

Term Information

Effective Term Autumn 2021
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 are concerned that disruptions of the flow of students will continue in future years. About 40% of our students are from China and 40% of our students are from Korea. It is very possible that in future years, there is a political standoff between the US and China, which prevents our students from receiving visas to enter the US. Or covid-19 might flare up in Korea but not in the US, so the Korean students cannot come to the US, but OSU sees no reason to institute an assurance process.

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
Previous Value No
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

- 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)
- ECON 8721 (15128) - Khan.pdf: Online syllabus
(Syllabus. Owner: Tobin, Ricky Mase)

Comments

- See 7-15-20 email to R. Tobin and Y. Azrieli *(by Oldroyd,Shelby Quinn on 07/15/2020 04:34 PM)*
- 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
Revision Requested	Oldroyd,Shelby Quinn	07/15/2020 04:34 PM	ASCCAO Approval
Submitted	Tobin,Ricky Mase	09/16/2020 02:16 PM	Submitted for Approval
Approved	Azrieli,Yaron	09/16/2020 03:38 PM	Unit Approval
Approved	Haddad,Deborah Moore	09/16/2020 03:42 PM	College Approval
Pending Approval	Jenkins,Mary Ellen Bigler Hanlin,Deborah Kay Oldroyd,Shelby Quinn Vankeerbergen,Bernadette Chantal	09/16/2020 03:42 PM	ASCCAO Approval

Economics 8721: Macroeconomic Theory IA, Autumn 2020

INSTRUCTOR

Professor Aubhik Khan

Office: 452 Arps Hall

Phone: +1-614-247-0097

Email: khan.247@osu.edu

All office meetings will be held on Zoom.

My access to my office phone is limited; please use email.

Use “E8721” in your subject line.

TEACHING ASSISTANT

Rohan Shah

Office: 387 Arps Hall

Email: shah.1252@osu.edu

All office meetings will be held on Zoom.

Use “E8721” in your subject line.

CLASS MEETING TIMES AND LOCATION

26 AUGUST – 12 OCTOBER

This class will be completely online as a response to the current pandemic. However, I will make every effort to emulate an in-classroom learning experience. Class will meet on Zoom synchronously three times each week. Meetings times have been chosen expressly to feasibly (if not ideally) accommodate students in North America through Asia. If you are in a time zone or health situation that prevents you attending, please contact me by email and we will work to make the necessary accommodations.

- **Lectures: MW 09:00 – 10:50 AM EST on Carmen Zoom (fixed-location TBA)**
- **Recitations: F 08:30 – 10:20 AM EST on Carmen Zoom (fixed-location TBA)**

Web Page: <https://www.asc.ohio-state.edu/khan.247/teaching/econ8721/>
login: reader password: Ramsey8721

OFFICE HOURS

Office hours will be on Zoom. Please email in advance of coming so we will know to expect you.

Office hours at other times than these are available by email appointment. Be sure to include E8721 in your email subject line. Emails received at addresses other than those listed above will get no reply.

- **AK: Tuesdays 09:00 – 10:00 EST and Wednesdays 20:00 – 21:00 EST (GMT – 4)**
- **RS: Thursdays 10:00-11:00 and Fridays 19:00 – 20:00 EST (GMT – 4)**

PREREQUISITES

This course is open to all first year doctoral students in Economics, and to other students only with the consent of the instructor.

COURSE OBJECTIVES

The class introduces students to the basic models and methods of modern macroeconomics. As such, it is a gateway to the subsequent classes in the first-year graduate macroeconomics sequence. After completing it, students will be able to use recursive methods to study individual decision making over time and uncertainty. Further, they will be able to use extensions of these methods to study the

equilibrium behavior of prices and quantities in dynamic economies.

COURSE OVERVIEW

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 that, 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.

COURSE MATERIALS

There are two required 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* 4th ed., MIT Press 2018

COURSE REQUIREMENTS AND GRADING

Attendance and participation is required. Students will each complete 5 problem sets, a midterm exam and a final exam. Dates for the assignment and coverage of each problem set are listed in the tentative calendar below. The **midterm will be Monday 21 September** at our regular class time. The registrar's office has announced that the **final is scheduled for Wednesday 14 October**, 16:10 – 1800 EST; I will ask to have its time changed to 9:00 AM. *Note that no exam absence will be excused without a documented illness or medical emergency.*

In determining final grades, I will assign 25 percent weight to homeworks, 25 percent to the midterm exam, 40 percent to the (cumulative) final exam and 10 percent to class participation. You must each submit your own problem sets to Rohan by email *at least one hour prior to the recitations* in which they are due; however, you are encouraged to work on these together in (Zoom-based) study groups.

