## Economics

This section presents the requirements for programs in:

- Economics B.Econ. Honours
- Economics B.Econ. Honours with Concentration
- Economics B.Econ. Honours with Concentrations
- Concentration in Financial Economics
- Concentration in International Economic Policy
- Stream in International Economic Policy B.G.In.S.
- Post-Baccalaureate Diploma in Economics
- Economics B.Econ. Honours with Concentration
- Concentration in Economic Theory
- Concentration in Economic Data Science
- Concentration in Mathematics and Quantitative Economics
- Concentration in Development
- Concentration in Computational Analysis
- Concentration in International Political Economy
- Concentration in Natural Resources, Environment, and Economy
- Concentration in Applied Economics
- Concentration in Industrial Economics
- Concentration in Environmental Economics
- Concentration in Health Economics
- Concentration in Urban Economics
- Concentration in Development Economics
- Concentration in Financial Economics
- Concentration in International Economic Policy
- Stream in International Economic Policy B.G.In.S.
- Post-Baccalaureate Diploma in Economics
- Economics B.A. Honours Combined
- Minor in Economics
- Minor in Industrial Economics
- Minor in Environmental Economics
- Minor in Development Economics
- Minor in Computational Analysis
- Minor in International Political Economy
- Minor in Natural Resources, Environment, and Economy
- Minor in Applied Economics
- Minor in Industrial Economics
- Minor in Environmental Economics
- Minor in Development Economics
- Minor in Computational Analysis
- Minor in International Political Economy
- Minor in Natural Resources, Environment, and Economy

### Program Requirements

#### Economics

#### B.Econ. Honours (20.0 credits)

1. **6.5 credits in:**
   - ECON 1001 [0.5] Introduction to Microeconomics
   - ECON 1002 [0.5] Introduction to Macroeconomics
   - or FYSM 1003 [1.0] Introduction to Economics
   - ECON 1401/MATH 1401 Elementary Mathematics for Economics I
   - ECON 1402/MATH 1402 Elementary Mathematics for Economics II
   - ECON 2020 [0.5] Intermediate Microeconomics I: Producers and Market Structure
   - ECON 2030 [0.5] Intermediate Microeconomics II: Consumers and General Equilibrium
   - ECON 2102 [0.5] Intermediate Macroeconomics I
   - ECON 2103 [0.5] Intermediate Macroeconomics II
   - ECON 2210 [0.5] Introductory Statistics for Economics
   - ECON 2220 [0.5] Introductory Econometrics
   - ECON 3900 [0.5] Research Methods in Economics
   - ECON 3920 [0.5] Professional Practice of Economics
   - ECON 4905 [0.5] Honours Capstone Seminar (see Note 1 below)

2. **2.0 credits in:**
   - ECON at the 3000 level
   - ECON at the 4000 level

3. **2.0 credits in:**
   - ECON at the 3000 level
   - ECON at the 4000 level

4. **5.0 credits in** electives not in ECON

5. **4.5 credits in** free electives

Total Credits: 20.0

### Note:

ECON 4908 [1.0] Honours Essay may be written by students with Overall and Major CGPAs of 9.50 or higher. In cases where a grade of B- or higher is earned on this essay, it may replace the ECON 4905 requirement together with an ECON elective requirement. Qualified students who choose to pursue the Honours essay pathway must first complete an Honours essay prospectus to the satisfaction of both their advisor and the Undergraduate Supervisor. See The Honours Essay guidelines maintained by the Department for further details.

#### Economics

#### B.Econ. Honours with Concentration (20.0 credits)

1. **6.5 credits in:**
   - ECON 1001 [0.5] Introduction to Microeconomics
   - ECON 1002 [0.5] Introduction to Macroeconomics
   - or FYSM 1003 [1.0] Introduction to Economics
   - ECON 1401/MATH 1401 Elementary Mathematics for Economics I
   - ECON 1402/MATH 1402 Elementary Mathematics for Economics II
   - ECON 2020 [0.5] Intermediate Microeconomics I: Producers and Market Structure
   - ECON 2030 [0.5] Intermediate Microeconomics II: Consumers and General Equilibrium
   - ECON 2102 [0.5] Intermediate Macroeconomics I
   - ECON 2103 [0.5] Intermediate Macroeconomics II
   - ECON 2210 [0.5] Introductory Statistics for Economics
   - ECON 2220 [0.5] Introductory Econometrics
   - ECON 3900 [0.5] Research Methods in Economics
   - ECON 3920 [0.5] Professional Practice of Economics
   - ECON 4905 [0.5] Honours Capstone Seminar (see Note 1 below)

2. One of the concentrations described after the Economics B.Econ. Honours with Concentrations program below, also included in the Major CGPA

3. **1.0 credit in** ECON at the 3000 level

4. **1.0 credit in** ECON at the 4000 level

5. **4.0 credits in** electives not in ECON

6. **3.5 credits in** free electives

Total Credits: 20.0

### Note:

An Honours essay, ECON 4908 [1.0], may be written by students with Overall and Major CGPAs of 9.50 or higher. In cases where a grade of B- or higher is earned on this essay, it may replace both the ECON 4905 requirement and a 0.5-credit 4000 level ECON elective requirement. Qualified students who choose to pursue the Honours essay pathway must first complete an Honours essay prospectus to the satisfaction of both their advisor and
Economics

B. Econ. Honours

with Concentrations (20.0 credits)

A. Credits Included in the Major CGPA (14.5 credits)

1. 6.5 credits in: 6.5

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1001 [0.5]</td>
<td>Introduction to Microeconomics</td>
</tr>
<tr>
<td>ECON 1002 [0.5]</td>
<td>Introduction to Macroeconomics</td>
</tr>
<tr>
<td>or FYSM 1003 [1.0]</td>
<td>Introduction to Economics</td>
</tr>
<tr>
<td>ECON 1401/MATH 1401</td>
<td>Elementary Mathematics for Economics I</td>
</tr>
<tr>
<td>ECON 1402/MATH 1402</td>
<td>Elementary Mathematics for Economics II</td>
</tr>
<tr>
<td>ECON 2020 [0.5]</td>
<td>Intermediate Microeconomics I: Producers and Market Structure</td>
</tr>
<tr>
<td>ECON 2030 [0.5]</td>
<td>Intermediate Microeconomics II: Consumers and General Equilibrium</td>
</tr>
<tr>
<td>ECON 2102 [0.5]</td>
<td>Intermediate Macroeconomics I</td>
</tr>
<tr>
<td>ECON 2103 [0.5]</td>
<td>Intermediate Macroeconomics II</td>
</tr>
<tr>
<td>ECON 2210 [0.5]</td>
<td>Introductory Statistics for Economics</td>
</tr>
<tr>
<td>ECON 2220 [0.5]</td>
<td>Introductory Econometrics</td>
</tr>
<tr>
<td>ECON 3900 [0.5]</td>
<td>Research Methods in Economics</td>
</tr>
<tr>
<td>ECON 3920 [0.5]</td>
<td>Professional Practice of Economics</td>
</tr>
<tr>
<td>ECON 4905 [0.5]</td>
<td>Honours Capstone Seminar (see Note, below)</td>
</tr>
</tbody>
</table>

2. Two of the concentrations described below, also included in the Major CGPA 8.0

<table>
<thead>
<tr>
<th>Concentration inclusion details</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Credits Not Included in the Major CGPA (5.5 credits)</td>
</tr>
<tr>
<td>2a. 3.0 credits in: 3.0</td>
</tr>
<tr>
<td>ECON 3508 [0.5]</td>
</tr>
<tr>
<td>ECON 3509 [0.5]</td>
</tr>
<tr>
<td>ECON 4507 [0.5]</td>
</tr>
<tr>
<td>ECON 4508 [0.5]</td>
</tr>
<tr>
<td>PSCI 2102 [0.5]</td>
</tr>
<tr>
<td>PSCI 4104 [0.5]</td>
</tr>
</tbody>
</table>

Note: an Honours essay, ECON 4908 [1.0], may be written by students with Overall and Major CGPAs of 9.50 or higher. In cases where a grade of B- or higher is earned on this essay, it may replace both the ECON 4905 requirement and a 0.5 credit free elective requirement. Qualified students who choose to pursue the Honours essay pathway must first complete an Honours essay prospectus to the satisfaction of both their advisor and the Undergraduate Supervisor. See The Honours Essay Guidelines maintained by the Department for further details.

Concentration in Computational Analysis (4.0 credits)

2a. 1.0 credit in: 1.0

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 1005 [0.5]</td>
<td>Introduction to Computer Science I</td>
</tr>
<tr>
<td>COMP 1006 [0.5]</td>
<td>Introduction to Computer Science II</td>
</tr>
<tr>
<td>(See Note 1 below)</td>
<td></td>
</tr>
</tbody>
</table>

2b. 2.0 credits in: 2.0

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 2401 [0.5]</td>
<td>Introduction to Systems Programming</td>
</tr>
<tr>
<td>COMP 2402 [0.5]</td>
<td>Abstract Data Types and Algorithms</td>
</tr>
<tr>
<td>COMP 1805 [0.5]</td>
<td>Discrete Structures I (see Note 2 below)</td>
</tr>
<tr>
<td>COMP 2804 [0.5]</td>
<td>Discrete Structures II</td>
</tr>
</tbody>
</table>

2c. 1.0 credit from: 1.0

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 2404 [0.5]</td>
<td>Introduction to Software Engineering</td>
</tr>
<tr>
<td>COMP 3005 [0.5]</td>
<td>Database Management Systems</td>
</tr>
<tr>
<td>COMP 4111 [0.5]</td>
<td>Data Management for Business Intelligence</td>
</tr>
<tr>
<td>COMP 4003 [0.5]</td>
<td>Transaction Processing Systems</td>
</tr>
<tr>
<td>COMP 3803 [0.5]</td>
<td>Introduction to Theory of Computation</td>
</tr>
<tr>
<td>COMP 3804 [0.5]</td>
<td>Design and Analysis of Algorithms I</td>
</tr>
<tr>
<td>COMP 3801 [0.5]</td>
<td>Algorithms for Modern Data Sets</td>
</tr>
</tbody>
</table>

Total Credits 4.0

Notes:

1. For Item 2a of the Concentration in Computational Analysis, COMP 1405 may replace COMP 1005 and COMP 1406 may replace COMP 1006.

2. COMP 1805 in the Concentration in Computational Analysis is not required unless precluded course MATH 1800 is required by another component of the student’s program, such as the Concentration in Mathematics and Quantitative Economics, in which case an additional 0.5 credit in COMP is required from the list of electives in Item 2c.

