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

Program Requirements

Economics

B.Econ. Honours (20.0 credits)

A. Credits Included in the Major CGPA (10.5 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 [0.5] Economics I
- ECON 1402/ MATH 1402 [0.5] Economics II
- ECON 2010 [0.5] Intermediate Microeconomics I: Producers and Market Structure
- ECON 2020 [0.5] Intermediate Microeconomics II: Consumers and General Equilibrium
- 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 4095 [0.5] Honours Capstone Seminar (see Note 1 below)

2. 2.0 credits in ECON at the 3000 level
3. 2.0 credits in ECON at the 4000 level

B. Credits Not Included in the Major CGPA (9.5 credits)

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 prospectus to the satisfaction of both their advisor and the Undergraduate Supervisor. See The Honours Essay prospectus to the satisfaction of both their advisor and the Undergraduate Supervisor.
the Undergraduate Supervisor. See The Honours Essay Guidelines maintained by the Department for further details.

**Economics**

**B. Econ. Honours with Concentrations (20.0 credits)**

**A. Credits Included in the Major CGPA (14.5 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 [0.5] Elementary Mathematics for Economics I
   - ECON 1402/ MATH 1402 [0.5] 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, below)

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

**B. Credits Not Included in the Major CGPA (5.5 credits)**

3. 3.0 credits in electives not in ECON

4. 2.5 credits in free electives.

**Total Credits**

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:

   - COMP 1005 [0.5] Introduction to Computer Science I
   - COMP 1006 [0.5] Introduction to Computer Science II
   - COMP 2401 [0.5] Introduction to Systems Programming
   - COMP 2402 [0.5] Abstract Data Types and Algorithms

2c. 1.0 credit from:

   - COMP 1805 [0.5] Discrete Structures I (see Note 2 below)
   - COMP 2804 [0.5] Discrete Structures II
   - COMP 2404 [0.5] Introduction to Software Engineering
   - COMP 3005 [0.5] Database Management Systems
   - COMP 4111 [0.5] Data Management for Business Intelligence
   - COMP 4003 [0.5] Transaction Processing Systems
   - COMP 3803 [0.5] Introduction to Theory of Computation
   - COMP 3804 [0.5] Design and Analysis of Algorithms I
   - COMP 3801 [0.5] Algorithms for Modern Data Sets

**Total Credits**

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 if 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:

   - ECON 3508 [0.5] Introduction to Economic Development
   - ECON 3509 [0.5] Development Planning and Project Evaluation
   - ECON 4507 [0.5] The Economics of Development
   - ECON 4508 [0.5] International Aspects of Economic Development
   - PSCI 2102 [0.5] Comparative Politics of the Global South
   - PSCI 4104 [0.5] Development in the Global South - Theory and Practice

2b. 1.0 credit from:

   - ECON 3220 [0.5] Canadian Economic History
   - ECON 3230 [0.5] Selected Topics in Economic History
   - ECON 3510 [0.5] African Economic Development
   - ECON 3808 [0.5] The Economics of Transition
   - ECON 3870 [0.5] Comparative Economic Systems
   - PSCI 4105 [0.5] Selected Problems in Development in the Global South
   - PSCI 4409 [0.5] Issues in Development Management

**Total Credits**

**Concentration in Economic Data Science (4.0 credits)**

2a. 1.5 credits in:

   - BUSI 2400 [0.5] Foundations of Information Systems
   - COMP 1005 [0.5] Introduction to Computer Science I
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 2708</td>
<td>Applied Data Analysis</td>
</tr>
<tr>
<td>ECON 4002</td>
<td>Statistical Analysis in Economics</td>
</tr>
<tr>
<td>ECON 4706</td>
<td>Econometrics I</td>
</tr>
<tr>
<td>ECON 4708</td>
<td>Economic Data Science - Analytics</td>
</tr>
<tr>
<td>ECON 4709</td>
<td>Economic Data Science - Applications</td>
</tr>
<tr>
<td>BUSI 4406</td>
<td>Business Analytics</td>
</tr>
<tr>
<td>BUSI 4408</td>
<td>Social Analytics</td>
</tr>
<tr>
<td>ECON 4707</td>
<td>Econometrics II</td>
</tr>
<tr>
<td>ECON 4713</td>
<td>Time-Series Econometrics</td>
</tr>
<tr>
<td>ECON 4880</td>
<td>Special Topics in Economics</td>
</tr>
</tbody>
</table>

