# University of Michigan Department of Economics ECON 402: Intermediate Macroeconomics

Syllabus and Course Policies

#### **Instructional team**

Name and role	E-mail	Office hours
Dmitriy Stolyarov, Instructor	stolyar@umich.edu	Mondays, 5 pm – 6 pm
		Fridays all day, by appointment
Alberto Arredondo Chavez,	[address administrative questions	TBA
Head GSI	here]: <u>aaredoc@umich.edu</u>	
Benjamin Glass, GSI	benglass@umich.edu	TBA
Mike Mei, GSI	mikemei@umich.edu	TBA
Alexandr Moskalev, GSI	moskalev@umich.edu	TBA
Matthew Wilson, GSI	mgwilson@umich.edu	TBA

In addition to office hours, there is a weekly Macro Squad (i.e. pooled office hours for all sections) on Fridays between 10 am and 1 pm.

Please use E-mail *if and only if* you have administrative questions or need to request office hours by appointment. For all other questions/requests for help, please come to office hours or post questions on Canvas.

### Important dates to put on your calendar

1<sup>st</sup> midterm: Thursday, February 9, 8-10pm 2<sup>nd</sup> midterm: Thursday, March 16 from, 8-10pm Final exam (non-cumulative): Friday, April 21, 4 pm – 6 pm

If you have time conflicts with exams, you should either resolve them on your own or drop the class.

### **Course Overview**

The study of macroeconomics is aimed at understanding the workings of an entire economic system that is made up of vast numbers of consumers and firms interacting in multiple markets. We will describe the interactions of the various economic actors operating through markets to understand where the macroeconomic variables (e.g. output, consumption, investment, interest rate, inflation and unemployment) "come form" and how they are affected by changes in economic environment and various government policies.

This course gives a rigorous introduction to the standard modern macroeconomic reasoning toolkit, as used in the day-to-day work at banks and financial institutions, central banks, treasury departments and economics consulting firms around the world. The emphasis is on developing economics reasoning skills to address problems at the level of real-world complexity: finding and selecting relevant information, encoding it into a modeling framework, performing model analysis and decoding results into predictions and/or policy implications.

### **Prerequisites**

<u>Enforced Prerequisites</u>: Calculus [Math 115, Math 116,...] is a strict prerequisite for this course. We will rely heavily on algebra, basic calculus, and graphs.

<u>Strongly Advised Prerequisites</u>: Econ 102, 401. Students who have not taken these courses may find the material unfamiliar, difficult, and that the pace of lecture moves quickly. If you are taking the class without advised prerequisites, you assume a risk and should expect to make up lack of preparation with extra study time.

### Grading system

The grading system is a dropped-midterm, flexible-weight: the better you do with the homework, the less weight is put on exam scores. This design rewards consistent effort, and it makes some allowance for an accidental lapse in exam performance or a difficult personal situation. Please take time to read through carefully to understand the grading system well.

Your total score for the class (*T*, between 0 and 300) is calculated according to a formula (see below) that depends on 5 sub-scores: 1<sup>st</sup> midterm ( $M_1$ , between 0 and 100), 2nd midterm ( $M_2$ ), final (*F*), cumulative homework points (*H*, between 0 and 24) and a participation point (*P*, 0 or 1). The formula used is as follows:

$$T = \frac{P+H}{100} \times 300 + \left(1 - \frac{P+H}{100}\right) \times \frac{max\{M_1, M_2\} + F}{200} \times 300.$$

In words, this means that your lowest midterm score is dropped (i.e. only  $max\{M_1, M_2\}$  counts), your final and your highest midterm score have equal weight, and that each homework or participation point shifts 1% of weight away from your exams and towards the maximum score of 300. You can thus earn up to 25% towards a perfect score by accumulating homework and participation points. The remaining weight is distributed evenly between your highest midterm score and your final score. The participation point is reserved for a special in-class event to be announced.

The translation of the final score into a letter grade is at the discretion of the instructor, and I will make additional announcements about what this translation might be. The class is not graded on a curve; I will instead set performance targets that correspond to letter grades.

### How to study and how to get help with studying

We would like to offer the best help we can throughout the semester and avoid unnecessary stress on students and instructors caused by poor planning or undeveloped study habits. Depending on your level of preparation, you should expect to set aside about 3-5 hours per week – every week – to study for this class. Make a week-by-week plan together with your homework teammate (see below) and stick to it. Help each other control procrastination and stay on track with the study plan. Do not cram and do not skim – these "study" strategies were shown not to work with the type of material taught in this class.

