Faculty of Arts and Science
Science Curriculum Committee
April 7, 2017

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**1 Minor Program Modification (Full Divisional Review)**

Focus In Theory of Computation

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<th>Start Session:</th>
<th>Summer 2017</th>
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**Current Completion Requirements:**

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<tr>
<th>Required Courses:</th>
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</thead>
<tbody>
<tr>
<td>1. MAT137Y1/MAT157Y1/MAT237Y1 (Note: If MAT237Y1 is used here, it cannot be counted as part of the 2.0 FCEs for point 5, below.)</td>
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<tr>
<td>2. CSC463H1</td>
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<td>3. CSC336H1/CSC350H1</td>
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<tr>
<td>4. 1.5 FCEs from the following: CSC310H1, CSC438H1, CSC448H1, MAT443H1, MAT332H1, MAT344H1, At UTM: CSC322H5/MAT302H5, CSC422H5; CSC494H1/CSC495H1 project supervised by a faculty member from the Theory group, or a relevant introductory graduate course in Theory. (Note that students must petition to take a graduate course.)</td>
</tr>
<tr>
<td>5. 2.0 FCEs from the following: APM236H1/MIE262H1, MIE263H1, APM421H1, APM461H1, MAT224H1/MAT247H1, MAT237Y1/MAT257Y1, MAT244H1/MAT267H1, MAT301H1/MAT347Y1, MAT315H1, MAT327H1, MAT334H1/MAT354H1, MAT337H1/MAT357H1, any 400-level MAT course (except MAT443H1), STA248H1/STA261H1, STA347H1</td>
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**Recommended Courses:**

1. Students are strongly encouraged to take the enriched theory courses: CSC240H1 and CSC265H1, rather than their regular counterparts: CSC165H1/CSC236H1 and CSC263H1, respectively.

**Suggested Related Courses:**

1. BCB410H1

2. CSC320H1/CSC418H1/CSC420H1, CSC321H1/CSC384H1/CSC411H1/CSC485H1, CSC343H1/CSC443H1, CSC351H1/CSC456H1, CSC358H1/CSC458H1, CSC412H1/CSC465H1/CSC486H1, CSC473H1, CSC488H1

**New Completion Requirements:**

<table>
<thead>
<tr>
<th>Required Courses:</th>
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<tbody>
<tr>
<td>MAT137Y1/MAT157Y1/MAT237Y1 (Note: If MAT237Y1 is used here, it cannot be counted as part of the 2.0 FCEs for point 4, below.)</td>
</tr>
<tr>
<td>CSC463H1</td>
</tr>
<tr>
<td>2.0 FCEs from the following: CSC304H1, CSC310H1, CSC336H1, CSC438H1, CSC448H1, CSC473H1; MAT309H1, MAT332H1, MAT344H1; at UTM: CSC322H5/MAT302H5, CSC422H5; graduate courses: CSC2221H1, CSC2401H1, CSC2410H1, CSC2420H1, CSC2426H1 (note that students must petition to take a graduate course)</td>
</tr>
</tbody>
</table>
| 2.0 FCEs from the following: APM236H1/MIE262H1, MIE263H1, APM421H1, APM461H1, MAT224H1/MAT247H1, MAT237Y1/MAT257Y1, MAT244H1/MAT267H1, MAT301H1/MAT347Y1, MAT315H1, MAT337H1/MAT357H1, any 400-level MAT course, STA248H1/STA261H1.
Notes:

Students who complete an independent study project (CSC494H1/CSC495H1) under the supervision of a faculty member from the Theory group may request to substitute one of CSC494H1/CSC495H1 for one of the courses in list 3 above. This request must be made directly to the department's Undergraduate Office.

Students who complete a graduate Topics course in Theory may request to count it towards the completion of list 3 above. This request must be made directly to the department's Undergraduate Office.

Recommended Courses:

Students are strongly encouraged to take the enriched theory courses: CSC240H1 and CSC265H1, rather than their regular counterparts: CSC165H1/CSC236H1 and CSC263H1, respectively.

Program Delivery:

Method: In Class

Brief Description of the Proposal:

Housekeeping: removing courses that have not been offered for many years (MAT443H1); adding new courses that were missing (CSC304H1, CSC473H1, MAT309H1); moving CSC336H1 from required to optional (focus of CSC336H1 is not theoretical but its theoretical counterpart, CSC350H1, is no longer offered); listing graduate courses explicitly, adding notes about exceptions that students can request.