Concentration in Development (4.0 credits)

2a. 3.0 credits in: 3.0

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 3508 [0.5]</td>
<td>Introduction to Economic Development</td>
</tr>
<tr>
<td>ECON 3509 [0.5]</td>
<td>Development Planning and Project Evaluation</td>
</tr>
<tr>
<td>ECON 4507 [0.5]</td>
<td>The Economics of Development</td>
</tr>
<tr>
<td>ECON 4508 [0.5]</td>
<td>International Aspects of Economic Development</td>
</tr>
<tr>
<td>PSCI 2102 [0.5]</td>
<td>Comparative Politics of the Global South</td>
</tr>
<tr>
<td>PSCI 4104 [0.5]</td>
<td>Development in the Global South - Theory and Practice</td>
</tr>
</tbody>
</table>

2b. 1.0 credit from: 1.0

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 3220 [0.5]</td>
<td>Canadian Economic History</td>
</tr>
<tr>
<td>ECON 3230 [0.5]</td>
<td>Selected Topics in Economic History</td>
</tr>
<tr>
<td>ECON 3510 [0.5]</td>
<td>African Economic Development</td>
</tr>
<tr>
<td>ECON 3808 [0.5]</td>
<td>The Economics of Transition</td>
</tr>
<tr>
<td>ECON 3670 [0.5]</td>
<td>Comparative Economic Systems</td>
</tr>
<tr>
<td>PSCI 4105 [0.5]</td>
<td>Selected Problems in Development in the Global South</td>
</tr>
<tr>
<td>PSCI 4409 [0.5]</td>
<td>Issues in Development Management</td>
</tr>
</tbody>
</table>

Total Credits 4.0

Concentration in Economic Data Science (4.0 credits)

2a. 1.5 credits in: 1.5

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSI 2400 [0.5]</td>
<td>Foundations of Information Systems</td>
</tr>
<tr>
<td>COMP 1005 [0.5]</td>
<td>Introduction to Computer Science I</td>
</tr>
</tbody>
</table>
Concentration in Economic Theory (4.0 credits)

2a. 3.0 credits in: Core Theory
- ECON 3001 [0.5] Mathematical Methods of Economics
- ECON 4001 [0.5] Mathematical Analysis in Economics
- ECON 4002 [0.5] Statistical Analysis in Economics
- ECON 4020 [0.5] Advanced Microeconomic Theory
- ECON 4021 [0.5] Advanced Macroeconomic Theory
- ECON 4706 [0.5] Econometrics I

Total Credits 4.0

Concentration in Financial Economics (4.0 credits)

2a. 1.0 credit in:
- BUSI 1001 [0.5] Principles of Financial Accounting
- BUSI 1002 [0.5] Management Accounting

(See Note 1 below)

2b. 1.5 credits from:
- ECON 3050 [0.5] Introduction to Financial Economics
- ECON 4051 [0.5] Financial Asset Pricing
- ECON 4052 [0.5] Corporate Financial Economics

or
- BUSI 3500 [0.5] Applied Corporate Finance
- BUSI 3502 [0.5] Investments
- BUSI 3512 [0.5] Derivatives

(see Note 2, below)

2c. 1.5 credits from:
- ECON 3602 [0.5] International Monetary Problems
- ECON 3607 [0.5] Monetary and Financial Institutions
- ECON 4053 [0.5] Financial Market Modeling
- ECON 4056 [0.5] Insurance Economics
- ECON 4057 [0.5] Behavioural Financial Economics
- PSCI 4805 [0.5] Political Economy of Global Money and Finance
- BUSI 2504 [0.5] & BUSI 2505 [0.5] and one of:
  - BUSI 4500 [0.5], BUSI 4502 [0.5] (see Note 3, below)

Total Credits 4.0

Notes
1. For Item 2a of the Concentration in Financial Economics, BUSI 1004 [0.5] may replace BUSI 1001 [0.5] and BUSI 1005 [0.5] may replace BUSI 1002 [0.5].
2. For Item 2b of the Concentration in Financial Economics, students taking BUSI 3500 [0.5], BUSI 3502 [0.5] and BUSI 3512 [0.5] must meet all required prerequisites for these courses as stated in the Undergraduate Calendar description at the time of registration.
3. For Item 2c of the Concentration in Financial Economics, BUSI 2504 [0.5] and BUSI 2505 [0.5] may not count for credit inside the major without also including either BUSI 4500 [0.5] or BUSI 4502 [0.5].

Concentration in International Political Economy (4.0 credits)

2a. 2.0 credits in:
- ECON 4601 [0.5] International Trade Theory and Policy
- ECON 4602 [0.5] International Monetary Theory and Policy
- PSCI 2602 [0.5] International Relations: Global Political Economy
- PSCI 4603 [0.5] Analysis of International Political Economy

Total Credits 4.0

Concentration in Natural Resources, Environment, and Economy (4.0 credits)

2a. 3.0 credits in:
- ECON 3803 [0.5] The Economics of Natural Resources
- ECON 3804 [0.5] Environmental Economics
- GEOG 2200 [0.5] Global Connections
- GEOG 2300 [0.5] Space, Place and Culture

Total Credits 4.0
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 3022</td>
<td>Environmental and Natural Resources</td>
<td>0.5</td>
</tr>
<tr>
<td>PSCI 3801</td>
<td>Environmental Politics</td>
<td>0.5</td>
</tr>
<tr>
<td>ECON 4407</td>
<td>Project Evaluation</td>
<td>0.5</td>
</tr>
<tr>
<td>GEOG 4004</td>
<td>Environmental Impact Assessment</td>
<td>0.5</td>
</tr>
<tr>
<td>TSES 4001</td>
<td>Technology and Society: Risk</td>
<td>0.5</td>
</tr>
</tbody>
</table>

2. **Concentration in Mathematics and Quantitative Economics (4.0 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1800</td>
<td>Introduction to Mathematical Reasoning</td>
<td>1.5</td>
</tr>
<tr>
<td>MATH 2052</td>
<td>Calculus and Introductory Analysis II</td>
<td>1.0</td>
</tr>
<tr>
<td>MATH 2152</td>
<td>Introductory Algebra II</td>
<td>1.0</td>
</tr>
<tr>
<td>MATH 2108</td>
<td>Abstract Algebra I</td>
<td>1.0</td>
</tr>
<tr>
<td>MATH 2404</td>
<td>Ordinary Differential Equations I</td>
<td>0.5</td>
</tr>
<tr>
<td>MATH 3001</td>
<td>Real Analysis I (Honours)</td>
<td>0.5</td>
</tr>
<tr>
<td>MATH 3007</td>
<td>Functions of a Complex Variable (Honours)</td>
<td>0.5</td>
</tr>
<tr>
<td>MATH 3107</td>
<td>Linear Algebra III</td>
<td>0.5</td>
</tr>
<tr>
<td>MATH 3705</td>
<td>Mathematical Methods I</td>
<td>0.5</td>
</tr>
<tr>
<td>MATH 3800</td>
<td>Mathematical Modeling and Computational Methods</td>
<td>0.5</td>
</tr>
<tr>
<td>MATH 3806</td>
<td>Numerical Analysis (Honours)</td>
<td>0.5</td>
</tr>
<tr>
<td>ECON 4004</td>
<td>Operations Research I</td>
<td>0.5</td>
</tr>
<tr>
<td>ECON 4005</td>
<td>Operations Research II</td>
<td>0.5</td>
</tr>
<tr>
<td>ECON 4700</td>
<td>Measurement Economics</td>
<td>0.5</td>
</tr>
<tr>
<td>MATH 4007</td>
<td>Measure and Integration Theory (Honours)</td>
<td>0.5</td>
</tr>
<tr>
<td>MATH 4205</td>
<td>Introduction to General Topology (Honours)</td>
<td>0.5</td>
</tr>
</tbody>
</table>

**Total Credits**: 4.0

**Notes:**

1. Students enrolled in the Concentration in Mathematics and Quantitative Economics must replace ECON 1401 [0.5] and ECON 1402 [0.5] in Item 1 of the B.Econ. Honours with Concentration(s) program requirements with either (i) MATH 1052 [0.5] and MATH 1152 [0.5], or (ii) MATH 1007 [0.5] and MATH 1107 [0.5]. Students who intend to take MATH 2000 [1.0] are strongly recommended to choose option (i). Please note that MATH 2000 is a prerequisite to upper year MATH courses such as MATH 3001 [0.5].

2. Students who have completed MATH 1004 [0.5] and MATH 1104 [0.5] can replace ECON 1401 [0.5] and ECON 1402 [0.5] in Item 1 of the B.Econ. Honours with Concentration(s) program requirements.

3. MATH 2007 [0.5] may replace MATH 2052 [0.5]. Students who intend to take MATH 2000 [1.0] are strongly recommended to take MATH 2052 [0.5].

4. MATH 2107 Linear Algebra II may replace MATH 2152 [0.5]. Students who intend to take MATH 2000 [1.0] are strongly recommended to take MATH 2152 [0.5].

5. MATH 2008 [0.5] may replace MATH 2000 [1.0]. In this case, the credit requirement under Item 2b will be reduced from 1.0 credit to 0.5 credit, and the credit requirement under Item 2c will be increased from 1.0 credit to 1.5 credit.

6. Students interested in other 3000 level MATH courses not listed under requirement 2c, may seek permission from the Department of Economics to have these courses count towards this requirement.

7. Students interested in other 4000 level MATH courses not listed under requirement 2d, may seek permission from the Department of Economics to have these courses count towards this requirement.

**Economics B.Econ. Combined Honours (20.0 credits)**

Students admitted to the Bachelor of Economics may register for a Combined Bachelor of Economics and any other discipline in which a B.A. Combined program is available.

**A. Credits Included in the Economics Major CGPA (7.5 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1001</td>
<td>Introduction to Microeconomics</td>
<td>0.5</td>
</tr>
<tr>
<td>ECON 1002</td>
<td>Introduction to Macroeconomics</td>
<td>0.5</td>
</tr>
<tr>
<td>FYSM 1003</td>
<td>Production to Economics</td>
<td>1.0</td>
</tr>
<tr>
<td>ECON 1401/MATH</td>
<td>Elementary Mathematics for Economics I</td>
<td>0.5</td>
</tr>
<tr>
<td>ECON 1402/MATH</td>
<td>Elementary Mathematics for Economics II</td>
<td>0.5</td>
</tr>
<tr>
<td>ECON 2020</td>
<td>Intermediate Microeconomics I: Producers and Market Structure</td>
<td>0.5</td>
</tr>
<tr>
<td>ECON 2030</td>
<td>Intermediate Microeconomics II: Consumers and General Equilibrium</td>
<td>0.5</td>
</tr>
<tr>
<td>ECON 2102</td>
<td>Intermediate Macroeconomics I</td>
<td>0.5</td>
</tr>
<tr>
<td>ECON 2103</td>
<td>Intermediate Macroeconomics II</td>
<td>0.5</td>
</tr>
<tr>
<td>ECON 2210</td>
<td>Introductory Statistics for Economics</td>
<td>0.5</td>
</tr>
<tr>
<td>ECON 2220</td>
<td>Introductory Econometrics</td>
<td>0.5</td>
</tr>
<tr>
<td>ECON 2900</td>
<td>Research Methods in Economics</td>
<td>0.5</td>
</tr>
<tr>
<td>ECON 3920</td>
<td>Professional Practice of Economics</td>
<td>0.5</td>
</tr>
</tbody>
</table>

**Total Credits**: 4.0

**Notes:**

1. **Economics**

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2. 1.0 credit in ECON at the 3000 or 4000 level 1.0

B. Additional Requirements (12.5 credits) 12.5

3. The requirements for Combined Honours in the other discipline must be satisfied.

4. Sufficient credits in free electives to make 20.0 credits for the degree.

Total Credits 20.0

Note: ECON 4908 [1.0] Honours Essay, may be written by students with Overall and Major CGPAs of 9.50 or higher. In cases where a grade of B+ or higher is earned on this essay, it may replace the ECON 4905 requirement together with an ECON elective requirement. Qualified students who choose to pursue the Honours essay stream must first complete an Honours essay prospectus to the satisfaction of both their advisor and the Undergraduate Supervisor. See The Honours Essay guidelines maintained by the Department for further details.

