Proposal was approved by HCS DCC on October 7, 2021.
Resources: None

FSTC05H3: Feeding the City: Food Systems in Historical Perspective

Prerequisites: Any 4.0 credits, including 0.5 credit at the A or B-level in ~~AFS ,~~ CLA, FST, GAS HIS or WST courses
Rationale: The prerequisite statement was initially written to allow HCS students greater flexibility with taking courses across the different HCS disciplines. AFS is no longer a part of HCS and therefore should no longer be included in the prerequisite statement and has been removed.
Consultation: Proposal approved by HCS DCC on October 7, 2021
Resources: None

FSTC37H3: Eating and Drinking Across the Americas

Prerequisites: Any 4.0 credits, including 0.5 credit at the A- or B-level in ~~AFS ,~~ CLA, FST, GAS, HIS or WST courses
Rationale: The prerequisite statement was initially written to allow HCS students greater flexibility with taking courses across the different HCS disciplines. AFS is no longer a part of HCS and therefore should no longer be included in the prerequisite statement and has been removed.
Consultation: Proposal approved by HCS DCC on October 7, 2021
Resources: None

FSTC54H3: Eating and Drinking Across Global Asia

Prerequisites: Any 4.0 credits, including 0.5 credit at the A- or B-level from ~~AFS ,~~ CLA, FST, GAS, HIS or WST courses

Rationale: The prerequisite statement was initially written to allow HCS students greater flexibility with taking courses across the different HCS disciplines. AFS is no longer a part of HCS and therefore should no longer be included in the prerequisite statement and has been removed.
Consultation: Proposal approved by HCS DCC on October 7, 2021
Resources: None

FSTD10H3: Food Writing and Photography

Title: Food Writing ~~and Photography~~
Abbreviated Title: Food Writing ~~and Photography~~
Description: This course introduces students to a range of writing about food and culture, exposing them to different genres and disciplines, and assisting them to experiment with and develop their own prose ~~. It also prompts students to think about photography and visual culture as both tools for documenting culinary practices and experiences , and as increasingly important adjuncts to contemporary food writing~~ . The course is designed as a capstone offering in Food Studies, and as such, asks students to draw on their own expertise and awareness of food as a cultural vehicle to write in a compelling way about social dynamics, historical meaning, and - drawing specifically on the Scarborough experience - the diasporic imaginary.
Rationale: Moving forward, this course will focus solely on food writing as a new course (FSTD11H3) has been proposed to focus on food media, therefore the photography media component has been removed from the course title and description to avoid overlap.
Consultation: Proposal was approved by HCS DCC on October 7, 2021.
Resources: None

GASC20H3: Gendering Global Asia

Prerequisites: 8.0 credits, including 0.5 credit at the A-level, and 1.0 credit at the B-level in ~~AFS ,~~ CLA, FST, GAS, HIS, or WST courses
Enrolment Limits: ~~50~~
Rationale: The prerequisite statement was initially written to allow HCS students greater flexibility with taking courses across the different HCS disciplines. AFS is no longer a part of HCS and therefore should no longer be included in the prerequisite statement and has been removed.
Consultation: Proposal approved by HCS DCC on October 7, 2021
Resources: None

GASC40H3: Chinese Media and Politics

Prerequisites: 4.0 credits~~,~~ ~~including~~ ~~ACMB01H3~~
Rationale: The change in prerequisite is due to ACM's decision to ACMB01H3 as a requirement.
Consultation: HCS DCC approved on December 2, 2021
Resources: None

GASC41H3: Media and Popular Culture in East Asia

Prerequisites: 4.0 credits~~,~~ ~~including~~ ~~ACMB01H3~~
Rationale: The change in prerequisite is due to ACM's decision to ACMB01H3 as a requirement.
Consultation: HCS DCC approved on December 2, 2021

Resources: None

GASC54H3: Eating and Drinking Across Global Asia

Prerequisites: Any 4.0 credits, including 0.5 credit at the A- or B-level from ~~AFS ,~~ CLA, FST, GAS, HIS or WST courses

Rationale: The prerequisite statement was initially written to allow HCS students greater flexibility with taking courses across the different HCS disciplines. AFS is no longer a part of HCS and therefore should no longer be included in the prerequisite statement and has been removed.