Consultation:
1 Course Modification for Committee Review

ECO414H1: Energy and Regulation

<table>
<thead>
<tr>
<th>Prerequisites</th>
<th>Current: ECO200Y1/ECO204Y1/ECO206Y1, ECO220Y1/ECO227Y1/(STA220H1, STA255H1)/(STA257H1, STA261H1) or permission of the instructor</th>
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<tr>
<td></td>
<td>New: ECO200Y/ECO204Y1/ECO206Y1, ECO220Y1/ECO227Y1/(STA257H1, STA261H1) or permission of the instructor</td>
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## 2 Course Modifications for Committee Review

### LMP410H1: Pathobiology of Neurodegenerative Disease

| Description | **Current:** Molecular basis of neurodegenerative diseases of the central and peripheral nervous systems. Relevant neuroanatomy and molecular biology of the CNS. Current research topics in neurodegenerative diseases.  
**New:** Molecular basis of neurodegenerative diseases of the central and peripheral nervous systems. Emphasis on the molecular pathobiology of neurodegenerative diseases, current research developments and guidance with writing of research proposals. Mid-term and final exams will practice assembly of a succinct research proposal and query neurodegenerative disease material taught in course. |
|---|---|

| Prerequisites | **Current:** (BIO240H1, BIO241H1)/BIO255Y1/(PSL300H1, PSL301H1)/PSL302Y1  
**New:** (BIO270H1, BIO271H1)/BIO255H1/(PSL300H1, PSL301H1)/PSL302Y1 |
|---|---|

### LMP436H1: Microbial Pathogenesis

| Prerequisites | **Current:** BCH210H1/BCH242Y1, IMM340H1/IMM350H1  
**New:** BCH210H1/BCH242Y1, (IMM340H1/IMM350H1)/(IMM341H1, IMM351H1) |
|---|---|
1 Course Modification for Committee Review

PSL350H1: Mammalian Molecular Biology

<table>
<thead>
<tr>
<th>Prerequisites</th>
<th>Current: BIO230H1, PSL300H1, BCH210H1</th>
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<tr>
<td></td>
<td>New: BCH210H1, BIO230H1/(BIO240H1, BIO241H1)/BIO255H1, PSL300H1</td>
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1 Minor Program Modification (Expedited Divisional Review)

Statistics Minor

**Start Session:**
Summer 2017

**Current Completion Requirements:**

(4 full courses or their equivalent)

First Year:
MAT133Y1 (70%)/(MAT135H1, MAT136H1)/MAT135Y1/MAT137Y1/MAT157Y1 ((MAT135H1, MAT136H1)/MAT135Y1/MAT157Y1 is strongly recommended). STA130H1 is also strongly recommended.

Second Year:
MAT221H1 (70%)/MAT223H1/MAT240H1, (STA220H1/STA221H1/ECO220Y1, STA255H1)/(STA247H1, STA248H1)/(STA257H1, STA261H1)/ECO227Y1

MAT221H1 (70%)/MAT223H1/MAT240H1 recommended in 1st year

Higher Years:
STA302H1

2. 2 half (H) course equivalents from all available STA300+ level courses

**New Completion Requirements:**

(4 full courses or their equivalent)

First Year:
MAT133Y1 (70%)/(MAT135H1, MAT136H1)/MAT135Y1/MAT137Y1/MAT157Y1, CSC108H1/CSC120H1/CSC121H1/CSC148H1 (MAT135H1, MAT136H1)/MAT137Y1/MAT157Y1 is strongly recommended)

STA130H1 is also strongly recommended.

Second Year:
MAT221H1 (70%)/MAT223H1/MAT240H1, (STA220H1/STA221H1/ECO220Y1, STA255H1)/(STA247H1, STA248H1)/(STA257H1, STA261H1)/ECO227Y1

MAT221H1 (70%)/MAT223H1/MAT240H1 recommended in 1st year

Higher Years:
STA302H1

1 half (H) course equivalents from all available STA300+ level courses

**Brief Description of the Proposal:**

Add the requirement of an introductory computer programming course to the statistics minor program of study and adjust the required number of upper year statistics courses accordingly.

**Rationale:**
The statistics specialist and major programs of study require a first year course in computer science. The proposed
programs has become essential for statistical work, in order to have the skills to manage modern data (with its increased size, variety and non-standard structures) and to carry out analyses using modern algorithmic methods. As a consequence, many advanced courses in statistics now have a computer programming course as a prerequisite and students in the statistics minor need a computer programming course in order to be able to complete the program.

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<th>Consultation:</th>
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<tr>
<td>We have discussed this with the Department of Computer Science. DCS has confirmed that the first year computer science courses will be able to absorb the estimated additional enrolment.</td>
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