University of St.Gallen

Course and Examination Fact Sheet: Spring Semester 2025

8,120: Business Forecasting

ECTS credits: 3

Overview examination/s
(binding regulations see below)
decentral - Written examination, Digital, Individual work individual grade (100%, 90 mins.)
Examination time: Term time

Attached courses
Timetable -- Language -- Lecturer
8,120,1.00 Business Forecasting -- English -- Huggenberger Markus

Course information

Course prerequisites

The course requires basic knowledge of statistics and probability.

Learning objectives

After successfully completing this course, students will understand the role of business forecasting for strategic and operational decision making and they will be familiar with important forecasting methods that can be applied to predict future business conditions.

In particular, students will…

- ... understand the importance of business forecasting as a tool for business planning.
- … know the elements of a systematic forecasting process.
- … have gained insights into the selection and transformation of relevant data for forecasting problems.
- … be familiar with standard techniques for data analysis that allow to identify and extrapolate current patterns and trends.
- … be able to explain and apply time-series as well as regression methods for the forecasting of relevant economic outcomes.
- … know how to present and interpret the results of analytical forecasting techniques.
- … understand how to use the judgement of experts for systematic forecasting.
- … be familiar with potential benefits of advanced forecasting techniques.

Course content

The first part of this course will provide an introduction to business forecasting. It will present important elements of a systematic forecasting framework and outline the relevance of an analytical approach to forecasting for efficient business planning and decision making. In addition, required statistical concepts and tools will be reviewed.

The second part will cover standard univariate time-series techniques for forecasting. In this part, time-series patterns like trends and seasonality will be discussed. Moreover, exponential smoothing and ARIMA models will be introduced.

The third part of the course will focus on the application of regression analysis for business forecasting, which allows to study how the economic variable of interest is related to a selection of explanatory variables or predictors.

The fourth part of the course will introduce forecasting methods based on expert judgement. Furthermore, it will provide a brief summary on the application of advanced methods from machine learning, such as neural network models.

Course structure and indications of the learning and teaching design

The course consists of weekly lectures with integrated exercise sessions. In addition to the lecture slides, students will be provided with problem sets containing questions and exercises on important concepts developed during the course. Solutions to these problem sets will be made available on StudyNet. Furthermore, selected problems will be discussed during the exercise sessions in class.

The implementation of important forecasting techniques will be illustrated with several short case studies. These case studies will use Excel and statistical software packages. Prior knowledge of statistical software is not required.

Course literature

Lectures slides, problem sets with the corresponding solutions and case studies will be made available on StudyNet. Moreover, selected chapters from the following textbooks will be recommended as optional reading:

Ord, K., Fildes, R. & Kourentzes N. (2017). *Principles of Business Forecasting*, 2nd edition, Wessex Press Inc., New York.

Hyndman, R.J., & Athanasopoulos, G. (2021). *Forecasting: principles and practice*, 3rd edition, OTexts, Melbourne. OTexts.com/fpp3.

Additional topic-specific references will be provided at the end of each module on the lecture slides.

Additional course information
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Examination information

Examination sub part/s

1. Examination sub part (1/1)

Examination modalities
Examination type	Written examination
Responsible for organisation	decentral
Examination form	Written exam
Examination mode	Digital
Time of examination	Term time
Examination execution	Synchronous
Examination location	On Campus
Grading type	Individual work individual grade
Weighting	100%
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

The examination will be conducted as a digital examination with the following admissible media:

- **Private notebook** (compulsory) – no tablets!

- **Mains adapter** (compulsory)

- External computer mouse (optional)

- External computer keyboard (optional)

We would like to point out explicitly that the examination cannot be taken with tablets/iPads.

You will need the following for the examination:

- Appliance and system requirements: cf. StudentWeb

- Special software: LockDown Browser

- HSG log-in including access modalities

- WLAN – operational access to Eduroam

Please make sure that

- all the updates have been carried out before the examination.

- In the run-up to digitally conducted examinations, technical tests (mock examinations without grades) are carried out. Participation is urgently required!

- You yourself are responsible for the perfect working order of your appliance, cf. also StudentWeb.

- Keyboard stickers in the language in which the examination is conducted (such as English, German, as well as Arabic, Chinese, Russian, Japanese, etc. in language examinations) are permitted. The stickers must be identical with the original characters of the language concerned.

Any use of additional appliances that are not listed above will be strictly prohibited throughout the examination.

Any necessary actions with another software or additional appliances require the express prior approval of the persons in charge of the examination and are only permitted under supervision.

Any infringement of these rules of conduct may be sanctioned as an infringement of the rules of the University.

Examination content

The topics covered on the lecture slides, the problem sets and the case studies will be relevant for the final exam.

Examination relevant literature

Lecture slides, problem sets, case studies and additional readings that will be provided on StudyNet by May 16, 2025.

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).