**Total Credits**: 4.0

### Concentration in Economic Theory (4.0 credits)

<table>
<thead>
<tr>
<th>2a.</th>
<th>3.0 credits in: Core Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 3001</td>
<td>Mathematical Methods of Economics</td>
</tr>
<tr>
<td>ECON 4001</td>
<td>Mathematical Analysis in Economics</td>
</tr>
<tr>
<td>ECON 4002</td>
<td>Statistical Analysis in Economics</td>
</tr>
<tr>
<td>ECON 4020</td>
<td>Advanced Microeconomic Theory</td>
</tr>
<tr>
<td>ECON 4021</td>
<td>Advanced Macroeconomic Theory</td>
</tr>
<tr>
<td>ECON 4706</td>
<td>Econometrics I</td>
</tr>
</tbody>
</table>

**Total Credits**: 4.0

### Concentration in Financial Economics (4.0 credits)

<table>
<thead>
<tr>
<th>2a.</th>
<th>1.0 credit in:</th>
</tr>
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<tbody>
<tr>
<td>BUSI 1001</td>
<td>Principles of Financial Accounting</td>
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<tr>
<td>BUSI 1002</td>
<td>Management Accounting</td>
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(See Note 1 below)

<table>
<thead>
<tr>
<th>2b.</th>
<th>1.5 credits from:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 3050</td>
<td>Introduction to Financial Economics</td>
</tr>
<tr>
<td>ECON 4051</td>
<td>Financial Asset Pricing</td>
</tr>
<tr>
<td>ECON 4052</td>
<td>Corporate Financial Economics</td>
</tr>
<tr>
<td>or BUSI 3500</td>
<td>Applied Corporate Finance</td>
</tr>
<tr>
<td>or BUSI 3502</td>
<td>Investments</td>
</tr>
<tr>
<td>or BUSI 3512</td>
<td>Derivatives</td>
</tr>
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</table>

(see Note 2, below)

<table>
<thead>
<tr>
<th>2c.</th>
<th>1.5 credits from:</th>
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<tbody>
<tr>
<td>ECON 3602</td>
<td>International Monetary Theory and Policy</td>
</tr>
<tr>
<td>ECON 3607</td>
<td>Monetary and Financial Institutions</td>
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<tr>
<td>ECON 4053</td>
<td>Financial Market Modeling</td>
</tr>
<tr>
<td>ECON 4056</td>
<td>Insurance Economics</td>
</tr>
<tr>
<td>ECON 4057</td>
<td>Behavioural Financial Economics</td>
</tr>
<tr>
<td>PSCI 4805</td>
<td>Political Economy of Global Money and Finance</td>
</tr>
</tbody>
</table>

**Total Credits**: 4.0

### Concentration in International Political Economy (4.0 credits)

<table>
<thead>
<tr>
<th>2a.</th>
<th>2.0 credits in:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 4601</td>
<td>International Trade Theory and Policy</td>
</tr>
<tr>
<td>ECON 4602</td>
<td>International Monetary Theory and Policy</td>
</tr>
<tr>
<td>PSCI 2602</td>
<td>International Relations: Global Political Economy</td>
</tr>
<tr>
<td>PSCI 4603</td>
<td>Analysis of International Political Economy</td>
</tr>
</tbody>
</table>

**Total Credits**: 4.0

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

<table>
<thead>
<tr>
<th>2a.</th>
<th>3.0 credits in:</th>
</tr>
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<tbody>
<tr>
<td>ECON 3803</td>
<td>The Economics of Natural Resources</td>
</tr>
<tr>
<td>ECON 3804</td>
<td>Environmental Economics</td>
</tr>
<tr>
<td>GEOG 2200</td>
<td>Global Connections</td>
</tr>
<tr>
<td>GEOG 2300</td>
<td>Space, Place and Culture</td>
</tr>
</tbody>
</table>

