ERASMUS

SOCIOLOGY

1	Name of the course	Social Network Analysis in R
2	Name and surname of the lecturer, title / academic degree	Kamil Filipek, doctor
3	Language	angielski
4	Strona WWW	
5	Semestr	Winter and summer
6	ECTS and number of hours	Hours with the participation of an academic teacher: Lecture 30h, 5 ECTS Consultations 5h Total number of hours with the participation of an academic teacher 35h Number of ECTS credits with the participation of an academic teacher 2 Non-contact hours (student's own work): Studying literature 50h Preparation to the exam 25h Total number of non-contact hours 75h Number of ECTS points for non-contact hours 3 Total number of ECTS points 5
7	Prerequisites	English B2
8	Description of the course	Nowadays, we are witnessing the rise of network data retrieved from digital sources e.g. mobile phones, social media, online archives. Such data enables us to reconstruct emerging practices of communication, sociality, cooperation, that is, the relational foundations of contemporary society. Social network analysis (SNA) is a set of interdisciplinary methods aimed to measure relationships and flows between people, organizations, computers and other connected entities. SNA throws a new light of social phenomena such as: friendship, disease transmission or innovation. In this course students will learn how to recognize, work with and visualize network data. In particular, R packages (igraph, sna, network) will be used to: a) transform untidy data into usable databases b) build networks from edgelists and adjacency matrices c) analyze network properties d) plot networks of different shapes e) interpret structural properties Previous experience of working with R and RStudio is desired but not necessary.

9	Topics	 R Analytical environment – installation and setup 2-3. Markdown documents in R and Python (Google Colab) + own project Local neighborhoods Centrality Friendship paradox Small world phenomenon Homophily and segregation Cohesion ERGMs
10	Literature	 Compulsory literature: Scott, J. (2012). What is social network analysis? (p. 114). Bloomsbury Academic Wasserman, S., & Faust, K. (1994). Social network analysis: Methods and applications. Crossley, N., Bellotti, E., Edwards, G., Everett, M. G., Koskinen, J., & Tranmer, M. (2015). Social network analysis for ego-nets: Social network analysis for actor-centred networks. Sage. Supplementary literature: Granovetter, M. S. (1973). The strength of weak ties. American journal of sociology, 78(6), 1360-1380. Batorski, D., Bojanowski, M., & Filipek, K. (2015). Getting a Job: Resources and Individual's Chances on the Warsaw Labour Market. Polish Sociological Review, 475-492.
11	Learning outcomes	Knows and understands at an advanced level selected facts, objects and phenomena in the field of sociological sub- disciplines as well as other detailed social issues (K_W02) P6U_W P6S_WG Student can use his/her sociological knowledge in predictable conditions and in conditions requiring non-standard solutions (K_U01) P6U_U P6S_UW Can discuss social issues and critically evaluate the positions of other debaters (K_U06) P6U_U P6S_UK
12	Method of verification of learning outcomes (separately for each effect)	K_W02: Discussion K_U01: Project
13	Teaching methods	Presentation, R studio, discussion
14	 Assessment methods Assessment criteria 	Student's project in R Usage of introduced concepts and methods, completeness of the code