(Introduction to) Network Analysis 2022/23

Week	Date	Lectures	Labs	Coursework
1	Feb 13th	Networks motivation, graph theory vs network science, graphology	/	Homework #1 out
2	Feb 20th	Networkology, network representations & data, Erdos-Renyi model	Recitation on *NetworkX* library, *Pajek* format etc.	
3	Feb 27th	Erdos-Renyi & configuration models, small-world networks & model	Network representations, basic network algorithms	
4	Mar 6th	Scale-free distributions & networks, preferential attachment models	Advanced network algorithms, random graph models	
5	Mar 13th	/	/	Homework #1 due
6	Mar 20th	Node position & measures of centrality, link analysis algorithms	Small-world & scale-free models, graphs vs networks	Homework #2 out
7	Mar 27th	Link importance & measures of bridging, perspectives & course projects	Measures of node centrality, PageRank algorithm	
8	Apr 3th	Community structure, community detection & graph partitioning	Measures of link bridging, five networks problem	
9	Apr 10th	Node equivalence & blockmodeling, core-periphery structure	*(course project consultations)*	
10	Apr 17th	Node mixing in networks, fragments & frequent subgraphs	Community detection, blockmodeling & k-cores	Homework #2 due
11	Apr 24th	/	Node degree mixing, graphlet degree	

			distribution	
12	May 1st	Network sampling & comparison, backbones & skeletons	*(course project consultations)*	
13	May 8th	Node layout & network visualization, dynamics of networks	Random-walk sampling, network comparison	
14	May 15th	Network inference & link prediction, graph machine learning	Wiring diagram & block models, errors & attacks	
15	May 22nd	Applications of network analysis, (tentative) invited talks	Node embeddings & classification, link prediction	Course project due
16	May 29th	/	*(preparation for final exam)*	