ECON 490
Technology and the Future of Work

Semester: Fall 2019
Meeting Times: Tuesdays and Thursdays, 9:30-10:50 AM, on Zoom

Zoom Registration Link:

Instructor: Professor Andrew Garin
Email: agarin@illinois.edu
Office Location: DKH 101D
Office Drop-in Hours: Thursday 2:30-4:00PM on Zoom, or by appointment

Changes to office hours will be announced to students during the class meeting time before, by email, and/or on the course website. It is always a good idea to indicate via email or in-person your intention to visit office hours as I may have appointments with other students during that time. If your class schedule does not allow you visit office hours during this time, please discuss with me as we may schedule another time to meet. I reserve the right to change the office hours schedule if there is sufficient demand, and this will be announced to students.

Course Description

This course examines how new technologies are changing the nature of and returns to work. We will investigate how the labor market has been impacted by computerization, automation, the gig economy, outsourcing, artificial intelligence, among others. We will combine microeconomic models of the labor market and empirical methods to assess how the rise new technologies drive trends in earnings growth, job growth, and gender pay disparities, and to analyze how policy responses might prepare for the future of work.

Prerequisites:

ECON 202; ECON 302 or ECON 303; MATH 220 or MATH 221 or other Calculus course. RECOMMENDED: Basic knowledge of econometrics and any statistical software. R/Excel/ Stata will be used in a few classes.

Course Goals

- **Familiarize students with recent developments in the labor market and labor policy debates**
- **Model-based reasoning**: Students will learn how to use formal models to understand patterns in the data and policy effects and develop understanding of how results depend on underlying assumptions.
- **Data-driven analysis**: Students will develop skills analyzing and presenting trade-related datasets. Specifically, students will gain experience using economy theory to guide empirical analysis, and using data to assess economic theories.
Course Structure:

The course will be a synchronous lecture with activities and discussion. In order to facilitate in-class interaction, lectures will be run as live Zoom meetings during the scheduled meeting time, and students are expected to be present. Discussion will be encouraged in class, and meetings will involve in-class polls and quizzes. The course will include several in-class data analysis tutorials. Each week, students will be required to submit responses to brief discussion questions about required reading.

Student Code pertaining to student attendance: http://studentcode.illinois.edu/article1_part5_1-501.html
Office of the Dean of Students helps to assist students navigate the Student Code and course policies. If students will be absent for an extended period of time, they should discuss with this office: http://odos.illinois.edu/

Website
We will use the course space on Illinois Compass 2g: https://compass2g.illinois.edu

Textbook/Other Required Materials

There will be required reading for each week, usually articles that review of the literature or non-technical overviews of topics. Supplemental readings will be provided as well. All readings will be accessible on JSTOR and/or posted online on the course Compass website. There is no required textbook for this course.

Students should purchase a one-semester Stata/SE 16 license through the campus web store: https://webstore.illinois.edu/shop/product.aspx?zpid=3865

Required Assignments

- **Problem Sets:** There will be biweekly problem sets assigned during the semester. These will include analytics exercises, hands-on empirical exercises using R or STATA, and expository writing exercises. The lowest grade will be dropped.

- **Weekly Discussion Questions:** Before each Tuesday lecture, students are required to submit responses to discussion questions about required reading to ensure preparation for discussion in class. Students are allowed to skip submitting responses two weeks during the semester. **Answers must be posted on the course blog by 9 PM Monday the night before lecture**

- **Review Quizzes.** Each Thursday lecture will begin with a 5-minuted in-class multiple choice mini-quiz that will review materials from prior weeks. The lowest two grades will be dropped.

- **Final Assignment.** Students will pick a technological innovation that affects work in an industry and draw on data and academic literature to write a policy memo analyzing how the technological development has impacted the labor market and whether such changes require a policy response.

Assessment Policies:

Problem sets are to be turned in by the beginning of the class in which they are due. Late assignments receive no credit without an instructor approved excuse. Acceptable excuses include physical and mental illness, and personal or family emergencies. A written request for an extension must be submitted at least 48 hours in advance.
Assignments should be submitted through the course Compass site as a single file digital attachment (a scan or a document file). You are encouraged to work as a group with your classmates on problems sets, although you have to hand in your own solutions.

