TEMPLATE

Course Syllabus

Title of the course	**Social Network Analysis**		
Title of the Academic Programme	MA programme in Comparative Politics of Eurasia		
Type of the course	Elective		
Prerequisites	none		
ECTS workload	5		
Total indicative study hours	Directed Study	Self-directed study	Total
	40	150	190
Course Overview	The course will explore main conceptual, theoretical and methodological approaches related to Social Network Analysis (SNA). Part of the course will be practical training in SNA research methods and techniques.		
Intended Learning Outcomes (ILO)	$GPLO_1$: Able to conduct professional communication in Russian and/or English in a multicultural environment with the use of different communication technologies PLO_1: Able to use relevant research results in political science and adjacent sciences, to develop applications of political science for solving practical tasks PLO_4: Able to analyze empirical data with the use of modern qualitative and quantitative methods and software PLO_6: Able to develop a design for academic and applied research, including collective one, with the use of modern political science methodology		
Teaching and Learning Methods	This course consists of lectures, seminars, computer classes and individual project with presentation. Seminars are held in interactive ways including discussions, group works, quizzes. Computer classes include practical work with social network analysis software. Individual project is a written work (essay) on the course topic.		

Content and Structure of the Course

№	**Topic**	**Total**	**Directed Study**	**Self-directed Study**
1	Network terminology and metrics. Describing, visualising and analysing networks. Software: Pajek, Gephi, R.	32	12	40
2	Network in bibliometrics: using SNA for bibliographic search and analysis. Software: VosViewer and CitNetExplorer.	41	14	55
3	Network theory and applications. Network analysis in political studies. Network models. Software: Pajek, Gephi, R.	41	14	55
Total study hours		190	40	150

<table>
<tr><td>Indicative Assessment Methods and Strategy</td><td>Final grade for the course will be based on the following criteria:
- class attendance, preparation and participation in class discussions (40% of the final grade),
- individual project (written essay) with oral presentation (35%),
- final written test (25% of the final grade).
Missed seminars policy: If students have valid excuses to miss seminars confirmed by the study office, they can compensate the whole participation grade provided that they submitted all the compensating tasks not later than two weeks before the end of the course (compensating tasks are discussed with the teacher). Seminars missed without valid excuse can't be retaken but up to 60% of preparation & participation grade can be compensated via additional task on the topic of the missed seminar; Student should request a task by email not later than by the next seminar and submit not later than three days after that.
Missed test policy: Test missed by the student without a valid excuse can be retaken with a 25% grade penalty. Penalty does not apply if a student has a valid excuse confirmed by the study office.
Late Submission policy: Essays (project) submitted after the deadline are penalized by one grade point for each day after the deadline.</td></tr>
<tr><td>Readings / Indicative Learning Resources</td><td>Mandatory
The Oxford Handbook of Political Networks
https://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780190228217.001.0001/oxfordhb-9780190228217
Optional
1) Hanneman, R. A., & Riddle, M. (2005). Introduction to social network methods (free introductory textbook on social network analysis). Downloadable from the author's webpage: http://www.faculty.ucr.edu/~hanneman/
2) Schneider, H. L., & Huber, L. M. (2008). Social Networks: Development, Evaluation and Influence. Nova Science Publishers. https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=3018880</td></tr>
<tr><td>Indicative Self- Study Strategies</td><td><table>
<tr><th>Type</th><th>+/–</th><th>Hours</th></tr>
<tr><td>Reading for seminars / tutorials (lecture materials, mandatory and optional resources)</td><td>+</td><td>90</td></tr>
<tr><td>Assignments for seminars / tutorials / labs</td><td>+</td><td>10</td></tr>
<tr><td>E-learning / distance learning (MOOC / LMS)</td><td>-</td><td>0</td></tr>
<tr><td>Fieldwork</td><td>-</td><td>0</td></tr>
<tr><td>Project work</td><td>+</td><td>50</td></tr>
<tr><td>Other (please specify)</td><td>-</td><td>0</td></tr>
<tr><td>Preparation for the exam</td><td>-</td><td>0</td></tr>
</table></td></tr>
<tr><td>Academic Support for the Course</td><td>Academic support for the course is provided via LMS, where students can find: guidelines and recommendations for doing the course; guidelines and recommendations for self-study; samples of assessment materials</td></tr>
<tr><td>Facilities, Equipment and Software</td><td>Facilities, Equipment and Software
SNA software: Gephi, Pajek, R (packages for network analysis)</td></tr>
</table>