Consultation: Proposal approved by HCS DCC on October 7, 2021

Resources: None

GASD01H3: Senior Seminar: Topics in Global Asian Migrations

Prerequisites: Any 8.0 credits, including[0.5 at the A- or B-level in ~~AFS ,~~ CLA, FST, GAS, HIS or WST courses]and [0.5 credit at the C-level in ~~AFS ,~~ CLA, FST, GAS, HIS or WST courses]

Enrolment Limits: ~~15~~

Note: ~~Topics vary from year to year. Check the website: www.utsc.utoronto.ca/~hcs/programs/global-asia-studies.html for current offerings.~~

Rationale: The prerequisite statement was initially written to allow HCS students greater flexibility with taking courses across the different HCS disciplines. AFS is no longer a part of HCS and therefore should no longer be included in the prerequisite statement and has been removed.
The website link to learn more about current offerings has been removed as the link has changed. A new link has not been added as links may change in the future.

Consultation: Proposal approved by HCS DCC on October 7, 2021

Resources: None

GASD02H3: Senior Seminar: Topics in Global Asian Societies

Enrolment Limits: ~~15~~

Note: ~~Topics vary from year to year. Check the website: www.utsc.utoronto.ca/~hcs/programs/global-asia-studies.html for current offerings.~~

Rationale: The website link to learn more about current offerings has been removed from the Note as the link has changed. A new link has not been added as links may change in the future.

Consultation: Proposal approved by HCS DCC on October 7, 2021

Resources: None

GASD20H3: Advanced Seminar: Social Change and Gender Relations in Chinese Societies

Prerequisites: [SOCB05H3 and one C-level course in SOC]or[GASA01H3 and GASA02H3 and one C-level course from the options in requirement #2 of the Specialist or Major programs in Global Asia Studies] or [10.0 credits including IDSB11 and enrolment in the Certificate in Global Development , Environment and Health]

Note: ~~Topics vary from year to year. Check the Global Asia Studies website at http://www.utsc.utoronto.ca/~hcs/programs/global-asia-studies.html for current offerings.~~

Rationale: The change to the prerequisite statement creates a pathway for students enrolled in the Certificate in Global Development, Environment and Health program to take this course, which is an elective for the program.

Consultation: Proposal approved by HCS DCC on October 13, 2021.

Resources: None

HISB12H3: The Classical World in Film

Title: The Ancient ~~Classical~~ World in Film

Abbreviated Title: The Ancient ~~Classical~~ World in Film

Rationale: The new title is more in line with the program's positioning, as well as with current trends within Classics and Antiquity-related fields.

Consultation: Proposal was approved by HCS DCC on October 7, 2021.

Resources: None

HISC05H3: Feeding the City: Food Systems in Historical Perspective

Prerequisites: Any 4.0 credits, including 0.5 credit at the A or B-level in ~~AFS ,~~ CLA, FST, GAS HIS or WST courses

Enrolment Limits: ~~50~~

Rationale: The prerequisite statement was initially written to allow HCS students greater flexibility with taking courses across the different HCS disciplines. AFS is no longer a part of HCS and therefore should no longer be included in the prerequisite statement and has been removed.

Consultation: Proposal approved by HCS DCC on October 7, 2021

Resources: None

HISC10H3: Environment, Society and Economy in Ptolemaic and Roman Egypt

Title: ~~Environment , Society and Economy in Ptolemaic and Roman Egypt~~ Beyond Cleopatra : Decolonial Approaches to Ancient Egypt

Abbreviated Title: ~~Env Soc and Eco Ptol / Rom Egypt~~ Decolon . Approach Anct Egypt

Description:
This course focuses on ~~provides a review of~~ the History of ancient Egypt ~~environmental~~ , with a focus on the Hellenistic to early Arab periods (4th c . BCE to 7th c . CE) . Lectures will emphasize the key role played by Egypt's diverse environments in the shaping of its socio-cultural ~~social~~ and economic features as well as in the policies adopted by ruling authorities . Elements of continuity and change will be emphasized and a variety of primary sources and sites will be discussed . Special attention will also be dedicated ~~Egypt from 332 BC~~ to the role played by imperialism , Orientalism , and modern identity politics in the emergence and trajectory of the fields of Graeco-Roman Egyptian history , archaeology , and papyrology ~~642 AD~~ .
Same as(IEEC52H3), CLAC05H3
0.5 ~~0.50~~ pre-1800 credit
Ancient World Area

Prerequisites: 2.0 credits in CLA or HIS courses, including 1.0 credit from ~~2 of~~ the following : ~~[~~ CLAA04H3/HISA07H3 or ~~,~~ CLAB05H3/HISB10H3 or ~~,~~ CLAB06H3/HISB11H3~~]~~

Exclusions: CLAC05H3 ,(IEEC52H3)~~, CLAC05H3~~

Rationale:
1. The course title and description have been revised to be in line with current trends within Classics and Antiquity-related fields. It also better reflects the topics and content covered in this course.
2. The prerequisite has been revised for grammatical purposes
3. The course exclusion has been revised to remain consistent with Calendar formatting

Consultation: DCC Approval: October 7, 2021.