Economics
B.A. Honours Combined (20.0 credits)

Students already enrolled in a B.A. discipline may add Economics as an additional discipline under the B.A. Combined Honours. Economics course requirements for the B.A. Combined Honours are the same as those listed under the B.Econ. Combined Honours, above.

Economics
B.Econ. (15.0 credits)

A. Credits Included in the Major CGPA (7.0 credits)

1. 3.5 credits in: 3.5
   - ECON 1001 [0.5] Introduction to Microeconomics
   - & ECON 1002 [0.5] Introduction to Macroeconomics
   - or FYSM 1003 [1.0] Introduction to Economics
   - ECON 1401/MATH 1009 Elementary Mathematics for Economics I
   - ECON 1402/MATH 1010 Elementary Mathematics for Economics II
   - ECON 2020 [0.5] Intermediate Microeconomics I: Producers and Market Structure
   - ECON 2102 [0.5] Intermediate Macroeconomics I
   - ECON 2210 [0.5] Introductory Statistics for Economics

2. 3.5 credits in ECON at the 2000 level or higher 3.5

B. Credits Not Included in the Major CGPA (8.0 credits)

3. 6.0 credits in electives not in ECON 6.0

4. 2.0 credits in free electives. 2.0

Total Credits 15.0

Specialization in International Economic Policy
B.G.In.S. Honours (20.0 credits)

A. Credits Included in the Major CGPA (12.0 credits)

1. 4.5 credits in: Core Courses 4.5
   - GINS 1000 [0.5] Global History
   - GINS 1010 [0.5] International Law and Politics
   - GINS 1020 [0.5] Ethnography, Globalization and Culture
   - GINS 2000 [0.5] Ethics and Globalization
   - GINS 2010 [0.5] Globalization and International Economic Issues
   - GINS 2020 [0.5] Global Literatures
   - GINS 3010 [0.5] Global and International Theory
   - GINS 3020 [0.5] Places, Boundaries, Movements and Global Environmental Change
   - GINS 4090 [0.5] Honours Seminar in Global and International Studies

2. 0.0 credit in: International Experience Requirement Preparation
   - GINS 1300 [0.0] International Experience Requirement Preparation

3. 7.5 credits in: the Specialization

   a. 1.0 credit in: Foundations 1.0
   - ECON 1001 [0.5] Introduction to Microeconomics
   - & ECON 1002 [0.5] Introduction to Macroeconomics
   - or FYSM 1003 [1.0] Introduction to Economics

   b. 0.5 credit in: Microeconomics 0.5
   - ECON 2001 [0.5] Intermediate Microeconomics for Non-Mathematical Majors
   - or ECON 2009 [0.5] Managerial Economics
   - or ECON 2020 [0.5] Intermediate Microeconomics I: Producers and Market Structure

   c. 0.5 credit in: Macroeconomics 0.5
   - ECON 2101 [0.5] Intermediate Macroeconomics for Non-Mathematical Majors
   - or ECON 2102 [0.5] Intermediate Macroeconomics I

   d. 0.5 credit in: Research Methodologies 0.5
   - IPAF 2000 [0.5] Quantitative Approaches to Policy Analysis
   - or ECON 2210 [0.5] Introductory Statistics for Economics

   e. 2.0 credits in: International and Public Economics 2.0
   - ECON 3403 [0.5] Introduction to Public Economics: Expenditures
   - ECON 3405 [0.5] Introduction to Public Economics: Taxation
   - ECON 3601 [0.5] Introduction to International Trade
   - ECON 3602 [0.5] International Monetary Problems

   f. 3.0 credits from: International Economic Policy 3.0
   - ECON 3370 [0.5] The Economics of Migration
   - ECON 3508 [0.5] Introduction to Economic Development
   - ECON 3509 [0.5] Development Planning and Project Evaluation
   - ECON 3510 [0.5] African Economic Development
   - ECON 3803 [0.5] The Economics of Natural Resources
   - ECON 3804 [0.5] Environmental Economics
   - ECON 3807 [0.5] European Economic Integration
   - ECON 3808 [0.5] The Economics of Transition
   - ECON 3860 [0.5] Agricultural Economics
   - ECON 3870 [0.5] Comparative Economic Systems

Note: To meet the prerequisite requirements for ECON 2009, ECON 2020, ECON 2102, and ECON 2210, students must have obtained a grade of C+ or higher in ECON 1401 or MATH 1009 and a grade of C+ or higher in FYSM 1003 or ECON 1000 or equivalent.

B. Credits Not Included in the Major CGPA (8.0 credits)
4. 8.0 credits in: Free Electives
8.0
C. Additional Requirements
5. The International Experience requirement must be met.
6. The Language requirement must be met.

Total Credits 20.0

Stream in International Economic Policy
B.G.In.S. (15.0 credits)

A. Credits Included in the Major CGPA (8.0 credits)

<table>
<thead>
<tr>
<th>1. 4.0 credits in: Core Courses</th>
<th>4.0</th>
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<tbody>
<tr>
<td>GINS 1000 [0.5] Global History &amp; ECON 1002 [0.5] Introduction to Microeconomics or FYSM 1003 [1.0] Introduction to Economics</td>
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<td>ECON 3870 [0.5] Comparative Economic Systems</td>
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<td>ECON 3802 [0.5] International Monetary Problems</td>
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<tr>
<td>ECON 3803 [0.5] The Economics of Natural Resources</td>
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<td>ECON 3805 [0.5] Introduction to Public Economics: Expenditures</td>
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</tbody>
</table>

Note: To meet the prerequisite requirements for ECON 2009, ECON 2020, ECON 2102, and ECON 2210, students must have obtained a grade of C- or higher in ECON 1401 or MATH 1009 and a grade of C- or higher in FYSM 1003 or ECON 1000 or equivalent

B. Credits Not Included in the Major CGPA (7.0 credits)

3. 7.0 credits in: Free Electives
7.0
C. Additional Requirements
4. The Language requirement must be met.

Total Credits 15.0

Minor in Economics (4.0 credits)

Open to all undergraduate degree students not pursuing a Major in Economics or the B.G.In.S. Specialization or Stream in International Economic Policy.

Requirements:

1. 1.0 credit in:
   ECON 1001 [0.5] Introduction to Microeconomics & ECON 1002 [0.5] Introduction to Macroeconomics or FYSM 1003 [1.0] Introduction to Economics

2. 0.5 credit in:
   ECON 2001 [0.5] Intermediate Microeconomics for Non-Mathematical Majors or ECON 2009 [0.5] Managerial Economics or ECON 2020 [0.5] Intermediate Microeconomics I: Producers and Market Structure

3. 0.5 credit in:
   ECON 2101 [0.5] Intermediate Macroeconomics for Non-Mathematical Majors or ECON 2102 [0.5] Intermediate Macroeconomics I

4. 2.0 credits from:
   IPAF 2000 [0.5] Quantitative Approaches to Policy Analysis

5. The remaining requirements of the major discipline(s) and degree must be satisfied.

Total Credits 4.0

Minor in Industrial Economics (4.0 credits)

Open to all B.Eng. students and other undergraduate degree students not pursuing a Major in Economics who have successfully completed ECOR 3800 and SYSC 3200 while registered in a B.Eng. program.

Requirements:

1. 1.0 credit in:
   ECON 1001 [0.5] Introduction to Microeconomics & ECON 1002 [0.5] Introduction to Macroeconomics

2. 0.5 credit in:
   ECON 2009 [0.5] Managerial Economics or ECON 2020 [0.5] Intermediate Microeconomics I: Producers and Market Structure

3. 1.5 credits from:
   ECON 2030 [0.5] Intermediate Microeconomics II: Consumers and General Equilibrium
   ECON 3300 [0.5] Public Policy Toward Business
   ECON 3360 [0.5] Introduction to Labour Economics
   ECON 3365 [0.5] Introduction to Industrial Relations
or more of these courses to replace missing program. Such students may, however, be required to take one level Mathematics courses for credit toward their degree. Students in B.Econ. programs may not count any 0000-Level Courses register in a FYSM. 

A Second Language (ESLA) credit are not permitted to those who are required to take a minimum of one English as a First-Year Seminar (FYSM) when they have completed the Enriched Support Program (ESP) or have first-year standing in their B.Econ. program. Students who have completed the Enriched Support Program (ESP) or who are required to take a minimum of one English as a Second Language (ESLA) credit are not permitted to register in a FYSM.

**Bachelor of Economics Regulations**

The regulations presented in this section apply to all Bachelor of Economics (B.Econ.) programs. In addition to the requirements presented here, students must satisfy the University regulations common to all undergraduate students including the process of Academic Performance Evaluation (consult the Academic Regulations of the University section of this Calendar).

- **First-Year Seminars**
  B.Econ. degree students are strongly encouraged to include a First-Year Seminar (FYSM) during their first 4.0 credits of registration. Students are limited to 1.0 credit in FYSM and can only register in a FYSM while they have first-year standing in their B.Econ. program. Students who have completed the Enriched Support Program (ESP) or who are required to take a minimum of one English as a Second Language (ESLA) credit are not permitted to register in a FYSM.

- **0000-Level Courses**
  Students in B.Econ. programs may not count any 0000-level Mathematics courses for credit toward their degree. Such students may, however, be required to take one or more of these courses to replace missing program prerequisites in which case the courses will be set aside as “no credit for degree” (NCD).

**Access to Economics Courses**

To meet the prerequisite requirements for most 2000-level Economics courses, students must have obtained a grade of C- or higher in ECON 1401 and a grade of C- or higher in FYSM 1003 [1.0] or ECON 1000 [1.0] or, equivalently, an average grade of C- or higher in ECON 1001 and ECON 1002, one or both of which have been transferred from another university.

**Regulations**

**Post-Baccalaureate Diploma**

In addition to the requirements presented here, students must satisfy the University regulations (see the Academic Regulations of the University section of this Calendar).

**Definition**

A post-baccalaureate diploma is defined as a stand-alone undergraduate credential intended to:

- qualify a candidate for consideration for entry into a master's program, or
- bring a candidate who already possesses a bachelor's degree up to a level of a bachelor's degree of 20.0 credits or more in another discipline, or
- provide a candidate who already possesses a twenty-credit bachelor's degree in the same discipline the opportunity to bring their previous studies to current equivalents and/or to examine alternative areas, or
- provide a candidate with a professional undergraduate credential for which the prior completion of an undergraduate degree program is appropriate.

**Program Requirements**

- A post-baccalaureate diploma is normally constituted of a minimum of 3.0 credits to a maximum of 5.0 credits of advanced undergraduate courses.
- A minimum of 3.0 residency credits counting toward the post-baccalaureate diploma.

