

Initial calendar:

The list shows the topics covered in classes, **brown** are lectures based on textbook, **green** are research presentations, and **blue** are presentations by students.

Aug. 28: L01 **Overview and Introduction to Network Science (chapter 1)**
Aug. 31: L02 **Graph Theory I (chapter 2); topics for student presentations**
Sept. 05: L03 **Graph Theory II and Random Networks (chapter 2)**
Sept. 07: L04 **Random Networks and Small World Networks (chapters 3-4)**
Sept. 11: L05 **Research: Global_Risk Networks WEF**
Sept. 14: Research topic selections are due before noon
Sept. 14:L06 **Scale Free Networks and Barabasi-Albert Model (chapters 4-5)**
Sept. 18: L07 **Research: U.S. Senate Clustering; U.S. Congress Polarization (Constitution Day)**
Sept. 21: L08 Introduction to Gephi + Examples; **Undergraduate Networks out, Selection due Oct 2**
Sept. 25: L09 Q&A session for H1 **Undergraduate Assignment out due Oct. 16**
Sept. 28: L10 **Barabasi-Albert Model II (chapter 5)**
Oct. 02; Deadline for undergraduates to register their networks before noon
Oct. 02: L11 **Evolving Networks and Degree correlation I (chapter 5, 7)**
Oct. 05; Deadline for undergraduates to select topic for presentation
Oct. 05: L12 **Degree Correlation II (chapter 7)**
Oct. 12: L13 **Robustness I+II (chapter 8)**
Oct. 16: Graduate research plan write ups and undergraduate assignment are due before midnight
Oct. 16: L14 **NS in AI;**
Oct. 19: L15 **Research: French Election Analysis, Aamir Mandviwalla, CS;**
Oct. 23: L16 **Research: Community Detection, Brendan Cross, CS;**
Finding the source of spread in networks;
Oct. 26: L17 **Research: Social Media Evolution, Shahid Modim, CS; Youtube Dynamics, Mon Ma (CS)**
Oct. 30: L18 **skip class to later start students presentation, be made up by three longer classes 26-28**
Nov. 02: L19 **Dr. Youngtao Zhang, NEST; Dr. James Flamino, NEST**
Nov. 06: L20 **Political polarization of news media and influencers on Twitter, [Matthew Cirimele](#);**
Quantifying reputation and success in art, [Jerry Hu](#);
Nov. 09: L21 **Polarization & tipping points, [Andrew Wilkerson](#); Polarized information ecosystems, [Gunnar Eastman](#)**
Nov. 13: L22 Quantifying the evolution of individual scientific impact, [Zirui Yan](#) + The product space conditions the development of nations, [Avni Solace](#); Discussion of the homework solutions
Nov. 16: L23 Universal resilience patterns in complex networks, [Fernando Spadea](#) + The universal decay of collective memory and attention, [Justin Lui](#); Understanding individual human mobility patterns, [Kharn Nigam](#);
Nov. 20: L24 **Controllability of complex networks, [Michael Cleversley](#) + Clique and link percolation, [Fatih Orhan](#)**
Nov. 27: L25 **Experimental evidence for tipping points in social convention, [David Qian](#) + Fast Algorithm for Community Detection, [Yuyang Gong](#); Complex Network Control of Airline Flight Delays, [Brandon McCusker](#)**
Nov. 30: **Contact networks patches, [Tashi Sherpa](#); Beyond the degree distribution, [Angelica Loshak](#); Immunization, [Alex Orr](#); Human symptoms and disease network, [Simon Gibson](#);**
Dec. 04: L27 Entropy Measures of Human Communication, [June Tan](#); Human networks and segregation, [Gwin Promprated](#); Social Networks and Cognition, [Thomas Bowen](#); Limits of modularity - greedy algorithms, [Alexander Gibson](#)
Dec. 07: L28 Epidemics on Networks, [Jonathan Adotey](#); Plotting power laws & estimating the degree exponent, [Peyton Daley](#); Measuring fitness of evolving networks, [Erik Swanke](#); A network framework of cultural history, [Muhammed Alafifi](#); TBA, [Colin Sherer](#)