Resources: None

HISC11H3: Multiculturalism and Cultural Identities in the Greek and Roman Worlds

Title: Race ~~Multiculturalism~~ and Ethnicity ~~Cultural~~ ~~Identities~~ in the Ancient Mediterranean ~~Greek~~ and West Asian ~~Roman~~ Worlds
Abbreviated Title: ~~Multicultural Greek and Roman~~ Race & Ethnicity Ancient Med
Description: A critical examination of multiculturalism and cultural identities in the Greek and Roman worlds. Special attention will be dedicated to the evidences through which these issues are documented and to their fundamental influence on the formation and evolution of ancient Mediterranean and West Asian societies and cultures. Same as CLAC24H3 0.5 pre-1800 credit Ancient World Area
Prerequisites: 1.0 ~~One~~ ~~full~~ credit in CLA ~~Classics~~ or HIS courses. ~~History~~
Rationale: The new title is more in line with the program's positioning, as well as with current trends within Classics and Antiquity-related fields. It also better reflects the topics and content covered in this course.
Consultation: Proposal was approved by HCS DCC on October 7, 2021.
Resources: None

HISC37H3: Eating and Drinking Across the Americas

Prerequisites: Any 4.0 credits, including 0.5 credit at the A- or B-level in ~~AFS ,~~ CLA, FST, GAS, HIS or WST courses
Rationale: The prerequisite statement was initially written to allow HCS students greater flexibility with taking courses across the different HCS disciplines. AFS is no longer a part of HCS and therefore should no longer be included in the prerequisite statement and has been removed.
Consultation: Proposal approved by HCS DCC on October 7, 2021
Resources: None

HISC52H3: Ethiopia: Seeing History

Prerequisites: [1.0 credit in History]or [VPHA46H3 ~~and~~ ~~ACMB01H3~~ and an additional 1.0 credit in VPH courses]
Rationale: The change in prerequisite is due to ACM's decision to ACMB01H3 as a requirement.
Consultation: HCS DCC approved on December 2, 2021
Resources: None

HISC54H3: Eating and Drinking Across Global Asia

Prerequisites: Any 4.0 credits, including 0.5 credit at the A- or B-level from ~~AFS ,~~ CLA, FST, GAS, HIS or WST courses
Rationale: The prerequisite statement was initially written to allow HCS students greater flexibility with taking courses across the different HCS disciplines. AFS is no longer a part of HCS and therefore should no longer be included in the prerequisite statement and has been removed.
Consultation: Proposal approved by HCS DCC on October 7, 2021
Resources: None

HISC58H3: Delhi and London: Imperial Cities, Mobile People

Prerequisites: Any 4.0 credits, including 0.5 credit at the A- or B-level from ~~AFS ,~~ CLA, FST, GAS, HIS or WST courses
Rationale: The prerequisite statement was initially written to allow HCS students greater flexibility with taking courses across the different HCS disciplines. AFS is no longer a part of HCS and therefore should no longer be included in the prerequisite statement and has been removed.
Consultation: Proposal approved by HCS DCC on October 7, 2021
Resources: None

HISC60H3: Old Worlds? Strangers and Foreigners in the Mediterranean, 1200-1700

Description: An exploration of how medieval and early modern societies encountered foreigners and accounted for foreignness, as well as for religious, linguistic, and cultural difference more broadly. Topics include:monsters, relics, pilgrimage, the rise of the university, merchant companies, mercenaries, piracy, captivity and slavery, tourism, and the birth of resident embassies. Same as(IEEC51H3) 0.5 ~~0.50~~ pre-1800 credit Transnational Area
Prerequisites: Any 4.0 credits, including 0.5 credit at the A- or B-level in ~~AFS ,~~ CLA, FST, GAS, HIS or WST courses
Rationale: The prerequisite statement was initially written to allow HCS students greater flexibility with taking courses across the different HCS disciplines. AFS is no longer a part of HCS and therefore should no longer be included in the prerequisite statement and has been removed.
Consultation: Proposal approved by HCS DCC on October 7, 2021
Resources: None

HISC65H3: Venice and its Empire, 800-1800

Description: Social and cultural history of the Venetian Empire from a fishermen's colony to the Napoleonic Occupation of 1797. Topics include the relationships between commerce and colonization in the Mediterranean, state building and piracy, aristocracy and slavery, civic ritual and spirituality, guilds and confraternities, households and families. 0.5 ~~0.50~~ pre-1800 credit European Area
Prerequisites: Any 4.0 credits, including 0.5 credit at the A- or B-level in ~~AFS ,~~ CLA, FST, GAS, HIS or WST courses
Rationale: The prerequisite statement was initially written to allow HCS students greater flexibility with taking courses across the different HCS disciplines. AFS is no longer a part of HCS and therefore should no longer be included in the prerequisite statement and has been removed.
Consultation: Proposal approved by HCS DCC on October 7, 2021
Resources: None

