

**University of Waterloo**  
**Department of Economics**  
**Econ 406**  
**Money and Banking 2**  
**Winter 2019**  
**1:00-2:20 pm, MW, HH 2107**

### **Instructor Information**

Instructor: Jean-Paul Lam  
Office: HH220  
Office Phone: 519-888-4567 x33091  
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Teaching assistant : TBA

### **Course Description**

This course will cover various topics on money, monetary economics and monetary policy. Topics include: what is money? What forms does money take? Money and inflation, the role of money in macro models, price rigidities, optimal monetary policy, liquidity traps, zero lower bound, rules versus discretion and structural vector autoregressive models.

### **Readings Available on LEARN**

I will make copies of my lecture notes available on UW-LEARN. In addition to the lecture notes and book chapters, there are a number of required readings for this class. Most of the papers are available online. Please let me know if you cannot find a particular paper.

### **Textbooks**

Below are the textbooks that I will use for this course. However, I recommend buying only the textbook by Carl Walsh.

- Walsh, Carl E., *Monetary Theory and Policy*, 4th edition, Cambridge: MIT (third edition is also good) Press, 2017. [CW]
- Woodford, Michael., *Interest & Prices*, Princeton University Press, 2003. (MW)
- Useful websites: Bank of Canada, Federal Reserve System, Bank of England, especially the working papers, the NBER and CEPR.

## Evaluation

4 assignments worth 40 percent of your total marks. No late assignments allowed. If you do not hand in your assignment by the deadline, you will receive a mark of zero.

One midterm worth 20 percent of your total marks. The midterm will take place on Monday March 4<sup>th</sup>, 2019.

One final exam (2 hours) worth 40 percent of your total marks. The date will be set by the registrar.

## Lecture Topics and Readings

Lecture notes and readings will be posted before each class on UW LEARN (<https://learn.uwaterloo.ca>). You are required to read ahead all the lecture notes and required materials. It will allow you to make the most of the lectures. I also strongly encourage you to ask questions in class. Below is a list of topics I will cover in class and the approximate time I will devote to each.

### 1 What is money?

- Why is money important?
- Barter economy versus a monetary economy
- Correlation: money, output and prices in the short-and-long-run
- Forms of money
- Cryptocurrency and Blockchain

#### Readings

Walsh, Ch 1

### 2 General Equilibrium Model without money

- Solving a simple macro model with Dynare/Iris

### 3 General Equilibrium Models with money and Optimal Inflation

- Money in the utility

#### Readings

- CW, Chapter 2, Chapter 3, sections 3.3 and 3.6, Chapter 5, section 5.3
- Cooley, Thomas F., and Gary D. Hansen. 1995. "Money and the Business Cycle," in

Cooley, Thomas F. (ed.), *Frontiers of Business Cycle Research*, Princeton: Princeton University Press 2

#### 4 **New Keynesian Models and Optimal Monetary Policy**

- Models of price stickiness
- Evidence on price stickiness
- The New Keynesian model
- Optimal policy under commitment and discretion

##### **Readings**

- CW chapter 8
- Clarida, R., J. Galí, and M. Gertler. 1999. "The Science of Monetary-Policy: A New Keynesian Perspective." *Journal of Economic Literature*.
- MW chapter 3

#### 5 **Monetary Policy Rules**

- Taylor Principle
- Liquidity trap and the ZLB

##### **Readings**

- CW Chapter 11, sections 11.1-11.4.
- MW Chapter 2, p 85—102.
- Clarida, Richard, Jordi Galí, and Mark Gertler. 2000. "Monetary Policy Rules and Macroeconomic Stability: Evidence and Some Theory," *Quarterly Journal of Economics* 115: 147—180.

#### 6 **Structural Vector Autoregressions**

- What happens after a monetary policy shock?

##### **Readings:**

- Structural Vector Auto Regressive Analysis (Chapter 2) <http://www.personal.umich.edu/~lkilian/book.html>

## **Software**

I will use Matlab for this course (and sometimes EVIEWS). Matlab is installed on all computers on campus. Alternatively, you can buy your own copy of the student version of Matlab (You will need the econometrics and financial toolboxes also)

A good place to start learning Matlab is the Mathworks website where there are plenty of examples and a tutorial. Regarding Eviews, there is a free student version and that should be enough for this course

To solve and simulate DSGE models, I will use DYNARE and/or IRIS. Dynare and IRIS are free toolboxes. On their respective website, there is information on how to install both software within Matlab. You can also download the manuals for Dynare and IRIS. You will have to learn how to program in Matlab.

