**L40 SOC 2510/L98AMCS 226:**

**Sociological Approaches to American Health Care**

**Spring 2018**

**Instructor**: Linda Lindsey, Ph.D. **Email**: llindsey@wustl.edu

**Office:** McMillan 245 **Hours:** 1-2pm Mon/Wed and by appointment

**Phone:** AMCS Office (314-935-5216)

 **MTEs:** Luke Foreman (luke.foreman@wustl.edu)

 Yoav Kadan (ykadan@wustl.edu)

**Time:** Mon/Wed 4:00-5:30pm **Credits:** 3 **Location:** Simon 017

**Course Description**

Through a sociological lens, this course provides the theoretical (conceptual) and empirical tools necessary to understand how health, illness, and health care in the United States are significantly influenced by the social structure in which they are embedded. With the backdrop of the ongoing crisis of health care in the United States and the Affordable Care Act, we focus on the intersection of diversity factors including race, social class, gender, and sexuality that predict risks in navigating the health care system. Sociological factors are now major components of the Medical College Admission Test (MCAT) and appear on board licensing exams for nursing and allied health professions; as such, students with interests in medicine, social work, public health, law, and policy studies will find this course useful. Professionals representing the health care needs of a diverse constituency will share their perspectives.

**Course Objectives**

Consistent with the course description, the major objective of this course is to provide the sociological tools to understand the influence of social structure on health, illness, and health care in the United States. Reflecting the interdisciplinary thrust of research, this perspective is supplemented with views from public policy, history, and political economy. Students will demonstrate this understanding by designing a conceptually grounded research project with sound methodological strategies for collecting and analyzing data. In addition, the course will:

* demonstrate the usefulness of theoretical perspectives in sociology (functionalism, conflict theory, social constructionism, symbolic interaction) and the congruent model of social epidemiology to explain and offer interventions in health and health care.
* apply sociological analysis to understand issues of health care reform in the United States centering on the Patient Protection and Affordable Care Act (ACA).
* examine demographic and socio-cultural variables in explaining health care delivery and health outcomes, especially related to the intersection of gender, race and ethnicity, age, social class, and sexuality.
* introduce principles, tools, and evaluations of social science research, including research design, data collection and analysis, and research report writing.
* compare health and health care in the United States with global trends.
* offer perspectives from health care stakeholders including physicians, nurses, administrators, and advocates of underserved groups.
* provide models for health care planning, evaluation, and practice that can be applied to a variety of academic, work, or policy-oriented settings.
* provide students with the critical thinking skills to better understand and predict the future of health care delivery in the United States.
* objectively analyze issues in health care but also be sensitive to the plight of those who are adversely affected by them.

**Course Format**

* The course is divided into four parts:
	+ Part I provides the sociological foundation for health and health care. Interdisciplinary perspectives are overviewed.
	+ Part II examines health care issues, debates on health policy, and costs of health care.
	+ Part III examines inequality, cultural diversity, and intersectional risks in health and health care, and alternative models of health care.
	+ Part IV overviews directions in medical education, the changing roles of health practitioners, and emerging themes in health care practices, communication, technology, and ethics. Research projects will be presented.
* Classes consist of lecture, discussion, and briefings by professionals representing various health constituencies. Be prepared to discuss readings and engage our speakers with meaningful dialogue during class.
* As time permits, we will view segments of several outstanding videos.
* In-class material will highlight selected content that is particularly challenging, both conceptually and empirically. Lectures will *not* be summaries of readings. Although the class is large, course objectives that encourage active engagement, dialogue, and self-directed approaches to learning will be fostered.
* Texting, cell phones and internet are prohibited during class.

**Course Requirements and Grading**

Quizzes: 40%

There will be four 80-minute quizzes throughout the semester that include objective (multiple choice) and essay questions covering all course content. You will work with an assigned partner on the objective portion of the quiz and independently on the essay portion. Essay questions will be drawn from a list distributed in advance.

Group Research Project: 30%

The research project requires data collection on a health care topic of your choice, a comparison of these data with library (secondary) research, and an explanation of the data from one or more of the guiding theoretical perspectives in sociology. You will work with partners of your choice, present findings to the class, and provide one written report from your group. Takeaways for presentations of your peers will be turned in and counted in the grading category below.

