



## Course and Examination Fact Sheet: Spring Semester 2022

### 8,310: Asset Pricing

ECTS credits: 4

#### Overview examination/s

(binding regulations see below)

Central - Written examination (70%, 90 mins.)

Examination time: inter-term break

Decentral - examination paper written at home (in groups - all given the same grades) (30%)

Examination time: term time

#### Attached courses

Timetable -- Language -- Lecturer

[8,310,1.00 Asset Pricing](#) -- Englisch -- [Fengler Matthias Reginald](#)

#### Course information

#### Course prerequisites

Good knowledge and interest in mathematics and statistics.

#### Learning objectives

Students understand the notion of a stochastic discount factor in asset pricing theory. They are familiar with the main asset pricing models and know how they can be tested.

#### Course content

The class provides an introduction into the theory of asset pricing.

The course is relevant for students with interest in the economics of asset pricing. The class covers choices under uncertainty, discrete-time asset valuation, contingent claim valuation, mean variance analysis, factor models, arbitrage pricing theory. Students learn how the various financial theories can be phrased using the notion of the stochastic discount factor and how they are empirically validated.

Topics:

1. Stochastic discount factor (SDF)
2. Some basics of utility theory
3. SDF and arbitrage free markets
4. Mean variance analysis
5. Discount factors, betas, and mv frontiers
6. The multiple time period SDF
7. Factor pricing
8. Testing asset pricing models

#### Course structure and indications of the learning and teaching design

Weekly lecture with theoretical and practical problem sets.

#### Course literature

Core Books:



- Cochrane (2005): Asset Pricing, Revised Edition, Princeton University Press.

## Additional course information

**In the case of the President's Board having to implement new directives due to the SARS-CoV-2 pandemic in SpS2022, the course information listed above will be changed as follows:**

- The course is conducted online via the platform zoom;
- The recordings of the course are available for 30 days;
- The lecturer informs via StudyNet or e-mail on the changed implementation modalities of the course;
- There are no changes necessary to the course information.

**The examination information listed below would be changed as follows:**

- The oral examination (for eligible) exchange students) are conducted online and are not recorded.
- Otherwise there are no changes necessary to the examination information.

## Examination information

### Examination sub part/s

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

##### Examination time and form

Central - Written examination (70%, 90 mins.)

Examination time: inter-term break

##### 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

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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 (in groups - all given the same grades) (30%)

Examination time: term time

##### Remark



Assignments (2-3 students collaborate)

## Examination-aid rule

Term papers

Written work must be written without outside help according to the known citation standards, and a declaration of authorship must be attached, which is available as a template on the StudentWeb.

Documentation (quotations, bibliography, etc.) must be carried out universally and consistently according to the requirements of the chosen/specified citation standard such as e.g. APA or MLA.

The legal standard is recommended for legal work (cf. by way of example: FORSTMOSER, P., OGOREK R., SCHINDLER B., Juristisches Arbeiten: Eine Anleitung für Studierende (the latest edition in each case), or according to the recommendations of the Law School).

The reference sources of information (paraphrases, quotations, etc.) that has been taken over literally or in the sense of the original text must be integrated into the text in accordance with the requirements of the citation standard used. Informative and bibliographical notes must be included as footnotes (recommendations and standards e.g. in METZGER, C., Lern- und Arbeitsstrategien (latest edition)).

For all written work at the University of St.Gallen, the indication of page numbers is mandatory, regardless of the standard chosen. Where page numbers are missing in sources, the precise designation must be made differently: chapter or section title, section number, article, etc.

## Supplementary aids

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## Examination languages

Question language: English

Answer language: English

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## Examination content

Precise content of exam (70%) together with most relevant sources in the literature

### 1. Stochastic discount factor

a. C: 1-2

### 2. Some basics of utility theory

b. Habit formation -> C: 21.2

c. IES -> Lengwiler: 8.2.1-8.2.3

### 3. SDF and arbitrage free markets

a. C: 3-4

### 4. Mean variance analysis

a. C: 5

b. C: 4.3 (first part)

### 5. Discount factors, betas, and mv frontiers

a. C: 6-7

### 6. The multiple time period SDF

a. Hansen, Renault (2009)



## 7. Conditioning information

a. C: 8

## 8. Factor pricing

a. C: 9

## 9. Estimating and evaluating asset pricing models

a. C: 10-16

## Supplement

### 1. Inner product space

a. LeRoy, Werner: 17

Examination paper (30%) written at home in groups on assigned problems related to the list above.

## Examination relevant literature

Lecture notes, supplements and assignments as published on canvas by the end of the term.

Further literature:

### Core Books:

- C: Cochrane (2005): Asset Pricing, Revised Edition, Princeton University Press.

## 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, 27 January 2022);
- Examination information (regulations on aids, examination contents, examination literature) for decentralised examinations: in CW 12 (Monday, 21 March 2022);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised mid-term examinations: in CW 12 (Monday, 21 March 2022);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised examinations: two weeks before the end of the registration period in CW 15 (Monday, 11 April 2022).