



Course and Examination Fact Sheet: Spring Semester 2025

6,906: Economics: Macro for Computer Science

ECTS credits: 3

Overview examination/s

(binding regulations see below)

decentral - Written examination, Analog, Individual work individual grade (60%, 90 mins.)

Examination time: Term time

decentral - Written work, Digital, Group work group grade (20%)

Examination time: Term time

decentral - Presentation, Analog, Group work group grade (20%)

Examination time: Term time

Attached courses

Timetable -- Language -- Lecturer

[6,906,1.00 Economics: Macro for Computer Science](#) -- English -- [Iordache-Bolboaca Maria](#)

Course information

Course prerequisites

No previous knowledge of economics is required, but familiarity with basic algebra and programming is recommended.

Learning objectives

This course aims to provide students with the key concepts and tools to understand recent developments in macroeconomics and assesses their impact on the business environment and people's well-being. We study how individuals and firms are affected by national and global events; recent examples include the global financial crisis, the COVID-19 pandemic, and the Russia-Ukraine war. We analyze how the government, through monetary and fiscal policies, limits the costs imposed by these events on businesses and households.

On completion of the course, students will be able to...

Factual knowledge:

1. Characterize a nation's economic health.
2. Evaluate the scope for policy to improve macroeconomic performance.
3. Use simple macroeconomic models and run numerical simulations of these models to study economic phenomena.
4. Demonstrate a deep analytical understanding of the role of expectations for economic decisions.

Practical ability:

1. Access, critically analyze, evaluate, and synthesize quantitative and qualitative economic data.

Transfer knowledge:

1. Present research findings orally and in writing clearly and concisely to diverse audiences.
2. Constructively contribute to team project work.

Course content



Whereas microeconomics studies the decision-making of small economic units (e.g., individuals, households, and firms), macroeconomics focuses on the functioning of the whole economy. A good understanding of how the overall economy works can help students spot cyclical trends such as expansions and recessions and anticipate economic developments and political decisions. This allows for taking informed action and making financial decisions accordingly.

The study of modern macroeconomics is usually divided into three “runs”: the long run, the medium run, and the short run, each being discussed in a part of this course.

The course comprises four parts. The first part introduces key macroeconomic terms such as output, inflation, and employment. The second deals with an economy’s performance over decades by laying out the main facts about long-run growth and then developing a model that describes how capital accumulation and technological progress determine economic growth. The third part of the course covers the economy’s behavior in the short run, spanning from a couple of months to a few years, and derives the workhorse model used to study short-run movements in output. The last part focuses on the medium run, measured in periods of several years, in which the relationship between inflation and unemployment is discussed, and the short-run model is enlarged to incorporate this relationship as well. In this framework, the role of expectations and macroeconomic policies in the determination of output is examined.

Course structure and indications of the learning and teaching design

The course comprises in-class lectures with theoretical and practical (hands-on) parts. To justify the relevance of the theory studied, each part starts with stylized facts, which the students learn to derive from real data. This empirical evidence is further used to calibrate the theoretical models and to confront the model predictions.

Lecture no.	Lecture title
1	Introduction to Macroeconomics
2	Key Macroeconomic Concepts
3	Facts about Growth
4	Economic Growth and Technological Progress
5	Facts about Business Cycles
6	Goods and Financial Markets
7	Short-Run Economic Fluctuations and the IS-LM Model
8	Inflation, Unemployment, and the Phillips Curve
9	Expectations and Policy



10	Presentations of Projects
11	Revision, Q&A
12	Written Exam

Course literature

The main source of material for this course is the set of slides and codes, which will become available online on Canvas before each lecture. Additional reading material will be provided on Canvas. Below is a list of textbooks on which the material in the lecture notes develops and that may be useful for a more in-depth understanding of the concepts:

Mandatory:

Olivier Blanchard, 2021. Macroeconomics, Global Edition, 8th edition, Pearson, available at https://hsg.swisscovery.sisp.ch/permalink/41SLSP_HSG/1h7ra77/alma9911065107605506

Supplementary:

1. Julio Garin, Robert Lester, and Eric Sims, 2021. Intermediate Macroeconomics, v. 3.0.1, unpublished, available at https://juliogarin.com/files/textbook/GLS_Intermediate_Macro.pdf
2. Peter Birch Sorensen and Hans Jorgen Whitta-Jacobsen, 2022. Introducing Advanced Macroeconomics, 3rd edition, Oxford University Press.

