

37:575:313 Technological Change and Work (3 credits)

Fall 2021

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Course Overview

This 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 draw knowledge from multidisciplinary academic fields and explore a wide variety 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 staffing. We will also discuss the implications of these changes for workers, employers, and the larger society.

This three-credit course has **an asynchronous component (about 2 hours of self-paced learning every week)** and **a synchronous online learning component (1pm-2:20pm every Tuesday)**.

That is, you would be online from 1pm to 2:20pm on Tuesdays. Here is the Zoom meeting (link TBA).

Learning Goals

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

School of Management and Labor Relations (SMLR):

-- Demonstrate an understanding of how to apply knowledge necessary for effective work performance. (Goal VI)

Labor Studies and Employment Relations (LSER) Department:

-- Apply employment relations concepts, and substantive institutional knowledge, to understanding contemporary developments related to work. (Goal 2).

Learning Materials

There is no required textbook for this class. Most course readings will be available via the Canvas course website (<https://rutgers.instructure.com/courses/148420>). Readings will draw from academic articles, popular press articles, book excerpts, and business cases. Please check Canvas **at least twice a week**.

Student Responsibilities

- 1. Individual assignments.** All students must read the articles and cases posted on Canvas, and be prepared to participate in class discussions. Unless you have written documentation of a University approved excuse, assignments and projects are due on the assigned date. Late submission will be penalized at 10% per day.
- 2. Team case study.** The class will divide into groups of 2-3 students. Each group will be responsible for summarizing and leading a 40-min interactive discussion on the given case

during class hours. **Students must turn in their presentation slides to the instructor by 10am, the day of the class. The case presentation will be evaluated by peer students and the slides will be graded by the instructor.** In addition, each group member will be graded by their fellow group members on their overall contribution to the group presentation.

3. Tests. There are in-class exams on the textbook material and any material covered in class. These exams are opened-book and consist of a combination of multiple-choice items and short answer questions. Tests are not specifically cumulative.

4. Class participation. Attendance at every class is **required**. Absences for illness, religious holidays and other events recognized by Rutgers University will be excused. If you know you are going to miss a class because of a religious holiday, I would appreciate an email prior to the holiday.

Grading Policy

In-class exams	=	200
Individual assignments		
Weekly forum participation	=	100
Final reflection	=	100
Team case study		
Presentation and moderated discussion	=	200
Presentation slides	=	100
Class participation and attendance	=	100
Total points	=	800 points

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.

Diversity, Equity, and Inclusion (DEI) Statement

This is an inclusive learning environment that is welcoming of all people and perspectives, including those of diverse races, religions, ethnicities, ages, gender identities and sexual orientations. If you go by a name or gender that is different from the one on official Rutgers documents, please let me know so that I can use the proper name and pronouns. Moreover, 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.

Course Schedule (Tentative)

▼ Unit 1: Course Overview

Syllabus Overview



[Required Reading: What history teaches us about the effect of technological change on work, employment, and productivity](#)

Sep 7



[Required Video: Kochan & Mindell Discussion on Industrial Revolutions and Work](#)

▼ Unit 2: Old and New Technologies, and Their Impact on Work / Tech Focus- Autonomous Driving



[Required Reading: Elliott, S.W., 2018. Artificial Intelligence, Robots, and Work: Is This Time Different?](#)

Sep 14



[Required Video: Furman, J. Automation and the Future of Work: Will This Time Be Different?](#)



[Optional Reading: Budd, 2011. The Thought of Work -- Pick two perspectives that interest you most](#)

Sep 14

▼ Unit 3: Technology and Future of Work / Tech focus- Automation



[Reading: McKinsey Global Institute, 2017. A future that works.](#)

Sep 21



[Required video: Mapping Automation-Proof Jobs and Skills \(30-min video\)](#)

Sep 22

▼ Unit 4: Skills, Tasks, and Technology (Part 1) / Tech Focus - AI



[Must watch: Will automation take away all our jobs? David Autor \(20 min video\)](#)

Sep 28



[Reading: Davenport, T.H. and Ronanki, R., 2018. Artificial intelligence for the real world](#)

Sep 28

▼ **Unit 5: Skills, Tasks, and Technology (Part 2) / Tech Focus - Internet of Things**



[Required Reading: Roose. 2019.A Machine May Not Take Your Job, but One Could Become Your Boss](#)

Oct 5



[Optional Reading: Smarter, Smaller, Safer Robots. 2015. Harvard Business Review.](#)

Oct 5



[Required: IoT & Cyber Physical Systems \(10 min\)](#)

Oct 5



[Optional: Internet of Things \(15 min\)](#)

Oct 5

▼ **Unit 6: Technology, Globalization, and the Geography of Jobs / Tech Focus - Virtual Reality**



[Reading: Moretti, E. 2012. The New Geography of Jobs.](#)

Oct 12



[Must watch before class: Technology, Work, and Urban Ecosystems: How Should Cities and Regions](#)

[Respond?](#)

Oct 5

▼ **Unit 8: Rethinking skills and education**



[Must watch before class: Why job seekers don't land jobs?](#)

Oct 13



[Must watch before class - Future Careers and Competencies, Professor Lee Dyer \(10 min\)](#)

Oct 13



[Required Reading: Companies Invest in Partnerships, Workforce Training to Bridge Skills Gap](#)

Oct 13

https://www.oecd-ilibrary.org/education/oecd-digital-education-outlook-2021_589b283f-en

▼ **Unit 9: The gig economy and crowdwork**



[Reading: BLS. Career Outlook. Working in a gig economy](#)

Oct 20



[Optional reading: Plugging Into the Gig Economy, From Home With a Headset](#)



[Must Watch 1. Tech focus: How the Platform Ecosystem Works. 4 min video](#)

Oct 20



[Must Watch 2: How to Thrive in the Gig Economy. Jerry Davis. - 3 min video](#)

Oct 20

▼ Unit 10: Digital labor platforms and the Uberization of Work



[Must Watch. Business perspective: Uber's plan to get more people into fewer cars | Travis Kalanick \(18 min video\)](#)

Oct 27



[Must read. Workers' perspective: Rosenblat, A., 2018. Uberland: How algorithms are rewriting the rules of work. \(4 pages\)](#)

Oct 27



[Optional reading: Greenhouse, S., 2015. Uber: On the road to nowhere. The American Prospect.](#)



[Must watch. Tech focus: The Economics of Uber. \(10 min video\)](#)

Oct 27

▼ Unit 11 Algorithmic Management



[Must Read: Mateescu & Nguyen. 2019. Algorithmic Management in the Workplace](#)

Nov 3



[Must watch: Tech focus: What's an algorithm? - David J. Malan \(5 min video\)](#)

Nov 3



[Optional reading: Rosenblat, A., 2018. When your boss is an algorithm. New York Times.](#)

▼ Unit 12 New forms of work and their social implications



[Required Reading: Weil, D., 2014. The fissured workplace. Chapter 8 Rethinking Responsibility](#)



[Optional Reading: Weil, D., 2014. The fissured workplace. Chapter 9 Rethinking Enforcement](#)



[Optional Video: Prof. Paul Oyer, "The Gig Economy: Threats and Opportunities for Workers and Employers"](#)

▼ Unit 13 Re-imagining Worker Power: New Forms of Collective Activism



[Must Read 1: Platform Organizing: Digital Tools for Worker Communication](#)



[Must Watch: Why Google's union is a big deal \(8-min video\)](#)

▼ Unit 14 - Last week / Final reflection