

**PhD MACROECONOMIC THEORY II**  
**ECO 7925-AA00 (Part II)**  
**Winter, 2022**

## COURSE INFORMATION

**Class schedule:** Thursdays 08:30 - 11:20  
Hybrid course

**Instructor Information:**

**Name:** Yazid Dissou  
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**Communication preferences :** Emails  
**Office hours:** Wednesdays: 10:30-11:30 (Available on MS Teams)

**Teaching assistant:**

**Name:** TBA  
**E-mail:** TBA  
**Office hours:** TBA

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Before emailing a question, please *fully* read this syllabus and explore the associated resources. The answers to many questions can be found in this document and students may be referred back to the syllabus if the answer is already available.

Please allow at least **two (2) business days** for responses to inquiries before pursuing another route of communication.

## OFFICIAL COURSE DESCRIPTION

Modern dynamic stochastic general equilibrium models, such as real-business-cycle models, models of labour-market and financial frictions, and heterogeneous-agent models. Students also learn computational techniques to solve and estimate these models.

## INDIGENOUS AFFIRMATION

ANISHNABE

Ni manàdjiyànànig Màmìwininì Anishinàbeg, ogor kà nàgadawàbandadjig iyo akì eko weshkad. Ako nongom ega wìkàd kì mìgiwewàdj.

Ni manàdjiyànànig kakina Anishinàbeg ondaje kaye ogor kakina eniyagizidjig enigokamigàg Kanadàng eji ondàpinangig endàwàdjìn Odàwàng.

Ninìsidawinawànànig kenawendamòdjig kije kikenindamàwin; weshkinìgidjig kaye kejejàdizidjig.

Nìgijeweninmànànig ogor kà nìgànì sòngideyedjig; weshkad, nongom; kaye àyànikàdj.

[Listen to the audio file](#)

## ENGLISH

We pay respect to the Algonquin people, who are the traditional guardians of this land. We acknowledge their longstanding relationship with this territory, which remains unceded. We pay respect to all Indigenous people in this region, from all nations across Canada, who call Ottawa home. We acknowledge the traditional knowledge keepers, both young and old. And we honour their courageous leaders: past, present, and future.

## INCLUSION

The University of Ottawa aims to be an equitable and inclusive institution, actively participating in ensuring the wellbeing of students, personnel and faculty members. The University is committed to eliminating obstacles to student inclusion in accordance with the [Ontario Human Rights Code](#). The *Code* provides that every person has the right to equal treatment with respect to goods, services, facilities, housing, contracts and employment as well as membership in trade or professional associations and unions without discrimination because of ‘‘Race, Ancestry, Place of origin, Colour, Ethnic origin, Citizenship, Creed, Sex, Sexual orientation, Gender identity, Gender expression, Age, Record of offence (in employment only), Receipt of public assistance, Marital status, Family status, Disability’’.

The [Human Rights Office of the University of Ottawa](#) adds ‘‘although the Human Rights Code does not provide a definition of discrimination, the notion of discrimination covers unfair treatment on the basis of race, disability, sex, or any other personal characteristic. It can take many different forms, can target a single person or a group and can be part of a system.’’

If you have experienced discrimination or harassment, you can seek confidential assistance through the University Human Rights Office to discuss your situation and/or [to file a formal complaint](#).

The following uOttawa Campus based services are available to you and your fellow students:

- [uOttawa Counselling Service](#) including Individual Counselling provided by uOttawa Counsellor, Pierre Bercy who specializes in anti-black racism;
- University of Ottawa Students’ Union (UOSU) [Resources for/from the Black Community](#), [Centre for Students with Disabilities](#), [Racialized and Indigenous Students Experience Centre](#), [Womxns Resource Centre](#) and [uOttawa Pride Center](#)
- Anti-racism student committee (Email: [car.arc.uottawa@gmail.com](mailto:car.arc.uottawa@gmail.com))
- Mashkawazìwogamig: [Indigenous Resource Center](#)
- [University of Ottawa’s Human Rights Office](#) including [policies on accessibility](#).

## COURSE LEARNING OUTCOMES

### General course objectives

PhD Macroeconomic Theory II is the second PhD course in macroeconomics. It deals with modern techniques used to understand economic fluctuations and labour market frictions.

This second part of the course will focus on dynamic general equilibrium models in a stochastic framework. The topics covered will include real business cycles (RBC) models without and with frictions, dynamic stochastic general equilibrium (DSGE) models with nominal rigidities, and fiscal policy models. Finally, students will be introduced to the computational techniques used to simulate these models.

