

Term Information

Effective Term Autumn 2020
Previous Value Autumn 2019

Course Change Information

What change is being proposed? (If more than one, what changes are being proposed?)

Changing the course to allow us to have the course offered as distance learning (DL)

What is the rationale for the proposed change(s)?

We want the flexibility to offer the course as a DL course in case a group of students are not able to attend in person (due to pandemic, travel visa issues, etc.).

What are the programmatic implications of the proposed change(s)?

(e.g. program requirements to be added or removed, changes to be made in available resources, effect on other programs that use the course)?

There are no major implications. It is being done to try to keep the program as close to normal as possible, under the circumstances, rather than to modify it.

Is approval of the request contingent upon the approval of other course or curricular program request? No

Is this a request to withdraw the course? No

General Information

Course Bulletin Listing/Subject Area	Economics
Fiscal Unit/Academic Org	Economics - D0722
College/Academic Group	Arts and Sciences
Level/Career	Graduate
Course Number/Catalog	8721
Course Title	Macroeconomic Theory IA
Transcript Abbreviation	Macro Theory 1A
Course Description	A rigorous introduction to modern macroeconomic analysis and models of economic growth with emphasis on dynamic competitive equilibrium analysis: topics include dynamic programming applied to stochastic environments.
Semester Credit Hours/Units	Fixed: 3

Offering Information

Length Of Course	14 Week, 12 Week, 8 Week, 7 Week, 6 Week, 4 Week
Flexibly Scheduled Course	Never
Does any section of this course have a distance education component?	Yes
Is any section of the course offered	100% at a distance
<i>Previous Value</i>	<i>No</i>
Grading Basis	Letter Grade
Repeatable	No
Course Components	Recitation, Lecture
Grade Roster Component	Recitation
Credit Available by Exam	No
Admission Condition Course	No
Off Campus	Never
Campus of Offering	Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites

Prereq: Grad standing, and permission of Economics Director of Grad Studies.

Exclusions

[Previous Value](#)

Not open to students with credit for 806.

Electronically Enforced

No

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code

45.0603

Subsidy Level

Doctoral Course

Intended Rank

Doctoral

Requirement/Elective Designation

Required for this unit's degrees, majors, and/or minors

Course Details

Course goals or learning objectives/outcomes

- Students will have an understanding of modern macroeconomic analysis and models of economic growth with emphasis on dynamic competitive equilibrium analysis, including dynamic programming applied to stochastic environments and other topics listed.

[Previous Value](#)

Content Topic List

- Recursive methods
- Competitive equilibrium
- Neoclassical growth models and real business cycle models
- Dynamic stochastic general equilibrium
- Business cycle analysis

Sought Concurrence

No

[Previous Value](#)

Attachments

- ASC DL Course Syllabus Template Econ 8721 AU20.docx: Online syllabus

(Syllabus. Owner: Tobin,Ricky Mase)

- ECON 8721.docx: ASC tech checklist

(Other Supporting Documentation. Owner: Tobin,Ricky Mase)

- ECON 8721 (18617) - Khan.pdf: In-person syllabus

(Syllabus. Owner: Tobin,Ricky Mase)