**English as a Second Language Requirement**

In addition to the program requirements, completion of English as a Second Language (ESLA) courses may be required from the following sequence: ESLA 1300, ESLA 1900, ESLA 1905, ESLA 1900, ESLA 1905. No credits from this sequence will be counted toward the post-baccalaureate diploma.

**Continuation**

All post-baccalaureate diploma students are expected to complete their diploma requirements within two calendar years after the date of initial registration. After this period student may be withdrawn.

**Graduation**

- A candidate for a post-baccalaureate diploma must have an overall CGPA of at least 6.5 to graduate.
- A candidate for a post-baccalaureate diploma must obtain a grade of C- or higher in each course taken in fulfillment of the program requirements.
• Students should consult with the Department, School or Institute when planning their diploma and selecting courses.

Co-operative Education
For more information about how to apply for the Co-op program and how the Co-op program works please visit the Co-op website.

All students participating in the Co-op program are governed by the Undergraduate Co-operative Education Policy.

Undergraduate Co-operative Education Policy
Admission Requirements
Students can apply to co-op in one of two ways: directly from high school or after beginning a degree program at Carleton.

If a student is admitted to co-op from high school, their grades will be reviewed two terms to one year prior to their first work term to ensure they continue to meet the academic requirements after their 1st or 2nd year of study. The time at which evaluation takes place depends on the program of study. Students will automatically be notified via their Carleton email account if they are permitted to continue.

Students not admitted to Carleton University with the co-op option on their degree can apply for admission via the co-operative education program website. To view application deadlines, visit carleton.ca/co-op.

Admission to the co-op option is based on the completion of 5.0 or more credits at Carleton University, the CGPA requirement for the students' academic program as well as any course prerequisites. The articulated CGPA for each program is the normal standard for assessment. Please see the specific degree program sections for the unique admission and continuation requirements for each academic program.

English Language Proficiency
Students admitted to Carleton based on CAEL, IELTS or TOEFL assessments and who are required to take an ESL course must take and pass the Oral Proficiency in Communicative Settings (OPECS) Test. The test must be taken before being permitted to register in COOP 1000. Admission to the co-op program can be confirmed with a minimum score of 4+.

Participation Requirements
COOP 1000
Once a student has been given admission or continuation confirmation to the co-op option s/he must complete and pass COOP 1000 (a mandatory online 0.0 credit course). Students will have access to this course a minimum of two terms prior to their first work term and will be notified when to register.

Communication with the Co-op Office
Students must maintain contact with the co-op office during their job search and while on a work term. All email communication will be conducted via the students' Carleton email account.

Employment
Although every effort is made to ensure a sufficient number of job postings for all students enrolled in the co-op option of their degree program, no guarantee of employment can be made. Carleton's co-op program operates a competitive job search process and is dependent upon current market conditions. Academic performance, skills, motivation, maturity, attitude and potential will determine whether a student is offered a job. It is the student's responsibility to actively conduct a job search in addition to participation in the job search process operated by the co-op office. Once a student accepts a co-op job offer (verbally or written), his/her job search will end and access to co-op jobs will be removed for that term. Students that do not successfully obtain a co-op work term are expected to continue with their academic studies. The summer term is the exception to this rule. Students should also note that hiring priority is given to Canadian citizens for co-op positions in the Federal Government of Canada.

Registering in Co-op Courses
Students will be registered in a Co-op Work Term course while at work. The number of Co-op Work Term courses that a student is registered in is dependent upon the number of four-month work terms that a student accepts. While on a co-op work term students may take a maximum of 0.5 credit throughout each four-month co-op work term. Courses must be scheduled outside of regular working hours.

Students must be registered as full-time before they begin their co-op job search (2.0 credits). All co-op work terms must be completed before the beginning of the final academic term. Students may not finish their degree on a co-op work term.

Work Term Assessment and Evaluation
To obtain a Satisfactory grade for the co-op work term students must have:

1. A satisfactory work term evaluation by the co-op employer;
2. A satisfactory grade on the work term report.

Students must submit a work term report at the completion of each four-month work term. Reports are due on the 16th of April, August, and December and students are notified of due dates through their Carleton email account.

Workplace performance will be assessed by the workplace supervisor. Should a student receive an unsatisfactory rating from their co-op employer, an investigation by the co-op program manager will be undertaken. An unsatisfactory employer evaluation does not preclude a student from achieving an overall satisfactory rating for the work term.

Graduation with the Co-op Designation
In order to graduate with the co-op designation, students must satisfy all requirements for their degree program in addition to the requirements according to each co-op
Students are advised to discuss the application process and requirements with the International Student Services Office.

**Bachelor of Economics Honours: Co-op Admission and Continuation Requirements**

- Maintain full-time status in each study term (2.0 credits);
- Be eligible to work in Canada (for off-campus work);
- Have successfully completed COOP 1000 [0.0]

In addition to the following:

1. Registered as a full-time student in the second year of the Bachelor of Economics Honours program
2. A major CGPA of 8.00 or higher and an overall CGPA of 8.00 or higher;
3. Successfully completed all required first- and second-year courses before beginning the first work term.

To obtain the co-op designation in Bachelor of Economics, students must successfully complete three (3) work terms.

**Work Term Report Course:** ECON 3999

**Work/Study Pattern:**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term</td>
<td>Pattern</td>
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<tr>
<td>S</td>
<td>Summer</td>
<td>Summer W</td>
<td>Summer W</td>
<td>W</td>
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</tbody>
</table>

**Legend**

- S: Study
- W: Work
- O: Optional

* indicates recommended work study pattern
** student finds own employer for this work-term.

**Admissions Information**

Admission Requirements are for the 2020-21 year only, and are based on the Ontario High School System. Holding the minimum admission requirements only establishes eligibility for consideration. The cut-off averages for admission may be considerably higher than the minimum. See also the General Admission and Procedures section of this Calendar. An overall average of at least 70% is normally required to be considered for admission. Some programs may also require specific course prerequisites and prerequisite averages and/or supplementary admission portfolios. Higher averages are required for admission to programs for which the demand for places by qualified applicants exceeds the number of places available. The overall average required for admission is determined each year on a program by program basis. Consult admissions.carleton.ca for further details.

Note: Courses listed as *recommended* are not mandatory for admission. Students who do not follow the recommendations will not be disadvantaged in the admission process.

**Degree**

- Bachelor of Economics (B.Econ.) (Honours)
Admission Requirements

First Year
The Ontario Secondary School Diploma (OSSD) or equivalent including a minimum of six 4U or M courses. The six 4U or M courses must include a 4U course in English (or anglais) as well as 4U Advanced Functions or MATH 0005. In addition, 4U Calculus and Vectors or MATH 0107 is strongly recommended. Equivalent courses may be substituted between the old and new Ontario mathematics curriculum. For applicants whose first language is not English, the requirement of English can also be met under the conditions outlined in the section “English Language Requirements” in the Admissions Requirements and Procedures section of this Calendar.

Advanced Standing
Applications for admission to the second or subsequent years will be assessed on their merits. Advanced standing will be granted only for those courses that are determined to be appropriate.

Co-op Option
Direct Admission to the First Year of the Co-op Option
Applicants must:
1. meet the required overall admission cut-off average and prerequisite course average. These averages may be higher than the stated minimum requirements;
2. be registered as a full-time student in a Bachelor of Economics Honours program;
3. be eligible to work in Canada (for off-campus work placements).

Meeting the above requirements only establishes eligibility for admission to the program. The prevailing job market may limit enrolment in the co-op option. Students should also note that hiring priority is given to Canadian citizens for co-op positions in the Public Service Commission.

Note: continuation requirements for students previously admitted to the co-op option and admission requirements for the co-op option after beginning the program are described in the Co-operative Education Regulations section of this Calendar.

Admissions Information
Admission Requirements are for the 2020-21 year only, and are based on the Ontario High School System. Holding the minimum admission requirements only establishes eligibility for consideration. The cut-off averages for admission may be considerably higher than the minimum. See also the General Admission and Procedures section of this Calendar. An overall average of at least 70% is normally required to be considered for admission. Some programs may also require specific course prerequisites and prerequisite averages and/or supplementary admission portfolios. Higher averages are required for admission to programs for which the demand for places by qualified applicants exceeds the number of places available. The overall average required for admission is determined each year on a program by program basis. Consult admissions.carleton.ca for further details.

Note: Courses listed as recommended are not mandatory for admission. Students who do not follow the recommendations will not be disadvantaged in the admission process.

Diploma
- Post-Baccalaureate Diploma in Economics
To be eligible for admission to the Post-Baccalaureate Diploma in Economics students must normally have:
1. an undergraduate degree with a GPA of 9.0 or higher, preferably with honours,
2. successfully completed university-level introductory (micro- and macro-) economics, calculus, and linear algebra with a grade of C+ or higher in each, and
3. permission of the Department of Economics.

Students may be granted advanced standing to a maximum of 1.0 credit. Advanced standing does not negate the 3.0 credit residency requirement.

Note: students who already hold an honours undergraduate degree in economics are encouraged to apply for admission to graduate programs in economics through the Graduate Admissions web site at graduate.carleton.ca.

Economics (ECON) Courses
ECON 1000 [1.0 credit]
Introduction to Economics
An introduction to the major tools and policy problems of economics. Economic analysis is applied to a variety of contemporary problems such as pollution, poverty, the control of monopoly, unemployment, inflation, and international economic problems.

Precludes additional credit for ECON 1001, ECON 1002, and FYSM 1003.
Lectures three hours a week, discussion groups one hour every two weeks.

ECON 1001 [0.5 credit]
Introduction to Microeconomics
An introduction to the major tools and policy problems of microeconomics. Economic analysis is applied to a variety of contemporary issues such as taxation, pollution, wage determination, poverty, market power, and international trade.

Precludes additional credit for ECON 1000 and FYSM 1003.
Lectures three hours a week, discussion groups one hour every two weeks.
ECON 1002 [0.5 credit]
Introduction to Macroeconomics
An introduction to the major tools and policy problems of macroeconomics. Economic analysis is applied to a variety of contemporary problems such as: saving, investment and interest rates; unemployment; money and inflation; exchange rates; fiscal and monetary policy.
Precludes additional credit for ECON 1000 and FYSM 1003.
Lectures three hours a week, discussion groups one hour every two weeks.

ECON 1401 [0.5 credit]
Elementary Mathematics for Economics I
Also listed as MATH 1401.
Precludes additional credit for BIT 1000, BIT 1001, BIT 1100, BIT 1101, BIT 1200, BIT 1201, MATH 1007, MATH 1009, MATH 1104, MATH 1107, MATH 1119, MATH 1052, MATH 1152.
Prerequisite(s): Ontario Grade-12 U Advanced Functions, or MATH 0005, or equivalent; and ECON 1000 or ECON 1001 or FYSM 1003, which may be taken concurrently with ECON 1401.
Lectures three hours a week, tutorials one hour a week.