We would like to answer your questions about the material promptly and efficiently. For this to work, we need your cooperation in properly routing questions and requests for help. Face-to-face is the best way to get immediate and interactive help with the material. Plus, we get to know you better. You are particularly encouraged to attend the office hours (shown on the p. 1 of the syllabus) and the Macro Squad on Fridays 10 am – 3pm. Another good option is to post questions on Canvas – the instructional team is set to receive notifications of all posts, and the answers to your questions will be promptly uploaded. E-mailing questions about the material is considered inefficient; E-mailed questions will be given a lower priority than other forms of requests for help, especially around the time of the exams.

# **Lectures**

I would like to encourage note-taking in class, as this is one of the most effective ways to digest the material. The first 5 rows of the lecture hall are therefore reserved for students who would like to take handwritten notes and can commit to not using electronic devices during lecture. Cell phones and other noise-making gadgets should be in silent mode no matter where you sit. Repeat violators of this rule will forfeit participation points.

Distraction-free work during lectures is important for all, and there are rules of professional decorum aimed at creating an environment conducive of serious work. Entering or leaving in the middle of the lecture, as well as engaging in class-unrelated activities (e.g. reading newspapers or eating) in a way that produces noises, odors or other disruptions is considered disrespectful and is afforded only limited tolerance.

# **Study materials**

## Textbooks

### Required

The Mankiw book is well-written and well-organized, although many chapters are pitched at a lower level than we need. Nevertheless, the book is a great resource on most topics, it complements other study materials well, and it is especially useful for students who are newcomers to either macroeconomics or intermediate-level economics classes.

Williamson's book contains a more in-depth treatment of the type of economic theory from which our macroeconomic reasoning is built, and its sequence of topics and expositional logic corresponds somewhat more closely to the structure of the course. Some students may find this book less user-friendly than Mankiw, and therefore is only optional and not required.

### **Canvas site**

The Canvas site is a primary source of study materials that are strictly necessary to support your learning. The materials posted will include magazine articles, lecture slides, section notes, problem set solutions and lecture capture (voice and screen).

To support your study, and to offer timely help with questions about the material, the instructional team will run discussions on Canvas where students will post questions and instructors will post answers.

The Canvas site has a special announcement section where we will post essential administrative and logistical information. You need to keep up with the announcements to stay in tune with the course.

## **Announcements**

Announcements will be posted on Canvas site, and we assume that all announcements are read and understood, and that the instructions contained therein are followed. Please check your personal notification settings on Canvas to see that you are getting the notifications that you want/need.

## **Homework**

### Credit for team-based homework

Homework consists of 8 problem sets worth 3 homework points each. Students are encouraged to work on homework assignments in pairs (i.e. teams of 2), and to submit one problem set per team.<sup>1</sup> Each team member will receive an identical individual score for the problem set. Pairing up with different people on different problem sets is allowed, however no student can be a member of more than one team at a time. Of course, if you prefer to work alone, solo-authored problem sets are also OK.

### Homework submission

Problem sets should be finished in a professional manner that is evaluator-friendly: legibly and neatly written or typed on clean paper that has not been folded or crumpled, with straight and smooth edges (no spiral stuff!) and individual sheets of paper stapled together.<sup>2</sup> Problem sets are due at the beginning of the class on the due date (typically, Wednesday). The GSIs will collect the assignments at the entrance to the lecture hall. If team members do not attend class on the due date, it is the students' responsibility to make sure the problem set arrives in the lecture hall and is handed in.

### Homework grading criteria

<sup>&</sup>lt;sup>1</sup> You might be tempted to divide up the work and do one-half of a problem set each. This is precisely the wrong approach. A better approach is to work together on every problem helping each other along – this way you are likely to spend less time overall and learn more also.

<sup>&</sup>lt;sup>2</sup> Illegible scribbles cannot and will not be graded, and otherwise evaluator-unfriendly submissions will be rejected.

A problem set is divided into sections, and each section receives either 0 or 1 homework point – there is <u>no partial</u> <u>credit</u> on homework points, and no re-grades. One homework point is awarded if one of the following conditions is met

*Condition 1:* Problem set is submitted on time, and work is presented in a professional manner, as defined above. Author(s) show all steps taken to get to the answers in all of the questions within the section, and most of the essential steps are done correctly.

*Condition 2:* Problem set is submitted on time, and work is presented in a professional manner. Author(s) show evidence of serious and substantial effort in tackling each problem in the section, followed by a paragraph explaining where and why they got stuck.

## **Exam-related policies and procedures**

This course complies with all Economics Department course policies, including those on academic integrity, graded assignments in undergraduate courses, and grade grievances. These policies are available at

### http://lsa.umich.edu/econ/undergraduates/policies-and-procedures.html

#### What to expect prior and during an exam

Please check the announcement on Canvas for your exam room location and show up at least 10 minutes before the exam start time. The proctoring GSIs will assign your seating.

