MACROECONOMICS II
COURSE OUTLINE WINTER SEMESTER 2020-2021
Dr. Paola D’Orazio

CONTENT
The course will consider both economic theory and advanced mathematical techniques. The first part of the course will cover continuous time dynamics (ordinary differential equations, systems of linear differential equations, the concepts of stability and phase diagrams), systems of difference equations, and chaos theory. In the second part, we will cover economic applications (e.g., closed economic dynamics, employment and inflation, etc.) of these procedures.
The software R is ideally suited for solving and plotting dynamic systems; its use and knowledge will be required to solve the problem sets proposed during the course.

MODULE OBJECTIVES

▪ To deepen your knowledge and understanding of macroeconomic theories and dynamics.
▪ To improve your mathematical skills and concepts.
▪ To acquire solid practical skills in using the R software for computational purposes.

PREREQUISITES
You will need very good English skills. Knowledge of macroeconomic models and concepts at the principles to intermediate level is expected. If you are not familiar with basic concepts in macroeconomics, please consult textbooks such as Blanchard, “Macroeconomics” or Carlin & Soskice, „Macroeconomics: Institutions, Instability, and the Financial System“ or similar books before taking this module.
We will work intensively with R software: it is not necessary to have previous experience with this software, but the willingness to learn how to use it is expected. For a better preparation and interaction with the tutor, it is necessary to bring your own laptop during the tutorials.

ORGANIZATION
This module consists of lectures and tutorials.

Please note: Attending the lectures will help students understand the material and also help them gauge what is important for the exam. This does not imply that exam questions will only come from the lectures, but rather that in class, the lecturer will cover the more challenging material compared to the relevant material recommended for the course. Students are responsible for the information in the recommended material AND in the lectures.
Participants: no restriction

Time and place:
- Monday, 8-10h, (Lecture)
- Wednesday, 8-10h, (Tutorial)

Due to the COVID-19 emergency, lectures and tutorial sessions will be video-recorded and uploaded on Moodle.

Start:
The first lecture will take place on Monday, Nov. 2nd. In the first lecture the most important information regarding the course will be presented and the first topic will be discussed.

Assessment:
A final written exam on February 1st 2021, 8:30h (Online).
It will last 60 minutes and count 100% of the final grade. Further details on the exam will be provided on Moodle in due time.

Registration to the exam: Via FlexNow.
De-registration period: from 14.12.2020

COURSE MATERIAL
Lectures and tutorials will be based on the lecture notes prepared by the lecturer. They will be distributed on Moodle in due time. The following books are however highly recommended.

RECOMMENDED BOOKS

SOFTWARE (REQUIRED)
R STUDIO: It can be downloaded at: https://www.rstudio.com/products/rstudio/download/
Make sure to choose the appropriate operating system (OS) present on your computer and then follow the instructions. Additional information regarding the set up and the packages needed will be provided in class.

SELF-STUDY
This module contains 120 hours of self-study. You are expected to prepare the lecture by reading the relevant chapters of the lecture notes.