ECON 1402 [0.5 credit]
Elementary Mathematics for Economics II
Calculus: including partial differentiation, definite and indefinite integrals, techniques of integration, and unconstrained optimization. Vectors and matrices: scalar multiplication, inner product, linear dependence, matrix operations, rank, invertible matrix theorem, and determinants. Economic applications such as profit maximization, comparative statics, and the Leontief input-output model.
Also listed as MATH 1402.
Precludes additional credit for BIT 1000, BIT 1001, BIT 1100, BIT 1101, BIT 1200, BIT 1201, MATH 1007, MATH 1009, MATH 1104, MATH 1107, MATH 1119, MATH 1052, MATH 1152.
Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003 with a grade of C- or higher, and ECON 1401 or MATH 1401 with a grade of C- or higher.
Lectures three hours a week, tutorials one hour a week.

ECON 2001 [0.5 credit]
Intermediate Microeconomics for Non-Mathematical Majors
The main topics in microeconomic theory presented in a relatively non-technical manner (e.g., without the requiring knowledge of calculus) with illustrations of their applications. Not open to students in any Economics, B.Com., B.C.S., B.Eng., B.I.D., B.I.B., B.Math., or B.Sc. program.
Precludes additional credit for ECON 2002 (no longer offered), ECON 2003 (no longer offered), ECON 2009, ECON 2020, and ECON 2030.
Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003, or permission of the Department.
Lectures three hours a week.

ECON 2009 [0.5 credit]
Managerial Economics
An economic analysis of managerial decision-making. Elements of production and cost; price and output determination under perfectly and imperfectly competitive market structures; the role of information; topics in business strategy; and the impact of government intervention. Not open to students in any Economics program.
Precludes additional credit for ECON 2001, ECON 2002 (no longer offered), ECON 2003 (no longer offered), and ECON 2020.
Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003 with a grade of C- or higher; MATH 1009 (or equivalent) with a grade of C- or higher.
Lectures three hours a week, tutorials one and half hours a week.

ECON 2020 [0.5 credit]
Intermediate Microeconomics I: Producers and Market Structure
Theory of the firm: elements of production and cost; input allocation, pricing, and firm behaviour under perfectly and imperfectly competitive market structures; the role of information; game theory and public policy, including basic competition policy.
Precludes additional credit for ECON 2001, ECON 2002 (no longer offered), ECON 2003 (no longer offered), and ECON 2009.
Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003 with a grade of C- or higher; ECON 1401 (or equivalent) with a grade of C- or higher; and ECON 1402 (or equivalent), which may be taken concurrently with ECON 2020.
Lectures three hours a week, tutorials one and a half hours a week.
ECON 2030 [0.5 credit]
Intermediate Microeconomics II: Consumers and General Equilibrium
Theory of consumer choice and demand; applications to intertemporal choice, labour supply, and/or choice under uncertainty; welfare analysis; general equilibrium theory; externalities and the role of government. Precludes additional credit for ECON 2001, ECON 2002 (no longer offered), and ECON 2003 (no longer offered). Prerequisite(s): ECON 2020 with a grade of C- or higher or ECON 2009 with a grade of C+ or higher, and ECON 1402 (or equivalent) with a grade of C- or higher. Lectures three hours a week, tutorials one and a half hours a week.

ECON 2101 [0.5 credit]
Intermediate Macroeconomics for Non-Mathematical Majors
The main topics in macroeconomic theory presented in a relatively non-technical manner (e.g., without the requiring knowledge of calculus) with illustrations of their application. Not open to students in any Economics, B.Com., B.C.S., B.Eng., B.I.D., B.Math., or B.Sc. program. Precludes additional credit for ECON 2102 and ECON 2103. Prerequisite(s): ECON 1002 or ECON 1003 or FYSM 1003, or permission of the Department. Lectures three hours a week.

ECON 2102 [0.5 credit]
Intermediate Macroeconomics I
An introduction to the macroeconomic modeling of output in the short and long run, and to fixed-price models of the closed and open economy over the business cycle. Policy prescriptions in relation to the business cycle are analysed. Precludes additional credit for ECON 2101. Prerequisite(s): ECON 1002 or ECON 1000 or FYSM 1003 with a grade of C- or higher; ECON 1401 (or equivalent) with a grade of C- or higher; and ECON 1402 (or equivalent), which may be taken concurrently with ECON 2102. Lectures three hours a week, tutorials one and a half hours a week.

ECON 2103 [0.5 credit]
Intermediate Macroeconomics II
An extension of macroeconomic modeling to the dynamics of wage-price adjustment in the intermediate and long run, to the theoretical foundations of basic macroeconomic relationships, and to contemporary policy issues arising in relation to the business cycle and long-run growth. Precludes additional credit for ECON 2101. Prerequisite(s): ECON 2102 with a grade of C- or higher, ECON 1001 with a grade of C- or higher, and ECON 1402 (or equivalent) with a grade of C- or higher. Lectures three hours a week, tutorials one and a half hours a week.

ECON 2210 [0.5 credit]
Introductory Statistics for Economics
Basic statistical methods for the study of economics. Topics include descriptive statistics, elementary probability theory, sampling distributions, estimation and hypothesis testing for one and two population parameters. Precludes additional credit for BIT 2000, BIT 2100 (no longer offered), BIT 2300 (no longer offered), ECON 2200 (no longer offered), ECON 2201 (no longer offered), STAT 2507, STAT 2606, and STAT 3502. Prerequisite(s): ECON 1401 (or equivalent) with a grade of C- or higher; ECON 1402 (or equivalent), which may be taken concurrently with ECON 2210. Lectures three hours a week, tutorials one and a half hours a week.

ECON 2220 [0.5 credit]
Introductory Econometrics
Topics include correlation, simple and multiple linear regression, and an introduction to statistical computing using an econometrics package. Emphasis on understanding appropriate methods and their properties, as distinct from their formal theoretical development. Empirical applications. Precludes additional credit for ECON 2200 (no longer offered), ECON 2202 (no longer offered), STAT 2509, and STAT 2607. Prerequisite(s): ECON 2210 (or equivalent) with a grade of C- or higher, and ECON 1402 (or equivalent) with a grade of C- or higher. Lectures three hours a week, tutorials one and a half hours a week.

ECON 2708 [0.5 credit]
Applied Data Analysis
An introduction to concepts and tools for using various forms of data to study applied economic problems. Topics may include identifying relevant datasets, collecting and cleaning both research-ready and user-assembled data sets, data visualization, and summary statistics. Includes: Experiential Learning Activity. Includes: Experiential Learning Activity Prerequisite(s): COMP 1005 with a grade of C- or higher; and ECON 1402 (or equivalent), with a grade of C- or higher; and ECON 2210 (or equivalent), with a grade of C+ or higher. Lectures three hours a week.
ECON 3001 [0.5 credit]
Mathematical Methods of Economics
Constrained optimization via Lagrange and Kuhn-Tucker conditions; implicit functions and implicit differentiation; comparative static methods applied to models such as utility maximization and least-cost production; homogeneous functions; concave and convex functions; compounding and exponential functions; economic models involving integration; differential equations. Precludes additional credit for ECON 2400 (no longer offered). Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003 with a grade of C- or higher; and ECON 1401 and ECON 1402 (or equivalent) with a grade of C- or higher in each and a combined grade point average in ECON 1401 and ECON 1402 of 6.50 or higher. Lectures three hours a week, tutorials one and a half hours a week.

ECON 3050 [0.5 credit]
Introduction to Financial Economics
The major theories and basic tools used to address modern financial economic issues. Topics may include time value of money, bond and stock valuation, investment criteria, capital budgeting, the risk-return tradeoff, options and option valuation, cost of capital, and the fundamentals of international corporate finance. Precludes additional credit for BUSI 2503, BUSI 2504, ECON 2504 (no longer offered), BUSI 2505, and ECON 2505 (no longer offered). Prerequisite(s): ECON 1001 and ECON 1002 each with a grade of C- or higher, or ECON 1000 or FYSM 1003 with a grade of C- or higher, ECON 1402 (or equivalent) with a grade of C- or higher, and BUSI 1002 or BUSI 1005 with a grade of C- or higher. Lectures three hours a week.

ECON 3201 [0.5 credit]
Economic Thought and Policy in Canada
An account of the interrelationship between economic theories expounded in Canada and their issue in national policy. Precludes additional credit for ECON 3404 (no longer offered). Prerequisite(s): an introductory course in one of the social sciences or Canadian history. Lectures three hours a week.

ECON 3202 [0.5 credit]
Canadian Economic History
A survey of Canadian economic history from the sixteenth century to the present. Also listed as HIST 3220. Precludes additional credit for ECON 2305 or HIST 2305 (no longer offered), ECON 3203 (no longer offered), ECON 3202 or HIST 3203 (no longer offered), and ECON 3207 or HIST 3204 (no longer offered). Prerequisite(s): ECON 1001 and ECON 1002, or ECON 1000 or FYSM 1003. Lectures three hours a week.

ECON 3230 [0.5 credit]
Selected Topics in Economic History
An examination of the economic development of North America or Europe or other possible selected sets of countries. Countries examined vary from year to year. Also listed as HIST 3230. Precludes additional credit for ECON 3005 (no longer offered). Prerequisite(s): ECON 1001 and ECON 1002, or ECON 1000 or FYSM 1003, or permission of the Department. Lectures three hours a week.

ECON 3300 [0.5 credit]
Public Policy Toward Business
The interaction of government and business in the Canadian economy. Reasons for government involvement in selected public policy areas. Topics covered may include competition policy, regulation of firms by boards and commissions, environmental regulation, and public enterprise. Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003. Lectures three hours a week.

ECON 3305 [0.5 credit]
Introduction to Labour Economics
Basic principles of labour economics including market, institutional, and sociological forces. Technology and labour demand, wage systems, human capital, internal wage structure, market discrimination, female labour-force entry, wage-price spiral, household labour supply, and wage determination. Precludes additional credit for ECON 3506 (no longer offered). Credit will not be given if taken concurrently with or after ECON 4305 (no longer offered) or ECON 4306 (no longer offered) or ECON 4360. Prerequisite(s): ECON 1001 and ECON 1002, or ECON 1000 or FYSM 1003. Lectures three hours a week.

ECON 3365 [0.5 credit]
Introduction to Industrial Relations
An introduction to industrial relations covering such topics as: industrial relations systems, the functioning of trade unions, collective bargaining in Canada, and Canadian public policy in industrial relations. Precludes additional credit for BUSI 3107 (no longer offered) and ECON 3507 (no longer offered). Credit will not be given if taken concurrently with or after ECON 4365 or ECON 4605 (no longer offered). Prerequisite(s): ECON 1001 and ECON 1002, or ECON 1000 or FYSM 1003. Lectures three hours a week.
ECON 3370 [0.5 credit]
The Economics of Migration
An introduction to the economic aspects of migration. Topics include, among others: the economics of migration within countries; the economics of host country integration of immigrants; the impact of immigration on outcomes in the host country; the impacts of emigration on the home country.
Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003.
Lectures three hours a week.

ECON 3380 [0.5 credit]
The Economics of Gender and Ethnicity
The impact of gender and ethnicity on labour-market outcomes. Topics may include: employment, work, earnings, and poverty; discrimination and policy responses; immigration; the economics of the household; gender and development; micro-credit; labour standards. Precludes additional credit for ECON 3100 (no longer offered) and ECON 3810 (no longer offered).
Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003.
Lectures three hours a week.

