Course and Examination Fact Sheet: Spring Semester 2025

8,032: Methods: Social Network Analysis - a Systematic and Quantifying Approach

ECTS credits: 3

Overview examination/s
(binding regulations see below)
decentral - Written work, Digital, Individual work individual grade (50%)
Examination time: Term time
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Examination time: Term time

Attached courses
Timetable -- Language -- Lecturer
8,032,1.00 Methods: Social Network Analysis - a Systematic and Quantifying Approach -- English -- Shahrezaye Morteza

Course information

Course prerequisites

This course is assigned to the «Digital Channel & Customer Relationship Management» profile but can also be taken without selecting a specialization.

Basic computer skills are required (no programming skills). However, basic knowledge of mathematics and programming is an advantage.

Learning objectives

With the advent of social media, social network analysis (SNA) has become increasingly popular among researchers, journalists, marketers, and the general public. Most of us are familiar with examples of network visualizations such as friendship networks, networks of corrupt politicians, networks of shell companies.

This course is designed for those who would like to use SNA to view, explore, analyze, and create insights from network data. After successfully participating in the course, students are able to:
1. understand the most important theoretical and methodological foundations of social network analysis
2. understand the main concepts of simulation of social systems
3. apply these methods to your own research projects
4. use centrality measures and their calculation
5. visualize networks and other complex data

Course content
1- Fundamentals of networks
2- Descriptive methods of Social Network Analysis (SNA)
3- Fundamentals of Gephi
4- Basics of network visualization with Gephi
5- Network patterns
6- Working with Gephi filters
7- network statistics
8- Communities and partitioning networks

9- A brief introduction to SNA in R platform

Course structure and indications of the learning and teaching design

This course counts three credits. Accordingly, the total workload for students is 90 hours. This includes self-study, campus time, and all examinations.

The course is conducted in presence in St. Gallen.

This course is self-contained. Comprehensive PowerPoint slides with animations and videos are provided. In addition, the instructor will guide the participants through every step. There will be several exercises and projects that participants will have to work on personally (no teamwork). These exercises are used for the final grading.

Course literature
- Yang, S., Keller, F. B., & Zheng, L. (2016). *Social network analysis: Methods and examples*. Sage Publications.
- Cherven, K. (2015). *Mastering Gephi network visualization*. Packt Publishing Ltd.

Additional course information
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Examination information

Examination sub part/s

1. Examination sub part (1/2)

Examination modalities

Examination type	Written work
Responsible for organisation	decentral
Examination form	Written work
Examination mode	Digital
Time of examination	Term time
Examination execution	Asynchronous
Examination location	Off Campus
Grading type	Individual work individual grade
Weighting	50%
Duration	--

Examination languages
Question language: English
Answer language: English

Remark
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Examination-aid rule
Free aids provision

Basically, students are free to choose aids. Any restrictions are defined by the faculty members in charge of the examination under supplementary aids.

Supplementary aids
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2. Examination sub part (2/2)

Examination modalities

Examination type	Written work
Responsible for organisation	decentral
Examination form	Written work
Examination mode	Digital
Time of examination	Term time
Examination execution	Asynchronous
Examination location	Off Campus
Grading type	Individual work individual grade
Weighting	50%
Duration	--

Examination languages
Question language: English
Answer language: English

Remark
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Examination-aid rule
Free aids provision

Basically, students are free to choose aids. Any restrictions are defined by the faculty members in charge of the examination under supplementary aids.

Supplementary aids
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Examination content
50% of the final grade is made up of 5 exercises that students must submit during the semester. The other 50% consists of a final project. The students are obliged to work individually.

Basics of network theory and network visualization with Gephi are prerequisites for fulfilling the examination pots. Active participation in the course guarantees student success and does not require them to use material outside of the course.

Examination relevant literature
The slides provided by the instructor and the presence in the lectures are enough for the examination.

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 13 (Monday, 25 March 2025) 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, 23 January 2025);
- Examination information (supplementary aids, examination contents, examination literature) for decentralised examinations: in CW 12 (Monday, 17 March 2025);
- Examination information (supplementary aids, examination contents, examination literature) for centrally organised mid-term examinations: in CW 14 (Monday, 31 March 2025);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised examinations: two weeks before ending with de-registration period in CW 15 (Monday, 07 April 2025).