HISD09H3: Senior Seminar: Topics in Global Asian Migrations

Prerequisites: Any 8.0 credits, including[0.5 at the A- or B-level in ~~AFS ,~~ CLA, FST, GAS, HIS or WST courses]and [0.5 credit at the C-level in ~~AFS ,~~ CLA, FST, GAS, HIS or WST courses]
Note: ~~Topics vary from year to year. Check the website: www.utsc.utoronto.ca/~hcs/programs/global-asia-studies.html for current offerings.~~
Rationale: The prerequisite statement was initially written to allow HCS students greater flexibility with taking courses across the different HCS disciplines. AFS is no longer a part of HCS and therefore should no longer be included in the prerequisite statement and has been removed. The website link to learn more about current offerings has been removed as the link has changed. A new link has not been added as links may change in the future.

Consultation: Proposal approved by HCS DCC on October 7, 2021
Resources: None

HISD10H3: Water Management in the Ancient Mediterranean World

Title: Dripping Histories : Water ~~Management~~ in the Ancient Mediterranean and West Asian Worlds ~~World~~
Description: This seminar type course addresses issues related to the relationships between ancient Mediterranean and West Asian societies and their hydric environments ~~in the Mediterranean~~ from 5000 BC to 600 AD. Same as CLAD05H3 0.5 ~~0.50~~ pre-1800 credit Ancient World Area
Prerequisites: Any 11.0 ~~11~~ ~~full~~ credits including 2.0 ~~2~~ ~~full~~ credits in CLA ~~Classical~~ ~~Studies~~ or HIS courses. ~~History~~
Enrolment Limits: ~~15~~
Rationale: The new title is more in line with the program's positioning, as well as with current trends within Classics and Antiquity-related fields. It also better reflects the topics and content covered in this course.
Consultation: Proposal was approved by HCS DCC on October 7, 2021.
Resources: None

HISD46H3: Selected Topics in Canadian Women's History

Prerequisites: Any 8.0 credits, including :[0.5 credit at the A- or B-level in ~~AFS ,~~ CLA, FST, GAS, HIS or WST courses]and [0.5 credit at the C-level in ~~AFS ,~~ CLA, FST, GAS, HIS or WST courses]
Enrolment Limits:~~15~~
Note: ~~Topics vary from year to year. Check the website www.utsc.utoronto.ca/~hcs/programs/history.html for current offerings.~~
Rationale: The prerequisite statement was initially written to allow HCS students greater flexibility with taking courses across the different HCS disciplines. AFS is no longer a part of HCS and therefore should no longer be included in the prerequisite statement and has been removed. The website link to learn more about current offerings has been removed from the Note as the link has changed. A new link has not been added as links may change in the future.
Consultation: Proposal approved by HCS DCC on October 7, 2021
Resources: None

HISD72H3: History of Beer and Brewing

Prerequisites: Any 8.0 credits in ~~AFS ,~~ CLA, GAS, HCS, HIS, RLG, and/or WST courses
Enrolment Limits: ~~15~~
Rationale: The prerequisite statement was initially written to allow HCS students greater flexibility with taking courses across the different HCS disciplines. AFS is no longer a part of HCS and therefore should no longer be included in the prerequisite statement and has been removed.
Consultation: Proposal approved by HCS DCC on October 7, 2021
Resources: None

WSTB06H3: Women in Diaspora

Prerequisites: 1.0 credit at the A-level in ~~AFS ,~~ CLA, GAS, HIS or WST courses
Rationale: The prerequisite statement was initially written to allow HCS students greater flexibility with taking courses across the different HCS disciplines. AFS is no longer a part of HCS and therefore should no longer be included in the prerequisite statement and has been removed.
Consultation: Proposal approved by HCS DCC on October 7, 2021
Resources: None

WSTB10H3: Women, Power and Protest

Prerequisites: 1.0 credit at the A-level in ~~AFS ,~~ GAS, HIS, WST, or other Humanities and Social Sciences courses
Rationale: The prerequisite statement was initially written to allow HCS students greater flexibility with taking courses across the different HCS disciplines. AFS is no longer a part of HCS and therefore should no longer be included in the prerequisite statement and has been removed.
Consultation: Proposal approved by HCS DCC on October 7, 2021
Resources: None.

