



Course and Examination Fact Sheet: Spring Semester 2020

4,753: Verantwortung/Responsibility: The Power of Games - How Simulation Games Can Foster Sustainability Transitions

ECTS credits: 3

Overview examination/s

(binding regulations see below)

Decentral - Presentation (in groups - all given the same grades) (50%)

Decentral - examination paper written at home (individual) (50%)

Attached courses

Timetable -- Language -- Lecturer

[4,753,1.00 Verantwortung/Responsibility: The Power of Games - How Simulation Games Can Foster Sustainability Transitions](#)

-- Englisch -- [Kubli Merla](#) , [Gerber Andreas](#)

Course information

Course prerequisites

none

Learning objectives

The students...

- have theoretical and practical knowledge about simulation games and how and why such tools can facilitate the learning about transition processes,
- know about major systemic and strategic challenges of businesses and other societal actors in the context of sustainability transitions,
- are able to evaluate and apply strategies to deal with conflicting goals and locate potential for cooperation in the context of the simulation games.

The course is designed to promote a well-balanced mix of content-related knowledge, and action- and reflection-related competences. We estimate the share of action- to reflection-related competences of the course as 60% - 40%.

Course content

Companies do not only operate in economic markets, but act in a wider context of the environment and society. In today's world, a sustainability transition is more pressing than ever and imposes major challenges on companies, such as decision trade-offs between profit maximization, sustainability investments and long-term survival. To facilitate sustainability transitions, it is inevitable to adopt more sustainable solutions and behavior, but also to have tools that help developing transformative knowledge.

In this course, students learn the theoretical and practical basics of simulation games, and how such games can be applied to facilitate learning for sustainability transitions. The students will be familiarized with central trade-offs within sustainability transitions and be enabled to actively participate in such processes. The course includes two phases.

The first course phase consists of lectures and game sessions. The lectures will provide theoretical background about simulation games and sustainability transitions, with a focus on electric mobility and renewable energies, and thereby help to introduce the context of the game sessions. In the game sessions, the students will play illustrative simulation games, where they will experience the challenge of taking managerial decisions in complex environments. The first-hand experiences in the games will be



complemented with debriefing sessions after each game, where the students reflect about the game play and their learning. During the game sessions, we plan to play the "post-fossil cities" game, as well as other illustrative simulation games.

In the second course phase, the students will use the newly gained knowledge to design their own simulation game, addressing a particular sustainability challenge. Towards the end of the course, these games will be presented and played in class. Students will submit in groups a documentation of their self-developed game and reflect on what they have learned and experienced in an individual reflection paper.

Course structure

The course will be structured in 6 blocks à 4 lessons each. The first four course blocks are dedicated to knowledge transfer on simulation games and sustainable transitions, as well as the playing of selected simulation games. The fifth block is used for discussing student projects and introducing some short games. As a final event, the students will present their self-developed simulation games and play them during the lectures. The first four blocks will preferably be held on full days with 2 blocks each, the fifth and the sixth block on separate dates. The game development projects will be organized in groups and are to be implemented in-between the blocks. The students will document the developed simulation games in groups and reflect about the learnings and experiences of the course in an individual reflection paper.

Contextual Studies are considered part of **Contact Learning**; thus, taking part properly implies **regular attendance**. It is the students' own responsibility to ensure that there is **no timetable clash** between the courses they have chosen. Only the current timetable as published on **Stundenplan online** does apply.

Course literature

- Duke, Richard and Jac Geurts. "Policy Games for Strategic Management - Pathways into the Unknown". 2004. Dutch University Press, Amsterdam, The Netherlands.
- Sterman, John D. "Modeling managerial behavior: Misperceptions of feedback in a dynamic decision making experiment." *Management science* 35.3 (1989): 321-339.
- Holtz, Georg, et al. "Prospects of modelling societal transitions: Position paper of an emerging community." *Environmental Innovation and Societal Transitions* 17 (2015): 41-58.
- Dietz, Thomas, Elinor Ostrom, and Paul C. Stern. "The struggle to govern the commons." *Science* 302.5652 (2003): 1907-1912.
- Capaul, Roman and Markus Ulrich. "Planspiele - Simulationsspiele für Unterricht und Training." 2010. Tobler Verlag AG, Altstätten, Switzerland.

Additional course information

Dr. **Merla Kubli** is a PostDoc researcher at the Chair for Management of Renewable Energies at the University of St. Gallen. In her research she investigates the interactions between business model dynamics and customer acceptance. The focus of her studies are newly emerging solutions for renewable energies and electric mobility.

Dr. **Andreas Gerber** is a Postdoc researcher at the Technology and Society Laboratory at Empa. His research focuses on systems thinking in combination with games. In his current position, he is part of the NRP 73 project "post-fossil cities" where he contributes to the development and application of a simulation game.

Examination information

Examination sub part/s

1. Examination sub part (1/2)

Examination time and form

Decentral - Presentation (in groups - all given the same grades) (50%)

Remark

Development and documentation of a simulation game

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

2. Examination sub part (2/2)

Examination time and form

Decentral - examination paper written at home (individual) (50%)

Remark

Individual reflection paper

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

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Examination languages

Question language: English

Answer language: English

Examination content

- Development and documentation of a simulation game in groups (50%)
- Individual reflection paper (at least 12.000 characters incl. blanks) on the learnings and insights drawn from participating in different simulation games, of the own game development and the theoretical foundations (50%)

Examination relevant literature

- Duke, Richard and Jac Geurts. "Policy Games for Strategic Management - Pathways into the Unknown". 2004. Dutch University Press, Amsterdam, The Netherlands.
- Sterman, John D. "Modeling managerial behavior: Misperceptions of feedback in a dynamic decision making experiment." Management science 35.3 (1989): 321-339.
- Holtz, Georg, et al. "Prospects of modelling societal transitions: Position paper of an emerging community." Environmental



Innovation and Societal Transitions 17 (2015): 41-58.

- Dietz, Thomas, Elinor Ostrom, and Paul C. Stern. "The struggle to govern the commons." *Science* 302.5652 (2003): 1907-1912.
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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.