## TEACHING METHODS

As with the first part of the course, this second part will be organized around weekly lectures. It will start on March 17<sup>th</sup>, 2022. Course notes in form of PDF files will be posted on Brightspace. Students have the responsibility of reading the notes and the suggested articles.

## PREQUISITES

Students are expected to be familiar with basic intuition in macroeconomics covered in undergraduate courses, in addition to basic calculus and optimization techniques in dynamic settings covered at the graduate level. In particular, all students should be comfortable with the microeconomic foundations of macroeconomics covered in the previous graduate macroeconomic courses.

## REQUIRED MATERIALS

No specific textbook will be closely followed. The lectures will be based on journal articles, chapters from some textbooks, and handouts made available on the course web page.

The following textbooks may be useful:

- Galí, J. (2015). *Monetary Policy, Inflation, and the Business Cycle: An Introduction to the New Keynesian Framework and its Applications*. Princeton University Press.
- Romer, D. (2019) *Advanced Macroeconomics*, McGraw-Hill/Irwin, 5th edition.
- Wickens, M. (2012). *Macroeconomic Theory: A Dynamic General Equilibrium Approach*. Princeton University Press.

## ASSESSMENT METHODS

The evaluation of this second half of the course will be based on one assignment and one final exam:

- Assignment **released on March 25, 2022** and due on **April 01, 2022** (15.0%)

- An online final exam (TBA). (35%)

**Note that the date of the deferred final exam is May 13, 2022.**

University of Ottawa Grading Scheme		
<a href="https://international.uottawa.ca/en/grading-system">https://international.uottawa.ca/en/grading-system</a>		
Letter grade	Numerical value	Percentage value
A+	10	90-100
A	9	85-89
A-	8	80-84
B+	7	75-79
B	6	70-74
C+	5	65-69
C	4	60-64
D+	3	55-59
D	2	50-54
E	1	40-49
F	0	0-39
ABS	0	Absent
EIN	0	Failure/Incomplete

### **POLICY ON THE EIN GRADE (INCOMPLETE):**

In all economics courses, students who fail to complete work (either a single piece of work or a combination of work) worth a total of 25% or more of the final grade will receive a grade of EIN in the course. The EIN grade is equivalent to a failure mark (F). See Regulation 10.6 (<https://www.uottawa.ca/administration-and-governance/academic-regulation-10-grading-system>) for details.

Please note that a denied request for a deferral may therefore lead to a failure mark.

### **ASSESSMENT POLICIES AND EXPECTATIONS**

#### **Time Commitment**

In order to succeed in a 3-credit course, alongside the standard 3 hours of in-class Instruction, students should expect to spend a minimum of 6 hours per week outside of the classroom engaged in activities related to the course, e.g., homework, reading, studying, etc., and should expect a minimum time commitment of 9 hours per week per course (on average).

### **Language Expectations**

This course is delivered in English, and in class interactions, including the online discussion boards, and feedback will also be managed in English. As part of your evaluation will be on your writing abilities, it is recommended to take the appropriate measures to avoid mistakes such as spelling, syntax, punctuation, inappropriate use of terms, etc. You may be penalized up to 15% for poorly written materials, to the professor's discretion.

### **Mobile Devices**

Unless explicitly requested, please refrain from using mobile devices during our class. As our in-class time is quite limited, I would ask that you prioritize using this time to engage with class discussions and other content-related activities. Active participation and engagement with the content and your peers helps ensure full participation marks for your contributions this semester.

### **Late Assignments**

All assignments are to be submitted by their due date and time. All late submissions will be immediately docked 5%, with an additional 5% for each subsequent day late to a maximum of 3 days, including weekends. **After 3 days all outstanding assignments will be given a zero (0%) grade.** Exceptions are made only for illness or other serious situations deemed as such by the instructor. University regulations require all absences from exams and all late submissions due to illness to be supported by a medical certificate. Absence for any other serious reason must be justified in writing, to the academic assistants of the Faculty, within five business days following the date of the exam or submission of an assignment. The Faculty reserves the right to accept or refuse the reason; reasons such as travel, jobs, or any misreading of the examination timetable are not acceptable.

### **Online Examination Strategy**

Your (**identify exams, for example mid-term and final**) exam(s) will be administered through Respondus (please read the FAQ here: <https://uottawa.saeatls.ca/en/transition-to-remote-teaching/respondus-faq>, as well as the notice below). The University of Ottawa has granted students the possibility of refusing to use this system.

If you do not wish to write your exam through Respondus, you must advise your professor by **[Date]** so that alternate arrangements can be made.