All exams are closed-books, closed-notes. All notes, books, paper and electronic devices (with the exception of approved calculators<sup>3</sup>), smart watches etc. must be stowed inside your bag prior to entering the exam room and stay there for the entire duration of the exam. The exam will not start until this condition is met by everyone.

Please note that departmental sanction for documented academic misconduct on any graded assignment is automatic failure of the course. In order to help distinguish good from bad conduct, students may be photographed or videotaped while taking the midterm and final exams. These photographs and videos will not be widely circulated, but will be saved until the semester is finished. Furthermore, students will not be permitted to wear head gear during exams; nor will they be permitted access to water bottles, phones, or other objects during the exams. Anyone with concerns about these procedures, including but not limited to health or religious concerns, is welcome to contact the instructor.

The University of Michigan takes academic integrity very seriously. Accordingly, the cover page of each exam will include a pledge of academic honor that you would have to sign to get credit for the exam.

### Requesting special accommodations for the exams

We would like to provide accommodations for students with disabilities, and we ask for your cooperation to have the process run smoothly. If you are in doubt about whether or not you require special accommodations, please get diagnosed ASAP and follow the rest of the procedure as applicable. Students requesting special accommodations should obtain a VISA form from OSSD and deliver it to the head GSI no later than January 30, 2017. We will make every effort to provide special exam accommodations; however, we do not feel obligated to honor late requests.

### Requesting a regrade for an exam

Re-grade requests apply to midterms only, and they should be made within 7 days since the exam is returned. A re-grade can be approved only when there are clear and obvious grading errors. These grading errors consist of: i) Mistakes in adding point totals, or ii) The answer coincides with the posted answer key, but full credit was not awarded.

To request a re-grade, students need to E-mail their section GSI (cc head GSI and Instructor) why they think that a re-grade is needed. If the request is specific and legitimate, the instructors will re-grade the entire exam (and not just the questions in which there appears to be a conflict).

<sup>&</sup>lt;sup>3</sup> Please see the <u>College Board Calculator policy</u> for the list of approved calculator types.

#### Missed exams

By default, everyone should sit for all three exams. If you are about to miss an exam, please notify the instructor (as well as head GSI and your section GSI) by E-mail <u>at least one hour prior</u> to the exam start time to avoid irreversible consequences. The following additional rules apply:

a) If you miss one midterm (i.e.  $1^{st}$  midterm or  $2^{nd}$  midterm). No problem. Your lowest midterm score is dropped anyway, and you will be in the same position as someone who took the midterm and received a low score.<sup>4</sup>

b) **If you miss the final having taken both midterms** The burden is on you to secure an excused absence from the instructor in strict accordance with Department policy or otherwise receive a score of zero for the final. If your absence is excused, the final exam weight will shift proportionately to your other completed graded assignments.

c) **If you miss two or more exams** The burden is on you to secure an excused absence from the instructor in strict accordance with Department policy or otherwise receive a score of zero for every exam missed. If your absence is excused, you may be offered a cumulative oral exam administered by the instructor and the panel of GSIs no later than Sep 1, 2017. The weight distribution between the oral exam result and other completed graded assignments will be decided on a case-by-case basis at the instructor's discretion. No other makeup opportunities will be offered for missed exams, whether excused or unexcused.

<sup>&</sup>lt;sup>4</sup> I strongly advise that you do not miss midterms for reasons other than medical or personal emergencies. If you skip a midterm, for instance, and subsequently have a personal or medical emergency during another exam, you will find yourself subject to rule c) and would have to potentially work harder to get credit for the class.

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY
WEEK 1			Lecture 1, How to study Section 1: Macro science	
	Jan-02	Jan-03	Jan-04	Jan-05
WEEK 2	Lecture 2, Macro data, NIPA		Lecture 3, CPI, national saving etc, unemployment Section 2: NIPA, CPI	
	Jan-09	Jan-10	Jan-11	Jan-12
WEEK 3	MLK DAY		Lecture 4, Intertemporal choice - basic mechanics PS 1 distributed: what is macro, NIPA, CPI, unemployment Section 3: Household intertemp choice	
	Jan-16	Jan-17	Jan-18 Lecture 6, Two-period model	Jan-19
WEEK 4	Lecture 5, Comp statics, GE example		of the firm, investment demand, AD(Y,r) PS1 due PS 2 distributed: household intertemporal choice, comparative statics Section 4, comp. stat., inv demand	
	Jan-23	Jan-24	Jan-25	Jan-26
WEEK 5	Lecture 7, Asset pricing		Lecture 8, Labor market, AS, equilibrium PS2 due PS 3 distributed: AD, AS, equilibrium, asset pricing Section 5: inv. Demand, asset pricing, equilibrium	
	Jan-30	Jan-31	Feb-01	Feb-02
WEEK 6	Lecture 9, G, taxation, Ricardian equivalence		Lecture 10, US budget issues, Social security PS3 due	
			Section 6: Replaced with OH	MIDTERM # 1: ps1-ps3 material
	Feb-06	Feb-07	Feb-08	Feb-09