COURSE CHANGE REQUEST
8721 - Status: PENDING

Last Updated: Haddad,Deborah Moore
06/09/2020

Comments

- This is confusing. The dept also checked off 50% or above online, but there is only a syllabus template (not even a full syllabus) for the full 100% course. Please remember that both 100% and 50% (or above) requests need to be reviewed. Only requests for less than 50% online do not get reviewed by ASCTech and ASCC. *(by Vankeerbergen,Bernadette Chantal on 06/03/2020 11:01 AM)*
- Change the request to mention DL, and change the reason to cover any situation in which a group of students are unable to attend in person *(by Peck,James D on 05/29/2020 11:28 AM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Tobin,Ricky Mase	05/29/2020 09:43 AM	Submitted for Approval
Revision Requested	Peck,James D	05/29/2020 11:28 AM	Unit Approval
Submitted	Tobin,Ricky Mase	05/29/2020 11:38 AM	Submitted for Approval
Approved	Peck,James D	05/29/2020 12:09 PM	Unit Approval
Approved	Haddad,Deborah Moore	05/29/2020 01:54 PM	College Approval
Revision Requested	Vankeerbergen,Bernadette Chantal	06/03/2020 11:02 AM	ASCCAO Approval
Submitted	Tobin,Ricky Mase	06/09/2020 10:54 AM	Submitted for Approval
Approved	Peck,James D	06/09/2020 11:18 AM	Unit Approval
Approved	Haddad,Deborah Moore	06/09/2020 11:43 AM	College Approval
Pending Approval	Jenkins,Mary Ellen Bigler Hanlin,Deborah Kay Oldroyd,Shelby Quinn Vankeerbergen,Bernadette Chantal	06/09/2020 11:43 AM	ASCCAO Approval



THE OHIO STATE UNIVERSITY

COLLEGE OF ARTS AND SCIENCES

SYLLABUS: ECON/8721 MACROECONOMIC THEORY 1A AU 2020

Course overview

Instructor

Instructor: TBD

Email address: TBD

Phone number: TBD

Office hours: TBD

Office Location: Arps Hall

Course description

The class introduces dynamic economic analysis. Its organising theme is the development of completely-specified models. Such environments are characterised by technologies, preferences and market structure. Individual behaviour is derived from microeconomic foundations and macroeconomic aggregates are determined as the sum of individual decisions. Equilibrium analysis of such environments involves the joint determination of quantities and relative prices which, in turn, requires consistency between the expectations of future prices and quantities and their stochastic processes. In characterising such environments, a brief introduction to mathematical analysis will allow us to use recursive methods. The class will balance the teaching of such tools with their application.

This course will be offered online to the extent needed to accommodate students during the ongoing public health crisis.

Course learning outcomes

By the end of this course, students should successfully be able to understand core concepts and methods such as:

1. Recursive methods

2. Competitive equilibrium
3. Neoclassical growth models and real business cycle models
4. Dynamic stochastic general equilibrium
5. Business cycle analysis

Course materials

Required

Stokey, Nancy L., Robert E. Lucas Jr. with Edward C. Prescott, Recursive Methods in Economic Dynamics, Harvard University Press 1989

Ljungqvist, Lars and Thomas J. Sargent, Recursive Macroeconomic Theory 3rd edition, MIT Press 2012

Course technology

For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at <https://ocio.osu.edu/help/hours>, and support for urgent issues is available 24x7.

- **Self-Service and Chat support:** <http://ocio.osu.edu/selfservice>
- **Phone:** 614-688-HELP (4357)
- **Email:** 8help@osu.edu
- **TDD:** 614-688-8743
- **Carmen Zoom:** <https://resourcecenter.odee.osu.edu/carmenzoom>

Baseline technical skills necessary for online courses

- Basic computer and web-browsing skills
- Navigating Carmen

Technology skills necessary for this specific course

- Carmen Zoom text, audio, and video chat
- Collaborating in CarmenWiki
- Proficiency with Carmen Zoom

Necessary equipment

- Computer: current Mac (OS X) or PC (Windows 7+) with high-speed internet connection
- Webcam: built-in or external webcam, fully installed
- Microphone: built-in laptop or tablet mic or external microphone

Necessary software

- [Microsoft Office 365 ProPlus](#) All Ohio State students are now eligible for free Microsoft Office 365 ProPlus through Microsoft's Student Advantage program. Each student can install Office on five PCs or Macs, five tablets (Windows, iPad® and Android™) and five phones.
 - Students are able to access Word, Excel, PowerPoint, Outlook and other programs, depending on platform. Users will also receive 1 TB of OneDrive for Business storage.
 - Office 365 is installed within your BuckeyeMail account. Full instructions for downloading and installation can be found <https://ocio.osu.edu/kb04733>.

