



Dear Applied Economics and Data Analysis student,

I would like to take this opportunity to welcome you to our two-year Master's program in Economics, *Applied Economics and Data Analysis*, and to provide you with some initial information about your program and your first two courses. I am very pleased that you have chosen this program, and I can assure you that I, along with my colleagues, will do our utmost to provide you with an excellent learning experience here at JIBS.

The program is designed to build your competencies in addressing economic issues and analyzing large quantities of data, including enhancing your programming skills. It prepares you for roles that demand specialized analytical and methodological skills in economics. As a graduate, you will possess the skills needed to work closely with decision-making in various types of organizations. You will be equipped to process and analyze data and to present results to your colleagues and managers. These skills are valuable in both the private and public sectors. Upon completing the program, you will be well-prepared for positions that require either practical or scientific knowledge.

The program will begin on Monday, August 19th, with a formal roll call, followed by the commencement of your first two courses.

Advanced Microeconomics

This course will provide you with an introduction to the behaviour of economic agents and institutions by using standard concepts of noncooperative game theory and applies these concepts to describe and analyse market failures. Topics covered in the course are, e.g.:

- Static and dynamic games
- External effects
- Market power
- Monopoly pricing
- Adverse selection, signalling, screening
- Principal-agent problems

The coverage of the analytical tools in this course enables you to immediately apply such tools to concrete problems and extend your microeconomic foundations needed for later courses in the programme.

The literature used in the course consists of one book – Munoz-Garcia, Felix (2017). *Advanced Microeconomic Theory: An Intuitive Approach with Examples*, MIT Press – as well as additional articles supplied at the course introduction.



Assistant Professor Andrea Schneider (andrea.schneider@ju.se),
the examiner and main teacher in this course.
Office: B5010

More information about the course, including the course syllabus, can be found [here](#). The schedule for your programme can be found [here](#) by choosing the Applied Economics and Data Analysis with the ending H24.

In parallel with this course, you will also take a mathematics course, which provides a solid foundation for subsequent courses in both economics and econometrics.

Advanced Mathematics for Economics:

In this course, you will be introduced to mathematical tools essential for economic and statistical theory, including matrix algebra and dynamic mathematical systems. It also focuses on mathematical concepts that are useful for master's level economics courses and beyond. The contents of this course include:

- Matrix algebra: addition, multiplication, and inversion of matrices, eigenvalues, eigenvectors
- Constrained optimization with inequality constraints
- The envelope theorem
- Difference equations
- Differential equations

The required literature for the course includes the book Fundamental Methods of Mathematical Economics by Alpha C. Chiang and Kevin C. Wainwright (4th edition, 2005, McGraw Hill [ISBN: 007-123823-9] or a later edition), along with supplementary material provided by the instructor.



Professor Scott Hacker (scott.hacker@ju.se),
the examiner and main teacher in this course.
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More information about the course, including the course syllabus, can be found [here](#). To find the schedule for your programme see instructions above.

As the program director, I, Anna Nordén, am responsible for the overall coordination of the programme's courses, ensuring high program quality. I also serve as a liaison between you, the students, and the faculty. You are more than welcome to contact me at any time with questions regarding the programme. For inquiries specific to individual courses, it is more effective to contact the course examiners directly.



Assistant Professor Anna Nordén (anna.norden@ju.se)
Program Director of Applied Economics and Data Analysis
Office: B5050

We look forward to welcoming you to JIBS in August where we will offer you an international experience within a local context, enriching your academic journey with global insights and community engagement.

Anna and the teaching team of *Applied Economics and Data Analysis*