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320.410 GENERAL EQUILIBRIUM THEORY (KS, 2h)

TUE 9:00 – 11:00, SR 15.4B (F4)

1. ESSENTIAL PREREQUISITES

320.313 Mathematics for Microeconomics, 320.312 Consumption and Production, 320.314 Imperfect Competition and Welfare.

I assume familiarity with the basic concepts in microeconomics as offered by undergraduate microeconomics textbooks such as Nicholson, Microeconomic Theory – Basic Principles and Extensions.

2. LITERATURE

REQUIRED READING

• Starr, R. M. (2011), General Equilibrium Theory, Cambridge: Cambridge University Press.

The course follows the textbook closely. Please make sure you have access to the book.

REFERENCES

At some points you might want to consult a mathematics textbook. I recommend:

- Sydsaeter, K., P. Hammond (2005), *Essential Mathematics for Economic Analysis*, Harlow: Prentice-Hall Inc. (or its German translation: Sydsaeter, K., P. Hammond (2006), *Mathematik für Wirtschaftswissenschaftler*, 2. aktualisierte Auflage, München: Pearson Studium).
- Sydsaeter, K., P. Hammond, A. Seierstad, A. Strom (2005), *Further Mathematics for Economic Analysis*, Harlow: Pearson Education (Prentice-Hall).

All of the following resources are valuable references for our course, and might be quite helpful for you to understand the material we are going to discuss. All of the books are put on reserve ("Semesterhandapparat").

- Notes are available on my website: <u>http://www.uni-graz.at/ronald.wendner/ge.html</u>
- Mas-Colell, A., M.D. Whinston, J.R. Green (1995), *Microeconomic Theory*, New York, Oxford: Oxford University Press; particularly Part 1 (Ch. 1-3, 5), Part 4 (Ch. 15 17).
- Novshek, W. (1993), Mathematics for Economists, San Diego et al.: Academic Press Inc.
- Corbae D., et al. (2009), An Introduction to Mathematical Analysis for Economic Theory and Econometrics, Princeton: Princeton University Press.

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3. TOPICS

- Getting started: An almost nontechnical introduction to key themes in GE theory
- Mathematical tools (those that every economics student needs to know by heart)
- Production (with a bounded technology)
- Households
- A market economy
- Existence of equilibrium in a market economy
- Pareto efficiency and competitive equilibrium
- Competitive equilibrium and the core

4. REQUIREMENTS & GRADING

- Active class participation 15%
- Exam 1: May 6, 2014 40%
- Exam 2: June 24, 2014 45%

Grading. 81-100 %: sehr gut (A), 71-80 %: gut (B), 61-70 %: befriedigend (C), 50-60 %: genügend (D), 1-49 % nicht genügend (F).

There is no possibility to earn additional marks after the final exam.

5. WHAT TO CONSIDER FOR MASTERING THE COURSE

(1) PLEASE DO NOT EXPECT A COURSE IN APPLIED OR EMPIRICAL ECONOMICS. THIS IS A COURSE IN ECONOMIC THEORY.

Our course in general equilibrium theory is scheduled for the second year in the master program in economics. There are prerequisites in terms of both, microeconomic theory and mathematics. One implication is that it is not sufficient just to attend the lectures. Instead, you are required to carefully read the chapters, we are dealing with, in our textbook (Starr) during the semester.

(2) ECTS requirement: $6 \text{ ECTS} = 6 \times 25h = 150 \text{ h} = 10 \text{ h}$ work per week = 8h work/week **in addition** to our weekly class. So, as a rule of thumb, if you invest 1 full day/week to study general equilibrium theory, you can expect to pass the course well. Please, don't forget to take this time requirement into account when planning your semester.

(3) On our course website (<u>http://www.uni-graz.at/ronald.wendner/ge.html</u>) I am offering the transparencies used as well as lecture notes on all topics we are discussing. These materials are written *for you*. You are supposed to carefully study them.

(4) Every question, both in class and during my office hours, is welcome. The more you ask, the more you will get out of the course, and the more you learn for your professional career.

(5) I advise you to initiate or to join a learning-/discussion group in general equilibrium theory with your colleagues. Meet once a week to discuss the materials you learn in class.

(6) Study carefully the mathematics review, presented in our textbook. These mathematical tools are the key for understanding the economic theory presented in the textbook. Make sure you fully under-

stand the mathematical concepts used (e.g. what is a convex set, what does closedness mean, how can one check for closedness, what is a sequence,...). A good way to check is simply to try to write down a formal definition of the respective concept BY SCRATCH – and then to compare the definition with the ones given in our textbook.

(7) Follow the proofs carefully, step by step. Make sure you understand the underlying proof strategy. You may want to consult Corbae D., et al. (2009), chapter 1, or also <u>http://www.uni-graz.at/ronald.wendner/Logic.pdf</u>.

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(8) Feel free to check in on Monday during my office hours.