Macroeconomic Theory I (Economics 613)
Fall 2016

Instructor: Florian Kuhn
Email: fkuhn@binghamton.edu
Office hours: time to be announced, room LT 1002

Course objectives: This is the first of two courses in macroeconomics for the first year in the PhD program. There are two main goals for the course: 1) Learn tools used in the analysis of modern dynamic macroeconomics 2) Apply these tools to different macroeconomic topics in order to see how economic researchers approach these questions.
The topics we consider in this course will mostly be issues of *real* macroeconomics, that is, we will often focus on economic transactions as exchanges of goods and services without modeling the corresponding monetary flows. (The important issues of monetary macroeconomics will be part of the course in the second semester.)
We will explicitly take into account microeconomic foundations when constructing macroeconomic models. Therefore, a good background in microeconomics and mathematics is helpful.

Readings: Students are expected to take notes in class. These class notes will draw on a variety of sources, so there is no one book that we will follow. No book purchase is required for this course. I will occasionally post additional reading material on Blackboard.
Some books that you may find helpful include "Recursive Methods in Economic Dynamics" by Stokey and Lucas, "Recursive Macroeconomic Theory" by Lars Ljungqvist and Thomas J. Sargent, and "Mathematics for Economists" by Carl Simon and Lawrence Blume.

Grading: The final grade will be based on problem sets (30%), midterm (30%) and a final (40%). Problem sets will be given as homework assignments on an approximately weekly basis. The purpose of the problem sets is to help you understand the material. Therefore, discussing the problems in small groups (≤ 4 students) is allowed and encouraged, under 3 conditions: 1) you should try to solve the problems on your own before discussing them with your class mates 2) since writing helps the brain organize information, every student has to write down and turn in their own copy of the solutions 3) write down who you worked with next to your name when you turn in the problem set.
With a relatively small class I do not expect any make-up exams. If a make-up exam should become necessary, the student must contact me as early as possible before the test to inform me about their absence.

University policy on academic integrity:
Students in this course are expected to observe the Student Academic Honesty Code and should make sure they become familiar with its provisions. Violations of the code, for example, cheating on exams, will be prosecuted as specified in the Code.

Accommodation for Students with Disabilities: Students who qualify for services will receive the academic accommodations for which they are legally entitled. It is the responsibility of the student to register with the Services for Students with Disability Services (ssd.binghamton.edu). The student should inform the instructor as early as possible in order to make necessary arrangements.

Course outline: This constitutes a tentative schedule of topics and the order in which they will be covered in the course. The topics and their order are subject to change depending on our progress during the semester.

1. Equilibrium in an endowment economy
2. Neoclassical growth model
3. Dynamic Programming
4. Uncertainty
5. Asset Pricing
6. Real business cycles
7. Endogenous growth
8. Search and matching
9. Vector autoregression and empirics of the RBC model
10. Government policies

Course outline:

11. The simplest case: Endowment economy
    - Definition of equilibrium
    - Pareto optimality, FWT and Social planner's problem
    - Arrow-Debreu vs sequential equilibrium

12. Neoclassical growth model
    - Infinite horizon intertemporal optimization

13. Uncertainty
    - Technical preliminaries?
    - Revisit Endowment
    - Revisit NGM

14. Dynamic Programming
    - Cake eating example
    - Stokey/Lucas ch. 4/9
    - Applications

15. Asset Pricing
    - Derive pricing kernel
    - Intro equity premium puzzle

16. Real business cycles

17. Endogenous growth

18. Search and matching

19. Vector autoregression and empirics of the RBC

20. Government policies
    - Ricardian equivalence
    - Monopolistic competition and prices