



M375T/M396C:

**TOPICS IN COMPLEX
NETWORKS**

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Network science is an interdisciplinary discipline with deep connections in graph theory, probability, statistical physics, and computer science. In recent years, the availability of large data sets from real-world networks (e.g., Facebook, Twitter) and the ability to study them using modern computational power has fueled significant interest in this area.



In this course for advanced undergraduates and graduate students, we introduce the mathematical foundations for analyzing the structure of complex networks. In doing so we will rely on a mix of rigorous theory and intuition. Topics include random graph models, empirical tools, and dynamical processes on networks. No prior background except a good working knowledge of probability and linear algebra will be assumed. For additional information see:

<http://www.ma.utexas.edu/users/rav/ComplexNetworks/>