

NEW YORK CITY COLLEGE OF TECHNOLOGY
The City University of New York
School of Arts & Sciences
Department of Social Science Course Outline

Course code: SOC 3303

Course title: Data, AI, and Society

Class hours/credits: 3 class hours, 3 credits

Prerequisite: Any 1000-level SOC or ANTH courses or PSY 1101

Pathways: Individual and Society

CATALOG DESCRIPTION:

Focus is on social dimensions of quantification and automation. The course examines how measurement techniques and big data applications interact with social relations, identities, workplaces, state institutions, and the political organization of society. Special emphasis is placed on privacy; responsibility; transparency; anonymity; and accountability as well as the role of quantification in shaping race/ethnicity, gender, age, ability, and socio-economic inequalities.

RECOMMENDED TEXTS* [bibliography can be found at the end of the outline]

- Richard Rottenburg and Sally E. Merry, *The World of Indicators: The Making of Governmental Knowledge through Quantification*
- Hellen Nissenbaum, *Privacy in Context: Technology, Policy, and the Integrity of Social Life*
- Trebor Scholz, *Digital Labor: The Internet as Playground and Factory*
- Kelly Gates, *Our Biometric Future: Facial Recognition Technology and the Culture of Surveillance*
- Martha Lampland and Susan Leigh Star, *Standards and Their Stories: How Quantifying, Classifying, and Formalizing Practices Shape Everyday Life*
- Julie E. Cohen, *Configuring the Networked Self: Law, Code, and the Play of Everyday Practice*
- Ales Završnik, ed. *Big Data, Crime and Social Control*
- David Karpf, *Analytic Activism: Digital Listening and the New Political Strategy*
- John McNutt, ed. *Technology, Activism, and Social Justice in a Digital Age*

* The textbook used in a particular section will be chosen by the instructor.

COURSE INTENDED LEARNING OUTCOMES/ASSESSMENT METHODS

LEARNING OUTCOMES	ASSESSMENT METHODS*
1. Describe and demonstrate an understanding of main characteristics of quantification and how they relate to social phenomena.	Combination of exams including multiple choice and short essay assignments, quizzes, lectures, discussions of multimedia materials, in-class discussions, small group workshops, and oral presentations.

2. Distinguish the main theoretical approaches within the field of economic sociology and sociology of quantification.	Combination of exams including multiple choice and short essay assignments, quizzes, lectures, discussions of multimedia materials, in-class discussions, small group workshops, and oral presentations.
3. Identify social, political and economic dimensions of the growing use of big data applications.	Combination of exams including multiple choice and short essay assignments, lectures, discussions of multimedia materials, in-class discussions, small group workshops, and oral presentations.
4. Explain the ways in which the deepening ecological crisis gives rise to movements of resistance as well as the ways these movements interact with social justice movements.	Combination of exams including multiple choice and short essay assignments, quizzes, lectures, discussions of multimedia materials, in-class discussions, small group workshops, and oral presentations.

** May vary slightly per instructor to suit their own needs*

PATHWAYS INDIVIDUAL AND SOCIETY LEARNING GOALS

1. Identify and apply the fundamental concepts and methods of a discipline or interdisciplinary field exploring the relationship between the individual and society, including, but not limited to, anthropology, communications, cultural studies, history, journalism, philosophy, political science, psychology, public affairs, religion, and sociology.
2. Examine how an individual's place in society affects experiences, values, or choices.
3. Articulate and assess ethical views and their underlying premises.
4. Articulate ethical uses of data and other information resources to respond to problems and questions.

GENERAL EDUCATION LEARNING OUTCOMES/ASSESSMENT METHODS

LEARNING OUTCOMES	ASSESSMENT METHODS*
KNOWLEDGE: Explain and demonstrate an understanding of quantification and how it shapes social relations and organization.	Quizzes, exams, essay, class discussions, and oral presentations, in-class small group work.
SKILLS: Develop and use the tools needed for communication, inquiry, analysis and productive work.	Combination of class discussions, oral presentations, in-class small group work, essay, and exams.

INTEGRATION: Work productively within and across disciplines. Explain how the resolution of issues stemming from the growing use of big data can be achieved by engaging scholarship in sociology, economics, anthropology, and political science.	Quizzes, exams, essays, class discussions, and in-class small group work that draws on various resources in sociology and other disciplines.
VALUES, ETHICS, AND RELATIONSHIPS: Understand and apply values, ethics, and diverse perspectives in personal, civic, and cultural/global domains.	Combination of class discussions, oral presentations, in-class small group work, and essays that engage directly with the questions about values, ethics, responsibility, and diversity.

** May vary slightly per instructor to suit their own needs*

SCOPE OF ASSIGNMENTS AND OTHER COURSE REQUIREMENTS*

Quizzes; midterm and final exams including multiple-choice and short answer questions; essay assignments; participation in-class discussions; participation and contribution to small-group projects; oral presentations.

** May vary slightly per instructor to suit their own needs*

FINAL GRADE DISTRIBUTION – elements and weight of factors determining the students’ grade*

- Class Participation: 10% of the grade
- Midterm exam: 20% of the grade
- Final exam: 25% of the grade
- Quizzes and in-class small group assignments: 20% of the grade
- Research project and essay: 25% of the grade

** May vary slightly per instructor to suit their own needs*

A	93-100	C	70-76.9
A-	90-92.9	D	60-69.9
B+	87-89.9	F	59.9 and below
B	83-86.9	WU	Unofficial Withdrawal
B-	80-82.9		
C+	77-79.9		

GRADE SCALE_

ATTENDANCE POLICY

It is the conviction of the Department of Social Science that a student who is not in a class for any reason is not receiving the benefit of the education being provided. Missed class time

includes not just absences but also latenesses, early departures, and time outside the classroom taken by students during class meeting periods. Missed time impacts any portion of the final grade overtly allocated to participation and/or any grades awarded for activities that relate to presence in class.