ECON 3403 [0.5 credit]
Introduction to Public Economics: Expenditures
The role and nature of the government sector in the economy, the theory of public goods, the equity and efficiency effects of public expenditures, voting rules and fiscal politics, techniques of public expenditure analysis, and intergovernmental fiscal relations.
Precludes additional credit for ECON 3003 (no longer offered) and ECON 3408 (no longer offered). Credit will not be given if taken concurrently with or after ECON 4402 (no longer offered) or ECON 4403.
Prerequisite(s): ECON 1001 and ECON 1002 or ECON 1000 or FYSM 1003.
Lectures three hours a week.

ECON 3405 [0.5 credit]
Introduction to Public Economics: Taxation
The role and nature of the government sector in the economy, principles of taxation, tax equity, incidence and excess burden of taxes, structure of taxes in the economy, role of personal, corporate, sales and wealth taxes, fiscal stabilization policy, and the economics of public debt.
Precludes additional credit for ECON 3003 (no longer offered) and ECON 3407 (no longer offered). Credit will not be given if taken concurrently with or after ECON 4401 (no longer offered) or ECON 4404.
Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003.
Lectures three hours a week.

ECON 3420 [0.5 credit]
Economic Theories of Federalism
Economic dimensions of federalism, with reference to Canadian experience. Issues include: fiscal federalism; impact of federal economic policies on provincial economies; decentralization possibilities for fiscal and economic development policies; and consequences of policies such as provincial trade barriers and impediments to factor flows.
Precludes additional credit for ECON 3206 (no longer offered).
Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003.
Lectures three hours a week.

ECON 3450 [0.5 credit]
Political Economy in the Modern State
An examination of the role of government in the economy, with emphasis on alternate forms of social coordination and the advantages and disadvantages of each form in the Canadian system.
Precludes additional credit for ECON 3305 (no longer offered).
Prerequisite(s): ECON 1001 and ECON 1002, or ECON 1000 or FYSM 1003.
Lectures three hours a week.

ECON 3460 [0.5 credit]
Introduction to Health Economics
Preclusion: credit will not be given if taken concurrently with or after ECON 4460.
Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003.
Lectures three hours a week.

ECON 3508 [0.5 credit]
Development Planning and Project Evaluation
An introduction to the tools used in the planning and evaluation of development projects. Topics include the theory, application, strengths and limitations of cost-benefit analysis and competing approaches, and an examination of project evaluation techniques.
Precludes additional credit for ECON 3604 (no longer offered).
Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003.
Lectures three hours a week.

ECON 3509 [0.5 credit]
Development Planning and Project Evaluation
An introduction to the tools used in the planning and evaluation of development projects. Topics include the theory, application, strengths and limitations of cost-benefit analysis and competing approaches, and an examination of project evaluation techniques.
Precludes additional credit for ECON 3604 (no longer offered).
Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003.
Lectures three hours a week.
**ECON 3510 [0.5 credit]**

**African Economic Development**
Domestic and international aspects of development problems and policies in the African context. Topics may include human resource development, growth and poverty reduction, domestic resource mobilization, the implications of ethnic diversity, governance, and institutions, and issues of trade, investment, aid, migration, and health.

Prerequisite(s): ECON 1001 and ECON 1002, or ECON 1000 or FYSM 1003.

Lectures three hours a week.

**ECON 3600 [0.5 credit]**

**Introduction to International Economics**
A discussion of theory and policy in international trade and finance. Intended for students planning to take only 0.5 credit in international economics at the 3000-level.

Precludes additional credit for ECON 3601 and ECON 3602. Credit will not be given if taken concurrently with or after ECON 4601 or ECON 4602.

Prerequisite(s): ECON 1001 and ECON 1002, or ECON 1000 or FYSM 1003, or permission of the Department.

Lectures three hours a week.

**ECON 3601 [0.5 credit]**

**Introduction to International Trade**
An extension of the basic principles of economics to international trade. Topics covered include the theory of international specialization, tariffs and other barriers to trade, trade liberalization and economic integration, international movements of labour and capital, trade and development.

Precludes additional credit for ECON 3600. Credit will not be given if taken concurrently with or after ECON 4601.

Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003.

Lectures three hours a week.

**ECON 3602 [0.5 credit]**

**International Monetary Problems**
A discussion of the theory and institutions of the international monetary system, and the related balance of payments problems of nation states.

Precludes additional credit for ECON 3600. Credit will not be given if taken concurrently with or after ECON 4602.

Prerequisite(s): ECON 1001 and ECON 1002, or ECON 1000 or FYSM 1003.

Lectures three hours a week.

**ECON 3607 [0.5 credit]**

**Monetary and Financial Institutions**
The behaviour of financial intermediaries and institutions such as the Bank of Canada, banks and trust companies, and regulatory bodies such as the Canada Deposit Insurance Corporation and the Superintendent of Financial Institutions.

Prerequisite(s): ECON 1001 and ECON 1002, or ECON 1000 or FYSM 1003.

Lectures three hours a week.

**ECON 3603 [0.5 credit]**

**The Economics of Natural Resources**
The application of economic analysis to questions concerning natural-resource use, management and conservation, as well as market failures and environmental effects. Policy problems relating to natural resources are discussed.

Precludes additional credit for ECON 3805 (no longer offered).

Prerequisite(s): ECON 1001 and ECON 1000 or FYSM 1003.

Lectures three hours a week.

**ECON 3604 [0.5 credit]**

**Environmental Economics**
Microeconomic analysis of environmental issues. Frameworks for measuring environmental costs and benefits. The efficiency of alternative pollution control policies. Applications include air and water pollution and global environmental problems such as ozone depletion and global warming.

Precludes additional credit for ECON 3806 (no longer offered).

Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003.

Lectures three hours a week.

**ECON 3706 [0.5 credit]**

**Applied Econometrics**
Introduction to applied econometric methods with emphasis on the use of the regression model for empirical research. Real-world examples are used extensively to illustrate key concepts. Hands-on computer exercises are an integral part of the course.

Includes: Experiential Learning Activity

Precludes additional credit for ECON 4706.

Prerequisite(s): ECON 1001 and ECON 1002, or ECON 1000 or FYSM 1003, or ECON 2201 (or equivalent) with a grade of C- or higher, and ECON 2202 (or equivalent) with a grade of C+ or higher.

Lectures three hours a week, tutorials one and a half hours a week.

**ECON 3801 [0.5 credit]**

**Regional Economics**
Unequal distribution of economic activity between spatially defined regions. The pattern in Canada since World War II and the outlook for the future is evaluated, considering "natural" adjustment mechanisms and policy tools.

Precludes additional credit for ECON 3401 (no longer offered).

Prerequisite(s): ECON 1001 and ECON 1002, or ECON 1000 or FYSM 1003.

Lectures three hours a week.

**ECON 3803 [0.5 credit]**

**The Economics of Natural Resources**
The application of economic analysis to questions concerning natural-resource use, management and conservation, as well as market failures and environmental effects. Policy problems relating to natural resources are discussed.

Precludes additional credit for ECON 3805 (no longer offered).

Prerequisite(s): ECON 1001 and ECON 1000 or FYSM 1003.

Lectures three hours a week.

**ECON 3804 [0.5 credit]**

**Environmental Economics**
Microeconomic analysis of environmental issues. Frameworks for measuring environmental costs and benefits. The efficiency of alternative pollution control policies. Applications include air and water pollution and global environmental problems such as ozone depletion and global warming.

Precludes additional credit for ECON 3806 (no longer offered).

Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003.

Lectures three hours a week.
ECON 3807 [0.5 credit]
European Economic Integration
A discussion of the theories of free trade areas and customs, monetary, and economic unions, and the related historical experience of Europe. Topics include: currency area and the euro, coordination of fiscal policy and the EU budget, common agricultural policy, labour mobility, and regional policy.
Prerequisite(s): ECON 1001 and ECON 1002, or ECON 1000 or FYSM 1003.
Lectures three hours a week.

ECON 3808 [0.5 credit]
The Economics of Transition
The transition from state ownership and central planning to mixed ownership structure with resource allocation by market mechanisms. "Classical socialism" is criticized and the processes of transition in countries of Central and Eastern Europe, the former Soviet Union, and Asia are compared.
Precludes additional credit for ECON 3700 (no longer offered), ECON 3701 (no longer offered), and ECON 3702 (no longer offered).
Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003.
Lectures three hours a week.

ECON 3820 [0.5 credit]
Topics in Canadian Economic Policy
Economic analysis applied to selected policy areas, issues or institutions. One or more of the following topics may be dealt with: decision-making by bureaucratic institutions, policy problems arising from poverty, the economics of natural resources and pollution, urban economics.
Precludes additional credit for ECON 3800 (no longer offered).
Prerequisite(s): ECON 1001 and ECON 1002, or ECON 1000 or FYSM 1003.
Lectures three hours a week.

ECON 3840 [0.5 credit]
An Economic Analysis of Law
An introduction to the application of economic principles and methodology to a variety of legal problems with emphasis on the theory of property rights and the allocation of resources.
Precludes additional credit for ECON 3204 (no longer offered).
Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003.
Lectures three hours a week.

ECON 3850 [0.5 credit]
Economics of Information and the Media
An introduction to the economics of information and the media, with a focus on the analysis of production and distribution of information, the application of theory to selected communications-media industries in Canada, and the analysis of existing Canadian policies.
Precludes additional credit for ECON 3200 (no longer offered). Credit will not be given if taken concurrently with or after ECON 4205 (no longer offered) or ECON 4850.
Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003.
Lectures three hours a week.

ECON 3856 [0.5 credit]
Housing Economics
Examination of housing markets, housing finance, and government housing policy using the tools of microeconomics. Models of demand, supply, and market equilibrium emphasizing the special characteristics of housing, including heterogeneity, durability, and spatial fixity. Relationships to other goods and markets and the wider macroeconomy.
Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003.
Lectures three hours a week.

ECON 3860 [0.5 credit]
Agricultural Economics
An examination of the agricultural industry in the national economy and in low-income societies, with emphasis on the working out of the basic forces that determine supply and demand for the industry, and the functional distribution of income among the factors of production.
Precludes additional credit for ECON 3406 (no longer offered).
Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003.
Lectures three hours a week.

ECON 3864 [0.5 credit]
Transportation Economics
Factors affecting demand for and supply of transportation services; demand elasticities and cost structures of various modes of transport; transportation service pricing. Topics may include transport demand forecasting, transportation investment and project appraisal, and the role of transport in economic development.
Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003.
Lectures three hours a week.
ECON 3870 [0.5 credit]
Comparative Economic Systems
Analysis of the structure, institutions, and performance of alternative economic systems, including capitalism, socialism, and communism. Selected countries are studied as examples of these systems.
Precludes additional credit for ECON 4806 (no longer offered) and ECON 4807 (no longer offered).
Prerequisite(s): ECON 1001 or ECON 1000 or FYSM 1003.
Lectures three hours a week.

ECON 3880 [0.5 credit]
Special Studies in Economics
Content may vary from year to year and is announced in advance of the registration period.
Precludes additional credit for ECON 3402 (no longer offered).
Prerequisite(s): ECON 1001 and ECON 1002, or ECON 1000 or FYSM 1003.
Lectures and/or seminars three hours a week.