	Bibliometric SNA software: VosViewer, CitNetExplorer
Course Instructor	Valeria Ivaniushina

Course Content

1. **Network terminology and metrics. Describing, visualising and analysing networks. Software: Pajek, Gephi, R.**

    1) Network terminology and basic concepts

       Definition of a network. Nodes (vertices) and links (arcs, edges). Directed and undirected relations. Representation of social relations as graphs. How to record network data: adjacency matrix, edge list, node list.

    2) Network structure: centrality

       Egonetworks, k-neighbors. Centrality measures: in/out degree centrality; betweenness; closeness; eigenvector, Katz & PageRank. Centrality vs. centralization. Degree distribution and centralization measures.

    3) Social capital

       What is social capital? Definitions of P.Bourdieu, J.S.Coleman, R.D.Putnam, A.Portes. Bonding and bridging; social capital formation; social capital and economic development. World Bank's programs with emphasis on social capital. Operationalization and measures of social capital.

    4) Network structure: components and communities.

       Weak, strong, and giant components. Diffusion of information in networks. Real life examples. Network modularity. Community detection algorithms: local and global definitions, vertex dissimilarity. Clustering: hierarchical, partitional, spectral. Communities in real-life networks.

2. **Network in bibliometrics: using SNA for bibliographic search and analysis. Software: VosViewer and CitNetExplorer.**

    5) Networks in bibliometrics.

       Two-mode (bimodal) networks. Affiliation matrix. Weighted networks. Bibliometric networks: co-citation, bib-coupling, co-authorship. Journal networks. Timeline in bibliometric analysis.

3. **Network theory and applications. Network models. Software: Pajek, Gephi, R.**

    6) Network models: Random graphs (Erdos-Renuy), Small world, Preferential attachment (Power law). Network characteristics: shortest path, clusterization coefficient (local and global). Resistance to attacks.

    7) Diffusion of information in networks. Opinion formation. Social movements. Recruiting through networks.

    8) Project presentations

    9) Test

Annex 1

Intended Learning Outcomes (ILO) Delivering

Course ILO(s)	Teaching and Learning Methods for delivering ILO(s)	Indicative Assessment Methods of Delivered ILO(s)
$GPLO_1$: Able to conduct professional communication in Russian and/or English in a multicultural environment with the use of different communication technologies	Lectures, seminars, self-study	Preparation for seminars; In-class participation; Test
PLO_1: Able to use relevant research results in political science and adjacent sciences, to develop applications of political science for solving practical tasks	Lectures, seminars, self-study	Preparation for seminars; In-class participation; Test
PLO_4: Able to analyze empirical data with the use of modern qualitative and quantitative methods and software	Lectures, seminars, self-study	Preparation for seminars; In-class participation; Test
PLO_6: Able to develop a design for academic and applied research, including collective one, with the use of modern political science methodology	Lectures, seminars, self-study	Preparation for seminars; In-class participation; Test

Annex 2

Assessment Methods and Criteria

Assessment Methods

Types of Assessment	Forms of Assessment	Modules			
		1	2	3	4
Formative Assessment	Test		*		
	Project with Presentation		*		
	In-class Participation	*	*		

Assessment Criteria

In-class Participation

Grades	Assessment Criteria
«Excellent» (8-10)	A critical analysis which demonstrates original thinking and shows strong evidence of preparatory research and broad background knowledge.
«Good» (6-7)	Shows strong evidence of preparatory research and broad background knowledge. Excellent oral expression.
«Satisfactory» (4-5)	Satisfactory overall, showing a fair knowledge of the topic, a reasonable standard of expression. Some hesitation in answering follow-up questions and/or gives incomplete or partly irrelevant answers.
«Fail» (0-3)	Limited evidence of relevant knowledge and an attempt to address the topic. Unable to offer relevant information or opinion in answer to follow-up questions.

