**Advanced Macroeconomics Theory**
**AP/ECON 4020 M – S2 2024**
**Location: VH 3006**
**Time: T Th 11:30am-2:30pm**

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| **Instructor** | Professor Henry Tam |
| **Email** | thenry@yorku.ca |
| **Office hours** | M 3-3:45pm, T 2:30-3:15pm |
| **Office location** | VH 1042 |
| **TA** | TBA |
| **TA Office hours** | TBA |
| **Course webpage** | eclass.yorku.ca |
| **Lecture Hours** | Tuesday and Thursday 11:30am-2:30pm (**In-person lectures**). |
| **Organization** | Please note that this is an in-person course. All exams will be in-person. There will be NO online alternatives. We will use eClass for posting course materials only. Lecture notes, mathematical notes, announcements, practice problem sets and solutions, exam information, etc., will be posted there. You should check posted materials on a regular basis. |
| **Course description** | This course introduces the modern approach to studying macroeconomics and is meant to be a preparation course for graduate studies. This course covers standard macroeconomic topics (economic growth, business cycles, fiscal policy, monetary policy, etc.) that are covered in intermediate macroeconomics, but introduces more rigorous technical analyses. Micro-foundation for macroeconomic models and the dynamics of the macro-economy will be emphasized in this course. |
| **Prerequisites** | Prerequisite: AP/ECON 2400 3.00 and AP/ECON 2450 3.00, or equivalents. Recommended prerequisites: AP/ECON 2300 3.00, AP/ECON2350 3.00, and AP/ECON 3530 3.00. |
| **Textbook** | *Advanced Macroeconomics* (5$^{th}$ edition) by David Romer. McGraw-Hill. |

**Topics covered**

This course will heavily rely on course notes and lecture materials given by the instructor. The textbook is to be considered complementary to course notes and lecture materials discussed in class.

**Lecture**

We shall cover the following topics:

**I. Solow growth model**
- Ch. 1 (Sections 1.1-1.7) of textbook + Notes + Lecture Materials

**II. Ramsey-Cass-Koopmans model of neoclassical growth**
- Ch. 2 (Sections 2.1-2.6) of textbook + Notes + Lecture Materials

**III. Government and fiscal policy in Classical model and Ramsey model**
- Ch. 2 (Section 2.7) and Ch. 13 (Section 13.1-13.2) of textbook + Notes + Lecture Materials

**IV. Keynesian theories of short-run fluctuations (a more advanced treatment)**
- Notes + Lecture Materials

Because this course is meant to be a preparation course for graduate studies and involves rigorous technical analysis, this course is designed to be heavily mathematically oriented. Knowledge in basic calculus is assumed in the course. You will also be taught a number of mathematical techniques in order to apply them to macroeconomic analysis. The following lists the related mathematical tools used in different parts of the course.

| Topics | Mathematical tools used |
|---|---|
| Solow model | Basic calculus (functions, limits, simple and partial derivatives, some minimal integration)<br>Graphical analysis of dynamic equation in 1 variable |
| Ramsey model | Constrained maximization and the Lagrangian method (extended to the case of dynamic optimization)<br>Graphical analysis of a system of 2 dynamic equations using phase diagram |
| SR models | Differentials<br>Matrix algebra and determinants |

**Evaluation**

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| In-class Midterm (July 23, Tues, 11:30am-2pm) | 40% |
| Final Exam (cumulative, date and time TBA by the RO) | 60% |

Note: If you do better in the final exam, your final exam will count as 75% while the midterm will then count as 25% of the course weight. All exams are open-book and open-notes. All exams will take place in-person. There will be NO online alternative. The midterm covers the Solow model and the Ramsey model. The final exam is cumulative and covers the Solow model, the Ramsey model, government and fiscal policy in the classical model and the Ramsey model, and the Keynesian models of short-run fluctuations. If you miss the midterm for any reason, the weight will be transferred to the final exam. If you miss the final exam, you will need to request a deferred exam and upon approval you will be given a deferred exam. To request exam deferral, use the following link to the Mach form: https://www.yorku.ca/laps/econ/undergraduate-programs/academic-resources/department-policies/deferred-standing/

Final course grades may be adjusted to conform to Program or Faculty grades distribution profiles.

## IMPORTANT INFORMATION FOR STUDENTS

All students are expected to familiarize themselves with the following information, available on the Senate Committee on Curriculum & Academic Standards webpage;
https://secretariat-policies.info.yorku.ca/

- York's Academic Honesty Policy and Procedures/Academic Integrity Website
- Ethics Review Process for research involving human participants
- Course requirement accommodation for students with disabilities, including physical, medical, systemic, learning and psychiatric disabilities
- Student Conduct Standards
- Religious Observance Accommodation

Important Dates: https://registrar.yorku.ca/enrol/dates

Here are some useful links for student computing information, resources and help:
Student Guide to eClass/Moodle, Computing for Students Website, Student Guide to eLearning at York University
FAQs for eClass can be found here - https://lthelp.yorku.ca/faq

**Academic honesty and integrity**

In this course, we strive to maintain academic integrity to the highest extent possible. Please familiarize yourself with the meaning of academic integrity by completing SPARK's Academic Integrity module at the beginning of the course. Breaches of academic integrity range from cheating to plagiarism (i.e., the improper crediting of another's work, the representation of another's ideas as your own, etc.). All instances of academic dishonesty in this course will be reported to the appropriate university authorities, and can be punishable according to the Senate Policy on Academic Honesty.