



Course and Examination Fact Sheet: Spring Semester 2020

8,270: International Macroeconomics (MEcon)

ECTS credits: 4

Overview examination/s

(binding regulations see below)

Decentral - examination paper written at home (individual) (100%)

Attached courses

Timetable -- Language -- Lecturer

[8,270,1.00 International Macroeconomics \(MEcon\)](#) -- Englisch -- [Torun David](#) , [Muendler Marc](#)

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 and Stata can help, but is not necessary. The relevant aspects of dynamic optimization and Matlab and Stata coding will be covered in the course.

Learning objectives

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

- Understand the identity of a country's net export outflows and its net capital outflows.
- Invoke the distinctions between the trade balance and the current account balance as well as the matching difference between gross domestic product and national income.
- Predict the changes in domestic macroeconomic variables-such as consumption, investment, output, employment, and wages-from fluctuations in international relative prices-such as the terms of trade, the global real interest rate, and the real exchange rate.
- 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.
- Alternatively use optimality conditions in discrete time to state the fundamental current account equation.
- Relate optimally chosen stocks of assets to their market value under certainty and uncertainty in the open economy.
- Derive and quantify an open-economy real-business-cycle model, including in an exercise that requires basic coding in MATLAB and, optionally, STATA.
- Model open economies with multiple sectors, using optimality conditions from a social planner's problem and decentralized optimality conditions.
- Infer how shocks to domestic productivity, the terms of trade and the real exchange rate in the presence of traded and non-traded goods move the real business cycle in the open economy.
- Use calibrated open-economy real-business-cycle and multi-sector models to predict consequences of domestic productivity, terms of trade and real exchange rate shocks for domestic macroeconomic variables, including in exercises that require basic coding in MATLAB.
- Evaluate the quality of model predictions relative to empirical evidence from structural vector autoregression models.
- Assess empirical puzzles in international macroeconomics that continue to pose challenges to canonical models.

Course content



This course examines 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 investigates real-side explanations, and students put the models to work in quantitative exercises using current country data and state-of-the-art software.

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 and STATA 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 shocks 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 the calibrated theory models. 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 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

--

Examination information

Examination sub part/s

1. Examination sub part (1/1)



Examination time and form

Decentral - examination paper written at home (individual) (100%)

Remark

Two Problem Sets, each counting 50% of total grade

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.
- The documentation of sources (quotations, bibliography) has to be done throughout and consistently in accordance with the APA or MLA standards. The indications of the sources of information taken over verbatim or in paraphrase (quotations) must be integrated into the text 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. (2017), *Lern- und Arbeitsstrategien* (12th ed., Cornelsen Schweiz).
- For any work written at the HSG, the indication of the page numbers both according to the MLA and the APA standard is never optional.
- 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.
- For papers in law, the legal standard is recommended (by way of example, cf. FORSTMOSER, P., OGOREK R. et SCHINDLER B. (2018, *Juristisches Arbeiten: Eine Anleitung für Studierende* (6. Auflage), Zürich: Schulthess, or the recommendations of the Law School).

Supplementary aids

--

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 45 points, so the total score for the course is 90 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 STATA are available on StudyNet (Canvas).

There are two scheduled tutorials for the course. The first tutorial provides an introduction to MATLAB and STATA as well as an explanation of the existing code that you will use for your problem sets. The second tutorial, immediately after the due time of the first problem set, will review possible answers and code variations that enter the first problem set.

Examination relevant literature

See Course Literature.



Please note

Please note that this fact sheet alone is binding and has priority over any other information such as StudyNet (Canvas), personal databases or faculty members' websites and information provided in their lectures, etc.

Any possible references and links within the fact sheet to information provided by third parties are merely supplementary and informative in nature and are outside the University of St.Gallen's scope of responsibility and guarantee.

Documents and materials that have been submitted no later than the end of term time (CW21) are relevant to central examinations.

Binding nature of the fact sheet:

- Information about courses and examination time (central/decentral) and examination type starting from the beginning of the bidding on 23 January 2020
- Information about examinations (examination aid regulations, examination content, examination-relevant literature) for decentral examinations after the 4th semester week on 16 March 2020
- Information about examinations (examination aid regulations, examination content, examination-relevant literature) for central examinations as from the starting date for examination registration on 6 April 2020

Please consult the fact sheet again after these deadlines have expired.