Instructors may including a reasonable “Participation” grade into their final grade calculations for this course.

STUDENT ACCESSIBILITY

City Tech is committed to supporting the educational goals of enrolled students with disabilities in the areas of enrollment, academic advisement, tutoring, assistive technologies, and testing accommodations. If you have or think you may have a disability, you may be eligible for reasonable accommodations or academic adjustments as provided under applicable federal, state, and/or city laws. You may also request services for temporary conditions or medical issues under certain circumstances. If you have questions about your eligibility and/or would like to seek accommodation services and/or academic adjustments, please email the [Student Accessibility Center](#).

COMMITMENT TO STUDENT DIVERSITY

The Department of Social Science complies with the college wide nondiscrimination policy and seek to foster a safe and inclusive learning environment that celebrates diversity in its many forms and enhances our students’ ability to be informed, global citizens. Through our example, we demonstrate an appreciation of the rich diversity of world cultures and the unique forms of expression that make us human.

SAMPLE SEQUENCE OF TOPICS*

Week 1: Introductions and Course Overview

Current trends and examples
History of quantification
Critiques of singularity
Contribution of social sciences to studying quantification and big data

Week 2: Social Aspects of History of Quantification

The rise of statistics in the 19th century
History of census
State and big data
Modernization, institutionalization
Max Weber, Alain Desrosieres, Margo Anderson

Week 3: Big Theories for Big Data

Dialectics of surveillance and recognition
Politics of big numbers

Sociology of Science and Technology

Paul Starr, Geoff Bowker, Susan Leigh Starr, Bruno Latour, Lucy Suchman, Tom Boellstorff

Week 4: New Identity Politics and Social Media

The networked self

Quantification and personal data: social media

Anonymity

Social Interactionism

Charles Horton Cooley, Erving Goffman, George Herbert Mead, Danah Boyd

Week 5: Digital Work

Digital workplace politics

Cyberproletariat/precariat

Redistribution of accountability

Alienation

Exploitation (and self-exploitation)

Karl Marx, Safiya Umoja Noble

Week 6: Case Studies: Social Consequences of Big Data Use

Examples of case studies:

Credit ratings

Health insurance markets

Family: Dating algorithms

Health information (privacy issues)

Week 7: Midterm; Case Studies Continued

Examples of case studies: Infrastructures:

Urban design

Transportation systems

Week 8: Algorithms as Sites for Reproducing Inequalities

Discriminatory designs

Reproducing race/ethnicity, gender, ability, and age inequalities

Lisa Nakamura, Cathy O'Neil

Week 7: The Political Economy of Quantification

Expanding frontiers of commodification

Commodification of privacy

New forms of capital sourcing—vulture capitalism

Financialization on the internet

Non-state currencies (cryptocurrencies)

John McNutt

Week 8: Big Data and Social Movements

Theories of digital activism
Citizen engagement
Indigenous data sovereignty
Forensic data, human rights and refugees
Open data
Zeynep Tufekci, David Karpf

Week 9: Data and Political Sociology

Opinion polls
Data mining and democratic institutions
Changes in the public sphere
Political sociology
Nikolas Rose, Hellen Nissenbaum, Richard Rottenburg, Sally E. Merry

Week 10: Privacy and Security

Biopolitics: uses of biometric data, facial recognition
Privacy
Crime and criminology:
 Social control
 Predictive policing
Sherry Turkle, Kelly Gates

Week 11: Redistribution of Accountability

New approaches to algorithm accountability
Responsibility
Law and society
Hellen Nissenbaum

Week 12: Materiality of Data Infrastructures

Environmental footprint and energy considerations
Designing and building infrastructures
Lisa Parks

Week 13: Internet Governance: A Global Perspective

Privacy laws and expectations
Crossing borders and legal regimes
Ongoing debates in net-neutrality
Keith Guzik

Week 14: The Future of Digital Work and Leisure

Trends in automation
Changing labor markets

Entertainment politics
Sociology of (digital) culture
New frontiers in digital arts
Lawrence Lessig

Week 15: Review and Final Exam

* *May vary slightly per instructor to suit their own needs*

BIBLIOGRAPHY

Articles from popular journals:

New York Times
New Yorker
The Guardian
Wall Street Journal
Wired

Articles from scholarly journals

Big Data & Society
Surveillance Studies

- Athey, Susan. 2017. "Beyond prediction: Using big data for policy problems." *Science*, 355(6324): 483–485. Available at <http://science.sciencemag.org/content/355/6324/483>
- Bjorkegren, Daniel and Darrell Grissen. 2015. "Behavior revealed in mobile phone usage predicts loan repayment." Available at <https://arxiv.org/abs/1712.05840>
- Brighenti, Andrea Mubi. 2017. "The Social Life of Measures: Conceptualizing Measure–Value Environments." *Theory, Culture & Society*, 35(1): 23–44.
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- Kleinberg, Jon, Sendhil Mullainathan, and Manish Raghavan. 2016. "Inherent trade-offs in the fair determination of risk scores." Available at <https://arxiv.org/abs/1609.05807>.

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- Noble, Safiya Umoja. 2018. *Algorithms of Oppression: How Search Engines Reinforce Racism*. New York: New York University Press.
- O'Neil, Cathy. 2016. *Weapons of Math Destruction: How Big Data Increases Inequality*. New York: Crown Press.
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