Paragraphs, Media Updates, Discussion Leaders, Dialogue: 30%

Critical thinking paragraphs for selected readings will be assigned. Takeaways from the project presentations are part of this grade. Each student will also provide one health-related media update to the class on an assigned day and write a brief summary. Discussion leaders for briefings will be assigned and will generate at least one question to ask our speakers and turn in. Dialogue is part of this grade (see below).

Dialogue

It is expected that in-class participation is ongoing. Dialogue incudes class discussion, reflections on paragraphs and engaging our speakers. Dialogue will be assed throughout the semester and points will be added to the overall paragraph grade. Attendance is a factor for dialogue.

Note: Guidelines and rubric for all requirements will be posted and discussed.

**Text and Reading**

*The Sociology* *of Health, Healing, and Illness* (9/e), 2017, by Gregory L. Weiss and

Lynne E. Lonnquist. New York: Routledge.

Selected content from *Sociology* (3/e) by Linda Lindsey and Stephen Beach, Prentice Hall, 2004.

Other readings are assigned and/or recommended (see schedule). Additional readings will be made available through Blackboard or accessed online.

**Lecture, Reading, and Briefing Schedule**

WL = Text L = Lindsey on Blackboard BB = Blackboard (other readings)

**Part I – *Sociological and Interdisciplinary Perspectives on Health and Health Care; Issues in Measuring Health Care Quality***

**January 17**

Course overview; Basic concepts, Sociological perspectives on health and health care; Intersectionality and health; Exercise on health care awareness

WL = Ch. 1, A Brief Introduction to the Sociology of Health, Healing, and Illness

 Ch. 6, “The Concept of Health,” pp. 141-143

L = Ch. 19, (selection from Health and Health Care), “Theoretical Perspectives on Health in the United States,” pp. 511-517

**January 22**

Exercise/sociological perspectives (continued); Macro, micro, mezzo explanations for health behavior; Medicalization and the medical-industrial complex; Diagnosis as a socio-political process; applying social constructionism

WL = Ch. 2, “Perspectives on the Ascendancy of Medical Authority,” pp. 35-36

 Ch. 6, “Explaining Health Behavior,” pp. 149-167

 Ch. 7, “Experiencing Illness and Disability,” pp. 176-186

BB = Conrad, P. 2006. “The Shifting Engines of Medicalization.” *Journal of Health and*

 *Social Behavior* 46: pp. 3-14

 “Towards a Sociology of Diagnosis.” 2011. *Social Science & Medicine* 73(6):

 793-800

Recommended

Umberson, D. and J. Montez. 2010. “Social Relationships and Health: A

Flashpoint for Public Policy.” *Journal of Health and Social Behavior* 51 (Suppl.) S54-S66

**January 24**

Perception of health and health risk; Stress and mental health of college students; Focus on study drugs

WL = Ch. 4, “Mental Illness,” pp. 103-108

 Ch. 5, Social Stress, pp. 113-127

 Ch. 6, “Health Behavior,” pp. 143-148

BB = Byrd, D. et al. 2012. “Individual, Interpersonal, and Institutional Level Factors

 Associated with the Mental Health of College Students.” *Journal of*

 *American* ***College* *Health*** 60(3): 185-93

 DeSantis, Alan et al. 2013. “Illegal College ADHD Stimulant Distributors….”

 *Substance Use and Abuse.* 48(6):446-456.

 Kolar, K. 2015. “Study Drugs ‘Don’t Make You Smarter’: Acceptability

 Evaluations of Nonmedical Prescription Stimulant Use Among

 Undergraduate Students.” *Contemporary Drug Problems* 42(4):314-330

Briefing: Health/mental health issues on campus

**January 29**

Social epidemiology and etiology of disease; Demographic and epidemiological transition; Conducting research and issues of causality; Applying intersectionality

to health research

WL = Ch. 3, Social Epidemiology

 Ch. 4, “The Social Etiology of Disease,” pp. 76-82

 Ch. 5, “The Roles of SES, Race, Sexual Orientation, and Gender in Social

 Stress,” pp.127-135

L = Ch. 19, (selection from Health and Health Care), “Defining and Measuring Health

 and Disease,” pp. 509-11

 Diagram: The Research Process

BB = Alvarado, C., and C. Chi. 2016. “Intersecting Positions of Social

Disadvantage and Self-Reported Health Status Disparities.” *Journal of*

 *Health Disparities Research and Practice* 9(2):184-215

Braveman, P. et al., 2011. “The Social Determinants of Health: Coming of Age.”