### **Missed and Deferred Examinations**

Students who are excused for missing an exam will be required to write a deferred exam, except where the professor offers a re-weighting scheme which applies to the student's case. Professors may decline to offer a deferred exam and instead re-weight the remaining pieces of work only if (i) the re-weighted scheme is indicated on the syllabus and (ii) it respects both the 25 percent rule ([Academic Regulation I-9.0](#)) and the final exam rule.

Absences from exams will be penalized. Exceptions are made only for illness or other serious situations. The Faculty reserves the right to accept or refuse the reason.

Conflicts due to travel, jobs, or any misreading of the examination timetable are not acceptable reasons. Absences from exams which are not excused will result in a mark of zero for the exam.

Students who are excused for missing an exam will be required to write a deferred exam, except where the professor offers a re-weighting scheme which applies to the student's case. (If available, such a scheme is described in this syllabus). Except in the case of a re-weighting scheme, students

wishing to be excused for an absence must complete a [deferral form](#) (DFR). This form must be completed for both midterm and final exams.

Absence due to illness must be supported by a medical certificate. Requests for deferral must be submitted, with supporting documentation (ex. medical certificate), within five working days of the exam. The request must respect all the conditions of [Academic Regulation I-9.5](#). The date of the deferred final exam is **May 13, 2022**.

### **Exam Conflicts**

- Any conflict with a midterm exam schedule should be reported to the Professor at the beginning of the term. This request is especially applicable to the type 3 conflict (two in-class exams back-to-back) for students with special learning needs.
- Any conflict with a final exam schedule should be reported to the Faculty's undergraduate office as soon as the final examination schedule is released.

## **ACADEMIC INTEGRITY**

### **Preamble**

Academic integrity is a fundamental value at the core of all academic activities. The regulation on academic fraud ([Academic Regulation 1-14](#)) defines the acts that can compromise academic integrity and outlines the various sanctions and consequences of such acts, and the procedures for handling allegations and setting sanctions. Further information on academic integrity is available on [the website of the Provost and Vice-President, Academic Affairs](#).

### **Definition**

1. Any act by a student that may result in a distorted academic evaluation for that student or another student. Academic fraud includes but is not limited to activities such as:
  - a. plagiarising or cheating in any way;
  - b. submitting work not partially or fully the student's own, excluding properly cited quotations and references. Such work includes assignments, essays, tests, exams, research reports and theses, regardless of whether the work is in written, oral or any other form;
  - c. presenting research data that are forged, falsified or fabricated in any manner;
  - d. attributing a statement of fact or reference to a fabricated source;
  - e. submitting the same work or a significant part of the same piece of work in more than one course, or a thesis or any other piece of work submitted elsewhere without the prior approval of the appropriate professors or academic units;
  - f. falsifying or misrepresenting an academic evaluation, using a forged or altered supporting document or facilitating the use of such a document;
  - g. taking any action aimed at falsifying an academic evaluation.

## **SANCTIONS**

1. Students who commit or attempt to commit academic fraud, or who are a party to academic fraud, are subject to one or more sanctions ([full list](#)), such as:
  - a. a written warning;
  - b. zero for part of the work in question;
  - c. zero for the work in question;
  - d. zero for the work in question and the loss of additional marks for the course in question;
  - e. zero for the work in question, with a final grade no higher than the passing grade for the course in question;
  - f. an F or NS grade for the course in question.

## COURSE SCHEDULE

- March 17, 2022:**      **Lecture 1: RBC models I (The basic RBC model)**
- March 24, 2022:**      **Lecture 2: RBC models II (Extensions of the basic RBC model)**  
                                 **Release of Assignment (due for March 31, 2022)**
- March 31, 2022:**      **Lecture 3: The New-Keynesian DSGE model**
- April 07, 2022:**      **Lecture 4: Fiscal Policy with Dynamic General Equilibrium Models**