Additional course information

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Examination information

Examination sub part/s

1. Examination sub part (1/3)

Examination modalities

Examination type	Written examination
Responsible for organisation	decentral
Examination form	Written exam
Examination mode	Analog
Time of examination	Term time
Examination execution	Synchronous
Examination location	On Campus
Grading type	Individual work individual grade
Weighting	60%
Duration	90 mins.

Examination languages

Question language: English
Answer language: English

Remark



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Examination-aid rule

Closed Book

The use of aids is prohibited as a matter of principle, with the exception of pocket calculator models of the Texas Instruments TI-30 series and, in case of non-language exams, bilingual dictionaries without any handwritten notes. Any other aids that are admissible must be explicitly listed by faculty members in the paragraph entitled "Supplementary aids" of the course and examination fact sheet; this list is exhaustive.

Procuring any aids, as well as ensuring their working order, is the exclusive responsibility of students.

Supplementary aids

Students are allowed to use one A4 double-sided cheatsheet.

2. Examination sub part (2/3)

Examination modalities

Examination type	Written work
Responsible for organisation	decentral
Examination form	Written work
Examination mode	Digital
Time of examination	Term time
Examination execution	Asynchronous
Examination location	On Campus
Grading type	Group work group grade
Weighting	20%
Duration	--

Examination languages

Question language: English
Answer language: English

Remark

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Examination-aid rule

Free aids provision

Basically, students are free to choose aids. Any restrictions are defined by the faculty members in charge of the examination under supplementary aids.

Supplementary aids

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3. Examination sub part (3/3)

Examination modalities

Examination type	Presentation
Responsible for organisation	decentral
Examination form	Oral examination
Examination mode	Analog



Time of examination	Term time
Examination execution	Asynchronous
Examination location	On Campus
Grading type	Group work group grade
Weighting	20%
Duration	--

Examination languages

Question language: English

Answer language: English

Remark

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Examination-aid rule

Free aids provision

Basically, students are free to choose aids. Any restrictions are defined by the faculty members in charge of the examination under supplementary aids.

Supplementary aids

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Examination content

Part I (60%): Written exam (90 minutes), with open- and closed-ended questions.

Part II (40%): Group project (maximum of three students) with 15 minutes of presentation in class. Students will be allocated a group of countries (one for each student) for which they have to collect data, derive stylized facts, implement and simulate the models studied in class, and report the results in a written essay accompanied by computer codes and an oral presentation. Students may choose any program they want (e.g., MATLAB, Python, R). The grade is equally split between the written essay (20%) and the oral presentation (20%).

Examination relevant literature

Lecture content (slides, relevant chapters in the mandatory textbook, exercises) until the final week.



Please note

Please note that only this fact sheet and the examination schedule published at the time of bidding are binding and takes precedence over other information, such as information on StudyNet (Canvas), on lecturers' websites and information in lectures etc.

Any references and links to third-party content within the fact sheet are only of a supplementary, informative nature and lie outside the area of responsibility of the University of St.Gallen.

Documents and materials are only relevant for central examinations if they are available by the end of the lecture period (CW21) at the latest. In the case of centrally organised mid-term examinations, the documents and materials up to CW 13 (Monday, 25 March 2025) are relevant for testing.

Binding nature of the fact sheets:

- Course information as well as examination date (organised centrally/decentrally) and form of examination: from bidding start in CW 04 (Thursday, 23 January 2025);
- Examination information (supplementary aids, examination contents, examination literature) for decentralised examinations: in CW 12 (Monday, 17 March 2025);
- Examination information (supplementary aids, examination contents, examination literature) for centrally organised mid-term examinations: in CW 14 (Monday, 31 March 2025);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised examinations: two weeks before ending with de-registration period in CW 15 (Monday, 07 April 2025).