



Course and Examination Fact Sheet: Autumn Semester 2021

7,390: Network Analysis

ECTS credits: 4

Overview examination/s

(binding regulations see below)

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

Examination time: term time

Decentral - examination paper written at home (individual) (45%)

Examination time: term time

Decentral - Active participation (15%)

Examination time: term time

Attached courses

Timetable -- Language -- Lecturer

[7,390,1.00 Network Analysis](#) -- Englisch -- [Westerwinter Oliver](#)

Course information

Course prerequisites

Familiarity with basic matrix algebra and R programming would be an advantage.

Learning objectives

This course is an introduction to network analysis. Students will learn the basic concepts and analytic techniques of network analysis and how they can be employed to study substantive socio-political phenomena. Topics covered include network data collection and management including data collection based on web scraping and text analysis, formulation of network hypotheses, network description and visualization, and methods for making statistical inferences with and about networks. We will make use of substantive applications in various social sciences with a focus on political science and international relations. Students will be introduced to common software packages for network analysis in R. Students will engage in their own analyses, using either their own data or replication data that has appeared in published work in political science.

Course content

Politics, and social life more generally, is about networks. People, organizations, groups, and states are connected through a range of relationships. Organizations, for example, can be linked through project collaborations, flows of financial resources, or shared members. States in the international system are related to each other through trade, military alliances, and violent conflict among others. The patterns of such relationships constitute networks. The position of actors within these networks as well as the overall structural characteristics of networks can have an important impact on the behavior of agents and other outcomes of interest for social scientists. For example, the network ties of individuals may influence their voting behavior in an election, non-governmental organizations that occupy central positions in the network of human rights organizations may be more successful in launching human rights advocacy campaigns, and states that are central in the international trade network may be less likely to engage in violent conflict.

The study of networks in the social sciences has grown rapidly in recent years. Social scientists are investigating the effects of networks on a broad range of socio-political phenomena including political participation, voting behavior, congressional voting, terrorism, revolutions, transnational advocacy campaigns, policy diffusion, alliance formation, and war. Network analysis provides a repertoire of theoretical propositions and methods to study the properties, antecedents, and consequences of networks.

Course structure and indications of the learning and teaching design



The course will take place on a weekly basis in the fall semester 2021. There will be no classes during the semester break. The course will be taught in-person on the HSG campus.

The course will consist in input by the lecturer, with student discussion and student presentations.

Course literature

The syllabus will provide a list of required and optional readings for the class. Relevant readings include, but are not limited to:

- Carrington, Peter J., John Scott, and Stanley Wasserman. 2005. Models and Methods in Social Network Analysis. New York: Cambridge University Press.
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- Hanneman, Robert A. and Mark Riddle. 2005. Introduction to social network methods.} Riverside: University of California, Riverside. (<http://faculty.ucr.edu/~hanneman>)
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- Jackson, Matthew. 2008. Social and Economic Networks. Princeton: Princeton University Press. Knoke, David and Song Yang. 2008. Social Network Analysis. Second edition. London: Sage.
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- Robins, Garry. 2015. Doing Social Network Research. Network-based Research Design for Social Scientists. London: Sage.
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- Scott, John. 2013. Social Network Analysis. Third edition. London: Sage.
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- Wasserman, Stanley and Katherine Faust. 1994. Social Network Analysis. Methods and Applications. New York: Cambridge University Press.

Additional course information

The lecturer will inform about the exact specifics of the course in the first session and regularly during the course of the semester. For additional information, please contact Oliver Westerwinter (email: oliver.westerwinter@unisg.ch).

In the case of the President's Board having to implement new directives due to the SARS-CoV-2 pandemic in AS2021, the course information listed above will be changed as follows:

- The course is conducted online via the platform Zoom;
- The recordings of the course will be available for at least 30 day;
- The lecturer informs via StudyNet and email on the changed implementation modalities of the course.

There are no changes necessary to the examination information. Active participation applies to the online sessions.