ECON 3900 [0.5 credit]
Research Methods in Economics
The process of doing basic research in economics: development of the research proposal, finding and critically evaluating relevant literature, model development, methods for locating and collecting economic data, analytical methods, and writing mechanics. This course has a strong practical focus.
Includes: Experiential Learning Activity
Prerequisite(s): ECON 2030 with a grade of C+ or higher, ECON 2103 with a grade of C+ or higher, ECON 2210 (or equivalent) with a grade of C- or higher, and ECON 2220 (or equivalent) with a grade of C+ or higher.
Seminars three hours a week.

ECON 3920 [0.5 credit]
Professional Practice of Economics
Development of skills used by professional economists, including writing professional documents such as policy briefs and memos, data visualization, communication of economic ideas in non-technical terms, presentation skills, and team-based problem solving.
Includes: Experiential Learning Activity
Prerequisite(s): ECON 2030 with a grade of C+ or higher, ECON 2103 with a grade of C+ or higher, ECON 2210 (or equivalent) with a grade of C- or higher, and ECON 2220 (or equivalent) with a grade of C+ or higher.
Seminars three hours a week.

ECON 3999 [0.0 credit]
Co-operative Work Term
Graded Sat/Uns.
Includes: Experiential Learning Activity
Prerequisite(s): registration in the Honours Economics or Applied Economics Co-operative Education option, satisfactory completion of the Co-op preparation classes offered by the Co-operative Education Office, and permission of the Department.

ECON 4001 [0.5 credit]
Mathematical Analysis in Economics
Analysis and algebra: set theory, sequences and series, quadratic forms, separation and fixed-point theorems.
Static optimization: the Weierstrass, Lagrange, and Kuhn-Tucker theorems; convexity and quasi-convexity; the envelope theorem. Dynamic optimization: the Maximum Principle and Bellman's equation. Applications of these tools to economic theory.
Prerequisite(s): ECON 3001 with a grade of C+ or higher.
Lectures three hours a week, tutorials one and a half hours a week.

ECON 4002 [0.5 credit]
Statistical Analysis in Economics
Probability: including conditional probability, random variables and distributions, unconditional and conditional expectations. Distributions: including special distributions and their properties, and sampling distributions of estimators. Nonparametric methods and limit theorems; stochastic processes; simulation and bootstrap methods.
Applications of these tools to economic theory.
Precludes additional credit for STAT 3500 (no longer offered), STAT 3508, and STAT 3558.
Prerequisite(s): ECON 2210 (or equivalent) with a grade of C+ or higher, and ECON 2220 (or equivalent) with a grade of C+ or higher.
Lectures three hours a week, tutorials one and a half hours a week.

ECON 4004 [0.5 credit]
Operations Research I
Linear programming, duality, sensitivity analysis, transportation and network problems. Both theory and a wide range of applications are studied.
Precludes additional credit for BUSI 2300 (no longer offered), MATH 3801, and SYSC 3200.
Prerequisite(s): ECON 1402 (or equivalent) with a grade of C- or higher.
Lectures three hours a week.

ECON 4005 [0.5 credit]
Operations Research II
Dynamic programming, inventory models, queuing, simulation, and non-linear programming.
Prerequisite(s): ECON 1402 (or equivalent) with a grade of C- or higher, and ECON 2210 (or equivalent) or STAT 2605 or STAT 3502 with a grade of C- or higher.
Lectures three hours a week.
ECON 4020 [0.5 credit]  
Advanced Microeconomic Theory  
Advanced theory of individual economic behaviour in production, consumption, and general equilibrium. Elementary tools of mathematics are employed in the exposition of most topics. Precludes additional credit for ECON 4200 (no longer offered).  
Prerequisite(s): ECON 2020 (or ECON 2009) and ECON 2030 each with a grade of C+ or higher; ECON 3001 (or MATH 2000 or MATH 2004) with a grade of C+ or higher; and ECON 2220 (or equivalent, or STAT 2605 or STAT 3502), which may be taken concurrently with ECON 4020. Lectures three hours a week, tutorials one and a half hours a week.

ECON 4021 [0.5 credit]  
Advanced Macroeconomic Theory  
An introduction to advanced macroeconomic models. Topics may include analysis of business cycles, inflation, unemployment, economic growth, fiscal and monetary policy, consumption decisions of households, and investment decisions of firms. Precludes additional credit for ECON 4201 (no longer offered).  
Prerequisite(s): ECON 2102 with a grade of C+ or higher; ECON 2103 with a grade of C+ or higher; ECON 3001 (or MATH 2000 or MATH 2004) with a grade of C+ or higher; and ECON 2220 (or equivalent, or STAT 2605 or STAT 3502), which may be taken concurrently with ECON 4021. Lectures three hours a week, tutorials one and a half hours a week.

ECON 4025 [0.5 credit]  
Game Theory and Economics  
Analysis of strategic behaviour using non-cooperative game theory. Topics include extensive-form and strategic-form representation of games, and solution concepts for games of complete and incomplete information such as Nash equilibrium, subgame perfect equilibrium, and perfect Bayesian equilibrium. Economic applications will be presented.  
Prerequisite(s): ECON 2020 (or ECON 2009) and ECON 2030 each with a grade of C+ or higher or ECON 2002 (no longer offered) and ECON 2003 (no longer offered) each with a grade of C+ or higher; ECON 3001 (or MATH 2000 or MATH 2004) with a grade of C+ or higher; and ECON 2220 (or equivalent, or STAT 2605 or STAT 3502), which may be taken concurrently with ECON 4025. Lectures three hours a week.

ECON 4026 [0.5 credit]  
Macroeconomic Dynamics  
Dynamic models as applied to topics such as economic growth, business cycles, consumption, investment, inflation, and real-financial linkages. Empirical and/or policy issues may also be discussed.  
Prerequisite(s): ECON 2102 with a grade of C+ or higher; ECON 2103 with a grade of C+ or higher; ECON 3001 (or MATH 2000 or MATH 2004) with a grade of C+ or higher; and ECON 2220 (or equivalent, or STAT 2605 or STAT 3502), which may be taken concurrently with ECON 4026. Lectures three hours a week.

ECON 4030 [0.5 credit]  
Economics of Uncertainty and Information  
Uncertainty, imperfect information, and asymmetric information in the allocation of resources and the performance of markets and alternative coordinating mechanisms. Precludes additional credit for ECON 4006 (no longer offered) and ECON 4260 (no longer offered).  
Prerequisite(s): ECON 2030 with a grade of C- or higher or ECON 2003 (no longer offered) with a grade of C- or higher, and ECON 2220 (or equivalent) with a grade of C- or higher. Lectures three hours a week.

ECON 4051 [0.5 credit]  
Financial Asset Pricing  
Factors that drive security prices and models that attempt to account for aspects of security returns, including the generic arbitrage pricing model, the capital asset pricing model (CAPM), the consumption CAPM, and the intertemporal CAPM. Precludes additional credit for BUSI 3500, ECON 3500 (no longer offered), BUSI 3502, ECON 3502 (no longer offered).  
Prerequisite(s): ECON 3050 with a grade of C- or higher, and ECON 2220 (or equivalent) with a grade of C- or higher. Lectures three hours a week.

ECON 4052 [0.5 credit]  
Corporate Financial Economics  
Optimization and corporate finance. Corporate governance and managerial compensation. Capital structure and the Modigliani-Miller theorem. Agency theory and asymmetric information. The issue of equity, debt, and other securities. Dividend policy. Investment and capital budgeting, NPV, and real options. Precludes additional credit for BUSI 3500 (or ECON 3500, no longer offered) and BUSI 3502 (or ECON 3502, no longer offered).  
Prerequisite(s): ECON 3050 with a grade of C- or higher, and ECON 2030 with a grade of C- or higher or ECON 2003 (no longer offered) with a grade of C- or higher. Lectures three hours a week.
ECON 4053 [0.5 credit]
Financial Market Modeling
The modeling of the evolution of prices in (near) efficient markets and the evaluation of functions of these prices such as guarantees, options, warrants, futures, and other types of derivatives. Arrow-Debreu state-contingent claims. Notions of complete and incomplete markets. Precludes additional credit for ECON 4100 (no longer offered) and ECON 4504 (no longer offered).
Prerequisite(s): ECON 2030 with a grade of C- or higher and ECON 3001 with a grade of C- or higher.
Lectures three hours a week.

ECON 4056 [0.5 credit]
Insurance Economics
The theory of insurance founded on probability and decision theory. The optimal design of insurance policies from a risk-sharing and an information economics perspective. Principal-agent problems including adverse selection, asymmetric information, and moral hazard with implications for insurance. The interaction between insurance and other markets.
Prerequisite(s): ECON 2030 with a grade of C- or higher and ECON 2220 (or equivalent) with a grade of C- or higher.
Lectures three hours a week.

ECON 4057 [0.5 credit]
Behavioural Financial Economics
Prerequisite(s): ECON 2030 with a grade of C- or higher or ECON 2003 (no longer offered) with a grade of C- or higher, and ECON 3050 with a grade of C- or higher.
Lectures three hours a week.

ECON 4058 [0.5 credit]
Behavioural Economics
Major factors underlying economic behaviour, including various views of the role of rationality in economic analyses of individual decision-making and institutional design and a detailed treatment of behavioural heuristics and biases and their implications for nudging techniques that aim to improve economic outcomes.
Prerequisite(s): ECON 2030 with a grade of C- or higher.
Lectures three hours a week.

ECON 4059 [0.5 credit]
Experimental Economics
An introduction to the use of and insights gained from both laboratory- and field-type experimental methods in economic research. Topics include analysis of individual rationality, performance of markets, and design of economic systems. In-class experiments are an integral part of the course.
Prerequisite(s): ECON 2030 with a grade of C- or higher and ECON 2220 with a grade of C- or higher.
Lectures three hours a week.

ECON 4208 [0.5 credit]
Selected Topics in the History of Economic Thought
The development of economic thought through time in relation to selected economic problems. Precludes additional credit for ECON 4105 (no longer offered).
Prerequisite(s): ECON 2030 with a grade of C+ or higher or ECON 2003 (no longer offered) with a grade of C+ or higher, and ECON 2103 with a grade of C+ or higher. Also offered at the graduate level, with different requirements, as ECON 5209, for which additional credit is precluded.
Lectures and/or seminars three hours a week.

ECON 4230 [0.5 credit]
Market Structure and Firm Behaviour
Various theoretical and empirical studies of firm and market organization with emphasis on the pricing, advertising, investment and locational behaviour of firms in imperfectly competitive markets.
Prerequisite(s): ECON 2030 with a grade of C- or higher, ECON 2103 with a grade of C- or higher, and ECON 2220 (or equivalent) with a grade of C- or higher. Also offered at the graduate level, with different requirements, as ECON 5230, for which additional credit is precluded.
Lectures three hours a week.

ECON 4301 [0.5 credit]
Competition and Regulatory Policy
Public policies relating to competition and regulation. Topics may include: Ramsey pricing, peak-load pricing, cross-subsidization, access pricing (ECPR), multi-part pricing and price discrimination, predatory and targeted pricing, vertical restrictions, traditional regulation (including rate-of-return regulation), incentive regulation (including price caps), and the political economy of regulation. Precludes additional credit for ECON 4300 (no longer offered).
Prerequisite(s): ECON 2030 with a grade of C- or higher or ECON 2003 (no longer offered) with a grade of C- or higher.
Lectures three hours a week.

