



RUTGERS

School of Management
and Labor Relations

37:575:313 New Technology and Work

Professor Xiangmin (Helen) Liu

xiangmin.liu@rutgers.edu

Department of Labor Studies and Employment Relations
School of Management and Labor Relations, Rutgers University

Course Overview

This 3-credit course serves as an engagement, education, and interaction on the topics of new technologies and the changing nature of work and employment. In this course, we will gather insights from diverse academic disciplines and explore a broad spectrum of topics related to technological innovations, labor markets, and the workforce. For example, we will discuss emerging issues such as automation and job loss, digital platforms and the gig economy, and algorithmic management. We will also discuss the implications of these changes for workers, employers, and the larger society.

This course is listed as "Asynchronous content". See Rutgers University's explanation on asynchronous courses here: (<https://rlc.rutgers.edu/node/442>). That is, this course will have a regular schedule of work and assignments due throughout each week, but it will not require you to be online at a particular time. Rather, I will provide materials—readings, videos, assignments, and exams—and you can access these materials and satisfy the course requirements within specified time frames.

One of the key advantages of remote, asynchronous courses is **inclusion** and **flexibility**. Students can learn and complete assignments anytime and anywhere they want, including in any time zone. In addition, asynchronous courses can help increase cognitive engagement, because students will have more time to engage with and explore the course materials. For those who are interested in the benefits and challenges of taking asynchronous courses, here is a nice summary: <https://rlc.rutgers.edu/node/442>.

Learning Goals

This course is designed to meet the following SMLR and LSER Learning Goals:

I) Theoretical Perspectives - Demonstrate an understanding of relevant theories and apply them given the background context of a particular work situation.

- Demonstrate an understanding of the practical perspectives, theories and concepts in their field of study
- Evaluate and apply theories from social science disciplines to workplace issues

II) Understanding Context - Evaluate the context of workplace issues, public policies, and management decisions

- Analyze the degree to which forms of human difference shape a person's experience of and

- perspectives on work
- Analyze a contemporary global issue in their field from a multi-disciplinary and intersectional perspective
- Analyze issues related to business strategies, organizational structures, and work systems
- Analyze issues of social justice related to work across local and global contexts (LSER)

VII) Professional Development – Demonstrate an ability to interact with and influence others in a professional manner, and to effectively present ideas and recommendations

- Develop effective presentation skills appropriate for different settings and audiences
- Develop career management skills to navigate one’s career
- Develop capabilities to work and lead in a multicultural and diverse environment
- Work productively in teams, in social networks, and on an individual basis
- Develop cultural agility competencies
- Demonstrate lifelong personal and professional development skills

Course Materials



This course has received an ‘Open and Affordable Textbooks (OAT)’ award from Rutgers University Libraries. The OAT Program supports textbook affordability at Rutgers by encouraging courses to adopt educational material that are freely available, available at a low cost (compared to similar courses) or part of Rutgers University Libraries' electronic collections, and thereby **free of charge** to Rutgers University students.

All course readings will be available via the Canvas course website. Readings will draw from academic articles, popular press articles, book excerpts, and business cases. Please check Canvas **at least twice a week**.

As a student in this course, you will be asked to provide feedback on this initiative at the end of the semester.

Student Responsibilities

Completing synchronous courses requires a high level of discipline, dedication, and time management skills. While remote, asynchronous learning offers you flexibility and convenience to learn, you are still expected to:

- Have access to a reliable computer, and access to the Internet
- Log in to Canvas for your course **on a daily basis**
- Check for any announcements, syllabus updates, assignments, and/or discussions and respond accordingly
- Actively participate in the Discussion Forum
- Complete the assigned readings and multimedia, exercises and quizzes
- Adhere to all due dates

Make sure you have **an alternative plan of access to your Canvas course** in case your computer crashes (it happens). An extra computer at home, your employer’s computer, or computer at your

local library can be some alternatives. Additionally, be sure to backup your important documents and assignments on a flash drive or other external device.

Evaluation Methods

Weekly discussion forum	=	140
Tech focus assignment	=	60
Mid-term and final open-book exams	=	200
Final reflection paper	=	100
<i>Total points</i>	=	<i>500 points</i>

Respect for Diversity, Equity, and Inclusion

It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions are encouraged and appreciated.

Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. If you have already established accommodations with Student Accessibility Services, please communicate your approved accommodations to me at your earliest convenience so we can discuss your needs in this course.

Rutgers Academic Integrity

Students in this class and in all courses at Rutgers University are expected to uphold the highest standards of academic integrity. Cheating, plagiarism in written work, receiving and providing unauthorized assistance, and sabotaging the work of others are among the behaviors that constitute violations of the Academic Integrity Policy. You are expected to be familiar with this policy. If you have questions about specific assignments, be sure to check with the instructor. The Academic Integrity Policy defines all forms of cheating and the procedures for dealing with violations. You should be familiar with this policy. The trust between the instructor and the class depends on your acceptance of this essential principle of behavior in the University. Do your own work and do not provide unauthorized assistance to others and you will find this course more rewarding.