Examination information

Examination sub part/s

1. Examination sub part (1/3)

Examination time and form

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

Examination time: term time

Remark

Term paper

Examination-aid rule

Term papers

Written work must be written without outside help according to the known citation standards, and a declaration of authorship must be attached, which is available as a template on the StudentWeb.



Documentation (quotations, bibliography, etc.) must be carried out universally and consistently according to the requirements of the chosen/specified citation standard such as e.g. APA or MLA.

The legal standard is recommended for legal work (cf. by way of example: FORSTMOSER, P., OGOREK R., SCHINDLER B., Juristisches Arbeiten: Eine Anleitung für Studierende (the latest edition in each case), or according to the recommendations of the Law School).

The reference sources of information (paraphrases, quotations, etc.) that has been taken over literally or in the sense of the original text must be integrated into the text in accordance with the requirements of the citation standard used. Informative and bibliographical notes must be included as footnotes (recommendations and standards e.g. in METZGER, C., Lern- und Arbeitsstrategien (latest edition)).

For all written work at the University of St.Gallen, the indication of page numbers is mandatory, regardless of the standard chosen. Where page numbers are missing in sources, the precise designation must be made differently: chapter or section title, section number, article, etc.

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 - examination paper written at home (individual) (45%)

Examination time: term time

Remark

Three problem sets, 15% each

Examination-aid rule

Term papers

Written work must be written without outside help according to the known citation standards, and a declaration of authorship must be attached, which is available as a template on the StudentWeb.

Documentation (quotations, bibliography, etc.) must be carried out universally and consistently according to the requirements of the chosen/specified citation standard such as e.g. APA or MLA.

The legal standard is recommended for legal work (cf. by way of example: FORSTMOSER, P., OGOREK R., SCHINDLER B., Juristisches Arbeiten: Eine Anleitung für Studierende (the latest edition in each case), or according to the recommendations of the Law School).

The reference sources of information (paraphrases, quotations, etc.) that has been taken over literally or in the sense of the original text must be integrated into the text in accordance with the requirements of the citation standard used. Informative and bibliographical notes must be included as footnotes (recommendations and standards e.g. in METZGER, C., Lern- und Arbeitsstrategien (latest edition)).

For all written work at the University of St.Gallen, the indication of page numbers is mandatory, regardless of the standard chosen. Where page numbers are missing in sources, the precise designation must be made differently: chapter or section title, section number, article, etc.

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 - Active participation (15%)

Examination time: term time

Remark

Active participation in class discussions

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

Examination content

The three problem sets will cover the material discussed in class. For the term paper, you can choose your own research question to work on and apply methods of social network analysis to answer it.

Examination relevant literature

The syllabus will provide a list of required and optional readings for the class (available at the beginning of the term). Relevant readings include, but are not limited to:

- Carrington, Peter J., John Scott, and Stanley Wasserman. 2005. Models and Methods in Social Network Analysis. New York: Cambridge University Press.
- Hanneman, Robert A. and Mark Riddle. 2005. Introduction to social network methods.} Riverside: University of California, Riverside. (<http://faculty.ucr.edu/~hanneman>)
- Jackson, Matthew. 2008. Social and Economic Networks. Princeton: Princeton University Press. Knoke, David and Song Yang. 2008. Social Network Analysis. Second edition. London: Sage.
- Robins, Garry. 2015. Doing Social Network Research. Network-based Research Design for Social Scientists. London: Sage.
- Scott, John. 2013. Social Network Analysis. Third edition. London: Sage.
- Wasserman, Stanley and Katherine Faust. 1994. Social Network Analysis. Methods and Applications. New York: Cambridge University Press.



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, 26 August 2021);
- Examination information (regulations on aids, examination contents, examination literature) for decentralised examinations: in CW 42 (Monday, 18 October 2021);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised mid-term examinations: in CW 42 (Monday, 18 October 2021);

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, 8 November 2021).