**Macroeconomic Theory I (ECO 502)**

**Monsoon Semester 2019**

**Class days: Tuesdays and Thursdays**

**Instructors:**

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| Faculty | |
| Name:  Email Id:  Office hours for students:  Office Location:  Telephone Number: | Dr. Anuradha Saha  [anuradha.saha@ashoka.edu.in](mailto:anuradha.saha@ashoka.edu.in)  Thursdays at 11 am, other days by appointment only  Room 302, Third Floor, New Academic Block  0130-2300741 |

**Course Overview:**

This course is compulsory for all graduate economics students and optional for fourth year UG students. This course is an introduction to neoclassical growth, setting the theoretical foundations of modern macroeconomics. It will cover the theories of economic growth and long-run economic development and discuss how different factors such as human capital, physical capital, technology, trade, to name a few, contribute to economic growth. It will also deliberate over the empirical patterns which explain why different countries grow along different paths. The course aims to equip student with tools and ideas behind dynamic economic analysis.

**Learning Outcomes:**

* The first objective will be to explain economic models and theories in words.
* The second objective will be to understand the different sources of growth.
* We will also look at modeling real business cycles.

**Required Course Material:**

Main Textbooks:

* Introduction to Modern Economic Growth, by Daron Acemoglu.
* Economic Growth by Barro and Sala-i-Martin
* ABC for RBC by George McCandless
* The Economics of Growth by Aghion and Howitt
* Foundations of Modern Macroeconomics by Heijdra and Van der Ploeg
* Applied Econometric Time Series by Walter Enders

Students do not need to purchase the books. Many of these books have pdf versions available; students should get the pdfs. Different chapters will be covered from different books. Copies of these books will be in the library. Lecture notes are uploaded on LMS

**Evaluation:**

Student grades have three components: final exam (40% weightage), midterm (30%), and assignments (30%). Final exam is a 100 marks, 2.5 hours assessment on the entire syllabus. Students should exhibit expertise in initial topics and in-depth knowledge of the latter ones discussed in the course. Assignments are weekly writing and problem solving exercises. These sessions would give students an opportunity to apply recently learnt concepts to new problems and expose them to more interesting ones in a limited time frame.

The instructor does not entertain marks obsession. Students should be able to solve different problems discussed in and out of class *with precision*. Students should make use of office hours for any extra help or resources they require.

As is the Ashoka grading scheme:

* A, A- letter grade = outstanding. Students know the mathematical techniques and have the ability to apply them in novel problems.
* B+, B, B- letter grade = good. Students have expertise in most of the mathematical techniques taught in the course. They may lack creativity in problem solving but are well trained to do well in any mathematical or applied course.
* C+, C, C- letter grade = adequate. Student knows enough. If s/he tries to revise the course content, s/he shall do well in any application of the course content.
* D+, D, D- letter grade = barely satisfactory. Student knows little. S/he requires guidance and then s/he would be able to apply the courses’ concepts.
* F letter grade = unsatisfactory. Student knows less than 40% of the course content. S/he has not achieved the minimum standards for this course.

**Discussion Section:**

There will be a weekly discussion meeting on writing, maths or problem solving. Attendance is strongly recommended.

**Course Rules:**

1. The central objective of the course is to learn on economic growth and write about macroeconomic topics. To achieve this goal, we would solve innumerous problems and will frequently change the type of problems we encounter. Some problems may be in standard format, some may be word problems or graphical or case studies or other styles which shall invoke critical thinking.
2. Students missing more than 7 classes would get F in their final grade.
3. If students are late in entering the class by more than 5 minutes, they would be marked absent. Late assignments would not be graded.
4. Graphical calculators are not allowed but scientific calculators are allowed. Students shall not be allowed to share calculators in final exams or during midterm.
5. There is zero tolerance for accessing resource materials in final exams or during exams. If you are found cheating in any of the quizzes or tests you will get an automatic F in the course.

**Course map:**

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| Lecture | Title | Book |
| 2 days | Aggregate Demand and Aggregate Supply | Chapters 1 and 10, Heijdra |
| 1 day | Economic Growth and Economic Development: Patterns and Other Questions | Chapter 1, Daron Acemoglu  Chapter 1, Aghion and Howitt |
| 2 days | Notes on differential Equations | Hoy |
| 3 days | Solow Swan Growth Model | Chapter 2, Daron Acemoglu  Chapter 1, Aghion and Howitt  Chapter 1, Romer  Chapter 13, Heijdra |
| 2 days | Infinite Horizons, RCK Model | Chapter 8 and 9, Daron Acemoglu  Chapter 1, Aghion and Howitt  Chapter 2, Romer  Chapter 13, Heijdra |
| 2 days | Overlapping Generations Model | Chapter 9 (in parts), Daron Acemoglu  Chapter 2, Romer (good story)  Chapter 17, Heijdra (good intuition) |
| 17 Oct | MIDTERM EXAM |  |
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| 7 Nov | Introduction to time series | Chapter 2, Section 1-2, Enders  Chapter 4, Sections 1-2, Enders |
| 12 and 14 Nov | Stochastic OLG model | Chapter 2, McCandless |
| 19 and 21 Nov | Recursive Deterministic Models  (Value Function Method) | Chapter 4, McCandless |
| 26 and 28 Nov | Recursive Stochastic Models  (Value Function Method) | Chapter 5, McCandless |

Reading week from 2nd December. Exam week from 9th December

*(This document was last updated on 26th August 2019)*