University of St.Gallen

Course and Examination Fact Sheet: Spring Semester 2021

8,270: International Macroeconomics (MEcon)

ECTS credits: 4

Overview examination/s
(binding regulations see below)
Decentral - examination paper written at home (individual) (50%)
Examination time: term time
Decentral - examination paper written at home (individual) (50%)
Examination time: term time

Attached courses
Timetable -- Language -- Lecturer
8,270,1.00 International Macroeconomics (MEcon) -- Englisch -- Torun David , Mündler Marc-Andreas

Course information

Course prerequisites

Macroeconomics II is a prerequisite for this course, including basic knowledge of dynamic optimization techniques. Familiarity with the software packages Matlab can help, but is not necessary. The relevant aspects of dynamic optimization and Matlab coding will be covered in the course.

Learning objectives

After completion of this course, you will be able to:

- Simulate yourself open economies and their responses to local or global macroeconomic influences, using state-of-the-art software programs.
- Base predictions of the trade balance and the current account balance on optimal consumer and firm behavior as well as government interventions, both in simplified two-period models and more advanced infinite-horizon models using dynamic optimization.
- Use a fundamental current account equation to state predictions and relate the equation to empirical evidence on open-economy macroeconomics.
- Model open economies with multiple sectors, using optimality conditions from a social planner's problem and decentralized optimality conditions.
- Learn about the concept of calibration (the empirical quantification of the parameters of a model), and calibrate an open-economy real-business-cycle model yourself using data and Matlab.
- Assess how fluctuations in domestic productivity and international relative prices - the terms of trade and the real exchange rate - move the real business cycle and domestic macroeconomic variables - such as consumption, investment, national income, employment, and wages - in the presence of traded and non-traded goods.

Course content

This course equips you with the conceptual tools to understand open economies and their macroeconomic interaction with global markets, and the course equips you with the hands-on computing tools to simulate the open economy and its adjustment to local and global shocks yourself. For this dual purpose, the course presents open-economy macroeconomics from a theoretical and quantitative perspective. Topics include theories of the trade balance and the current account and their relationship to domestic macroeconomic variables, domestic productivity change, the terms of trade and the real exchange rate, as well as determinants of international capital flows. The course emphasizes real-side explanations. You will put the models to work in

quantitative exercises using current country data and state-of-the-art software programs, written in Matlab.

Course structure

The course content is grouped into two main blocks of instruction. The first five lectures in block I gradually lay the foundations of open-economy macroeconomics, progressing from households in an endowment economy to households and firms in a production economy, and moving from two-period to infinite-horizon models. Embedded in the first block is also a Tutorial on using Matlab for macroeconomic simulations in the open economy. At the end of block I stands an open-economy real-business-cycle model that unifies the insights for rigorous quantification. A first software-based exercise in the form of a problem set concludes this first block.

Block II starts out with a review of the first software-based exercise, so as to prepare you for the second software-based exercise. The four lectures in block II then consider the terms of trade and the real exchange rate, as well as shocks that move them, so as to assess how these relative prices affect the real business cycle in the open economy. The lectures present empirical evidence from structural vector auto-regression models and contrast them with predictions from versions of the calibrated theory model. A full understanding of the terms of trade and the real exchange rate requires an export-producing, an import-competing, and a non-traded goods sector. The second software-based exercise asks you to apply the insights and assess the plausibility and practical relevance of the extended model.

Course literature

Lecture notes become available online at *StudyNet (Canvas)* before each lecture.

Textbooks (required): Obstfeld and Rogoff (1996)/Chapters 1, 2 and 4; Uribe and Schmitt-Grohé (2017)/Chapters 1, 2, 3, 4, 7 and 8.

Background Readings (recommended): Lucas (1982); Nason and Rogers (2006); Mendoza (1991).

The two textbooks complement each other. The recommended background readings help you review the lecture material beyond the textbooks. Background readings are available through the course web page. Web links to copyrighted readings may only work from on-campus domains.