WSTD46H3: Selected Topics in Canadian Women's History

Prerequisites: Any 8.0 credits, including :[0.5 credit at the A- or B-level in ~~AFS ,~~ CLA, FST, GAS, HIS or WST courses]and [0.5 credit at the C-level in ~~AFS ,~~ CLA, FST, GAS, HIS or WST courses]
Note: ~~Topics vary from year to year. Check the website www.utsc.utoronto.ca/~hcs/programs/history.html for current offerings.~~
Rationale: The prerequisite statement was initially written to allow HCS students greater flexibility with taking courses across the different HCS disciplines. AFS is no longer a part of HCS and therefore should no longer be included in the prerequisite statement and has been removed. The website link to learn more about current offerings has been removed from the Note as the link has changed. A new link has not been added as links may change in the future.
Consultation: Proposal approved by HCS DCC on October 7, 2021
Resources: None

Language Studies (UTSC), Department of

1 Minor Program Modification:

MINOR PROGRAM IN ENGLISH AND CHINESE TRANSLATION (ARTS)

Completion Requirements: P **rogram Requirements** Students are required to complete a total of 4.0 credits. **1. 2.0 credits as follows:** [CTLA01H3 Foundations in Effective Academic Communication or LINA01H3 Introduction to Linguistics] [LINB06H3 Syntax or LINB18H3 English Grammar]

LINB60H3 Comparative Study of English and Chinese
[ECTB58H3 Foundations of Translation *or* ECTB61H3 English and Chinese Translation: Theory and Practice]

2. 1.0 credit from the following:
ECTB60H3 Agri-Food, Cultures, and Translation
ECTC61H3 Translation Studies in Literature
ECTC62H3 Translation in Media
ECTC63H3 Translation and the Environment
ECTD68H3 Translation for Business
ECTD69H3 Translation for Government and Public Administration

3. 1.0 credit from the following:
LGGC64H3 Reading Chinese and English: China ~~from~~ ~~the~~ Inside Out
LGGC65H3 Reading Chinese and English: Global Perspectives
LGGD66H3 / (LGGC67H3) Literary ~~LGGC66H3~~ ~~Classical~~ Chinese and English Translations
LGGD67H3 ~~LGGD66H3~~ /(LGGC66H3 ~~LGGC67H3~~) Classical ~~Literary~~ Chinese and English Translations

Description of Proposed Changes:
1. Requirement 1: added CTLA01H3 as an optional course
2. Requirement 2: added ECTC63H3 as an optional course
3. Requirement 3: updated course codes for LGGC66H3 to LGGD67H3 and title change for LGGC64H3.

Rationale:
1. Requirement 1: updated to provide students more options to complete this program requirement
2. Requirement 2: updated to provide students more options to complete this program requirement
3. Requirement 3: updated to ensure consistency throughout the Calendar.

Impact: None

Consultation:
CTL Consultation: June 2021
DCC Approval: Nov 25, 2021

Resource Implications: None.

9 Course Modifications:

ECTD68H3: Translation for Business

Prerequisites: [ECTB58H3 or ECTB61H3] and[LGGC64H3 or LGGC65H3 or LGGD66H3 / (LGGC67H3) or LGGD67H3 / (LGGC66H3)]. Students must have a minimum GPA of 70% in one of the four LGG bilingual courses ~~LGGC64H3~~ ~~or~~ ~~LGGC65H3~~ (or an equivalent through an interview).

Enrolment Limits: ~~30~~

Rationale:
1. The course prerequisites have been updated to ensure students are prepared for this course and ensure consistency throughout the Calendar.
2. Enrollment limit has been removed since enrollment does not exceed 30.

Consultation: DCC Approval: Nov 25, 2021

Resources: None.

ECTD69H3: Translation for Government and Public Administration

Prerequisites:

[ECTB58H3 or ECTB61H3] and[LGGC64H3 or LGGC65H3 or LGGD66H3 / (LGGC67H3) or LGGD67H3 / (LGGC66H3)]. Students must have a minimum GPA of 70%
in one of the four LGG bilingual courses ~~LGGC64H~~ ~~or~~ ~~LGGC65H~~ (or an equivalent through an interview).

Enrolment Limits: ~~30~~

Rationale:
1. The course prerequisites have been updated to ensure students are prepared for this course and ensure consistency throughout the Calendar.
2. Enrollment limit has been removed since enrollment does not exceed 30.

Consultation: DCC Approval: Nov 25, 2021

Resources: None.