### **Policy on Missed Tests and Assignments and Late Work**

Assignments have to be handed on time. If you miss the deadline, you will receive a mark of zero. No exceptions are allowed. No make-up midterms or assignments will be provided. Students who do not have a relevant medical certificate will receive a mark of zero on any missed midterm or assignment. If you who miss one midterm and have a relevant medical certificate, or medical certificates, the weight of the missed midterm will be automatically transferred to the highest weighted midterm that you have written. You NEED to write at least two midterms to PASS the course.

### **Policy of Remarking Tests**

If you want me to remark your midterm or assignment because you suspect a mistake on the part of the TA, all regrade requests must be submitted to me within one week of receiving the grade in question. In your request, you must clearly indicate the reasons why you want your midterm or your assignment to be regraded. Note that if you want your midterm and assignment re-graded, I will remark the entire piece of work. Your grade may go up, down or stay the same as a result of this.

### **Information on Plagiarism Detection**

I do encourage collaborations on assignment. However, each student must submit her/his own assignment. No photocopies are allowed. If you are working with other people, you must clearly indicate at the top of your assignment the names of the persons with whom you have collaborated. As there is no paper requirement for this course, I will not use the TurnItIn software.

### **Electronic Device Policy**

Students are allowed to use their laptops during class to take notes, view the lecture notes or online readings. No other use of the laptop is allowed. When entering the classroom, you should turn off your cell phone.

## **Attendance Policy**

Class attendance is compulsory for this course.

## **Note on the scheduling of midterms and religious holidays**

If a midterm falls on the day of a religious holiday that is not observed by the university and you anticipate this to be a problem, you must consult with the associate dean of the faculty of Arts regarding other arrangements. You have 1 week after the announcement of the date of the midterm/exam to make a request of rescheduling based on these grounds (i.e. you have one week after the first class for midterms). This is the University's policy.

## **Economics Department Deferred Final Exam Policy**

Deferred Final Exam Policy found at <https://uwaterloo.ca/economics/undergraduate/resources-andpolicies/deferred-final-exam-policy>

## **Cross-listed course**

This is not a cross-listed course.

## **Academic Integrity**

In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. See the [UWaterloo Academic Integrity Webpage](#) and the [Arts Academic Integrity](#) webpage for more information.

## **Grievance**

A student who believes that a decision affecting some aspect of his/her university life has been

unfair or unreasonable may have grounds for initiating a grievance. Read [Policy 70, Student Petitions and Grievances, Section 4](#). When in doubt please be certain to contact the department's administrative assistant who will provide further assistance.

## **Discipline**

A student is expected to know what constitutes academic integrity to avoid committing academic offenses and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course professor, academic advisor, or the undergraduate associate dean. For information on categories of offenses and types of penalties, students should refer to [Policy 71, Student Discipline](#). For typical penalties check the [Guidelines for the Assessment of Penalties](#).

## **Appeals**

A decision made or penalty imposed under Policy 70, Student Petitions and Grievances (other than a petition) or Policy 71, Student Discipline may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 - Student Appeals.

## **Accommodation for Students with Disabilities**

Note for students with disabilities: The [AccessAbility Services office](#), located on the first floor of the Needles Hall extension (1401), collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the AS office at the beginning of each academic term.

## **Mental Health Support**

All of us need a support system. The faculty and staff in Arts encourage students to seek out mental health supports if they are needed.

### **On Campus**

- Counselling Services: <mailto:counselling.services@uwaterloo.ca> / 519-888-4567 ext. 32655

- [MATES](#): one-to-one peer support program offered by Federation of Students (FEDS) and Counselling Services
- Health Services Emergency service: located across the creek from Student Life Centre

#### **Off campus, 24/7**

- [Good2Talk](#): Free confidential help line for post-secondary students. Phone: 1- 866-925-5454
- Grand River Hospital: Emergency care for mental health crisis. Phone: 519- 749-433 ext. 6880
- [Here 24/7](#): Mental Health and Crisis Service Team. Phone: 1-844-437-3247
- [OK2BME](#): set of support services for lesbian, gay, bisexual, transgender or questioning teens in Waterloo. Phone: 519-884-0000 extension 213

Full details can be found online at the Faculty of ARTS [website](#)

Download [UWaterloo and regional mental health resources \(PDF\)](#)

Download the [WatSafe](#) app to your phone to quickly access mental health support information

## **Territorial Acknowledgement**

We acknowledge that we are living and working on the traditional territory of the Attawandaron (also known as Neutral), Anishinaabe and Haudenosaunee peoples. The University of Waterloo is situated on the Haldimand Tract, the land promised to the Six Nations that includes six miles on each side of the Grand River.