References:

LUCAS, R. E. J. (1982): "Interest Rates and Currency Prices in a Two-Country World," Journal of Monetary Economics, 10(3), 335-59.

MENDOZA, E. G. (1991): "Real Business Cycles in a Small Open Economy," American Economic Review, 81(4), 797-818.

NASON, J. M., AND J. H. ROGERS (2006): "The Present-Value Model of the Current Account Has Been Rejected: Round Up the Usual Suspects," Journal of International Economics, 68(1), 159-87.

OBSTFELD, M., AND K. ROGOFF (1996): Foundations of international macroeconomics. MIT Press, Cambridge, Mass. and London.

URIBE, M., AND S. SCHMITT-GROHÉ (2017): Open economy macroeconomics. Princeton University Press, Princeton and Oxford.

Additional course information

We are planning to hold the first four lectures as well as both tutorials in-person. The remaining lectures will be held online using Zoom. Lectures will be recorded in the cloud and available to all course participants for the semester.

In the case of the President's Board having to implement new directives due to the SARS-CoV-2 pandemic in SpS2021, the course information listed above will be changed as follows:

- The planned in-person lectures and tutorials will be held online.

The examination information listed below would be changed as follows:

- There are no changes necessary to the examination information.

Examination information

![University of St.Gallen logo]

Examination sub part/s

1. Examination sub part (1/2)

Examination time and form
Decentral - examination paper written at home (individual) (50%)
Examination time: term time

Remark
One of Two Individual Problem Sets

Examination-aid rule
Term papers

Term papers must be written without anyone else's help and in accordance with the known quotation standards, and they must contain a declaration of authorship which is a published template in StudentWeb.

The documentation of sources (quotations, bibliography) has to be done throughout and consistently in accordance with the chosen citation standard such as APA or MLA.

For papers in law, the legal standard is recommended (by way of example, cf. FORSTMOSER, P., OGOREK R. et SCHINDLER B., Juristisches Arbeiten: Eine Anleitung für Studierende, newest edition respectively, or according to the recommendations of the Law School).

The indications of the sources of information taken over verbatim or in paraphrase (quotations) must be integrated into texts in accordance with the precepts of the applicable quotation standard, while informative and bibliographical notes must be added as footnotes (recommendations and standards can be found, for example, in METZGER, C., Lern- und Arbeitsstrategien, newest edition respectively.

For any work written at the HSG, the indication of the page numbers is mandatory independent of the chosen citation standard. Where there are no page numbers in sources, precise references must be provided in a different way: titles of chapters or sections, section numbers, acts, scenes, verses, etc.

Supplementary aids
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Examination languages
Question language: English
Answer language: English

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2. Examination sub part (2/2)

Examination time and form
Decentral - examination paper written at home (individual) (50%)
Examination time: term time

Remark
One of Two Individual Problem Sets

Examination-aid rule
Term papers

Term papers must be written without anyone else's help and in accordance with the known quotation standards, and they must contain a declaration of authorship which is a published template in StudentWeb.

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Law School).

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Supplementary aids
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Examination languages
Question language: English
Answer language: English

Examination content

Examination Papers/Problem Sets: There will be two take-home problem sets (also referred to as examination papers or term papers in the default terminology of this fact sheet). Each problem set counts 50 points, so the total score for the course is 100 points.

The problem sets ask you to obtain country-level data, prepare and detrend them; to mathematically derive variations of the material in class; and to then implement variations of existing MATLAB code to simulate the according variants of the model. Baseline data and code in MATLAB (and optionally for parts of problem set 1 in STATA) will be available on StudyNet (Canvas).

You have about one month time to complete each problem set.

Examination relevant literature
See Course Literature.

Please note

Please note that only this fact sheet and the examination schedule published at the time of bidding are is 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 12 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, 28 January 2021);
- Examination information (regulations on aids, examination contents, examination literature) for decentralised examinations: in CW 12 (Monday, 22 March 2021);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised mid-term examinations: in CW 12 (Monday, 22 March 2021);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised examinations: two weeks before the end of the registration period in CW 14 (Thursday, 8 April 2021).