Grading and faculty response

Grades

Course requirements are 6 homework assignments, a midterm and a final examination. In determining a student's overall grade for the class, homeworks will constitute 30 percent of the final score, the midterm examination 30 percent and the final examination 40 percent.

Assignment information

Homework sheets will be distributed to the class. Exams will be answered during class time using either standard OSU blue books **or** Carmen exams for online tests.

Faculty feedback and response time

I will generally respond within 24 hours to emails on business days. (Remember that you can call **614-688-HELP** at any time if you have a technical problem.)

Attendance, participation, and discussions

Student participation requirements

Because this is a distance-education course, your attendance is based on your online activity and participation. The following is a summary of everyone's expected participation:

- Attend all lectures and recitation sections through Zoom

Other course policies

Student academic services

Student academic services offered on the OSU main campus

<http://advising.osu.edu/welcome.shtml>.

Student support services

Student support services offered on the OSU main campus <http://ssc.osu.edu>.

Academic integrity policy

Policies for this online course

- **Quizzes and exams:** You must complete the midterm and final exams yourself, without any external help or communication.
- **Reusing past work:** In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. If you want to build on past research or revisit a topic you've explored in previous courses, please discuss the situation with me.
- **Falsifying research or results:** All research you will conduct in this course is intended to be a learning experience; you should never feel tempted to make your results or your library research look more successful than it was.
- **Collaboration and informal peer-review:** The course includes many opportunities for formal collaboration with your classmates. While study groups and peer-review of major written projects is encouraged, remember that comparing answers on a quiz or assignment is not permitted. If you're unsure about a particular situation, please feel free just to ask ahead of time.

Ohio State's academic integrity policy

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

Copyright disclaimer

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Statement on title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

Accessibility accommodations for students with disabilities

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Accessibility of course technology

This online course requires use of Carmen (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.

- [Carmen \(Canvas\) accessibility](#)
- Streaming audio and video
- Synchronous course tools

Your mental health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614- 292-5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at 614-292-5766 and 24 hour emergency help is also available through the 24/7 National Suicide Prevention Hotline at 1-800-273- TALK or at suicidepreventionlifeline.org

Course schedule (tentative)

Week	Dates	Topics, Readings, Assignments, Deadlines
1		
2		
3		
4		
5		
6		
7		

Economics 8721 Macroeconomic Theory I

Instructor: Aubhik Khan

Monday and Wednesday 16:10 - 18:00, Arps 012

Teaching Assistant: Rohan Shah

Review session: Friday 16:10-18:00, MacQuigg 159

26 August 2019

Summary: The class introduces dynamic economic analysis. Its organising theme is the development of completely-specified models. Such environments are characterised by technologies, preferences and market structure. Individual behaviour is derived from microeconomic foundations and macroeconomic aggregates are determined as the sum of individual decisions. Equilibrium analysis of such environments involves the joint determination of quantities and relative prices which, in turn, requires consistency between the expectations of future prices and quantities and their stochastic processes. In characterising such environments, a brief introduction to mathematical analysis will allow us to use recursive methods. The class will balance the teaching of such tools with their application. The primary source for all material will be the lectures, the outline of which follows.

