University of St.Gallen

Course and Examination Fact Sheet: Spring Semester 2019

8,720: Technologien/Technologies: Predictive Technologies in Modern Science - From Climate Research to Economy

ECTS credits: 6

Overview examination/s
(binding regulations see below)
Decentral - examination paper written at home (individual) (40%)
Decentral - Presentation (in groups - all given the same grades) (30%)
Decentral - examination paper written at home (individual) (30%)

Attached courses
Timetable -- Language -- Lecturer
8,720,1.00 Technologien/Technologies: Predictive Technologies in Modern Science - From Climate Research to Economy
-- Englisch -- Bschir Karim

Course information

Course prerequisites
No special requirements needed. Since the course is held in English, it is expected that students are prepared to read literature in English. Plenary discussions will also be held in English. It is expected that students are willing to engage in group work.

Course content

Predicting the behavior of complex systems (the climate, the economy, human health etc.) is a major goal of scientific practice. In this seminar, we will take a look at the historical development of predictive techniques in modern science from the late 19th century onwards with a special emphasis on the impact of computer technology in the middle of the 20th century and the recent rise of data-driven predictive technologies.Thinking about the potential and the limitations our predictive capacities will facilitate an adequate understanding of the goals and methods of modern science and technology more generally.

Course structure

Seminar sessions are held weekly. The first two sessions will be dedicated to a general introduction into the topic. During the rest of the semester, more specific issues related to predicton (Nassim Taleb's Black Swan theory, Philip Tetlock's good judgment project, the (un)predictability of history) as well current examples of predictive practices (climate science, economic forecasting, predictive policing) will be discussed.

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.

Course literature

General Introductory Literature

Oreskes, Naomi (2000). Why Predict? Historical Perspectives on Prediction in Earth Science. In D. Sarewitz, R. A. Pielke, & R. Byerly (Eds.), *Prediction: Science, Decision Making, and the Future of Nature* (pp. 23-40). Washingtion D.C.: Island Press.

Tetlock, P. E. (2015). *Superforecasting: The art and science of prediction.* New York: Crown Publishers.

Siegel, E. (2013). *Predictive analytics: The power to predict who will click, buy, lie, or die.* Hoboken, N.J.: Wiley.

Friedman, M. (1953). The methodology of positive economics. In *Essays in positive economics* (Vol. II, pp. 3-43). Chicago: University of Chicago Press.

Additional course information

After finishing his undergraduate studies in biochemistry and philosophy at the University of Zurich, Karim Bschir obtained a PhD in philosophy of science at the ETH Zurich in 2011 with a thesis on scientific realism (Wissenschaft und Realität, Mohr Siebeck: 2012). He held visiting research positions at the London School of Economics, the Leibniz University in Hannover, and the University Roma Tre. In Fall 2014, Karim was a visiting fellow at the Center for Philosophy of Science at the University of Pittsburgh. His current research focuses on the philosophical analyis of scientific predictions and is supported by a Branco Weiss Fellowship.

Examination information

Examination sub part/s

1. Examination sub part (1/3)

Examination time and form
Decentral - examination paper written at home (individual) (40%)

Remark
minimum length: 12000 characters

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

2. Examination sub part (2/3)

Examination time and form
Decentral - Presentation (in groups - all given the same grades) (30%)

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

3. Examination sub part (3/3)

Examination time and form
Decentral - examination paper written at home (individual) (30%)

Remark
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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).
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Supplementary aids
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Examination languages
Question language: English
Answer language: English

Examination content

The main part of the examination is a individual term paper on one of the topics of the course (examination part 1; 40% of grade). The paper can either be a discussion of relevant literature or of a current topic related to prediction and forecasting. Papers have to be handed in by Saturday, May 31st. Each student has to participate in a group presentation (approx. 20 min) of one of the texts discussed in the course (examination part 2; 30% of grade; all given the same grade). Each student will have to hand in 6 of 10 possible preparatory assignments (max. 500 words). Assignments will consist of a short question or task related to the reading of the week.

Examination relevant literature

There will be no specific literature requirements for the term papers. The full program with required readings for each week will be announced 10 days before the first session on www.predictionhsg.wordpress.com.

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Please note

We would like to point out to you that this fact sheet has absolute priority over other information such as StudyNet, faculty members' personal databases, information provided in lectures, etc.When will the fact sheets become binding?

- Information about courses and examination time (central/decentral and grading form): from the start of the bidding process on 24 January 2019
- Information about decentral examinations (examination-aid rule, examination content, examination relevant literature): after the 4th semester week on 18 March 2019
- Information about central examinations (examination-aid rule, examination content, examination relevant literature): from the start of the enrolment period for the examinations on 08 April 2019

Please look at the fact sheet once more after these deadlines have expired.

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