



**RUTGERS**

School of Management  
and Labor Relations

## **37:575:313 New Technology and Work**

**Professor Xiangmin (Helen) Liu**

[xiangmin.liu@rutgers.edu](mailto: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 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 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 (12 times)	=	140
Tech focus assignment (12 times)	=	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

<b>Unit 1: Course Overview</b>		✓	+	⋮
⋮	<a href="#">Required Video: Kochan &amp; Mindell Discussion on Industrial Revolutions and Work</a> Sep 9	✓		⋮
⋮	<a href="#">Required Reading: Technology, Jobs, and the Future of Work</a> Sep 9	✓		⋮
⋮	<a href="#">Optional: Glossary of automation technologies and techniques</a>	✓		⋮
⋮	<a href="#">Weekly forum 1 : What Coronavirus Means For Automation And The Future Of Jobs</a> Sep 11   10 pts	✓		⋮
⋮	<a href="#">Unit 1 Tech focus assignment: algorithm</a> Sep 11   5 pts	✓		⋮
<b>Unit 2: Old and New Technologies, and Their Impact on Work / Tech Focus- Autonomous Driving</b>		✓	+	⋮
⋮	<a href="#">Unit 1 Review</a>	✓		⋮
⋮	<a href="#">Required Video: The big debate about the future of work, explained</a> Sep 16	✓		⋮
⋮	<a href="#">Required Reading: Elliott, S.W., 2018. Artificial Intelligence, Robots, and Work: Is This Time Different?</a> Sep 16	✓		⋮
⋮	<a href="#">Weekly forum 2 : Trucking and the Rise of Autonomous Vehicles (AV)</a> Sep 18   10 pts	✓		⋮
⋮	<a href="#">Unit 2 Tech focus assignment: Autonomous driving</a> Sep 18   5 pts	✓		⋮
⋮	<a href="#">Optional Video: Furman, J. Automation and the Future of Work: Will This Time Be Different?</a>	✓		⋮
⋮	<a href="#">Optional Reading 1: Wajcman, J., 2010. Feminist theories of technology.</a>	✓		⋮
⋮	<a href="#">Optional Reading 2: Hankerson et al. 2016. Does technology have race?</a>	✓		⋮

▼ <b>Unit 3: Technology and Future of Work / Tech focus- Automation &amp; Robotics</b> +	
<a href="#">Unit 2 Review</a>	
<a href="#">Required Reading: A future that works.</a> Sep 23	
<a href="#">Required video: Mapping Automation-Proof Jobs and Skills (30-min video)</a> Sep 23	
<a href="#">Weekly forum 3 : Robots in the Workforce: The Case of Amazon Robotics</a> Sep 25   10 pts	
<a href="#">Unit 3 Tech focus assignment: Robotics</a> Sep 25   5 pts	
<a href="#">Optional Reading: Budd. 2011. The Thought of Work</a>	
<a href="#">Optional video: The Robot Revolution (10 minutes)</a>	

▼ <b>Unit 4: Skills, Tasks, and Technology / Tech Focus - Internet of Things</b> +	
<a href="#">Unit 3 Review</a>	
<a href="#">Required Video: Will automation take away all our jobs? David Autor (20 min video)</a> Sep 30	
<a href="#">Required Reading: Davenport, T.H. and Kirby, J., 2015. Beyond automation.</a> Sep 23	
<a href="#">Required Reading: Roose. 2019.A Machine May Not Take Your Job, but One Could Become Your Boss</a> Sep 30	
<a href="#">Required Video: IoT &amp; Cyber Physical Systems (10 min)</a> Sep 30	
<a href="#">Weekly forum 4 : If workers slack off, the wristband will know.</a> Oct 2   10 pts	
<a href="#">Unit 4 Tech focus assignment: IoT</a> Oct 2   5 pts	
<a href="#">Optional Reading: Smarter, Smaller, Safer Robots. 2015. Harvard Business Review.</a>	
<a href="#">Optional video: AlphaGo - Full Documentary</a>	