**Total Credits**: 4.0
Economics (4.0 credits)

Concentration in Mathematics and Quantitative Economics (4.0 credits)

1.  6.5 credits in:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1401</td>
<td>Introduction to Microeconomics</td>
<td>0.5</td>
</tr>
<tr>
<td>&amp; ECON 1002</td>
<td>Introduction to Macroeconomics</td>
<td>0.5</td>
</tr>
<tr>
<td>or FYSM 1003</td>
<td>Introduction to Economics</td>
<td></td>
</tr>
</tbody>
</table>

2.  6.5 credits in:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1401/</td>
<td>Elementary Mathematics for Economics I</td>
<td>0.5</td>
</tr>
<tr>
<td>MATH 1401</td>
<td>Elementary Mathematics for Economics II</td>
<td></td>
</tr>
<tr>
<td>ECON 1402/</td>
<td>Intermediate Microeconomics I: Producers and</td>
<td></td>
</tr>
<tr>
<td>MATH 1402</td>
<td>Market Structure</td>
<td></td>
</tr>
<tr>
<td>ECON 2020</td>
<td>Intermediate Microeconomics II: Consumers and</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>General Equilibrium</td>
<td></td>
</tr>
<tr>
<td>ECON 2030</td>
<td>Intermediate Microeconomics II:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Equilibrium</td>
<td></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></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></td>
</tr>
<tr>
<td>ECON 3900</td>
<td>Research Methods in Economics</td>
<td>0.5</td>
</tr>
<tr>
<td>ECON 3920</td>
<td>Professional Practice of Economics</td>
<td></td>
</tr>
</tbody>
</table>

3.  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.

4.  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.

5.  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.
B.G.In.S. Honours (20.0 credits)
Specialization in International Economic Policy

B.Econ. (15.0 credits)
Economics
under the B.Econ. Combined Honours, above.

the B.A. Combined Honours are the same as those listed
Combined Honours. Economics course requirements for
Economics as an additional discipline under the B.A.
Students already enrolled in a B.A. discipline may add
B.A. Honours Combined  (20.0 credits)

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:
   - ECON 1001 [0.5] Introduction to Microeconomics
   - ECON 1002 [0.5] Introduction to Macroeconomics
   - ECON 1401/ MATH 1401 [0.5] Mathematics I
   - ECON 1402/ MATH 1402 [0.5] Mathematics 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. B. Credits Not Included in the Major CGPA (8.0 credits)
4. 2.0 credits in electives not in ECON
4. 2.0 credits in free electives.
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
   - 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 2090 [0.5] Comparative Economic Systems
2. 4.5 credits in: Non-Core Courses
   - 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 2090 [0.5] Comparative Economic Systems
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.

International Experience Requirement

1. 4.5 credits in:
   - GINS 2000 [0.5] Honours Capstone Seminar (see
     Note 1 below)
2. 1.0 credit in ECON at the 3000 or 4000 level
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.

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
      - ECON 1001 [0.5] Introduction to Microeconomics
      - ECON 1002 [0.5] Introduction to Macroeconomics
   b. 0.5 credit in: Microeconomics
      - 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
      - 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
      - IPAF 2000 [0.5] Quantitative Approaches to Policy
        Analysis
      - or ECON 2210 [0.5] Intermediate Statistics for Economics
   e. 2.0 credits in: International and Public Economics
      - 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
      - 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.

