



Course and Examination Fact Sheet: Autumn Semester 2018

7,723: Technologien/Technologies: The Digital Revolution

ECTS credits: 6

Overview examination/s

(binding regulations see below)

Decentral - examination paper written at home (individual) (40%)

Decentral - Group examination paper (all given the same grades) (20%)

Decentral - Presentation (in groups - all given the same grades) (20%)

Decentral - examination paper written at home (individual) (20%)

Attached courses

Timetable -- Language -- Lecturer

[7.723.1.00 Technologien/Technologies: The Digital Revolution](#) -- 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 and do independent research in one of the focus topics of the course (Societal Challenges of Artificial Intelligence; Digitalization and Democracy; Big Data Technologies in Social Science; Digital Warfare).

Course content

This seminar treats the emergence of modern information technologies in the second half of the 20th century. Particular focus will be laid on the impact that digital technologies had on the development of science after WWII, and on their relevance for current scientific research. Along with the historical background of the digital revolution, students will also be introduced to theoretical concepts such as "scientific paradigm" and "scientific revolution", as well as to the basics of information theory. The goal of the course is to develop a historically well-informed reflective stance on the role and impact of digital technology on knowledge production in modern societies.

Course structure

Seminar sessions are held weekly on Tuesdays from 10-14h. The course is divided in two main parts. The first half of the course will be dedicated to the conceptual basics of the digital revolution. Technical terms like "scientific revolution", "paradigm change", "techno-economic paradigm shifts", "Kondratieff waves" and others will be introduced and discussed.

In the second half of the course, four focus topics related to the digital revolution will be investigated in-depth. Each student will have to engage in group work on one of the following topics:

- 1) Societal Challenges of Artificial Intelligence
- 2) Digitalization and Democracy
- 3) Big Data Technologies in Social Science
- 4) Digital Warfare

Course literature

General Preparatory Literature



Perez, Carlota. (2009). Technological revolutions and technoeconomic paradigms. In: *Working Papers in Technology Governance and Economic Dynamics*. Tallin: University of Technology Tallin.

Floridi, Luciano (2014). *The Fourth Revolution. How the Infosphere is Reshaping Human Reality*. Oxford University Press.

A detailed program and reading list will be available two weeks before the first seminar session on StudyNet as well as under this link: digitalrevolution.wordpress.org.

Additional course information

Karim Bschor ist Dozent und Oberassistent für Wissenschaftsphilosophie am Lehrstuhl für Philosophie der ETH Zürich. Er war Gastwissenschaftler unter anderem an den Universitäten Hannover und Pittsburgh. Derzeit betreibt er ein Forschungsprojekt über Vorhersagen in den Wissenschaften.

Examination information

Examination sub part/s

1. Examination sub part (1/4)

Examination time and form

Decentral - examination paper written at home (individual) (40%)

Remark

minimum length: 12'000 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 (2/4)

Examination time and form

Decentral - Group examination paper (all given the same grades) (20%)

Remark



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Examination-aid rule

Term papers

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- 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

3. Examination sub part (3/4)

Examination time and form

Decentral - Presentation (in groups - all given the same grades) (20%)

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

4. Examination sub part (4/4)

Examination time and form

Decentral - examination paper written at home (individual) (20%)

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 written group report on one of the focus topics. Each student will provide one chapter of the report (examination part 1; 40% of grade). Each group report will be complemented by a jointly written introduction (examination part 2; 20% of grade; all given the same grade). Written group reports will have to be handed in by January 15th 2019.

Each group will present their key insights in a joint presentation at the end of the semester (examination part 3; 20% of the grade; all given the same grade).

In the first part of the course, each student will have to hand in 2 of 4 possible preparatory assignments (max. 500 words). Assignments will consist of a short question or task related to the reading for next week's session and have to be handed in by Tuesday, 9am of the respective session date (examination part 4; 20% of grade).

Examination relevant literature

There will be no specific literature requirements for the group reports. Each group will do their own literature research. There will be suggested readings for each group announced. Groups will be given time and assisted with literature research during the Tuesday sessions.

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 23 August 2018
- Information about decentral examinations (examination-aid rule, examination content, examination relevant literature): after the 4th semester week on 15 October 2018
- Information about central examinations (examination-aid rule, examination content, examination relevant literature): from the start of the enrolment period for the examinations on 05 November 2018

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