1. The Lucas Critique and the Permanent Income Hypothesis
2. The optimal growth model (Ljungqvist and Sargent Ch. 1)
 - (a) The Solow model (Acemoglu sections 2.1 - 2.3)
 - (b) the finite horizon case (Stokey and Lucas section 2.1)
 - (c) a heuristic analysis of the infinite horizon case
 - (d) Sufficiency of the Euler and Transversality conditions (Stokey and Lucas section 4.5)
3. Introduction to Recursive Methods
 - (a) Mathematical preliminaries and the Contraction Mapping Theorem (Stokey and Lucas sections 3.1 and 3.2)
 - (b) The Theorem of the Maximum (Stokey and Lucas section 3.3)
 - (c) Deterministic Dynamic Programming (Stokey and Lucas section 4.2)

- (d) Recursive analysis of the one-sector growth model (Stokey and Lucas section 5.1)
4. Competitive equilibrium in dynamic models
- (a) Sequential competitive equilibrium
 - (b) Recursive competitive equilibrium
5. Dynamic stochastic general equilibrium
- (a) Uncertainty and the neoclassical growth model (Ljungqvist and Sargent sections 12.1 - 12.3)
 - (b) Complete markets (Ljungqvist and Sargent sections 8.1 - 8.3, 8.5 - 8.6 and 12.4 - 12.5)
 - (c) Recursive equilibrium (Ljungqvist and Sargent section 8.9 and sections 12.6 - 12.9)

Course requirements are 6 homework assignments, a midterm and a final examination. The midterm examination will be held on **16 September** in class and the final examination will be on **9 October** in class. The final exam date will be confirmed. In determining a student's overall grade for the class, homeworks will constitute 30 percent of the final score, the midterm examination 30 percent and the final examination 40 percent.

Office hours, R. Shah: Tuesdays 1330-1430 and Fridays 1430-1530. Office location: Arps 387. Email: shah.1252@osu.edu.

Office hours, A. Khan: Tuesdays 1245 - 1345 and Wednesdays 1500 - 1600. Office location: 452 Arps Hall. Email: khan.247@osu.edu.

When using email, start the subject line with *econ 8721* to ensure that we read your email. Do not send us email to any other account.

Textbooks: There are two texts for the class.

Stokey, Nancy L., Robert E. Lucas Jr. with Edward C. Prescott, *Recursive Methods in Economic Dynamics*, Harvard University Press 1989

Ljungqvist, Lars and Thomas J. Sargent, *Recursive Macroeconomic Theory* 3rd edition, MIT Press 2012

The following texts include much of the same material, and may be useful.

Stachurski, John, *Economic Dynamics*, MIT Press 2009

Acemoglu, Daron, *Introduction to Modern Economic Growth*, Princeton University Press 2009

References

- [1] Cass, D. (1965) 'Optimum Growth in an Aggregative Model of Capital Accumulation' *The Review of Economic Studies*, **32** (3), pp. 233-240.
- [2] Cooley, T. F. and E. C. Prescott "Economic Growth and Business Cycles," with , Chapter 1 in T. F. Cooley, ed., *Frontiers of Business Cycle Research*, (Princeton University Press, 1995), pages 1-38.
- [3] Koopmans, T. (1965) 'On the Concept of Optimal Economic Growth' *Academiae Scientiarum Scripta Varia* **28** (1).
- [4] King, R. G., C. I. Plosser and Sergio T. Rebelo (1988) 'Production, Growth and Business Cycles I: The Basic Neoclassical Model' *Journal of Monetary Economics* **21**: 197-232
- [5] King, R. G., C. I. Plosser and Sergio T. Rebelo (1987) 'Production, Growth and Business Cycles: Technical Appendix' University of Rochester Manuscript
- [6] Krusell, P. T. Mukoyama and A. A. Smith (2008) 'Asset Prices in a Hugget Economy' working paper
- [7] Lucas, R. E., Jr. (1976) 'Econometric Policy Evaluation: A Critique' *Carnegie-Rochester Conference Series on Public Policy* **1**, pp. 19-46.
- [8] Lucas, R. E., Jr. (1978) "Asset Prices in an Exchange Economy" *Econometrica* **46** (6) (November), pp. 1429-1445.
- [9] Lucas, R. E., Jr. (1991) *Models of Business Cycles*, Blackwell
- [10] Lucas, R. E., Jr. (1977) 'Understanding Business Cycles,' reprinted in Lucas (1983) *Studies in Business Cycle Theory*, MIT Press