 *American Review of Public Health* 32: 381-398

Recommended

 Lindsey, Ch. 2, The Research Process

**January 31**

Evidence-based medicine; Measuring health and the quality of health care

WL = Ch. 4, Society, Disease, and Illness, pp. 85-110

BB = Coombs, C. et al. 2017. “What Evidence Affects Clinical Practice? An Analysis of

 Evidence-Based Medicine Commentaries.” *Evidence-Based Medicine* 22:

 197

 Bogdan-Lovis, E. et al. 2012. “It’s Not Fair! Or is it? The Promise and the

 Tyranny of Evidence-Based Performance Assessment.” *Theoretical*

 *Medicine and Bioethics* (July) 33: 293-311

Knaapen. L. 2014. “Evidence-Based Medicine or Cookbook Medicine?

Addressing Concerns over the Standardization of Care.” *Sociology*

*Compass* 8/6:823-36

Briefing: Quality assurance in health care (BJC)

Recommended

 Armstrong, J. et al. 2017. “Improvement Evident but Still Necessary in Clinical

 Practice Guideline Quality: A Systematic Review.” *Journal of Clinical*

 *Epidemiology* 81:13-21

 Robertson-Preidler, J. et al., 2017. “What is Appropriate Care? An Integrative

 Review of Emerging Themes in the Literature.” *BMC Health Services*

 *Research* 17(1):452

**February 5: QUIZ #1**

**Part II *– Health Care Issues and Debates: American Health Care: System or Non-System? ACA and Health Care Reform: Cost, Access, and Equity***

**February 7**

Historical and political foundations of U.S. Health care; Development of health insurance: Profit, nonprofit, public sectors; Medicare and Medicaid; Health care reform

WL = Ch. 14, The Health Care System in the United States, pp. 371-385

BB = Collins, S. et al., 2017. “Following the ACA Repeal-and-Replace Effort. Where

 Does the U.S. Stand on Insurance Coverage?” The Commonwealth Fund.

 *Issue Brief,* September

 Gonzales, V. 2010. “The ‘Greatest Good’: The U.S. Political System and the

 Uphill Battle for Progressive Health Care Reform.” *Journal of Poverty.*

 14:116-122

 Starr, Paul. 2011. “Introduction: An Uneasy Victory.” Pp. 2-24, from *Remedy and*

 *Reaction: The Peculiar American Struggle over Health Care Reform.* New

 Haven: Yale University

Recommended

 Lepolstat, R. et al., 2009. “Impact of Managed Health Care on the United

 States…,” *Journal of Human Behavior in the Social Environment* 19:805-

 819

**February 12**

Health care reform (continued); Making economic, political and “humanistic” sense of the Patient Protection and Affordable Care Act (ACA); Predicting the future of ACA in the Trump Era

WL = Ch. 14, “Historical Efforts to Reform the Health Care System; Health Care

 Reform of 2010: The ACA,” pp. 398-415

BB = Nakra, P., and S. Nakra. 2016. “Not-for-profit Hospitals and Affordable Care Act:

 Navigating the New Health Care Landscape.” *Journal of Healthcare Risk*

 *Management* 36(2):36-44

 Obama, B. 2016. “United States Health Care Reform: Progress to Date and Next

 Steps. *JAMA* 316(3): 525-532

 Geyman, J. 2015. “A Five-Year Assessment of the Affordable Care Act: Market

 Forces Still Trump the Common Good in U.S. Health Care.” *International*

 *Journal of Health Services* 45(2): 209-225

Briefing: Health care issues: Hospitals, patients, and insurance options (BJC)

Recommended

 Budrys, G. 2016. “Health Care Reform: Is it Working?” Ch. 8 (pp. 143-65) from

 *Our Unsystematic Health Care System*. Lanham, MD: Rowman and

 Littlefield.

**February 14**

Health care costs-rising and unsustainable? Health care in a for-profit system; Medicare for All; Pharmaceutical industry; Opioid crisis

WL = Ch. 14, The Health Care System in the United States, “Financing of Health Care,

 Explanations for the High Cost of American Medicine,” pp. 382-394

BB = Barker, K. 2011. “Listening to Lyrica: Contested Illnesses and Pharmaceutical

Determinism.” *Social Science & Medicine* 73(6): 833-42

 Habibi, R. et al. 2016. “Regulating Information or Allowing Deception?

