Resource Economics (Spring Term 2025)

Structure of the Exercise Sessions & Project Assignments

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About the Exercise Sessions in General

- The main goals are:

    - Understand the concepts and mechanisms of economic models from the lecture through applied cases.

    - Ability to transfer pen & paper calculations into software models to solve more complex model specifications numerically.

- About software and coding:

    - We will use Python during the sessions. If you are yet new to the software, please visit the slides of the course "Introduction to Python Programming" by a fellow PhD student Leo Picard (2024). There are a handful of exercises accompanying the slides to already get coding practice from the beginning.

    - You are free to use Python in whichever IDE tool you prefer (PyCharm, VSCode, Spyder, etc.). I will use Jupyter Notebooks in the exercises because they are handy for teaching. You are also free to use "straight" Py-files if you prefer that. If you are completely new to Python, I suggest you use Google Colab. Here is a short tutorial on how to start a first notebook using Google Colab.

    - I might sometimes give you hints (Github repos, blog posts, Youtube videos etc.). There might well be other explanations online (or prompted from a GPT) that are better suited for your teaching needs. I encourage you therefore to also google a lot yourself despite the hints.

Problem Sets

- Problem sets will be uploaded to ADAM and my Github repo one week in advance as a PDF and / or a Jupyter Notebook. Try your best to solve the exercises before class. We will go through individual parts but there is no time to solve everything.

- **Please send me your solutions** (or what you have so far) for each week's problem set by email on **Sunday before the session**. This will not be graded! It is simply an assistance for me to see what I should focus on during the sessions.

- We will sometimes do live coding in the exercise session and sometimes just browse through code depending on how much time we have on various topics. You will always receive a detailed solution afterwards. **I still encourage you however to join the sessions, as coding is just one part of the exercise session**, getting an intuition for what you are coding is another (and arguably a more important one).

- Despite my best efforts, I will make errors in my code and the teaching material. Feel free to reach out by email if you feel that there is a mistake in the problem set. I will try to update the material and communicate what has been changed as quickly as possible.

Project Assignments

- Around mid-course, we will hand out a project assignment for you to solve in a group until the end of the semester. **This will be the evaluation for your final grade.**

- You will be working in groups both writing code and an essay to elaborate your model choice, assumptions, intuition and interpretation of the results.

- Details about the assignment (topic, format etc.) will be communicated in due time.

- We will start working on code related to the project assignment during the exercise sessions.

I am very much looking forward to an exciting semester with you all!