37:575:313 New Technology and Work

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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 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 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 course is **inclusion** and **flexibility**. Students can learn and complete assignments anytime and anywhere they want, including in any time zone. This is particularly great for learners who have to juggle conflicting course meeting times and work schedules. 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:

School of Management and Labor Relations (SMLR):

-- Demonstrate an understanding of relevant theories and apply them given the background context of a particular work situation. (Goal IV)

-- 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).

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 quiz	=	100
Weekly discussion forum	=	200
Mid-term and final open-book exams	=	100
Final reflection paper	=	100
Total points	=	500 points

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

Syllabus Overview

📄 **Required Reading: What history teaches us about the effect of technological change on work, employment, and productivity**
Jan 25, 2022

📄 **Required Video: Kochan & Mindell Discussion on Industrial Revolutions and Work**

💬 **Weekly forum: What Coronavirus Means For Automation And The Future Of Jobs**
Jan 23, 2022 | 10 pts

💬 **Bonus forum: Meet your learning community**
Jan 25, 2022

▾ 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?**
Feb 1, 2022

📄 **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**
Feb 1, 2022

💬 **Weekly forum: Trucking and the Rise of Autonomous Vehicles (AV)**
Jan 30, 2022 | 10 pts

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

📄 **Reading: McKinsey Global Institute. 2017. A future that works.**
Feb 8, 2022

📄 **Required video: Mapping Automation-Proof Jobs and Skills (30-min video)**
Feb 16, 2022

💬 **Weekly forum: Robots in the Workforce: The Case of Amazon Robotics**
Feb 6, 2022 | 10 pts

▾ 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)**
Feb 22, 2022

📄 **Reading: Davenport, T.H. and Ronanki, R., 2018. Artificial intelligence for the real world**
Feb 22, 2022

💬 **Weekly forum: Using AI for interviews**
Feb 20, 2022 | 10 pts

▾ 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**
Mar 1, 2022

📄 **Optional Reading: Smarter, Smaller, Safer Robots. 2015. Harvard Business Review.**
Mar 1, 2022

📄 **Required: IoT & Cyber Physical Systems (10 min)**
Mar 1, 2022

📄 **Optional: Internet of Things (15 min)**
Mar 1, 2022

💬 **Weekly forum: If workers slack off, the wristband will know.**
Feb 27, 2022 | 10 pts

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

📄 **Reading: Moretti, E. 2012. The New Geography of Jobs.**
Mar 15, 2022

📄 **Must watch before class: Technology, Work, and Urban Ecosystems: How Should Cities and Regions Respond?**
Mar 1, 2022

💬 **Weekly forum: Virtual reality is booming in the workplace**
Feb 27, 2022 | 10 pts

▾ Unit 7: Mid-term review / Test 1

Unit 8: Rethinking skills and education

📄 **Must watch before class: Why job seekers don't land jobs?**
Mar 16, 2022

📄 **Must watch before class - Future Careers and Competencies, Professor Lee Dyer (10 min)**
Mar 16, 2022

📄 **Required Reading: Companies Invest in Partnerships, Workforce Training to Bridge Skills Gap**
Mar 16, 2022

💬 **Weekly forum: Automation threatens jobs. Can education create new ones?**
15 pts

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**
Mar 23, 2022

📄 **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**
Mar 23, 2022

📄 **Must Watch 2: How to Thrive in the Gig Economy. Jerry Davis. - 3 min video**
Mar 23, 2022

💬 **Weekly forum: With food-delivery apps like Uber Eats, who's actually making money? PBS Video.**
Mar 22, 2022 | 15 pts

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)**
Apr 6, 2022

📄 **Must read. Workers' perspective: Rosenblat, A., 2018. Uberland: How algorithms are rewriting the rules of work. (4 pages)**
Apr 6, 2022

📄 **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)**
Apr 6, 2022

💬 **Weekly forum Option 1: The 'gig' economy is uprooting the American workforce**
Apr 6, 2022 | 15 pts

💬 **Weekly forum - Option 2: Nice Guys of the Gig Economy? The cases of Hello Alfred and Managed by Q**
Mar 27, 2022 | 15 pts

Unit 11 Algorithmic Management

📄 **Must Read: Mateescu & Nguyen. 2019. Algorithmic Management in the Workplace**
Apr 13, 2022

📄 **Must watch: Tech focus: What's an algorithm? - David J. Malan (5 min video)**
Apr 13, 2022

💬 **Weekly forum: On Amazon's Time**
Apr 10, 2022 | 15 pts

📄 **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"**

💬 **Weekly forum: Finland's Universal Income Experiment**
Apr 27, 2022 | 10 pts

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

📄 **Must Read 1: Platform Organizing: Digital Tools for Worker Communication**

📄 **Must Read 2: The latest frontier in worker activism: Zoom union organizing**

📄 **Must Watch: Why Google's union is a big deal (8-min video)**

💬 **Weekly forum: Alphabet Workers Union**
May 4, 2022 | 10 pts

Unit 14 - Last week / Final reflection / Test 2

📄 **Final Paper: The importance of being human in a world of automation.**
May 9, 2022