You may not seek solutions to any question on any problem set or exam from an upper-year graduate student or from any online source. To do so defeats the purpose of these assignments and is a clear violation of the University's policy on academic integrity (below in this syllabus).

Exams will be completed individually without the help of any person, notes, book, calculator or other electronic or online source. There are *no make-up exams*; if you miss an exam with a valid excuse, I will redistribute its weight between problem sets and the other exam. *Late problem sets* will not be accepted.

ASSIGNMENT RETURN AND RE-GRADE POLICY

Exam or problem set re-grade requests must be submitted by email. This request must state which question is to be re-evaluated and why. This may result in a re-evaluation of the entire question, and

points may be added or subtracted.

ON-CAMPUS HEALTH PRECAUTIONS AND ILLNESS POLICIES

“Health and safety requirements: All students, faculty and staff are required to comply with and stay up to date on all university safety and health guidance (<https://safeandhealthy.osu.edu>), which includes wearing a face mask in any indoor space and maintaining a safe physical distance at all times. Non-compliance will result in a warning first, and disciplinary actions will be taken for repeated offenses.”

Student illness: If you are too ill to participate in this course due to COVID-19 or other illness, please contact the instructor as soon as you are able. Alternate assignments and extensions may be arranged.

OUTLINE OF THE REMAINDER OF THIS SYLLABUS

Course topics (modules) and an abbreviated list of associated readings are on the next page, preceded by a tentative calendar for lectures and when assignments will be posted (by email and on Carmen) and due/covered. Next, you will find specific information on course technology, student academic and support services and the academic integrity policy applying to all work in this course. Thereafter, please see the statements on mental health, Title IX protections and on accommodations for students with disabilities. The last page of the syllabus has complete references for course readings listed below.

TENTATIVE CALENDAR PLAN

Week 1	W 26 Aug.:	Lecture 1	First Topic (Permanent Income, see list below) Problem Set 1 Posted
	F 28 Aug.:	Recitation 1	Overview of Macroeconomics
Week 2	M 31 Aug.:	Lecture 2	Second Topic (Introduction to Growth) Problem Set 2 Posted
	W 2 Sept.:	Lecture 3	Topics 2, 3 and 4
	F 4 Sept.:	Recitation 2	Problem Set 1 Covered
Week 3	M 7 Sept.:	University Holiday	
	W 9 Sept.:	Lecture 4	Topic 5 (Normed Vector Spaces) Problem Set 3 Posted
	F 11 Sept.:	Recitation 3	Problem Set 2 Covered
Week 4	M 14 Sept.:	Lecture 5	Topics 5 and 6
	W 16 Sept.:	Lecture 6	Topic 6 (Contraction Mapping Theorem) Problem Set 4 Posted
	F 18 Sept.:	Recitation 4	Problem Set 3 Covered/ Midterm Review

Week 5	M 21 Sept.: MIDTERM EXAM	
	W 23 Sept.: Recitation 5	Midterm covered Problem Set 5 Posted
	F 25 Sept.: Lecture 7	Topic 07 (Neoclassical Growth)
Week 6	M 28 Sept.: Lecture 8	Topic 8 (Competitive Equilibrium)
	W 30 Sept.: Lecture 9	Topic 9 (Uncertainty)
	F 2 Oct.: Recitation 6	Problem Sets 4 and 5 Covered
Week 7	M 5 Oct.: Lecture 10	Topic 9 and 10
	W 7 Oct.: Lecture 11	Topic 10 (Competitive Equilibrium & Uncertainty)
	F 9 Oct.: Recitation 7	Problem Set 6 Covered/ Final Review
Week 8	M 12 Oct.: Lecture 12	Introduction to Applications
	W 14 Oct.: Final Exam	

TOPICS

1. The Permanent Income Hypothesis and the Lucas Critique
2. Introduction to Economic Growth
3. Sufficiency of the Euler and Transversality Conditions
4. Exogenous Technological Progress
5. Recursive Analysis: Normed Vector Spaces
6. Recursive Analysis: The Contraction Mapping Theorem and the Theorem of the Maximum
7. Recursive Analysis of the One Sector Growth Model
8. Competitive Equilibrium in Dynamic Economies
9. Uncertainty and the Neoclassical Growth Model
10. Competitive Equilibrium under Uncertainty