LGGC62H3: Cultures in the East and West

Description:
This course focuses on similarities and differences between Chinese and Western cultures through a variety of cultural and literary materials. Students will further develop their language skills and cultural awareness through reading, writing, and translation.
~~Note~~
~~: This course does not meet any program requirements for the Minor program in English and Chinese Translation~~

Exclusions: (LGGB66H3), (LGGB67H3), LGGC64H3, LGGC65H3 ~~,~~ ~~LGGC66H3~~ , LGGD66H3 /(LGGC67H3), LGGD67H3 / (LGGC66H3) ~~LGGD66H3~~

Note:
1. This course is not required for the Minor program in English and Chinese Translation.
2. Students may take this course before or after LGGC63H3. ~~LGGC63H3 .~~

Rationale:
1. Course description has removed note information and transferred it into note section
2. Course exclusions have been updated to ensure consistency with course code changes

Consultation: DCC Approval: Nov 25, 2021

Resources: None.

LGGC63H3: Canada, China, and Beyond

Exclusions: (LGGB66H3), (LGGB67H3), LGGC64H3, LGGC65H3 ~~,~~ ~~LGGC66H3~~ , LGGD66H3/(LGGC67H3) , and LGGD67H3 / (LGGC66H3)

Note:
1. This course is not required for the Minor program in English and Chinese Translation.
2. Students may take LGGC63H3 before or after LGGC62H3. ~~LGGC62H3 .~~

Rationale:
1. Course exclusions have been updated to ensure consistency with new course codes.
2. Note has been added to inform students of important information

Consultation: DCC Approval: November 25, 2021

Resources: None.

LGGC64H3: Reading Chinese and English: China from the Inside Out

Title: Reading Chinese and English:China ~~from~~ ~~the~~ Inside Out

Description:
Intended for students who read Chinese and English well. Complex-simplified character conversion and vice versa, as well as English-Chinese and Chinese-English bilingual texts, are emphasized through reading, discussion, and translation in a variety of topics from, and outside of, Greater China, presentations, translation comparison, translation, and translation criticism ~~essay~~ ~~writing~~ .

Enrolment Limits: ~~30~~

Note:
1. This course is bilingual , and priority will be given to students enrolled in the Minor in English and Chinese Translation.
2. This course may be taken before or after LGGC65H3
3 ~~or~~ ~~LGGC66H3 3~~ . Students who have taken this course should not subsequently take LGGC60H3, LGGC61H3, LGGC62H3, or LGGC63H3 for credit.
4 ~~credit~~ . The exclusion limit has been removed as it is unnecessary

Rationale:
1. The course title has been updated with editorial changes.
2. The course description has been updated to accurately reflect the content covered in the course.
3. The note updated new course codes.

Consultation: DCC Approval: Nov 25, 2021

Resources: None.

LGGC65H3: Reading Chinese and English: Global Perspectives

Description:
Designed for students who read Chinese and English well. Complex-simplified Chinese character conversion and vice versa, as well as English-Chinese and Chinese-English bilingual texts are emphasized through reading, discussion, and translation in a variety of topics from global perspectives, presentations, translation and translation comparison, and translation criticism ~~essay~~ ~~writing~~ .

Enrolment Limits: ~~30~~

Note:
1. This course is bilingual and priority will be given to students enrolled in the Minor in English and Chinese Translation.
2. This course may be taken before or after LGGC64H3
3 ~~or~~ ~~LGGC66H3 3~~ . Students who have taken this course may not subsequently take LGGC60H3, LGGC61H3, LGGC62H3, or LGGC63H3 for credit. ~~credit .~~

Rationale:
1. The course description has been revised to reflect the nature of the bilingual course better.
2. The Note has been revised to update new course codes
3. The exclusion limit has been removed as it is unnecessary

Consultation: DCC Approval: Nov 25, 2021

Resources: None.

LGGD66H3: Literary Chinese and English Translations

Description:
This course examines ~~continues~~ ~~to~~ ~~examine~~ Chinese literary masterpieces of the pre-modern era and their English translations. They include the prose and poetry of many dynasties as well as examples in Literary Chinese of other genres that are still very much alive in Chinese language and society today. An in-depth review of the English translations will be strongly emphasized.

Prerequisites: ~~LGGC66H3~~ A working knowledge of Modern Chinese and English

Enrolment Limits: ~~30~~

Note:
1. Priority will be given to students enrolled in the Minor in English and Chinese Translation.
2. Students who have taken this course should not subsequently take any lower-level Chinese or Chinese / English bilingual courses ~~LGGC60H3~~ , ~~LGGC61H3~~ , ~~LGGC62H3~~ , ~~LGGC63H3~~ , ~~LGGC64H3~~ , ~~LGGC65H3~~ , ~~LGGC66H3~~ for credit .
3 . This course may be taken before or after LGGD67H3.

