This course is designed to provide an overview of what we have learned from relational studies of human health; how relational studies of health-related topics are conducted; and the strengths and limits of various approaches. Much of what you will encounter in this course will be some form of social network analysis, though familiarity with network methods is not assumed nor required as a prerequisite. Topically, the material will engage sociology, population health and medicine, and will be a combination of exposure to key texts; learning about methodological approaches and recent advances that have shaped studies of health and relationships; and importantly, examining the frontiers and opportunities for the field to expand. While the vast majority of the assigned readings will directly involve analysis of a health-related topic, on several occasions the focus of a given study will be an important related concept that will illuminate aspects of the week's theme or the future of this research area (examples will include fundamental social processes such as social status dynamics, or social exclusion).

The format of the course is discussion-based; I will spend time each week giving key background and context to how the work articulates with the development of the field, and each week one (or two) of you will lead a discussion introducing the material (no more than 15 minutes), and we'll spend the remainder of the time engaging with the questions raised by the discussants. This discussion will touch on conceptual/methodological contributions of the studies, how they articulate with prior approaches, and any challenging questions they raise.

Your goals in this course to take the skills you learn during the term to develop either a research paper, or an NSF or NIH-style funding proposal that you will present to the class. Either final product will be evaluated by me, but part of your course grade will come from thoughtful peer reviews of your classmates’ presentations to help them advance their thinking should they decide to develop it further into a publication, thesis, or dissertation. Starting in Week 2, if you have not signed up as one of the week's two discussants, you will be required to write and submit a 1-page memo (single-spaced, 12pt font) on an aspect(s) of the reading(s) that you found interesting (or provocative, or problematic) to Moodle by Wednesday @ 12n. The list of weekly supplemental readings) is intended to provide extra detail for those that wish it; these are not required.

Grading: 35% class participation and engagement (including serving as discusant and reflection papers); 15% short research proposal; 40% final project (research paper or NSF/NIH proposal); 10% peer reviews of the final project.

While not required, if you have not had formal exposure to social network methods, you may wish to familiarize yourself with key concepts in one of the following texts:

**Week 1: Overview: relational approaches to studying health (January 26)**
This week we will discuss major theories that motivate the study of social relationships and health from the literatures on medical sociology and social epidemiology.


**Week 2: Overview of key data sources that make use of network and health data (Feb. 2)**

This week we will begin to become familiar with some of the canonical social science and epidemiological datasets that have benefited scientific knowledge from bringing together network and health data. The required readings are exemplar studies, while the “also recommended” reading gives additional detail about the study design should you wish to become more familiar with it. Taken together, this comparative overview should orient you to possible data sources you may wish to explore for thesis projects or department comprehensive exams.


Also recommended:


**Week 3: Special methodological challenges in network analysis (Feb. 9)**

Also recommended:

**Week 4: Probabilistic approaches to examining relationships and health (Feb. 16)**

Also recommended:

**Week 5: How networks shape the provision and experience of health care and propensity for epidemic infectiousness (Feb. 23)**

Also recommended:

**Week 6: Missing data in networks. (March 2)**

While strategies to estimate causal effects in the presence of missing data have been refined for traditional sample survey data, approaches to missing network data are comparatively underdeveloped. Completeness is especially important for SNA because of the often-clustered nature of relationships. If one is missing data from a key individual who has ties to others, information is then missing on both that person’s attributes and ties.


Also recommended:

*** Due March 3: short research proposal (3 single-spaced pages, max). This deadline is so that I can give you feedback before spring break ***
Week 7: Network health interventions & experimental paradigms (March 9)


*Also recommended:*

*************** No class Week 8 : March 16 – Spring Break ***************

Week 9: Research ethics in relational data (March 23)


*Also recommended: *to be announced* (likely one or more Human Subjects Applications)
Week 10: Friend & family network influences on health across the life course (March 30)


Also recommended:


Week 11: New technologies to monitor health behaviors and social networks (April 6)

In the last decade we have entered an era of computational social science, where massive streams of real-time data on human behavior are increasingly amenable to analysis to improve our understanding of how social processes contribute to health from birth until our twilight years. Yet given the ubiquity of portable devices and advances in Bluetooth and radio-frequency-identification (RFID) technologies, conducting this type of research is becoming more feasible and widespread. Reliance upon social network data to construct relational datasets that reflect who people actually interact with has great potential to clarify how socialization processes unfold and moreover, how social processes interact with biological processes of human development. (Pachucki, 2016, NIH OBSSR Blog, https://obssr.od.nih.gov/the-importance-of-social-relationships-over-the-life-course/).


Week 12: Perspectives on social isolation & integration in health and well-being (April 13)


*Also recommended:*


Week 13: Social relationships, health, and genetics (April 20)


*Also recommended:*


Week 14: Final project presentations and group feedback  (April 27)

In this class session, your goal is to publicly summarize (in 5-10 minutes) your final project, lessons learned, and next steps. This will serve as a workshop of sorts, and allow you to integrate feedback from your peers in time for the final paper submission.

********** Final papers due May 5 **********
********** Your feedback to (no more than 2) peers due to them (and to me) by May 10 **********