



## Course and Examination Fact Sheet: Autumn Semester 2022

### 7,234: Managing Collaborative Innovation for Net-Zero

ECTS credits: 4

#### Overview examination/s

(binding regulations see below)

Decentral - Presentation (in groups - all given the same grades) (40%)

Examination time: term time

Decentral - Written examination (with defined exam duration) (40%, 90 mins.)

Examination time: term time

Decentral - Active participation (20%)

Examination time: term time

#### Attached courses

Timetable -- Language -- Lecturer

[7,234.1.00 Managing Collaborative Innovation for Net-Zero](#) -- Englisch -- [Zobel Ann-Kristin](#)

#### Course information

#### Course prerequisites

No specific prior knowledge is required. Basic knowledge of the principles of innovation management are recommended. As the course will be taught in English, very good command of the language (reading, writing, and discussing) is required.

#### Learning objectives

- Students understand why and under which conditions firms open up their innovation processes and are able to differentiate between different collaborative innovation strategies / designs in terms of their underlying purposes and characteristics
- Students develop a nuanced understanding of the opportunities and challenges associated with different collaborative innovation strategies and learn under which conditions different collaborative strategies can be effectively implemented in the corporate environment
- Students acquire a toolbox of collaborative innovation that equips them with theories, frameworks, and best practices that can guide firms in their journey from closed to open innovation
- Students inspire and nurture their interest in climate change, internalize its importance for conducting sustainable business and develop competences in critically assessing net-zero strategies of firms
- Students practice how to creatively combine collaborative innovation with different net-zero strategies and gain deep insights into how these combinations can help firms to decarbonize
- Students apply concepts and frameworks of collaborative innovation in the context of case challenges and develop novel decarbonization pathways for firms across different sectors
- Students sharpen their presentation, analytical and problem-solving skills by researching, solving, presenting and critically debating cases and challenges in the context of firms' race to net-zero

#### Course content

Many businesses across industrial sectors have opened up their organizational boundaries to harness external knowledge and experiment with new forms of collaborative innovation. The locus of innovation shifts from single hierarchically structured firms, to networks of distributed actors, including incumbent firms, start-ups, lead users, crowds, research institutions, and public entities. In these networks, collaborative innovation goes beyond bilateral inter-firm alliances and firms need find new strategies for multilateral organizing, including for instance crowdsourcing, platforms, or ecosystems.



These new forms of collaborative innovation are particularly relevant as firms develop strategies for dealing with climate risk, reducing emissions and/or positioning themselves as climate leaders. A growing number of firms are committing to 'carbon-neutral', 'net-zero', or even 'climate positive' contributions (e.g. Microsoft, IKEA, RWE). This requires innovations in technologies, products, services, business models, and value chains. Given the complexity and technological uncertainty in decarbonizing businesses and economies, it is unlikely that a single firm would consistently develop or acquire such high value innovations. Relevant knowledge and other resources are increasingly dispersed across multiple entities and firms turn to collaborative innovation in order to reduce their own emissions, remove emissions from the atmosphere, or help to decarbonize entire industries.

The course aims at providing students with theoretical concepts and analytical frameworks to understand and critically reflect upon different modes of collaborative innovation. In addition, students will apply these theoretical concepts and analytical frameworks to discuss, analyze, and reflect on how firms can utilize collaborative innovation to reduce emissions and/or create positive climate impact. By working on concrete challenges/cases, students will gain deep insights into how firms use collaborative innovation to enable and facilitate the decarbonization of industries and support net-zero strategies.

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

The seminar will be carried out in nine sessions, including the following topics:

- Crowdsourcing and innovation communities
- New models of startup-incumbent collaborations
- Innovation ecosystems and platforms
- Meta-organizations
- Open governance

Each session consists of two main parts. The first part of each session will feature an interactive lecture and aims at establishing, contrasting, and discussing the theoretical foundations of the different forms of collaborative innovation. The second part of each session will feature a seminar that focuses on analyzing and discussing a concrete business challenge in the context of achieving a net-zero economy that helps to apply, illustrate, and critically reflect upon the introduced concepts.

The second part will be student-centered, whereby small teams of students will act as 'presenters' and 'facilitators' of the challenge. The teams are encouraged to experiment with different presentation, discussion, and collaboration tools to engage their classmates in a critical and lively discussion of the challenge.

For selected sessions, the course will feature guest lectures from industry that showcase real-world strategic opportunities of collaborative innovation for net-zero.

Students are expected to be prepared for the in-class discussions (have read the assigned literature), and to participate actively in the discussions

## Course literature

For each session, mandatory readings will be assigned on Studynet (including both more academic and more practitioner-oriented readings). Session presenter/facilitators will also get access to the challenge and supplementary material. The assigned papers will provide the foundations and analytical frameworks that students will need to analyze, prepare, and discuss the challenges in the second part of the session. Readings will be made available before the start of the course.

## Additional course information

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## Examination information

### Examination sub part/s

#### 1. Examination sub part (1/3)

##### Examination time and form



Decentral - Presentation (in groups - all given the same grades) (40%)

Examination time: term time

## Remark

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## Examination-aid rule

Presentations

In presentations, aids for visual presentation can be used. These aids can be specified or restricted by the lecturers.

## Supplementary aids

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## Examination languages

Question language: English

Answer language: English

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## 2. Examination sub part (2/3)

### Examination time and form

Decentral - Written examination (with defined exam duration) (40%, 90 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

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## Examination languages

Question language: English

Answer language: English

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## 3. Examination sub part (3/3)

### Examination time and form

Decentral - Active participation (20%)

Examination time: term time

## Remark

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## Examination-aid rule

Active classroom participation

In the "Active classroom participation" examination form, regular participation in class is assessed.

The assessment criteria can be as follows:



- Requests to speak enrich the discussion (productive) / requests to speak disturb the discussion (counterproductive);
- Requests to speak are correct/requests to speak are incorrect;
- Requests to speak are frequent/average/rare;
- No requests to speak, but students follow the lesson/no requests to speak and students do not noticeably follow the lessons.

## Supplementary aids

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## Examination languages

Question language: English

Answer language: English

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## Examination content

All course topics, including for instance

- Crowdsourcing and innovation communities
- Models of startup-incumbent collaboration
- Innovation ecosystems and platforms
- Meta-organizations
- Open governance
- are relevant for the exam. Students need to be able to describe and analyze concepts and frameworks from the lectures, mandatory readings, and in-class discussions. In the exam, students will also need to apply their acquired knowledge on collaborative innovation to the context of climate/net-zero strategies.

## Examination relevant literature

Both mandatory and optional readings will be made available on StudyNet before each session. All exam-relevant material (including readings and lecture slides) will be made available before the final session.

### 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 (CW51) at the latest. In the case of centrally organised mid-term examinations, the documents and materials up to CW 42 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 34 (Thursday, 25 August 2022);
- Examination information (regulations on aids, examination contents, examination literature) for decentralised examinations: in CW 42 (Monday, 17 October 2022);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised mid-term examinations: in CW 42 (Monday, 17 October 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 45 (Monday, 7 November 2022).



University of St.Gallen