   International Experience Requirement

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
      - ECON 1001 [0.5] Introduction to Microeconomics
      - ECON 1002 [0.5] Introduction to Macroeconomics
   b. 0.5 credit in: Microeconomics
      - 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
      - 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
      - IPAF 2000 [0.5] Quantitative Approaches to Policy
        Analysis
      - or ECON 2210 [0.5] Intermediate Statistics for Economics
   e. 2.0 credits in: International and Public Economics
      - 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
      - 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.
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)

1. 4.0 credits in: Core Courses 4.0
   a. Foundations
      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
   b. Microeconomics
      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. Macroeconomics
      ECON 2101 [0.5] Intermediate Macroeconomics for Non-Mathematical Majors
      or ECON 2102 [0.5] Intermediate Macroeconomics I
   d. Research Methodologies
      IPAF 2000 [0.5] Quantitative Approaches to Policy Analysis
      or ECON 2210 [0.5] Productivity Statistics for Economics
   e. International Economic Policy
      ECON 3403 [0.5] Introduction to Public Economics: Expenditures
      ECON 3405 [0.5] Introduction to Public Economics: Taxation
      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 3601 [0.5] Introduction to International Trade
      ECON 3602 [0.5] International Monetary Problems
      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

2. 4.0 credits from: the Stream 4.0
   a. Foundations
      ECON 1001 [0.5] Introduction to Microeconomics
      & ECON 1002 [0.5] Introduction to Macroeconomics
      or FYSM 1003 [1.0] Introduction to Economics
   b. Microeconomics
      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. Macroeconomics
      ECON 2101 [0.5] Intermediate Macroeconomics for Non-Mathematical Majors
      or ECON 2102 [0.5] Intermediate Macroeconomics I
   d. Research Methodologies
      IPAF 2000 [0.5] Quantitative Approaches to Policy Analysis
      or ECON 2210 [0.5] Productivity Statistics for Economics
   e. International Economic Policy
      ECON 3403 [0.5] Introduction to Public Economics: Expenditures
      ECON 3405 [0.5] Introduction to Public Economics: Taxation
      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 3601 [0.5] Introduction to International Trade
      ECON 3602 [0.5] International Monetary Problems
      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 (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:
   a. ECON 1001 [0.5] Introduction to Microeconomics
   b. ECON 1002 [0.5] Introduction to Macroeconomics
   or FYSM 1003 [1.0] Introduction to Economics

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

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

4. 0.5 credit in:
   a. ECON at the 2000 level or higher,
   b. IPAF 2000 [0.5]

5. 1.5 credits in ECON at the 2000 level or higher 1.5
6. 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:
   a. ECON 1001 [0.5] Introduction to Microeconomics
   b. ECON 1002 [0.5] Introduction to Macroeconomics

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

3. 1.5 credits from:
   a. ECON 2030 [0.5] Intermediate Microeconomics II: Consumers and General Equilibrium
   b. ECON 3300 [0.5] Public Policy Toward Business
   c. ECON 3360 [0.5] Introduction to Labour Economics
   d. 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-
0000-Level Courses
register in a FYSM.
a Second Language (ESLA) credit are not permitted to
who are required to take a minimum of one English as
have completed the Enriched Support Program (ESP) or
first-year standing in their B.Econ. program. Students who
FYSM and can only register in a FYSM while they have
include a First-Year Seminar (FYSM) during their first 4.0
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 Continuation 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 1500, 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 applies to a degree program with a Co-op option from high school, their university grades will be reviewed two terms to one year prior to their first work term to ensure they meet the academic requirements after their first or second year of study. The time at which the evaluation takes place depends on the program of study. Students will automatically receive an admission decision via their Carleton email account.

Students who did not request Co-op at the time they applied to Carleton can request Co-op after they begin their university studies. To view application instructions and deadlines, please visit carleton.ca/co-op.

To be admitted to Co-op, a student must successfully complete 5.0 or more credits that count towards their degree, meet the minimum CGPA requirement(s) for the student's Co-op option, and fulfill any specified course prerequisites. To see the unique admission and continuation requirements for each Co-op option, please refer to the specific degree programs listed in the Undergraduate Calendar.

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 program (i.e. successful completion of three or four work terms).

Note: Participation in the co-op option will add up to one additional year for a student to complete their degree program.

Voluntary Withdrawal from the Co-op Option
Students may withdraw from the co-op option of their degree program during a study term ONLY. Students at work may not withdraw from the work term or the co-op
option until s/he has completed the requirements of the work term.