Individual project (written essay) with oral presentation

Grades	Assessment Criteria
«Excellent» (8-10)	A well-structured, analytical presentation of project work. Shows strong evidence and broad background knowledge. In a group presentation all members contribute equally and each contribution builds on the previous one clearly; Answers to follow-up questions reveal a good range and depth of knowledge beyond that covered in the presentation and show confidence in discussion.
«Good» (6-7)	Clearly organized analysis, showing evidence of a good overall knowledge of the topic. The presenter of the project work highlights key points and responds to follow up questions appropriately. In group presentations there is evidence that the group has met to discuss the topic and is presenting the results of that discussion, in an order previously agreed.
«Satisfactory» (4-5)	Takes a very basic approach to the topic, using broadly appropriate material but lacking focus. The presentation of project work is largely unstructured, and some points are irrelevant to the topic. Knowledge of the topic is limited and there may be evidence of

	basic misunderstanding. In a group presentation, most of the work is done by one or two students and the individual contributions do not add up.
«Fail» (0-3)	Fails to demonstrate any appropriate knowledge.

Written Assignments (Test)

Grades	Assessment Criteria
«Excellent» (8-10)	Has a clear argument, which addresses the topic and responds effectively to all aspects of the task. Fully satisfies all the requirements of the task; rare minor errors occur;
«Good» (6-7)	Responds to most aspects of the topic with a clear, explicit argument. Covers the requirements of the task; may produce occasional errors.
«Satisfactory» (4-5)	Generally addresses the task; the format may be inappropriate in places; display little evidence of (depending on the assignment): independent thought and critical judgement include a partial superficial coverage of the key issues, lack critical analysis, may make frequent errors.
«Fail» (0-3)	Fails to demonstrate any appropriate knowledge.

Samples of Assessment Material

Samples of essay topics:

- Information diffusion in Social Media
- Social networks and diffusion of innovations
- Social movements: role of networks
- Dark networks (criminology, terrorism, drugs)

Annex 3

Recommendations for students about organization of self-study

Self-study is organized in order to:

- Systemize theoretical knowledge received at lectures;
- Extending theoretical knowledge;
- Learn how to use legal, regulatory, referential information and professional literature;
- Development of cognitive and soft skills: creativity and self-sufficiency;
- Enhancing critical thinking and personal development skills;
- Development of research skills;
- Obtaining skills of efficient independent professional activities.

Self-study, which is not included into a course syllabus, but aimed at extending knowledge about the subject, is up to the student's own initiative. A teacher recommends relevant resources for self-study, defines relevant methods for self-study and demonstrates students' past experiences. Tasks for self-study and its content can vary depending on individual characteristics of a student. Self-study can be arranged individually or in groups both offline and online depending on the objectives, topics and difficulty degree. Assessment of self-study is made in the framework of teaching load for seminars or tests.

In order to show the outcomes of self-study it is recommended:

- Make a plan for 3-5 presentation which will include topic, how the self-study was organized, main conclusions and suggestions and its rationale and importance.
- Supply the presentation with illustrations. It should be defined by an actual task of the teacher.

Recommendations for essay

An essay is a written self-study on a topic offered by the teacher or by the student him/herself approved by teacher. The topic for essay includes development of skills for critical thinking and written argumentation of ideas. An essay should include clear statement of a research problem; include an analysis of the problem by using concepts and analytical tools within the subject that generalize the point of view of the author.

Essay structure:

1. *Introduction and formulation of a research question.*

2. *Body of the essay* and theoretical foundation of selected problem and argumentation of a research question.

3. *Conclusion* and argumentative summary about the research question and possibilities for further use or development.

Annex 4

Special conditions for organization of learning process for students with special needs

The following types of comprehension of learning information (including e-learning and distance learning) can be offered to students with disabilities (by their written request) in accordance with their individual psychophysical characteristics:

1) *for persons with vision disorders:* a printed text in enlarged font; an electronic document; audios (transferring of learning materials into the audio); an individual advising with an assistance of a sign language interpreter; individual assignments and advising.
2) *for persons with hearing disorders: a* printed text; an electronic document; video materials with subtitles; an individual advising with an assistance of a sign language interpreter; individual assignments and advising.
3) *for persons with muscle-skeleton disorders: a* printed text; an electronic document; audios; individual assignments and advising.