University of Toronto
Department of Economics
ECO422H1F: Monetary Theory and Policy Analysis
LEC0101 and LEC0201
Fall 2024
Professor Joao Ritto

Lecture Meetings:

LEC0101: Tuesday, 10:00am - 1:00pm. Room RW 142
LEC0201: Tuesday, 2:00 - 5:00pm. Room SU 255

Instructor: Joao Ritto, j.ritto@utoronto.ca
Office Hours: Wednesday, 2-4pm, **Office:** 150 St George St (Max Gluskin House), Room 204
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Course Description: ECO422 is an advanced undergraduate course on monetary economics. We will study some empirical facts connecting money, interest rates, inflation, and output growth, as well as models that try to shed light on questions such as: i) why is low inflation desirable?; ii) why do some economies struggle to attain low inflation?; iii) how can we make sense of the effects of monetary policy?; iv) how is monetary policy implemented in a modern economy? Throughout the course, we will make reference to historical episodes of the last four decades, like the Great Moderation, the Great Recession, and the inflation that followed the COVID-19 pandemic, which have generated a continuing debate about the role of monetary policy and its limits. The course outline below provides more detailed information on the contents of the course.

Textbook: There is no official textbook for the course. Lecture slides will contain all necessary material. Problem Sets and Sample Exams will provide you with additional material for practice.

Contact policy: The preferred form of communication is in person: after lectures or during office hours. If you must contact me or the TA by email, make sure to identify yourself, use your UTOR email account, and include "ECO422" in the subject line.

Grading and Exam Policy: The course grade consists of term work worth 65% and a final exam worth 35%. Term work includes 5 online quizzes (each worth 2%), 3 problem sets (each worth 10%) and a midterm test (worth 25%). The table below provides the dates for each of these components of the course grade.

Item	Date	Weight in grade
Quiz I	2024/09/10	2%
Quiz II	2024/09/17	2%
Problem Set I	2024/09/24	10%
Quiz III	2024/10/08	2%
Problem Set II	2024/10/15	10%
Midterm	2024/10/22	25%
Quiz IV	2024/11/05	2%
Quiz V	2024/11/12	2%
Problem Set III	2024/11/26	10%
Final Exam	TBD	35%

Online quizzes: Each online quiz will be composed of mutiple-choice questions related to an assigned reading. The goal is to complement the in-class material, which has a strong focus on economic models, with readings that offer some methodological discussion and/or analysis of relevant historical episodes of monetary economic history. Online quizzes will be taken in Quercus and you have 60 minutes to submit your answers to 4 questions. My suggestion is that you read the paper before you start the quiz. Once you do it, I would expect that it will take you a lot less than 60 minutes to complete it. The submission deadline will be 10am of the date written above (before the start of the lecture for section L0101). No late submissions will be accepted. If a student registers in the course too late to submit the first and/or second quiz, the corresponding part of the grade will be redistributed through the other 3 quizzes.

Problem sets: Problem sets will have two different types of exercises. The first type will be exercises that can be solved by pen and paper and which will be similar in style to the ones that will be tested in the midterm and exam. The second type of exercises will require the use of the software Matlab (and Dynare). This second type of exercises intends to get students acquainted with the computational tools that Central Banks use to solve and analyze dynamic general equilibrium models. Late submissions will be accepted up to 12 hours after the original deadline, but will receive a 20% penalty in the grade.

Midterm and Final Exam: The midterm test will take place during class time on October 22. The room may differ from the one we typically meet in, and will be announced in advance. The final exam will take place during the final exam period in December (location and time to be announced).

If necessary, there will be a make-up test several weeks after the midterm. To register for the make-up test you must:

- Email me before the start of the midterm in your section and declare your absence on ACORN by the day after the test at the latest.

- Meet with me during office hours the week after the midterm to discuss your progress on the course (remember to reserve a slot in advance!) If you have a time conflict, you must email me to set up an alternative meeting time that works for both of us.
- If you miss both the midterm and the make-up test, you will receive a score of zero for the midterm (there is no "make-up test for the make-up test").

On all exams, you may use non-programmable calculators only. No graphing calculators, mobile phones, or any other computational aids will be allowed. You may not bring notes or any other aids. Please remember to bring your student ID card to all exams so that I can take attendance.

Regrading Policy: For regrading of the midterm test or problem sets, you must submit an email request to the TA and me within two weeks of receiving the grade. This should contain a detailed written description of your complaint. Regrading requests will not be accepted after 2 weeks. The entire work will be remarked by the TA and the resulting mark can be higher, lower or remain the same. If you want to further appeal the regrading, you should email me and I will further analyze the regrading.

Office Hours: My office hours will be on Wednesdays 2-4pm. If you would like to attend, you must reserve a time slot in advance using this Google Docs calendar: `https://docs.google.com/spreadsheets/d/1aBbWtaIES93dWDdY8u2_DAORW-jGgDW-uqSV289a2hc/edit?usp=sharing`. Time slots are available in 15-minute increments. To reserve a slot, simply type your name. You may only reserve multiple time slots if you email me first. One exception to this policy is if you would like to attend office hours in a group of several students. Groups of X students may reserve X time slots, where X is any number greater than or equal to one and no larger than five (due to space constraints). Just fill in the names of all students in the group in each of the slots on the calendar that you would like to reserve.
The TA will also have office hours, with schedule to be determined.