- [11] Mehra, R. and Prescott, E. C. (1980) 'Recursive Competitive Equilibrium: The Case of Homogeneous Households,' **48** (6) (September), pp. 1365 - 1379.
- [12] Prescott, E. C. (1986) "Theory Ahead of Business Cycle Measurement," revised version printed in Federal Reserve Bank of Minneapolis Quarterly Review 10 (Fall 1986): 9-22.
- [13] Ramsey, F. P. (1928) 'A Mathematical Theory of Saving' *The Economic Journal* **38** (152), December, pp. 543-559.
- [14] Solow, R. (1956) 'A Contribution to the Theory of Economic Growth' *The Quarterly Journal of Economics* **70** (1), February, pp. 65 - 94.

“Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; <http://www.ods.ohio-state.edu/>.”

Arts and Sciences Distance Learning Course Component Technical Review Checklist

Course: ECON 8721

Instructor: TBD

Summary: Macroeconomic Theory 1a

Standard - Course Technology	Yes	Yes with Revisions	No	Feedback/Recomm.
6.1 The tools used in the course support the learning objectives and competencies.	X			<ul style="list-style-type: none"> • Carmen • Office 365
6.2 Course tools promote learner engagement and active learning.	X			<ul style="list-style-type: none"> • Carmen Discussion Boards • CarmenWiki
6.3 Technologies required in the course are readily obtainable.	X			All software is available for free via OSU site license.
6.4 The course technologies are current.	X			All are updated regularly.
6.5 Links are provided to privacy policies for all external tools required in the course.	X			No external tools are used
Standard - Learner Support				
7.1 The course instructions articulate or link to a clear description of the technical support offered and how to access it.	X			Links to 8HELP are provided.
7.2 Course instructions articulate or link to the institution's accessibility policies and services.	X			a
7.3 Course instructions articulate or link to an explanation of how the institution's academic support services and resources can help learners succeed in the course and how learners can obtain them.	X			b
7.4 Course instructions articulate or link to an explanation of how the institution's student services and resources can help learners succeed and how learners can obtain them.	X			c
Standard – Accessibility and Usability				
8.1 Course navigation facilitates ease of use.	X			Recommend using the Carmen Distance Learning "Master Course" template developed by ODEE and available in the Canvas Commons to provide student-users with a consistent user experience in terms of navigation and access to course content.
8.2 Information is provided about the accessibility of all technologies required in the course.	X			Accessibility links are provided for all tools.
8.3 The course provides alternative means of access to course materials in formats that meet the needs of diverse learners.	X			Instructions are provided.
8.4 The course design facilitates readability	X			
8.5 Course multimedia facilitate ease of use.	X			All assignments and activities that use the Carmen LMS with embedded multimedia facilitates ease of use. All other multimedia resources facilitate ease of use by being available through a standard web browser

Reviewer Information

- Date reviewed: 5/20/20
- Reviewed by: Ian Anderson

Notes: Please run a spell check on the document. Please replace all references of CarmenConnect with Carmen Zoom. Please designate the office hours platform (most likely Zoom). Assignments with dates need to be added to the weekly schedule. Please note that the class is a 100% DL course.

^aThe following statement about disability services (recommended 16 point font):
Students with disabilities (including mental health, chronic or temporary medical conditions) that have been certified by the Office of Student Life Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office of Student Life Disability Services is located in 098 Baker Hall, 113 W. 12th Avenue; telephone 614- 292-3307, slds@osu.edu; slds.osu.edu.

^bAdd to the syllabus this link with an overview and contact information for the student academic services offered on the OSU main campus.
<http://advising.osu.edu/welcome.shtml>

^cAdd to the syllabus this link with an overview and contact information for student services offered on the OSU main campus. <http://ssc.osu.edu>. Also, consider including this link in the “Other Course Policies” section of the syllabus.