Note that we cannot grade assignments that we cannot read. Consequently, please be careful to make all assignments legible.

**Exam Policy:**

In the event that a student misses one of the exams, the instructor reserves the right to give the student a zero on that exam. There are no make-up exams without an instructor approved excuse. Instructor approved excuses include 1) medical reasons, in which case you should bring a letter from a medical professional describing your reason for missing the exam, 2) death or serious illness of an immediate family member or close friend (documentation required), or 3) conflict with a religious holiday. Requests for exam make-ups should be made as far in advance as possible.

We will follow the University guidelines on student conflicts with final exams. For this year’s student code, see
Student Code Evening/Midterm/Hourly Exams: [http://studentcode.illinois.edu/article3_part2_3-202.html](http://studentcode.illinois.edu/article3_part2_3-202.html)
Student Code Final Exams: [http://studentcode.illinois.edu/article3_part2_3-201.html](http://studentcode.illinois.edu/article3_part2_3-201.html)

**Regrades:**

All regrade requests must be submitted in writing no more than one week after the assignment or exam is returned. The request must be written and include a detailed summary of why the student believes the grade they received was incorrect. I generally regrade the entire exam or assignment, so the grade may go up or down. Consequently, students should only request a regrade if they are very confident that the original grade they received was incorrect.

**Grading**

Grades will be on a +/- letter scale and will follow a light curve.

Semester grades will be based on the following:
- Weekly Discussion Questions—15%
- Problem Sets—45%
- Participation (including review quizzes)—15%
- Final Assignment—25%

**Academic Assistance**

Students are encouraged to utilize the many resources we have throughout campus to assist with academics. We recommend that you seek them out starting early in the semester, not just in times of academic need, in order to develop good study habits and submit work which represents your full academic potential. Many resources may be located on the Economics Website, including information about the Economics Tutoring Center, other tutoring centers, : [http://www.economics.illinois.edu/undergrad/resources/accassistance/](http://www.economics.illinois.edu/undergrad/resources/accassistance/)

**Academic Integrity**

According to the Student Code, ‘It is the responsibility of each student to refrain from infractions of academic integrity, from conduct that may lead to suspicion of such infractions, and from conduct that aids others in such infractions.’ Please know that it is my responsibility as an instructor to uphold the academic integrity policy of the University, which can be found here: [http://studentcode.illinois.edu/article1_part4_1-401.html](http://studentcode.illinois.edu/article1_part4_1-401.html)

Academic dishonesty may result in a failing grade. Every student is expected to review and abide by the Academic Integrity Policies. Ignorance is not an excuse for any academic dishonesty. It is your responsibility to
read this policy to avoid any misunderstanding. Do not hesitate to ask the instructor(s) if you are ever in doubt about what constitutes plagiarism, cheating, or any other breach of academic integrity.
Read the full Student Code at the following URL: http://studentcode.illinois.edu/

Students with Disabilities
To obtain disability-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor and the Disability Resources and Educational Services (DRES) as soon as possible. To contact DRES you may visit 1207 S. Oak St., Champaign, call 333-4603 (V/TTY), or e-mail a message to disability@illinois.edu DRES Website: www.disability.illinois.edu/

Emergency Response Recommendations
Emergency response recommendations can be found at the following website:
http://police.illinois.edu/emergency-preparedness/. I encourage you to review this website and the campus building floor plans website within the first 10 days of class. http://police.illinois.edu/emergency-preparedness/building-emergency-actionplans/.

Family Educational Rights and Privacy Act (FERPA)
Any student who has suppressed their directory information pursuant to Family Educational Rights and Privacy Act (FERPA) should self-identify to the instructor to ensure protection of the privacy of their attendance in this course. See http://registrar.illinois.edu/ferpa for more information on FERPA. Student information and records will not be released to anyone other than the student, unless the student has provided written approval or as required by law. More information may be found here: http://studentcode.illinois.edu/article3_part6_3-602.html.