COURSE TECHNOLOGY

Contact the OSU IT Service Desk for help with your password, university e-mail, Carmen, or other technology issues, questions, or requests. See <https://ocio.osu.edu/help/hours> for standard support hours; 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;
- 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

Available software: All OSU students are eligible for free Microsoft Office 365 ProPlus through Microsoft's Student Advantage program. Each student can install Office on 5 PCs or Macs, 5 tablets

(Windows, iPad®, Android™) and 5 phones to access Word, Excel, PowerPoint, Outlook and other programs. Students will receive 1 TB of OneDrive for Business storage. Office 365 is installed in your BuckeyeMail account; downloading/installation instructions are at <https://ocio.osu.edu/kb04733>.

ACADEMIC INTEGRITY AND INTELLECTUAL PROPERTY RIGHTS

Academic integrity policy: The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's Code of Student Conduct, and that all students will complete all academic and scholarly assignments fairly and honestly. Students must recognize that failure to follow the rules and guidelines established in the Code of Student Conduct (<http://studentlife.osu.edu/csc/>) and this syllabus may constitute "Academic Misconduct."

The University's Code of Student Conduct defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University, or subvert the educational process." Examples of academic misconduct include but are not limited to plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the Code of Student Conduct is never considered an 'excuse' for academic misconduct, so I recommend that you review it and, specifically, the sections dealing with academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by University rules to report this to the Committee on Academic Misconduct. If COAM determines that you have violated the University's Code of Student Conduct (committed academic misconduct), the sanctions could include a failing grade in this course and suspension or dismissal from the University. If you have any questions about this policy or what constitutes academic misconduct in this course,

please contact me. Other sources of information on academic misconduct (integrity) are listed below.

- Committee on Academic Misconduct web pages www.oaa.osu.edu/coam/home.html
- Ten Suggestions for Preserving Academic Integrity www.oaa.osu.edu/coam/ten-suggestions.html
- Eight Cardinal Rules of Academic Integrity www.northwestern.edu/uacc/8cards.html

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.

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 your ability to participate in daily activities. The Ohio State University offers services to assist you in addressing these and other concerns you may experience. 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. 24 hour emergency help is also available at the National Suicide Prevention Hotline at 1-800-273-TALK or at suicidepreventionlifeline.org

STUDENT ACADEMIC AND SUPPORT SERVICES

- Student academic services offered on OSU's main campus: <http://advising.osu.edu/welcome.shtml>
- Student support services offered on OSU's main campus: <http://ssc.osu.edu>

STATEMENT ON TITLE IX

Title IX makes 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

REFERENCES

- Cass, D. (1965) 'Optimum Growth in an Aggregative Model of Capital Accumulation' *The Review of Economic Studies*, 32 (3), pp. 233-240.
- 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.
- Koopmans, T. (1965) 'On the Concept of Optimal Economic Growth' *Academiae Scientiarum Scripta Varia* 28 (1).
- 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
- King, R. G., C. I. Plosser and Sergio T. Rebelo (1987) 'Production, Growth and Business Cycles: Technical Appendix' University of Rochester Manuscript
- Krusell, P. T. Mukoyama and A. A. Smith (2008) 'Asset Prices in a Hugget Economy' working paper
- Lucas, R. E., Jr. (1976) 'Econometric Policy Evaluation: A Critique' *Carnegie-Rochester Conference Series on Public Policy* 1, pp. 19-46.
- Lucas, R. E., Jr. (1978) "Asset Prices in an Exchange Economy" *Econometrica* 46 (6) (November), pp. 1429-1445.
- Lucas, R. E., Jr. (1991) *Models of Business Cycles*, Blackwell
- Lucas, R. E., Jr. (1977) 'Understanding Business Cycles,' reprinted in Lucas (1983) *Studies in Business Cycle Theory*, MIT Press
- Mehra, R. and Prescott, E. C. (1980) 'Recursive Competitive Equilibrium: The Case of Homogeneous Households,' 48 (6) (September), pp. 1365 - 1379.
- 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.
- Ramsey, F. P. (1928) 'A Mathematical Theory of Saving' *The Economic Journal* 38 (152), December, pp. 543-559.
- Solow, R. (1956) 'A Contribution to the Theory of Economic Growth' *The Quarterly Journal of Economics* 70 (1), February, pp. 65 - 94.

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.