Course Schedule (Tentative)

Unit 1. Course overview

Required materials:

1. Kochan & Mindell - Discussion on industrial revolutions and work
2. Technology, jobs, and the future of work

Optional materials: Glossary of automation technologies and techniques

Case discussion: Will ChatGPT take your job?

Tech focus assignment: Generative AI

Unit 2. Old and new technologies

Required materials:

1. The big debate about the future of work, explained
2. Elliott - Artificial intelligence, robots, and work: Is this time different?
3. Wajcman, J. (2010). Feminist theories of technology
4. Hankerson et al. (2016). Does technology have race?

Case discussion: Trucking and the rise of autonomous vehicles

Tech focus assignment: Autonomous driving

Unit 3. Workplace automation and robotics

Required materials:

1. Davenport, T.H., & Kirby, J. (2015). Beyond automation
2. McKinsey - A future that works

Optional materials: Budd (2011). The thought of work

Case discussion: Robots in the workforce: The case of Amazon Robotics

Tech focus assignment: Robotics

Unit 4. Skills, tasks, and technology

Required materials:

1. Autor. Why are there still so many jobs? The history and future of workplace automation
2. Roose. A machine may not take your job, but one could become your boss
3. IoT & cyber physical systems

Optional materials: What is DeepSeek?

Case discussion: If workers slack off, the wristband will know

Tech focus assignment: Internet of things

Unit 5. Jobs, cities, and innovation

Required materials:

1. Moretti. The new geography of jobs
2. The Economist. How COVID-19 is boosting innovation

Optional materials: Glaeser. A review of Enrico Moretti's "The new geography of jobs"

Case discussion: Virtual reality is booming in the workplace

Tech focus assignment: Virtual reality

Unit 6. Rethinking the value of skills and education

Required materials:

1. Cappelli - Why job seekers don't land jobs

2. *New York Times* - Workforce training programs that bridge the skills gap

Optional materials: Dyer - Future careers and competences

Case discussion: Automation threatens jobs. Can education create new ones?

Tech focus assignment: Blockchain

Unit 7. Review and mid-term exam

Unit 8. What is the gig economy

Required materials:

1. US Census Bureau - Counting the hustle: Platform workers and digital entrepreneurship in federal household surveys
2. Davis - How to thrive in the gig economy
3. Pew Research Center - The state of gig work in 2021
4. Economic Policy Institute - National survey of gig workers paints a picture of poor working conditions, low pay

Case discussion: With food-delivery apps like Uber Eats, who's actually making money?

Tech focus assignment: Platform ecosystems

Unit 9. Digital labor platforms and the uberization of work

Required materials:

1. Business perspective: Travis Kalanick on Uber's plan to get more people into fewer cars
2. Workers' perspective: Rosenblat - Uberland: How algorithms are rewriting the rules of work

Optional materials: ILO report on digital labor platforms and the future of work

Case discussion: The economics of Uber

Note: No tech focus assignment this week. Engage in a team-building activity.

Unit 10. Algorithmic management

Required materials:

1. Mateescu & Nguyen (2019). Algorithmic management in the workplace
2. Rosenblat, A. (2018). When your boss is an algorithm. *New York Times*

Optional materials: Cappelli, P. (2020). Stop overengineering people management. *Harvard Business Review*

Case discussion: Inside Amazon: The Rugeley warehouse

Unit 11. Worker rights

Required materials:

1. Your boss is going to start using AI to monitor you—and labor laws aren't ready
2. New forms of work and policy implications for labor regulations
3. Workers' rights in the age of surveillance capitalism

Optional materials: Oyer. *The gig economy: Threats and opportunities for workers and employers*

Case discussion: Finland's universal income experiment

Unit 12. Worker voice and collective activism (1)

Required materials:

1. What is worker voice and why is it so important
2. Hundreds of Google employees unionize, culminating years of activism
3. Why Google's union is a big deal

4. How AI took center stage in the Hollywood writers' strike

Optional materials: SMLR podcast - *A third of your life*, episode 8: The writers' strike

Case discussion: What is Alphabet Workers Union?

Unit 13. Worker voice and collective activism (2)

Required materials:

1. Union organizing in Amazon warehouses
2. More Starbucks stores want to unionize. These workers are leading the push
3. Why Amazon's first U.S. union faces a tough road ahead (25 minutes)

Optional materials: How Amazon is resisting unions in two upcoming elections

Case discussion: No case discussion this week. Work on the final essay.

Unit 14. Review, reflection, and final exam