Sexual Misconduct Reporting Obligation
The University of Illinois is committed to combating sexual misconduct. Faculty and staff members are required to report any instances of sexual misconduct to the University’s Title IX and Disability Office. In turn, an individual with the Title IX and Disability Office will provide information about rights and options, including accommodations, support services, the campus disciplinary process, and law enforcement options. A list of the designated University employees who, as counselors, confidential advisors, and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here: http://www.wecare.illinois.edu/resources/students/#confidential.
Other information about resources and reporting is available here: http://wecare.illinois.edu/.

Student Support
The Counseling Center is committed to providing a range of services intended to help students develop improved coping skills in order to address emotional, interpersonal, and academic concerns. Please visit their website to find valuable resources and services: https://counselingcenter.illinois.edu/.
Counseling Center Information: 217-333-3704
Location: Room 206, Student Services Building 610 East John Street, Champaign, IL
Appointment: Scheduled for same day, recommend calling at 7:50 a.m.
McKinley Mental Health Information: 217-333-2705
Location: 3rd Floor McKinley Health Center 1109 South Lincoln, Urbana, IL
Hours: 8 a.m. – 5 p.m., Monday through Friday Appointment: Scheduled in advance.
Emergency Dean: The Emergency Dean may be reached at (217) 333-0050 and supports students who are experiencing an emergency situation after 5 pm, in which an immediate University response is needed and which cannot wait until the next business day. The Emergency Dean is not a substitute for trained emergency personnel such as 911, Police or Fire. If you are experiencing a life threatening emergency, call 911. Please review the Emergency Dean procedures: http://odos.illinois.edu/emergency/

Academic Dates and Deadlines
Students should make note of important academic dates for making changes to their courses (add, drop, credit/no-credit, grade replacement, etc.). https://registrar.illinois.edu/academic-calendars
Please check with your academic department regarding specific procedures and policies.
Course Schedule (Tentative)
The following outline is what we plan to cover in class during the different class meetings, as well as all assignments and exams required. The outline is subject to change at the Instructor’s discretion, and information on these changes will be provided in class.

Weeks 1–2: Is This Time Different? (And Some Review)
Required reading for 9/1


Podcast: "When Luddites Attack": https://www.npr.org/sections/money/2015/05/06/404701816/episode-621-when-luddites-attack

Week 3: Skill-Biased Technical Change and Rising Inequality
Required reading for 9/8:


Supplemental reading:


Week 4: Automation and Routine-Biased Technical Change
Required reading for 9/15


Week 5: Did Robots Replace Manufacturing Jobs?
Required reading for 9/22:

Week 6: What Jobs Aren't Automated? Will AI Change That?

Required reading for 9/29:


Podcast "I Waiter" https://www.npr.org/sections/money/2015/05/15/407086723/episode-624-i-waiter

Week 7: A Race Between Man and Machine: Will Automation Replace Jobs?

Required reading for 10/6:


*TED Talk: Why are there still so many jobs? https://www.youtube.com/watch?v=LCxcnUrokJo


Supplemental reading:


Week 8: The Great Divergence Between Tech Hubs and Rust Belts

Required reading for 10/13:


Supplemental reading:

Moretti, Enrico 2012. The New Geography of Jobs

**Week 9: Bigger Stages, Bigger Superstars**

*Required reading for 10/20:*


Supplemental Readings:


**Week 10: Outsourcing and Offshoring in a Connected World**

*Required reading for 10/27:*


Supplemental Reading


**Week 11: The Gig Economy and Alternative Work**

*Required reading for 11/3:*


*Supplemental Reading:*


**Week 12: New Work and The Gender Gap**

*Required reading for 11/10:*

*Weekly Reading:*


**Supplemental Reading:**


**Week 13: Policy Responses to Technological Change: Technology Policy, Universal Basic Income, Training, and More**

*Required reading for 11/17:*


**Supplemental Reading:**


**Week 14: Work During and After COVID-19**

*Required reading for 12/1:*


(More TBD)

Week 15: Review and Recap