Rationale:
The course description has had editorial updates
2. The course prerequisite has been updated to better prepare students for this course
3. The course enrolment limit has been removed as it is not necessary
4. The note has been updated to provide more clarity and warns students to take courses in the correct sequence.
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Consultation: DCC Approval: Nov 25, 2021

Resources: None

LINB60H3: Comparative Study of English and Chinese

Prerequisites: LINB06H3 or LINB18H3

Rationale: The prerequistes have been updated to provide students more flexibility

Consultation: DCC Approval: November 25, 2021

Resources: None

PLID34H3: The Psycholinguistics of Reading

Prerequisites: [LINA01H3 or [FREB44H3 and FREB45H3]] and [PLIC24H3 or(PLIC25H3 ~~PLIB25H3~~)]

Rationale: The prerequisite has changed to correct a typo

Consultation: DCC Approval. Dec. 14, 2021

Resources: None.

Management (UTSC), Department of

4 Course Modifications:

MGEC08H3: Economics of Markets and Financial Decision Making

Exclusions: ~~MGEC02H3~~ , MGEC41H3, MGEC92H3, MGEC93H3, ECO200Y1, ECO204Y1, ECO206Y1, ECO310H1, ECO364H1, ECO365H1

Rationale: Course exclusions have been updated to removing MGEC02H3 because the overlap is minimal

Consultation: DCC Approval: July 2, 2021

Resources: None.

MGEC41H3: Industrial Organization

Exclusions: MGEC08H3 , MGEC92H3, ECO310H1

Enrolment Limits: ~~60~~

Rationale: The course exclusion has added MGEC08H3 due to a significant overlap between both courses
Consultation: DCC Approval: July 2, 2021
Resources: None.

MGEC92H3: Economics of Markets and Pricing

Exclusions: MGEC02H3 , MGEC08H3, MGEC41H3, ECO200Y1, ECO204Y1, ECO206Y1, ECO310H1, ECO310Y5
Rationale: The course exclusion has added MGEC08H3 due to a significant overlap between both courses
Consultation: DCC Approval: July 2, 2021
Resources: None.

MGEC93H3: International Economics

Exclusions: MGEC08H3 , MGEC62H3, ECO230Y1, ECO364H1, ECO365H1
Rationale: The course exclusion has added MGEC08H3 due to a significant overlap between both courses
Consultation: DCC Approval: July 2, 202
Resources: None.

2 Retired Courses:

MGIC14H3: International Business Ethics

Rationale: The department has never offered this course. There is significant overlap in content with this course and MGSC14H3 (listed as an exclusion) that meets the program requirement for the Management and International Bussiness programs, and therefore, there is no need to offer this course in the future
Consultation: DCC Approval: September 17, 2021.

MGOD30H3: Business Data Analytics

Rationale: MGOD30H3 course content is being split into two new courses MGOC15H3 and MGOD31H3.
Consultation: DCC Approval: September 17, 2021

Physical & Environmental Sciences (UTSC), Department of

2 Minor Program Modifications:

MAJOR PROGRAM IN ENVIRONMENTAL STUDIES (ARTS)

Description: For an updated list of Program Supervisors, please visit the Environmental Studies website . Companion majors include: Anthropology, Human Geography, Political Science, Public Policy, Sociology, Biology, Biodiversity, Ecology and Evolution, Chemistry, Biochemistry, and Environmental Science, Physics and Astrophysics, and Physical Sciences. Other majors are possible with the permission of the Supervisor of Study.
Completion Requirements:

Program Requirements
Completion of 8.5 credits as follows:

1. Core Courses (2.5 credits)

EESA01H3 Introduction to Environmental Science
[MGEA01H3 Introduction to Microeconomics *or* MGEA05H3 Introduction to Macroeconomics]
ESTB01H3 Introduction to Environmental Studies
and
0.5 credit chosen from the following:
ANTB01H3 Political Ecology
ESTB02H3/GGRB18H3 Canada, Indigenous Peoples, and the Land
GGRA03H3 Cities and Environments
POLA01H3 Critical Issues in Politics I
POLA02H3 Critical Issues in Politics II
POLB80H3 Introduction to International Relations I
and
0.5 credit chosen from the following:
EESA06H3 Introduction to Planet Earth
EESA07H3 Water
EESA09H3 Wind
EESA10H3 Human Health and the Environment
EESA11H3 Environmental Pollution
EESB18H3 Natural Hazards