Students are eligible to continue in their regular academic program provided that they meet the academic standards required for continuation.

Involuntary or Required Withdrawal from the Co-op Option

Students may be required to withdraw from the co-op option of their degree program for one or any of the following reasons:

1. Failure to achieve a grade of SAT in COOP 1000
2. Failure to pay all co-op related fees
3. Failure to actively participate in the job search process
4. Failure to attend all interviews for positions to which the student has applied
5. Declining more than one job offer during the job search process
6. Continuing a job search after accepting a co-op position
7. Dismissal from a work term by the co-op employer
8. Leaving a work term without approval by the Co-op manager
9. Receipt of an unsatisfactory work term evaluation
10. Submission of an unsatisfactory work term report

Standing and Appeals

The Co-op and Career Services office administers the regulations and procedures that are applicable to all co-op program options. All instances of a student’s failure during a work term or other issues directly related to their participation in the co-op option will be reported to the academic department.

Any decision made by the Co-op and Career Services office can be appealed via the normal appeal process within the University.

International Students

All International Students are required to possess a Co-op Work Permit issued by Immigration, Refugees and Citizenship Canada before they can begin working. It is illegal to work in Canada without the proper authorization. Students will be provided with a letter of support to accompany their application. Students must submit their application for their permit before being permitted to view and apply for jobs on the Co-op Services database. Confirmation of a position will not be approved until a student can confirm they have received their permit.

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:

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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 2022-23 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.

Admissions Information

Admission requirements are based on the Ontario High School System. Prospective students can view the admission requirements through the Admissions website at admissions.carleton.ca. The overall average required for admission is determined each year on a program-by-program basis. Holding the minimum admission requirements only establishes eligibility for consideration; higher averages are required for admission to programs for which the demand for places by qualified applicants exceeds the number of places available. All programs have limited enrollment and admission is not guaranteed. Some programs may also require specific course prerequisites and prerequisite
averages and/or supplementary admission portfolios. Consult admissions.carleton.ca for further details.

Note: If a course is listed as recommended, it is 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)
• Bachelor of Economics (B.Econ.)

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) and 4U Advanced Functions (or equivalent). MATH 0005 taken at Carleton with a minimum grade of C- also satisfies the Advanced Functions requirement.

Applicants who do not present with Advanced Functions or MATH 0005 may be admitted conditionally with the requirement that they complete MATH 0005 with a minimum grade of C- in their first term of study in the degree in order to be eligible to continue.

Applicants submitting an English language test to satisfy the requirements of the English Language Proficiency section of this Calendar may use that test to also satisfy the 4U English prerequisite requirement.

Advanced Standing
Applications for admission beyond first year will be assessed on their merits. Applicants must normally be Eligible to Continue in their year level, in addition to meeting the CGPA thresholds described in Section 3.1.9 of the Academic Regulations of the University. Advanced standing will be granted only for those subjects assessed as being appropriate for the program and stream selected.

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 2022-23 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 a week.
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 a week.

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 a week.