Pharmaceutical Sales Visits in Canada, France, and the United States.”

*Journal of Law, Medicine & Ethics* 44: 602-613

Hadland, S. et al. 2017. “Industry Payments to Physicians for Opioid Products,

2013-2015.” *American Journal of Public Health* 107:1493-1495

Moniz, C., and S. Gorin. 2014. “Moving toward Universal Care: Clinton to

Obama and the Affordable Care Act.” Pp. 3-15 from *Health Care Policy*

*and Practices*,” New York: Routledge (see pp. 12-13 for ACA overview of

major reforms)

Briefing: Physicians for a National Health Program

Recommended

 Mueller, S. et al. 2015. “A Review of Opioid Overdose Prevention and Naloxone

 Prescribing…..” *Substance Abuse* 36:240-253

**February 19**

Hospitals and health care organizations; Issues of co-ordination in transition of care

WL = Ch. 15, Health Care Delivery, pp. 354-370

BB = Kessler C., et al. “Transitions of Care in an Era of Healthcare Transformation,”

 *Journal of Healthcare Management* 61(May-June): 230-241

 Sacks, G. et al. 2015. “Relationship Between Hospital Performance on a Patient

 Satisfaction Survey and Surgical Quality.” *JAMA Surgery* 9:858-864

 Ryan, J. et al. 2016. “How High-Need Patients Experience Health Care in the

 United States.” The Commonwealth Fund *Issue Brief* 43 (December)

 Vimalananda, V. et al. 2018. Patient, Primary Care Provider, and Specialist

 Perspectives on Specialty Care Coordination in an Integrated Health Care

 System.” *Journal of Ambulatory Care Management* 41(1):15-24

**February 21: QUIZ #2**

**Part III - *Health Care and Inequality; Underinsured and Uninsured; Serving Diverse Populations; Interdisciplinary Perspectives on Health and Medicine***

**February 26**

Inequality and health status; Intersection of minority statuses and health risk;

WL = Ch. 7, “Use of Medical Care Services,” pp. 186-189

 Ch. 14, “America’s Uninsured Population,” pp. 394-398

BB = Angier, H. et al. 2017. “Uninsured Primary Care Visit Disparities Under the

 Affordable Care Act.” *Annals of Family Medicine* 15(5):434-442

 Dickman et al. 2017. “Inequality and the Health-Care System in the USA.” *The*

 *Lancet* 389 (April): 1431-1441

 Egan et al. 2017. “Health and Social Condition of the Poorest Versus Wealthiest

 Counties in the United States.” *American Journal of Public Health*

107(1):130-135

Washington University in St. Louis and St. Louis University. 2016. *For the Sake*

 *of All: A Report on the Health and Well-Being of African Americans in St.*

 *Louis*

Video: **“**In Sickness and in Wealth.” From *Unnatural Causes: Is Inequality Making Us*

*Sick*?

Recommended

 Mezuk, B. et al. 2010. “Reconsidering the Role of Social Disadvantage in

 Physical and Mental Health.” *American Journal of Epidemiology*

 172(11):1238-49

 Notaro, S. et al. 2012. “Analysis of the Demographic Characteristics and Medical

 Conditions of the Uninsured Utilizing a Free Clinic*.” Journal of Community*

 *Health* 37: 501-506

 Stillman, M. and M. Tailor. 2013. “Dead Man Walking.” *New England Journal of*

 *Medicine* (November Vol. 369(20): 1880-1881

**February 28**

Interdisciplinary perspectives in health research; Extending social epidemiology; Linking medicine, health care, and the social sciences

BB = Reiss, D. et al. 2013. “How Genes and the Social Environment Moderate Each

Other.” *American Journal of Public Health* (Supplement 1) 103(51): S111-

S121

White, K. and L. Borrell. 2011. “Racial/Ethnic Residential Segregation: Framing

the Context of Health Risk and Health Disparities.” *Health and Place* 17:438-448

Briefings: Public Health Sciences/Department of Surgery (WUSM); Department of

 Psychological and Brain Science

**March 5**

Cultural issues in health and mental health care; Health care in culturally diverse populations

WL = Ch. 11, “Ethnic Folk Healing,” pp. 308-312

BB = Holmes, S. 2012. “The Clinical Gaze in the Practice of Migrant Health: Mexican

 Migrants in the United States.” *Social Science & Medicine* 74:873-881

 Cobb, C. et al. 2017. “Acculturation, Discrimination, and Depression Among

 Unauthorized Latinos/as in the United States.” *Cultural Diversity and*

 *Ethnic Minority Psychology* 23(2):258-268

 Healey, p. et al. 2017. “Cultural Adaptations to Augment Health and Mental

 Health Services…..” *BMC Health Services* *Research* 17:8-34

Video: “Becoming American,” From *Unnatural Causes: Is Inequality Making Us Sick*?