ECON 4302 [0.5 credit]
Behavioural Economics
Major factors underlying economic behaviour, including various views of the role of rationality in economic analyses of individual decision-making and institutional design and a detailed treatment of behavioural heuristics and biases and their implications for nudging techniques that aim to improve economic outcomes.
Prerequisite(s): ECON 2030 with a grade of C- or higher.
Lectures three hours a week.

ECON 4309 [0.5 credit]
Experimental Economics
An introduction to the use of and insights gained from both laboratory- and field-type experimental methods in economic research. Topics include analysis of individual rationality, performance of markets, and design of economic systems. In-class experiments are an integral part of the course.
Prerequisite(s): ECON 2030 with a grade of C- or higher and ECON 2220 with a grade of C- or higher.
Lectures three hours a week.
ECON 4309 [0.5 credit]
Applied Industrial Economics
The empirical application of microeconomics, with special emphasis on the Canadian economy. Topics include: consumer demand, firm production and investment, and industrial and trade structure. Prerequisite(s): ECON 2030 with a grade of C- or higher and ECON 2220 (or equivalent, or STAT 2605 or STAT 3502) with a grade of C- or higher. Lectures three hours a week.

ECON 4360 [0.5 credit]
Labour Economics
The application of price theory to the labour market. Topics include models of labour supply and labour demand, human capital and the economics of education, and unions and their impact on the labour market. Precludes additional credit for ECON 4305 (no longer offered) and ECON 4306 (no longer offered). Prerequisite(s): ECON 2030 with a grade of C- or higher, and ECON 2220 (or equivalent) with a grade of C- or higher. Lectures three hours a week.

ECON 4365 [0.5 credit]
Industrial Relations
Economic analysis of selected industrial relations and labour market policy problems. Topics include unionization, strike activity, the economics of occupational health and safety, pension policy, and the impact of new technology on the labour market. Precludes additional credit for ECON 4605 (no longer offered). Prerequisite(s): ECON 2030 with a grade of C- or higher or ECON 2003 (no longer offered) with a grade of C- or higher. Lectures three hours a week.

ECON 4403 [0.5 credit]
Public Economics: Expenditures
A discussion of the theory of government expenditures and an examination of empirical attempts to quantify the theory. Examination of current topics such as expenditures and grants in the Canadian federation. Precludes additional credit for ECON 4402 (no longer offered). Prerequisite(s): ECON 2030 with a grade of C- or higher or ECON 2003 (no longer offered) with a grade of C- or higher. Lectures three hours a week.

ECON 4404 [0.5 credit]
Public Economics: Taxation
A discussion of the theory of taxation and an examination of empirical attempts to quantify the theory. Some topics of current interest, such as the redistribution of income in Canada and tax reform, are examined. Precludes additional credit for ECON 4401 (no longer offered). Prerequisite(s): ECON 2030 with a grade of C- or higher or ECON 2003 (no longer offered) with a grade of C- or higher. Lectures three hours a week.

ECON 4407 [0.5 credit]
Project Evaluation
Techniques and problems in the evaluation of public and private projects. Examination of alternative approaches to public decision-making including cost-benefit analysis, cost-effectiveness analysis, and multiple-objective frameworks. Case studies of projects in various areas such as natural resources, the environment, human resources, public services, and transportation. Prerequisite(s): ECON 2030 with a grade of C- or higher and ECON 2220 (or equivalent, or STAT 2605 or STAT 3502) with a grade of C- or higher. Lectures three hours a week.

ECON 4460 [0.5 credit]
Health Economics
Economic analysis of the organization, financing, and utilization of health-care services. Topics include supply and demand of health care, the impact of private and social health insurance on demand, and policy issues in the provision of health care in Canada. Prerequisite(s): ECON 2030 with a grade of C- or higher, and ECON 2220 (or equivalent) with a grade of C- or higher. Lectures three hours a week.

ECON 4507 [0.5 credit]
The Economics of Development
An examination of some theoretical approaches to the economics of development, together with analysis of some economic policy issues of a largely internal character, such as intersectoral investment allocation, income distribution, unemployment, and investment in human development. Prerequisite(s): ECON 2030 with a grade of C- or higher or ECON 2003 (no longer offered) with a grade of C- or higher, and ECON 2103 with a grade of C- or higher. Lectures three hours a week.

ECON 4508 [0.5 credit]
International Aspects of Economic Development
An analysis of the international economic policy problems of development in Asia, Africa and Latin America, focusing on international trade, direct foreign investment, technological transfer, regional integration, debt and development financing, and international migration. Prerequisite(s): ECON 2030 with a grade of C- or higher or ECON 2003 (no longer offered) with a grade of C- or higher, and ECON 2103 with a grade of C- or higher. Lectures three hours a week.
ECON 4601 [0.5 credit]
International Trade Theory and Policy
International trade theory and its implications for economic policy. Topics such as determinants of trade and specialization, gains from trade and commercial policy, international factor mobility, growth and development. Prerequisite(s): ECON 2030 with a grade of C- or higher or ECON 2003 (no longer offered) with a grade of C- or higher.
Lectures three hours a week.

ECON 4602 [0.5 credit]
International Monetary Theory and Policy
International monetary theory and its implications for economic policy. Topics such as sources of disequilibrium and adjustment in the balance of payments under fixed versus flexible exchange rates, international capital movements, and international monetary reform. Prerequisite(s): ECON 2103 with a grade of C- or higher.
Lectures three hours a week.

ECON 4670 [0.5 credit]
Monetary Theory and Policy
The role of money and the monetary system in determining income, employment, and price level; techniques of monetary policy; the relationship between monetary and fiscal policy. Precludes additional credit for ECON 4607 (no longer offered) and ECON 4608 (no longer offered).
Prerequisite(s): ECON 2103 with a grade of C- or higher, and ECON 2220 (or equivalent) with a grade of C- or higher.
Lectures three hours a week.

ECON 4700 [0.5 credit]
Measurement Economics
National accounting and index numbers. Topics may include: the measurement of output and income, capital and depreciation, productivity, employment and unemployment, poverty and inequality, household production, pollution and resource depletion, and the balance of payments; price indexes; standard-of-living indexes; and international comparisons. Prerequisite(s): ECON 2030 with a grade of C- or higher, ECON 2103 with a grade of C- or higher, and ECON 2220 (or equivalent) with a grade of C- or higher.
Lectures three hours a week.

ECON 4706 [0.5 credit]
Econometrics I
An introduction to econometric theory and analysis of the classical normal linear regression model. Topics include estimation methods, hypothesis testing, multicollinearity, indicator variables, heteroscedasticity, and an introduction to time-series methods. Precludes additional credit for ECON 3706.
Prerequisite(s): ECON 2210 (or equivalent) with a grade of C+ or higher, and ECON 2220 (or equivalent) with a grade of C+ or higher.
Lectures three hours a week, tutorials one and a half hours a week.

ECON 4707 [0.5 credit]
Econometrics II
An extension of ECON 4706. Topics include model specification, diagnostic checks, qualitative and limited dependent variables, panel data, and simultaneous equations models. Prerequisite(s): ECON 4706 with a grade of C+ or higher, or STAT 3503 with a grade of C+ or higher.
Lectures three hours a week.

ECON 4708 [0.5 credit]
Economic Data Science - Analytics
An introduction to methods of statistical and machine learning analytics for economic analysis. Tools relevant for both small and large data sets will be covered. Topics may include approaches to classification, dimension reduction strategies, and prediction models and tools. Includes: Experiential Learning Activity. Includes: Experiential Learning Activity
Prerequisite(s): ECON 2708 with a grade of C+ or higher, and ECON 4706 (or equivalent) with a grade of C+ or higher.
Lectures three hours a week.

ECON 4709 [0.5 credit]
Economic Data Science - Applications
Application of data science and machine learning methods to real-world economic problems. Students will apply their data science knowledge in hands-on projects to answer topical research questions. This course has a strong practical focus. Includes: Experiential Learning Activity. Includes: Experiential Learning Activity
Prerequisite(s): ECON 4708 with a grade of C+ or higher.
Lectures three hours a week.

ECON 4713 [0.5 credit]
Time-Series Econometrics
An introduction to the basic concepts and tools of time-series econometrics. Topics include stationary and non-stationary time series, identification, estimation and forecasting, unit root testing, cointegration analysis, error-correction models and ARCH models, together with relevant economic applications. Precludes additional credit for ECON 4803 (no longer offered) and STAT 4603.
Prerequisite(s): ECON 4706 with a grade of C- or higher, or STAT 3503 with a grade of C- or higher.
Lectures three hours a week.

ECON 4714 [0.5 credit]
Advanced Topics in Applied Econometrics
Advanced coverage of one or more areas of current interest in applied econometrics. An empirical research project may be required. Includes: Experiential Learning Activity
Prerequisite(s): ECON 4706 with a grade of C+ or higher, and ECON 4707, which may be taken concurrently with ECON 4714.
Lectures three hours a week.
ECON 4800 [0.5 credit]
Spatial Economics
Spatial dimensions of economic activity and organization. Theories of urban agglomeration effects, transport costs, forward and backward linkages, and associated spatial dynamics; empirical analysis of spatial economic clusters; effects of globalization and economic growth on the spatial structure of production and the associated policy response.
Prerequisite(s): ECON 2030 with a grade of C- or higher, ECON 2103 with a grade of C- or higher, and ECON 2220 (or equivalent) with a grade of C- or higher.
Lectures three hours a week.

ECON 4850 [0.5 credit]
Advanced Economics of Information and Media
The economics of information production, its distribution through broadcasting, publishing or the Internet, its exchange through telephone and e-mail networks, and its use in private and public organizations. An analysis of telecommunications, broadcasting, copyright, privacy, and Internet policy.
Precludes additional credit for ECON 4205 (no longer offered).
Prerequisite(s): ECON 2030 with a grade of C- or higher or ECON 2003 (no longer offered) with a grade of C- or higher.
Lectures three hours a week.

ECON 4880 [0.5 credit]
Special Topics in Economics
Selected advanced topics of interest to upper-year Honours Economics and Applied Economics students. Topics may vary from year to year and are announced in advance of the registration period.
Includes: Experiential Learning Activity
Prerequisite(s): ECON 2030 with a grade of C+ or higher or ECON 2003 (no longer offered) with a grade of C+ or higher; ECON 2103 with a grade of C+ or higher; and ECON 3706 or ECON 4706, which may be taken concurrently with ECON 4880 or may be waived by permission of the Department.
Lectures and/or seminars three hours a week.

ECON 4903 [0.5 credit]
Tutorial in Economics
An additional tutorial in economics may be taken subsequent to, or concurrently with, ECON 4890 or ECON 4901 or ECON 4902.
Prerequisite(s): permission of the Department.

ECON 4904 [0.5 credit]
Tutorial in Economics
An additional tutorial in economics may be taken subsequent to, or concurrently with, ECON 4890 or ECON 4901 or ECON 4902.
Prerequisite(s): permission of the Department.