**Unit 5: Technology, Globalization, and the Geography of Jobs / Tech Focus - Virtual Reality**




---



**Unit 4 Review**



---



[Reading: Moretti, E. 2012. The New Geography of Jobs.](#)  
 Oct 7
 


---



[Required Video:How covid-19 is boosting innovation](#)  
 Oct 7
 


---



[Weekly forum 5: Virtual reality is booming in the workplace](#)  
 Oct 9 | 10 pts
 


---



[Unit 5 Tech focus assignment: Virtual Reality](#)  
 Oct 9 | 5 pts
 


---



[Optional Reading: The Economist. 2019. Uncovering tomorrow's innovation hotspots.](#)



---

Will unlock Sep 26 at 12am



**Unit 6: Rethinking Skills and Education / Tech Focus - Blockchain**




---



**Unit 5 Review**



---



**Unit 6 Review**



---



[Required Reading: Companies Invest in Partnerships, Workforce Training to Bridge Skills Gap](#)  
 Oct 14
 


---



[Required Video: Why job seekers don't land jobs?](#)  
 Oct 14
 


---



[Weekly forum 7 : Automation threatens jobs. Can education create new ones?](#)  
 Oct 16 | 15 pts
 


---



[Unit 6 Tech focus assignment: Blockchain](#)  
 Oct 16 | 6 pts
 


---



[Optional Video: Future Careers and Competencies, Professor Lee Dyer \(10 min\)](#)



---



[Optional reading: Innovative Workplace Skill Development Programs](#)



---

Will unlock Oct 3 at 12am



**Unit 7: Mid-term / Test 1**




▾ <b>Unit 8: The gig economy and crowdwork / Tech Focus - Platforms ecosystems</b> +	
<a href="#">Required Reading 1: BLS. Career Outlook. Working in a gig economy</a> Oct 28	
<a href="#">Required reading 2: Plugging Into the Gig Economy, From Home With a Headset</a> Oct 28	
<a href="#">Required Video: How to Thrive in the Gig Economy, Jerry Davis. - 3 min video</a> Oct 28	
<a href="#">Unit 8 forum : With food-delivery apps like Uber Eats, who's actually making money? PBS Video.</a> Oct 30   15 pts	
<a href="#">Unit 8 Tech focus assignment - platform ecosystems</a> Oct 30   6 pts	
<a href="#">Optional Learning: ILO report on Digital labour platforms and the future of work</a>	
<a href="#">Optional learning: Pew Research Center -The State of Gig Work in 2021</a>	
Will unlock Oct 10 at 12am	

▾ <b>Unit 9: Digital labor platforms and the Uberization of Work?</b> +	
<a href="#">Unit 8 Review</a>	
<a href="#">Required 1. Business perspective: Uber's plan to get more people into fewer cars   Travis Kalanick (18 min video)</a> Nov 4	
<a href="#">Required 2. Workers' perspective: Rosenblat, A., 2018. Uberland: How algorithms are rewriting the rules of work. (4 pages)</a> Nov 4	
<a href="#">Unit 9 Tech focus assignment - The Economics of Uber</a> Nov 6   6 pts	
<a href="#">Optional reading: Greenhouse, S., 2015. Uber: On the road to nowhere. The American Prospect.</a>	
Choose and respond to ONE of the following case discussion:	
<a href="#">Weekly forum 9 - Option 1: The 'gig' economy is uprooting the American workforce</a> Nov 6   15 pts	
<a href="#">Weekly forum 9 - Option 2: Nice Guys of the Gig Economy? The cases of Alfred</a> Nov 6   15 pts	