ECON 1401 [0.5 credit]
Elementary Mathematics for Economics I
Functional relations: functional forms and error terms. Graphing economic magnitudes: scatter diagrams, time-series graphs, functional relationships. Applied calculus: mechanics of differentiation and integration, elasticity, consumer/producer surplus. Applied algebra: solving systems of linear equations and Keynesian national-income analysis. Problem solving approaches. Also listed as MATH 1401. Prerequisite(s): Ontario Grade-12 U Advanced Functions, or MATH 0005, or equivalent; and ECON 1001 or ECON 1000 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 1201, BIT 1200, 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/MATH 1401 (with a grade of C- or higher) and ECON 1402/MATH 1402, or equivalent department-approved MATH course pair. May be taken concurrently with ECON 1402/MATH 1402. 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 2009. 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 1000 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/MATH 1401 (with a grade of C- or higher) and ECON 1402/MATH 1402, or equivalent department-approved MATH course pair. May be taken concurrently with ECON 1402/MATH 1402. 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 2009, 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/MATH 1401 (with a grade of C- or higher) and ECON 1402/MATH 1402, or equivalent department-approved MATH course pair. May be taken concurrently with ECON 1402/MATH 1402. 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 2220 (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  
Prerequisite(s): COMP 1005 or COMP 1405 or ECOR 1606, or equivalent, with a grade of C- or higher; and ECON/MATH 1402, with a grade of C- or higher (or an equivalent department-approved MATH course pair with a grade of C- or higher in each); and ECON 2210 (or equivalent), with a grade of C+ or higher.  
Lectures three hours a week, tutorial 1.5 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, and ECON/MATH 1402 (or approved equivalent pair of first year math courses) 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 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 3360 [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
Health as an economic good: demand and need; supply and cost. Public health and personal health care. Alternative health-care delivery systems: financing, performance, quality, and cost effectiveness. 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]
Introduction to Economic Development
A discussion of the principles of economic development. Application to the problems of the developing countries. Precludes additional credit for ECON 3603 (no longer offered). Credit will not be given if taken concurrently with or after ECON 4507. 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 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
Prerequisite(s): ECON 1001 and ECON 1002, or ECON 1000 or FYSM 1003, 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 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 or 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 3878 [0.5 credit]
Contemporary Economic Issues
Content may vary from year to year and is announced in advance of the registration period.
Lectures and/or seminars 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.
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 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.
Prerequisite(s): BUSI 2300 (no longer offered), MATH 3801, and SYSC 3200. 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.
Prerequisite(s): ECON 2020 (or ECON 2009) and ECON 3001 (or MATH 2000 or MATH 2004) with a grade of C+ or higher; and ECON 2200 (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.
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 methods of modern 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 2210 (or equivalent, or STAT 2507 or STAT 2606 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.
Prerequisite(s): 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 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.
Prerequisite(s): 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
Prerequisite(s): ECON 3050 (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 4108 [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 4109 [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 4209 [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]
Economic History
The application of economic theory and quantitative techniques to selected topics in economic history, which may include historical patterns of growth and welfare, nineteenth-century globalization, technological change, the development of agriculture, industrialization, the Great Depression, and the origins of central banks.
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]
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.
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]
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 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.
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  
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 - Analytics  
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  
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  
Precludes additional credit for ECON 4804 (no longer offered).  
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 4707 [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 4800 [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 4805 [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 4800 or may be waived by permission of the Department.  
Lectures and/or seminars three hours a week.

ECON 4803 [0.5 credit]  
Tutorial in Economics  
An additional tutorial in economics may be taken subsequent to, or concurrently with, ECON 4890 (no longer offered) or ECON 4901 (no longer offered) or ECON 4902 (no longer offered) or ECON 4905.  
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 (no longer offered) or ECON 4901 (no longer offered) or ECON 4902 (no longer offered) or ECON 4905.  
Prerequisite(s): permission of the Department.
ECON 4905 [0.5 credit]
Honours Capstone Seminar
The development of individual research projects in suitable economics topic areas with the exchange of results at each stage through in-class discussions and written and oral reports and culminating in a major research paper by each course registrant.
Includes: Experiential Learning Activity
Precludes additional credit for ECON 4890, ECON 4900 (no longer offered), ECON 4901, and ECON 4902.
Prerequisite(s): ECON 3900 with a grade of C+ or higher, ECON 3920 with a grade of C+ or higher, and registration in an Honours Economics program.
Seminars three hours a week.

ECON 4908 [1.0 credit]
Honours Essay
Students taking Honours in Economics or Applied Economics may write an Honours essay during their final year. This essay counts for one credit. Students work under an individual faculty adviser.
Includes: Experiential Learning Activity
Prerequisite(s): permission of the Department.

ECON 4990 [0.5 credit]
Research and Writing in Economics
Development of fundamental research and writing skills pertinent to the discipline of economics. Writing summary reviews of economics texts of increasing sophistication; writing up empirical and/or theoretical results of increasing complexity.
Prerequisite(s): registration in the Post-Baccalaureate Diploma in Economics program and/or permission of the Department.
Seminars three hours a week, tutorials one and a half hours a week.