Briefing: Perspectives from the Latino community (Casa de Salud)

Recommended

 Degrie et al. 2017. “How Do Ethnic Minority Patients Experience the Intercultural

 Care Encounter in Hospitals?.......*BMC Medical Ethics* 18:17 pages.

 Warne, D., and L. Frizzell. 2014. “American Indian Health Policy: Historical

 Trends and Contemporary Issues.” *American Journal of Public Health*

 Suppl. 3, 104:S263 S267

**March 7**

Evolving and contentious models of health care; Integrative medicine; CAM: Acceptance or continuing challenge?; Spiritual healing

WL = Ch. 11, Complementary and Alternative Medicine, pp. 286-308

BB = Isaac, Kathleen et al. 2016.“Incorporating Spirituality in Primary Care.” *Journal*

*of Religion and Health* 55:1065-1077

Ramadurai, V. et al. 2016. “The Road Less Traveled: Finding a Path to Use

Complementary and Alternative Medicine.” *Qualitative Health Research*

26(9):1216-1228

Recommended

Dobos, G. 2009. “Integrative Medicine: Medicine of the Future or ‘Old Wine in

New Skins’?” *European Journal of Integrative Medicine* 1:109-115

 Malaguti-Boyle, M. 2015. “Whole-System Approach and Evidence-Based

 Medicine Research Models: Are These Two Systems Irreconcilable*?”*

 *Journal of the Australian Traditional Medicine Society* Summer 2015: 234

 240

**March 12, March 14 – Spring Break**

**March 19: QUIZ #3**

**Part IV – *Medical Education; Health Practitioners in Changing Society; Comparative Perspectives***

**March 21**

Trends and challenges in medical education;

WL = Ch. 9, Medical Education and the Socialization of Physicians

BB = Castillo-Angeles, M. et al. 2017. “Mistreatment and the Learning Environment for

 Medical Students on General Surgery Clerkship Rotations….” *The*

 *American Journal of Surgery* 213:307-312

Golub, R. 2016, “Looking Inward and Reflecting Back: Medical Education and

 JAMA.” *JAMA* 316(21):2200-2203

 McCarthy, C., and J. McEvoy. 2015. “Pimping in Medical Education Lacking

Evidence and Under Threat.” *JAMA* 314(22):2347-2348

 Wear et al. 2005. “Research Basic to Medical Education: Pimping – Perspectives

 of 4th Year Medical Students,” ***Teaching & Learning in Medicine (***Spring):

 1: 184-91

Briefing: Perspectives on medical education

Recommended

 Jauhar, Sandeep. 2008. “Medical School.” Ch. 3, from *Intern: A Doctor’s*

 *Initiation*. New York: Farrar, Straus and Giroux

**March 26**

Medical education (continued); Bioethics and technology in health care education

WL = Ch. 16, Social Implications of Advanced Health Care Technology

BB = Davenport, N. 2011. “Medical Residents’ Use of Narrative in Storytelling and

Diagnosis.” *Social Science & Medicine* 73:873-881

 Johnson, J. David. 2014. “Physicians’ Emerging Roles Related to Trends in

 Health Information Technology.” *Informatics for Health and Social Care*

 40(4):362-375
 Sharma, M. et al. 201. “Teaching the Social Determinants of Health: A Path to

 Equity or a Road to Nowhere?” *Academic Medicine* 93(1):25-30

Recommended

 Cowen, V. et al. 2016. “A Review of Creative and Expressive Writing as a

 Pedagogical Tool in Medical Education.” *Medical Education* 50:311-319

 Swanson, D, and T. Roberts. 2015. “Trends in National Licensing Examinations

 in Medicine.” *Medical Education* 50:311-319

**March 28**

Practice of medicine; Physician satisfaction and roles in a changing health care system

