



## Course and Examination Fact Sheet: Spring Semester 2021

### 4,586: The Business Economics of Digitalization

ECTS credits: 3

#### Overview examination/s

(binding regulations see below)

Decentral - Written examination (75%, 60 mins.)

Examination time: term time

Decentral - Presentation (in groups - all given the same grades) (25%)

Examination time: term time

#### Attached courses

Timetable -- Language -- Lecturer

[4,586,1.00 The Business Economics of Digitalization](#) -- Englisch -- [Gärtner Dennis](#)

#### Course information

#### Course prerequisites

The course will make use of game theoretic models and reasoning, particularly from the field of industrial organization.

Participants should have an interest in game theory and a basic knowledge of it at the level covered in the Assessment year and the first year of the Bachelor.

#### Learning objectives

Participants will analyze specific topics in the context of digitalization using tools and models from microeconomic theory, mostly from the fields of game theory and industrial organization.

Students will learn to apply economic models and concepts to study questions and problems arising in the context of digitalization, while being aware of concepts' limitations, thus ultimately enabling them to expertly apply these tools to new questions.

#### Course content

This course will familiarize participants with diverse economic questions and concepts arising in the context of digitalization.

As an example take the "internet of things". In theory, home automation allows a user to control numerous devices like lighting, heat, or air conditioning with a central control such as an app on their smartphones. In practice however, there are multiple competing standards fighting for adoption and making the goal of a central control for all devices hard to achieve. Home automation products are an example for goods which exhibit network effects, that is goods for which each user's utility is increasing in the number of other users of this (or a compatible) product. In this regard we will analyze markets and competition with products exhibiting network effects and try to answer questions like whether firms should adhere to a common standard or whether competition will always select the best technology.

The models used for this specific problem as well as the other models developed in this course are often simple, yet powerful, and can be applied to a broad range of real-world business problems. This course fosters understanding by carefully developing, analyzing, and interpreting microeconomic models.

#### Course structure

The course consists of a lecture part, occasional exercises and short student presentations. The lecture part will mostly be



focused on developing models and tools that are helpful to understand economic questions in the presence of digitalization. Those models and tools will be applied in the exercises. The goal of the student presentations is to connect the topics from the lecture part to real-life examples and cases.

The final exam is planned to take place at the last lecture date. The definite date, time and location will be communicated in class and via StudyNet. The exam will cover the contents from the lectures, exercises and presentations.

## Course literature

Select chapters in the textbooks:

- Belleflamme, P., & Peitz, M. (2015). *Industrial Organization: Markets and Strategies*. Cambridge University Press.
- Comino, S., & Manenti, F. M. (2014). *Industrial Organisation of High-technology Markets: The Internet and Information Technologies*. Edward Elgar Publishing.

Further material to be provided via StudyNet.

## Additional course information

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 course is conducted online via Zoom.
- The lecturer informs via StudyNet on the details of the changed implementation modalities of the course.

The examination information listed below can be changed as follows:

- The group presentation and written final exam will be replaced by a group homework (everyone in group given same grade) connection theoretical insights from the lecture to a real life example chosen by the students.
- Details will be communicated in the lectures and via StudyNet.

## Examination information

### Examination sub part/s

#### 1. Examination sub part (1/2)

##### Examination time and form

Decentral - Written examination (75%, 60 mins.)

Examination time: term time

##### Remark

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##### Examination-aid rule

Extended Closed Book

The use of aids is limited; any additional aids permitted are exhaustively listed under "Supplementary aids". Basically, the following is applicable:

- At such examinations, all the pocket calculators of the Texas Instruments TI-30 series and mono- or bilingual dictionaries (no subject-specific dictionaries) without hand-written notes are admissible. Any other pocket calculator models and any electronic dictionaries are inadmissible.
- In addition, any type of communication, as well as any electronic devices that can be programmed and are capable of communication such as notebooks, tablets, mobile telephones and others, are inadmissible.
- Students are themselves responsible for the procurement of examination aids.

##### Supplementary aids



none

## Examination languages

Question language: English

Answer language: English

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## 2. Examination sub part (2/2)

### Examination time and form

Decentral - Presentation (in groups - all given the same grades) (25%)

Examination time: term time

### Remark

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### Examination-aid rule

Practical examination

No examination-aid rule is necessary for such examination types. The rules and regulations of the University of St. Gallen apply in a subsidiary fashion.

### Supplementary aids

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## Examination languages

Question language: English

Answer language: English

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## Examination content

The written examination will cover the content of the lectures, slides, exercise sessions and associated book chapters (to be precisely specified on StudyNet), and student presentations.

## Examination relevant literature

Select chapters in the textbooks:

- Belleflamme, P., & Peitz, M. (2015). *Industrial Organization: Markets and Strategies*. Cambridge University Press.
- Comino, S., & Manenti, F. M. (2014). *Industrial Organisation of High-technology Markets: The Internet and Information Technologies*. Edward Elgar Publishing.

Further material to be provided via StudyNet.



## 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 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).