Course Website (Quercus): This course uses the University's learning management system, Quercus, to post information about the course, including materials required to complete class activities and course assignments, share important announcements and updates, and foster academic discussion between learners. The site is dynamic and new information and resources will be posted regularly as we move through the term. The principal source of information about all course-related work will be the course site in Quercus, so please make it a habit to log in to the site on a regular if not daily basis. Please note that any grades posted within the Quercus Grade Centre are posted for your information only, so you can view and track your progress through the course. No grades are considered official, included any posted in Quercus at any point in the term, until they have been formally approved by the Course Instructor at the end of the course. There will be a single Quercus page for the two sections of the course.

Academic Integrity: All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. If you have questions or concerns about what constitutes appropriate academic behaviour, please reach out to me. Note that you are expected to seek out additional information on academic integrity from me or from other institutional resources (for example, the University of Toronto website on Academic Integrity).

Accommodations: If you have an ongoing disability issue or accommodation need, you should register with Accessibility Services (AS) (`http://www.studentlife.utoronto.ca/as`) at the beginning of the term. Without registration, you will not be able to verify your situation with your instructors, and instructors will not be advised about your accommodation needs. AS will then assess your medical situation, develop an accommodation plan with you, and support you in requesting accommodation for your course work. Remember that the process of accommodation is private: AS will not share details of your condition with any instructor, and your instructors will not reveal that you are registered with AS.

As part of University Policy, if you anticipate being absent from class or missing a major course activity (like a test, or in-class assignment) due to a religious observance, please let me know as early in the course as possible, and with sufficient notice (at least two to three weeks), so that we can try to find alternate arrangements.

If you become ill and it affects your ability to do your academic work, consult me right away. Normally, I will ask you for documentation in support of your specific medical circumstances. This documentation can be an Absence Declaration (via ACORN) or the University's Verification of Student Illness or Injury (VOI) form. The VOI indicates the impact and severity of the illness, while protecting your privacy about the details of the nature of the illness. If you cannot submit a VOI due to limits on terms of use, you can submit a different form (like a letter from a doctor), as long as it is an original document, and it contains the same information as the VOI. For more information on the VOI, please see `https://www.registrar.utoronto.ca/policies-and-guidelines/verification-of-illness-or-injury/`. For information on Absence Declaration Tool for A&S students, please see `https://www.artsci.utoronto.ca/absence`.

There may be times when you are unable to complete course work on time due to non-medical reasons. If you have concerns, speak to me. It is also a very good idea to speak with an advisor in your College Registrar's office; they can support you in requesting extensions or accommodations, and importantly, connect you with other resources on campus for help with your situation.

Coding with Matlab and Dynare: Modern macroeconomics relies heavily on numerical methods and computational software in order to solve and analyze models. Simple models that you can analyze with pen and paper are helpful to provide intuition or prove a point, but the task of Central Banks is inherently quantitative and requires the use of models that are too complex to

analyze that way. In this course we will discuss the use of Matlab and particularly Dynare, in order to analyze the implications of some of the models we will look into and you will be asked to solve some problem set exercises that require the use of this software. Our use of it will be very pragmatic and user-oriented: we will not be looking into details of how Dynare works, but simply to how we can use it as a tool to solve our models.

You can get a free Matlab license through UofT here. If you have never heard of Matlab, you can start with their introductory video.

Dynare is a software developed by economists that runs inside Matlab. It has been developed to make the solution, estimation and analysis of macroeconomic models very simple. You can read a more detailed description of it here and download it for free here.

I will provide you with some sample codes for models that we cover in class, and a very quick introduction to how to get set up with Matlab and Dynare. In your attempts to solve the problem sets you may of course struggle, as one always does when learning how to use a new software. Your primary resource for help should be the internet. Many people use Matlab and Dynare and you will find out that most questions have been asked and answered in some forum. Generative AI can also help you.

Use of Generative AI (ChatGPT, Microsoft Copilot, etc.): You are allowed to use Generative AI for help with the problem sets and online quizzes. I do not anticipate that it will be very helpful for the pen and paper exercises in the problem sets, but it is definitely helpful with coding. Coding has always been an exercise where searching for help online is an important part of the learning process. Generative AI provides a new tool for help that can sometimes be much more efficient. However, it is not a Deus ex-machina: code errors in the output of Generative AI are still common, so you will have to learn how to communicate with these tools in the most effective way. For the online quizzes, my preference would be for you to read the assigned reading and then answer the multiple questions by yourself. However, as I have no way of enforcing that, you are also free to try and use Generative AI. Hopefully, discussing the reading with it will still allow you to understand the most important points. Remember, though, if you get an answer incorrectly because of a Generative AI mistake, you will be the one penalized, not ChatGPT!

General Outline:

	Date	Topic
Lecture 1	2024/09/03	A Primer on Monetary Economics
Lecture 2	2024/09/10	The roles of money
Lecture 3	2024/09/17	Cash-in-Advance model and the welfare costs of inflation
Lecture 4	2024/09/24	Fiscal-backing and inflation
Lecture 5	2024/10/01	Business cycle fluctuations: DSGEs
Lecture 6	2024/10/08	Price-setting and information frictions
Lecture 7	2024/10/15	Time-inconsistency and inflation
Midterm	2024/10/22	
Fall Reading Week	2024/10/29	
Drop deadline	2024/11/04	
Lecture 8	2024/11/05	The New Keynesian model
Lecture 9	2024/11/12	Banks and Monetary Policy
Lecture 10	2024/11/19	Financial Crises
Lecture 11	2024/11/26	Forward guidance and quantitative easing