## SUGGESTED READINGS

*(Nota: An updated list will be provided in the course notes)*

### Real Business Cycles Models

- Basu, S., and J. Fernald. "Why is Productivity Procyclical? Why Do We Care?" NBER W7940 (October 2000).
- Blanchard, O. and C. Kahn (1980). The Solution of Linear Difference Models Under Rational Expectations. *Econometrica* 48, 1305-131.
- Campbell, J. (1994). Inspecting the Mechanism: An Analytical Approach to the Stochastic Growth Model. *Journal of Monetary Economics* 33, 463-506.
- Gali, J., and P. Rabanal. "Technology shocks and aggregate fluctuations: How well does the RBC Model Fit Postwar U.S. Data?" *NBER Macroeconomics Annual* (2004).
- King, R. G., & Rebelo, S. T. (1999). Resuscitating real business cycles. *Handbook of macroeconomics*, 1, 927-1007.
- Kydland, F. E., and E. C. Prescott (1982), "Time to Build and Aggregate Fluctuations," *Econometrica*, 50(6), 1345–70
- Lucas, Robert (1976), "Econometric Policy Evaluation: A Critique", in Brunner, K. and A. Meltzer, The Phillips Curve and Labor Markets, Carnegie-Rochester Conference Series on Public Policy, 19–46. American Elsevier, New York.
- Uhlig, H. (1999), "A Toolkit for Analysing Nonlinear Dynamic Stochastic Models Easily," in *Computational Methods for the Study of Dynamic Economies*, ed. by R. Marimon, and A. Scott, pp. 30–61. Oxford University Press, London

### DSGE Sticky Prices Models

- Bils, M. and P. Klenow (2004), "Some evidence on the importance of sticky prices", *Journal of Political Economy*, 112(5), 947-985

- Calvo, G. A. (1983). Staggered prices in a utility-maximizing framework. *Journal of monetary Economics*, 12(3), 383-398.
- Cho, Seonghoon and Antonio Moreno (2006), “A Small-Sample Study of the New-Keynesian Macro Model”, *Journal of Money, Credit and Banking*, 38(6), 1461-1481
- Christiano, L. J., M. Eichenbaum, and C. L. Evans (2005), “Nominal Rigidities and the Dynamic Effects of a Shock to Monetary Policy,” *Journal of Political Economy*, 113(1), 1–45.
- Clarida, R., J. Gali and M. Gertler (2000), “Monetary Policy Rules and Macroeconomic Stability: Evidence and Some Theory”, *The Quarterly Journal of Economics*, 115(1), 147-180.
- Erceg, C. J., Henderson, D. W. and A. T. Levin (2000), “Optimal monetary policy with staggered wage and price contracts”, *Journal of Monetary Economics*, 46(2), 281-313
- Fuhrer, Jeffrey, C. (2000), "Habit Formation in Consumption and Its Implications for Monetary-Policy Models", *American Economic Review*, 90 (3): 367-390
- Galí, J. (2015), *Monetary Policy, Inflation, and the Business Cycle* (2nd ed.). Princeton University Press, Princeton
- Mankiw, N. G., & Reis, R. (2002). Sticky information versus sticky prices: a proposal to replace the New Keynesian Phillips curve. *The Quarterly Journal of Economics*, 117(4), 1295-1328
- Rotemberg, J. J., & Woodford, M. (1997). An optimization-based econometric framework for the evaluation of monetary policy. *NBER macroeconomics annual*, 12, 297-346.
- Yun, T. (1996). Nominal price rigidity, money supply endogeneity, and business cycles. *Journal of monetary Economics*, 37(2), 345-370.

## **Fiscal Policy**

- Leeper, E. M., M. Plante, and N. Traum (2010): “Dynamics of Fiscal Financing in the United States,” *Journal of Econometrics*, 156(2), 304–321.
- Lopez-Salido, J. D., and P. Rabanal (2006): “Government Spending and Consumption-Hours Preferences,” La Caixa Working Paper Series No. 02/2006, November.
- Monacelli, T., and R. Perotti (2008): “Fiscal Policy, Wealth Effects, and Markups,” National Bureau of Economic Research Working Paper No. 14584, December.
- Schmitt-Grohé, S., & Uribe, M. (2004). Optimal fiscal and monetary policy under sticky prices. *Journal of Economic Theory*, 114(2), 198-230.
- Woodford, M. (2011), “Simple Analytics of the Government Expenditure Multiplier,” *American Economic Journal: Macroeconomics*, 3(1), 1–35.

## UNIVERSITY POLICIES

### *Intellectual property right of course content*

The materials you receive for this course are protected by [copyright](#) and must be used for this course only. You do not have permission to disseminate these materials, regardless of the means of dissemination including the uploading of these materials to any website or mobile application. These materials include but are not limited to, any course notes provided by the professor, their PowerPoint presentations, and any lecture recordings you may have.

If you require clarification, please consult your professor.

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### *Regulation on Bilingualism at the University of Ottawa*

Every student has the right to require that a course be given in the language used to describe the course in the course calendar ([Academic Regulation I-2](#)).

Except in programs and courses for which language is a requirement, all students have the right to produce their written work and to answer examination questions in the official language of their choice, regardless of the course's language of instruction.