<b>Unit 10 Algorithmic Management</b>		✓	+	⋮
☰	<b>Unit 9 Review</b>	⊘		⋮
☰	<b>Required Reading 1: Mateescu &amp; Nguyen. 2019. Algorithmic Management in the Workplace</b> Nov 11	✓		⋮
☰	<b>Required reading 2: Rosenblat, A., 2018. When your boss is an algorithm. New York Times.</b> Nov 11	✓		⋮
☰	<b>Required video: Inside Amazon: The Rugeley warehouse</b> Nov 11	✓		⋮
☰	<b>Weekly forum 10: On Amazon's Time</b> Nov 13   15 pts	✓		⋮
☰	<b>Optional reading: Cappelli, P., 2020. Stop Overengineering People Management. Harvard Business Review.</b>	✓		⋮
☰	<b>Optional video: Alex Rosenblat (37 minutes, highly recommended)</b>	✓		⋮
☰	No tech focus assignment this week. Instead, start to work on your final essay.	✓		⋮
☰	<b>Final Paper: The importance of being human in a world of automation.</b> Nov 28	✓		⋮
Will unlock Oct 24 at 12am				

<b>Unit 11 New forms of work and their social implications</b>		✓	+	⋮
☰	<b>Unit 10 Review</b>	⊘		⋮
☰	<b>Required reading 1: Your boss is going to start using AI to monitor you—and labor laws aren't ready</b> Nov 18	✓		⋮
☰	<b>Required reading 2: New forms of work and policy implications for labour regulations</b> Nov 18	✓		⋮
☰	<b>Required Video: Workers rights in the age of surveillance capitalism</b> Nov 18	✓		⋮
☰	<b>Weekly forum 11 : Finland's Universal Income Experiment</b> Nov 20   10 pts	✓		⋮
☰	<b>Optional Video: Prof. Paul Oyer, "The Gig Economy: Threats and Opportunities for Workers and Employers"</b>	✓		⋮
<b>Unit 12 Rutgers Thanksgiving Recess Nov 24-27 (No classes)</b>		✓	+	⋮

☰	▼ <b>Unit 13 Re-imagining Worker Voice and Collective Activism (1)</b>	✓	+	⋮
☰	 <b>Unit 11 Review</b>	⊘		⋮
☰	 <a href="#">Required Reading 1: What is worker voice and why it is so important</a> Dec 2	✓		⋮
☰	 <a href="#">Required Reading 2: Hundreds of Google Employees Unionize, Culminating Years of Activism</a> Dec 2	✓		⋮
☰	 <a href="#">Required Video 1: Why Google's union is a big deal (8-min video)</a> Dec 2	✓		⋮
☰	 <a href="#">Required Video 2 : Hundreds of New York Times Tech Staffers Vote to Unionize (WSJ. March 2022)</a> Dec 2	✓		⋮
☰	 <a href="#">Weekly forum 13 : Alphabet Workers Union</a> Dec 4   10 pts	✓		⋮
☰	No tech focus assignment this week. Instead, start to work on your final essay.	✓		⋮
☰	 <a href="#">Final Paper: The importance of being human in a world of automation.</a> Nov 28	✓		⋮
Will unlock Nov 11 at 12am				

☰	▼ <b>Unit 14 Re-imagining Worker Voice and Collective Activism (2)</b>	✓	+	⋮
☰	 <b>Unit 13 Review</b>	⊘		⋮
☰	 <a href="#">Required reading 1: Union Organizing in Amazon warehouses</a> Dec 9	✓		⋮
☰	 <a href="#">Required video1: Alabama Amazon Warehouse Could Become First To Unionize For Company.</a> Dec 9	✓		⋮
☰	 <a href="#">Optional reading 1: How Amazon Is Resisting Unions in Two Upcoming Elections</a>	✓		⋮
☰	 <a href="#">Optional reading 2: Here's How We Beat Amazon</a>	✓		⋮
☰	 <a href="#">Required reading 2: More Starbucks stores want to unionize. These workers are leading the push.</a> Dec 9	✓		⋮
☰	 <a href="#">Required video 2: How the Starbucks Union vote may impact the restaurant industry</a> Dec 9	✓		⋮
☰	▼ <b>Unit 15 - Last week / Final reflection / Test 2</b>	✓	+	⋮