WL = Ch. 8, Physicians and the Profession of Medicine

BB = Hoff, T. et al. 2015. “Understanding U.S. Physician Satisfaction: State of the

Evidence and Future Directions.” *Journal of Healthcare Management*

60(6):409-428

Scheepers et al. 2015. “A Systematic Review of the Impact of Physicians’

Occupational Well-Being on the Quality of Patient Care.” *International*

*Journal of Behavioral Medicine* 22:683-698

 Schrijer, I. 2016. “Pathology in the Medical Profession? Taking the Pulse of

 Physician Wellness and Burnout*.” Archives of Pathology & Laboratory*

 *Medicine* 140:976-982

Briefing: Perspectives on medical practice

**April 2**

Practice of medicine (continued); Evolving physician and patient roles; Communication, liability, and challenges to patient-centered medicine

WL = Ch. 13, Professional and Ethical Obligations of Physicians and the Patient-

 Physician Relationship

BB =Burks, D., and A. Kobus. 2012. “The Legacy of Altruism in Health Care: The

Promotion of Empathy, Prosociality, and Humanism.” *Medical Education*

46:317-325

 Griffiths et al. 2012. “Social Networks: The Future of Health Care Delivery.”

 *Social Science & Medicine* 75:2233-2241

 Phillips, R. et al. 2014. “Achieving Patient-Centered Care: The Potential Role

 and Challenge of the Patient-As-Professional Role” *Health Expectations*

 18:2616- 2628

 Westphal, E. et al. 2015. “How to Get Better Care with Lower Costs? See the

 Person, Not the Patient.” *Journal of the American Geriatric Society* 64:19

 21

Recommended

 Shepherd, Joanna. 2014. “Uncovering the Silent Victims of the American Medical

 Liability System. *Vanderbilt Law Review* 67(1):151-

**April 4**

Nurses and allied health care professionals; Issues of roles, autonomy, and interdependence; Team approaches to health care; Evolving care for terminal illness; hospice

WL = Ch. 10, Nurses, Mid-Level Health Practitioners, and Allied Health Workers

 Ch. 15, Hospice and Home Care, pp. 370-375

BB = Brkczynski, K. 2012. “Clarifying, Affirming, and Preserving the Nurse in Nurse

Practitioner Education and Practice.” *Journal of American Academy of*

*Nurse Practitioners* 24:554-564.

Delunas, L. and S. Rouse. 2014. “Nursing and Medical Student Attitudes about

Communication and Collaboration….” *Nursing Education Perspectives.*

March 1:100-105

Park, J., and K. Jones. 2013. “Use of Hospitalists and Office-Based Primary Care

Physicians’ Productivity.” *Journal of General Internal Medicine* 30(5):572-

581

Young, H. and E. Siegel. 2016. “The Right Person at the Right Time: Ensuring

Person-Centered Care.” *Generations* 40(1):47

Briefing: Perspectives from nursing and social work

**April 9**

Comparative perspectives on health and health care; Health justice and human rights
WL = Ch. 17, Comparative Health Care Systems

L = Ch. 19, (selection from Health and Health Care), “The Challenge of International

Health,” pp. 517-520

BB = Pylypchuk, Y., and E. Sarpong. 2013. “Comparison of Health Care Utilization:

United States versus Canada.” *Health Services Research* 48(2 Pt. 1):560-

581

 Sarnak, D., and J. Ryan. 2016, “How High-Need Patients Experience the Health

Care System in Nine Countries.” Commonwealth Fund *Issues in*

*International Health Policy* Publication 1856, 1:January

Video: *Sick* *Around the World* (selections)

Recommended

 Ruger, Jennifer. 2016. The Health Capability Paradigm and the Right to Health

 Care in the United States.” *Theoretical Medicine and Bioethics*. 37:275-

 292

 Woolf, S., and L. Aron (eds.). 2013. *U.S. Health in International Perspective:*

 *Shorter Lives, Poorer Health*. National Academies Press

Video: *Sick* *Around the World* (selections)

**April 11: QUIZ #4**

**April 16, April 18:** Meetings on research projects

**April 23, April 25:** Presentations and takeaways

**May 4 by 5:30pm: RESEACH PROJECT REPORT DUE**

Note: The syllabus is subject to change to meet academic and scheduling needs.