### *Prevention of Sexual Violence*

**If you feel unsafe, call 9-1-1 or reach out to Campus Protective Services at 613-562-5411.**

The University of Ottawa has a zero-tolerance policy for any sexual act or act targeting a person's sexuality, gender identity or gender expression. This includes both physical and psychological acts that are committed, threatened, or attempted against a person without the person's consent, such as sexual assault, sexual harassment, stalking, indecent exposure, voyeurism, sexual exploitation, and cyberbullying. The University, as well as various employee and student groups, offers a variety of services and resources to ensure that all uOttawa community members have access to confidential support and information, and to procedures for reporting an incident or filing a complaint.

### *Notice: Collection of Personal Information with Adobe Connect/Zoom/MS Teams Recordings*

In accordance with the *Freedom of Information and Protection of Privacy Act* in Ontario and with University [Policy 90](#), your personal information is collected under the authority of the *University of Ottawa Act, 1965*.

The Adobe Connect/Zoom/MS Teams sessions will be recorded for purposes consistent with the fulfillment of the course learning activities and outcomes. The recording may include the use of your video presence, picture, and voice. If you choose not to have your picture or voice recorded, you may disable the audio and video functionality or request accommodation from your instructor. The recording will be available only to authorized individuals through University of Ottawa systems.

If you have questions about the collection, use and disclosure of your personal information in this notice, please contact *email of the professor@UOTTAWA.CA*.

## STUDENT SERVICES & RESOURCES

### *Faculty Student Experience Centre*

The goal of the [Student Experience Centre](#) is to help students with their academic and social well-being during their time at the University of Ottawa. Regardless of where a student stands academically, or how far along they are in completing their degree, the Student Experience Centre is there to help students continue on their path to success.

A student may choose to visit the [Student Experience Centre](#) for very different reasons. Younger students may wish to talk to their older peers to gain insight into programs and services offered by the University, while older students may simply want to brush up on study and time management skills or learn about programs and services for students nearing the end of their degree.

In all, the [Student Experience Centre](#) offers a place for students to talk about concerns and problems that they might have in any facet of their lives. While students are able to voice their concerns and problems without fear of judgment, mentors can garner further insight in issues unique to students and find a more practical solution to better improve the services that the Faculty of Social Sciences offers, as well as the services offered by the University of Ottawa.

### [Academic GPS](#)

The *Academic GPS* hub is a one-stop shop for academic support. Whether you're an experienced student or just starting out, you'll find some great resources to help you succeed.

#### **With the Academic GPS, you can:**

- chat with a mentor seven days a week
- register for study groups
- take part in study methods workshops (note taking, time management, exam preparation, stress management, Academic Integrity Session, etc.)
- book an appointment with a mentor

### [Health and Wellness](#)

Your wellness is an integral part of your success. If you don't feel well, it can be hard to focus on your studies.

Dedicated professionals and fellow students who care about you are always ready to provide advice and support. Depending on your needs, many activities and services exist to accompany you during your academic journey.

#### Services include:

- opportunities to connect;
- counselling sessions
- peer support;
- physical activity;
- wellness activities and workshops;

- spiritual guidance.

If you want to connect with a counsellor, you can book an appointment online or go to their walk-in clinic at 100 Marie-Curie, fourth floor.

You can also drop-in to our wellness space, chat online with a peer helper, or access 24/7 professional help through the website.

### *Academic accommodations*

The [Access Service](#) tries to make sure all students with disabilities have equal access to learning and research environments, the physical campus and University-related programs and activities. The Academic Accommodations service works with other campus services to create an accessible campus learning environment, where students with disabilities have an equal opportunity to flourish.

We offer a wide range of services and resources, provided with expertise, professionalism and confidentiality.

#### **Some services we offer**

- Help for students with disabilities in making the transition
- Permanent and temporary accommodation measures
- Learning strategy development
- Adaptive exams
- Transcriptions of learning material
- Interpretation (ASL and LSQ)
- Assistive technologies

If you think that you might need any of our services or support, [email the Academic Accommodations service](#) ([adapt@uOttawa.ca](mailto:adapt@uOttawa.ca)).

### *Human Rights Office*

The mandate of the [Human Rights Office](#) is to provide leadership in the creation, implementation and evaluation of policies, procedures and practices on diversity, inclusion, equity, accessibility and the prevention of harassment and discrimination.

**Contact information:** 1 Stewart St. (Main Floor – Room 121) - Tel.: 613-562-5222 / Email: [respect@uOttawa.ca](mailto:respect@uOttawa.ca)

### *Career Services*

[Career Services](#) offers various services and a career development program to enable you to recognize and enhance the employability skills you need in today's world of work.