2. Foundations and Skills (4.0 credits)
ESTC35H3 Environmental Science and Technology in Society
ESTC36H3 Knowledge, Ethics and Environmental Decision-Making
IDSB02H3 Development and Environment
STAB22H3 Statistics I (or equivalent)
and
2.0 credits chosen from the following:
EESB03H3 Principles of Climatology
EESB04H3 Principles of Hydrology
EESB05H3 Principles of Soil Science
EESB17H3 Hydro Politics and Transboundary Water Resources Management
EESC13H3 Environmental Impact Assessment and Auditing
EESD13H3 Environmental Law, Policy and Ethics
ESTB04H3 Addressing the Climate Change
ESTC34H3 Sustainability in Practice
ESTC40H3 Technical Methods for Climate Change Mitigation
ESTD20H3 Integrated Natural Resource and Climate Change Governance
GGRA30H3 Geographic Information Systems (GIS) and Empirical Reasoning
GGRB21H3 Political Ecology: Nature, Society and Environmental Change
(GGRC22H3) Political Ecology Theory and Applications
GGRC26H3 Geographies of Environmental Governance
GGRC28H3 Indigenous Peoples, Environment and Justice
GGRC44H3 Environmental Conservation and Sustainable Development
POLC53H3 Canadian Environmental Policy
POLD89H3 Global Environmental Politics
SOCC37H3 Environment and Society

3. Capstone and Applications (2.0 credits)
[ESTD16H3 Project Management in Environmental Studies *or* ESTD19H3 Risk]
ESTD17Y3 Cohort Capstone Course in Environmental Studies

ESTD18H3 Environmental Studies Seminar Series

Description of Proposed Changes:
Requirement 2: added optional courses: ESTB04H3, ESTC40H3 and ESTD20H3

Rationale:
These additional courses will provide more EST course options to complete this requirement. It will also give the students more flexibility to satisfy this program requirement.

Impact:
None.

Consultation:
DCC Approval: May 25, 2021

Resource Implications:
None.

MAJOR PROGRAM IN PHYSICAL SCIENCES (SCIENCE)

Completion Requirements:

Program Requirements :
This program requires 8.0 credits as follows:

First Year:
PHYA10H3 Physics I for the Physical Sciences
PHYA21H3 Physics II for the Physical Sciences
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms
MATA30H3 Calculus I for Physical Sciences
MATA22H3 Linear Algebra I for Mathematical Sciences
[MATA36H3 Calculus II for Physical Sciences *or* MATA37H3 Calculus II for Mathematical Sciences]

Second or Third Year
2.5 credits from the following:
PHYB10H3 Intermediate Physics Laboratory I
PHYB21H3 Electricity and Magnetism
PHYB52H3 Thermal Physics
PHYB54H3 Mechanics: From Oscillations to Chaos
PHYB56H3 Introduction to Quantum Physics
MATB24H3 Linear Algebra II
MATB41H3 Techniques of the Calculus of Several Variables I
MATB42H3 Techniques of the Calculus of Several Variables II
MATB44H3 Differential Equations I
ASTB23H3 Astrophysics of Stars, Galaxies and the Universe
CHMB20H3 Chemical Thermodynamics and Elementary Kinetics
CHMB21H3 Chemical Structure and Spectroscopy
STAB52H3 Introduction to Probability
~~STAB22H3 Statistics I~~

Third or Fourth Year
2.0 credits from the following:
PHYB57H3 Introduction to Scientific Computing
ASTC25H3 Astrophysics of Planetary Systems
MATC34H3 Complex Variables
MATC46H3 Differential Equations II

PHYC50H3 Electromagnetic Theory
PHYC56H3 Quantum Mechanics I
PHYC11H3 Intermediate Physics Laboratory II
PHYC14H3 Introduction to Atmospheric Physics
PHYC54H3 Classical Mechanics
PHYD37H3 Introduction to Fluid Mechanics
PHYD38H3 Introduction to Nonlinear Systems and Chaos
PSCD02H3 Current Questions in Mathematics and Science
PHYD26H3 Planetary Geophysics
PSCD50H3 Advanced Topics in Quantum Mechanics
[PHYD01H3 Research Project in Physics and Astrophysics *or* PHYD72H3 Supervised Reading in Physics and Astrophysics]

Description of Proposed Changes: Second and Third-year requirement: replaced optional course STAB22H3 with STAB52H3.

Rationale: This change helps align the program with the other departmental programs. This change will also make it easier for students to transition between programs without the need for exceptions.

Impact: None.

Consultation: DCC Approval: May 12, 2021

Resource Implications: None.

1 Course Modification:

EESB20H3: Sedimentology and Stratigraphy

Prerequisites: ~~EESA01H3~~ ~~and~~ EESB15H3

Rationale: The prerequisite is changed to ensure only the appropriate course is listed to better prepare students for this course.

Consultation: DCC Approval: September, 9th, 2021.

Resources: None.