WEEK 7	CRLT, surveys	Eab 44	Lecture 11: Business cycle facts, RBC PS 4 distributed: Ricardian equivalence, budget, Social Security, RBC Section 7: Ricardian equivalence, budget, Social Security, RBC	Each 46
WEEK 8	Lecture 12: Money market, money supply/money demand; LR-SR Feb-20	Feb-14	Lecture 13: Sticky price - sticky wage, ISLM mechanics PS4 due PS 5 distributed: Money, ISLM Section 8: Money, ISLM mechanics Feb-22	Feb-10
SPR.BREAK	Feb-27	Feb-28	Mar-01	Mar-02
WEEK 9	Lecture 14: ISLM applications, fiscal and monetary policy		Lecture 15: Phillips curve etc. PS5 due PS 6 distributed: ISLM applications, Phillips curve Section 9: ISLM applications, Phillips curve	
	Mar-06	Mar-07	Mar-08	Mar-09
	Lecture 16: Elective topic #1		Lecture 17: Elective topic #2 <mark>PS6 due</mark>	
WEEK 10	Mar-13	Mar-14	Section 10: replaced with office hours Mar-15	MIDTERM # 2: ps4-ps6 material Mar-16

Mar-20 Mar-21 Mar-22 Mar-21   Lacture 20: Solow model intro Lacture 21: Solow model BGP, Kaldor facts PS 6 distributed: Solow model, applications Section 12: Solow model PS 6 distributed: Solow model, applications   WEEK 12 Mar-27 Mar-28 Mar-29   WEEK 13 Lacture 22: Golden rule, other applications Lacture 23: Solow model applications Mar-29   WEEK 14 Lacture 24: ISTC Lacture 25: Productivity in the US Lacture 25: Productivity in the US Apr-05   WEEK 14 Apr-10 Apr-11 Apr-12 Apr-12   WEEK 15 CLASSES END STUDY DAY Apr-12	WEEK 11	Lecture 18: open Economy, Flemming-Mundell		Lecture 19: open Economy, Flemming-Mundell PS 7 distributed: open Economy, Flemming-Mundell Section 11: open Economy, Flemming-Mundell	
WEEK 13   Image: section 12: Solow model     WEEK 13   Image: section 12: Solow model and cross-country data     WEEK 13   Image: section 13: Solow model and cross-country data     Mutual Apr-03   Apr-04     Apr-03   Apr-04     Apr-04   Apr-05     Apr-05   Apr-06     MEEK 14   Image: section 13: Solow model applications     MUTUAL Apr-06   Apr-07     Apr-07   Apr-08     Apr-08   Apr-09     Apr-09   Apr-09     Apr-10   Apr-11     Apr-10   Apr-12     Apr-10   Apr-11     Apr-11   Apr-12     Apr-12   Apr-14     Apr-15   Apr-17	WEEK 12	Mar-20 Lecture 20: Solow model intro	Mar-21	Mar-22 Lecture 21: Solow model BGP, Kaldor facts PS 7 due PS 8 distributed: Solow model, applications	Mar-23
WEEK 13   Lecture 22: Golden rule, other applications   Lecture 23: Solow model and cross-country data     WEEK 13   Section 13: Solow model applications   Section 13: Solow model applications     MEEK 14   Lecture 24: ISTC   Lecture 25: Productivity in the US PS 8 due     WEEK 14   Apr-10   Apr-11     MEEK 15   CLASSES END   STUDY DAY		Mar-27	Mar-28	Section 12: Solow model Mar-29	Mar-30
MPF-03   Apr-04   Apr-05   Apr-04     WEEK 14   Lecture 24: ISTC   Lecture 25: Productivity in the US PS 8 due Section 14: ISTC, review   Lecture 24: ISTC   PS 8 due Section 14: ISTC, review     WEEK 15   Apr-10   Apr-11   Apr-12   Apr-14	WEEK 13	Lecture 22: Golden rule, other applications		Lecture 23: Solow model and cross-country data Section 13: Solow model applications	
WEEK 15 CLASSES END STUDY DAY	WEEK 14	Apr-03 Lecture 24: ISTC Apr-10	Apr-04	Apr-05 Lecture 25: Productivity in the US PS 8 due Section 14: ISTC, review Apr-12	Apr-06
	WEEK 15		CLASSES END	STUDY DAY	