TECHNOLOGICAL CHANGE AT WORK (TΔ@W) (SPRING 2025)

ILRGL 4066/6066 | AMST 4066 | PADM 5411
Professor Adam Seth Litwin

IDEAS worth TEACHING
THE ASPEN INSTITUTE
Award Winner

Course Syllabus

Note on the Use of This Course toward Degree Requirements:

As of the printing of this document, this course fulfills a number of academic requirements across the university:

- In the **ILR School**'s BSILR program, **ILRGL 4066** can be counted toward the Science & Technology (S&T) distribution requirement or as an upper-level elective. It also fulfills the advanced/writing-intensive elective requirement. However, consult OSS if you intend to have it count toward more than one of these requirements.
- In the **ILR School**'s MILR program, **ILRGL 6066** can be counted as an elective.
- In the **College of Arts & Sciences**, **AMST 4066** can be counted toward the 1.) Social Sciences distribution requirement (SSC-AS), 2.) Social & Behavioral Analysis distribution requirement (SBA-AS), or 3.) American Studies major or minor.
- In the **College of Engineering**, **ILRGL 4066** or **AMST 4066** can be applied toward the Liberal Studies requirement under Social Sciences (SSC) or Social & Behavioral Analysis (SBA).
- In the **Brooks School's MPA program, PADM 5411** can be applied toward the Science and Technology Policy (formerly Science, Technology, and Infrastructure Policy) concentration.

This course may count toward other degrees, programs, or concentrations at Cornell University. Please consult with me, and I will do what I can to help, though *the final determination rests with the academic advisors in your home school and program*.

Instructor
Professor Adam Seth Litwin

CONTACT INFORMATION
admin: Christine Schmidt ~ 374 Ives Hall ~ crs339@cornell.edu

OFFICE HOURS
in-person: Mondays, 4.00-5.30pm in 369 Ives Hall (faculty wing), and by appointment
via video w/ shared screen & whiteboard: in my Zoom room—by appointment only

I include details on Canvas for the best ways to get instant answers to your questions. *And that will never be by emailing me at my Cornell email address*.

When you have questions, ***please arrange to come to office hours***!

If you cannot do that, please direct *substantive* questions (i.e., questions about the material, e.g., "What is the difference between artificial intelligence and machine learning?") to the [Substantive Questions] forum on Canvas. By posting substantive questions on Canvas, you give other students first crack at answering. Explaining course concepts to each other requires strong understanding and the ability to elucidate clearly and concisely. It thus benefits both the person providing and the person receiving the answer. Moreover, it promotes egalitarianism with respect to class-related information and knowledge. I will intervene to provide any necessary clarification or elaboration. Likewise, please direct all *administrative* questions (i.e., non-substantive, e.g., "Can you tell me again where to find the readings?") to the Administrative Questions forum on Canvas. *This includes questions related to the many technologies and platforms we'll be using in the course this semester.* This gives your classmates the opportunity to help you, probably even faster than I can. Where confidentiality is needed, the concern is unique to you, or the forum is otherwise inappropriate, please arrange to stop by office hours. When that is not possible, *please message me directly through Canvas*. That is how to get your concierge access to me. My Cornell email is the abyss.

I *strongly* recommend that you subscribe to the above-mentioned discussion forums at once as I will *assume* that you have seen and read everything that appears on them.

But as I said at the outset, ***please come to office hours***! It's the best way we can get to know each other.

Learning Outcomes
As a result of taking part in this course, you will be able to:

1. Assess the extent to which the present wave of emerging workplace technologies differs from earlier ones.
2. Describe theorized patterns of how new technologies shape and reshape the employment relationship and the workplace for specific social groups and apply these theories to emerging workplace technologies.
3. Identify potential points of conflict and change in workplace hierarchy given information about how a new technology is being used in a contemporary workplace.
4. Prescribe policy responses aimed at mitigating the potentially deleterious impact of workplace technological change and articulate the potential unintended consequences of these policies.

You will engage in individual and group analyses of discrete technologies as well as of specific jobs and sectors, relying on both primary and secondary sources. You will present some of your findings in conventional, written form and others in more innovative, transmedia formats.

Purpose and Objectives
Computers and then "smart," digital technologies including robotics, machine learning, artificial intelligence (AI), internet-enabled platforms, and other "high-tech" drivers of automation have revolutionized the nature and organization of work in the U.S., with material implications for workers and their families, among others. This upper-level course begins with a rhetorical inquiry into whether and when the technological change engendered by digitization and the so-called "Information Technology (IT) Revolution" benefits workers. We then consider the broader impact of more recent technological advances on manufacturing and fabrication, low- and semi-skilled service work, i.e., restaurant servers and bus drivers, and even on expert and professional work like that to which most of you presumably aspire. Among the central themes is the notion that technology does not unilaterally act upon workers, their employers, or society-at-large. Rather, developers, workers, managers, customers, institutions, and policymakers shape which advances take hold and which do not, the ways that these technologies are deployed in the workplace, and the ways that society can actively mitigate the costs arising from technological advancement while harnessing its benefits.

Apps, Equipment, Technology, etc.

As you can already tell, this course will make heavy use of Canvas. Please get used to checking it regularly, and be sure you are getting pinged whenever someone adds new, course-related content. You should also install the Canvas app on your phone or tablet and/or be able to access it via your laptop. I may use it *in class* as well as between classes, so make sure you have a way to access Canvas from your seat in the classroom. Let me know privately, of course, if any of this will be difficult for you to do.

You should also arrive at our first class meeting ready to use Poll Everywhere on your laptop, phone, or tablet. Do that by following these directions:

In-Class Quizzes and Polling

This course will be using Poll Everywhere during lectures.
Follow the steps to set up your Poll Everywhere account and participate in classroom activities.

The wi-fi in classrooms can only accommodate one device per person. Please connect your device using Poll Everywhere to **Eduroam** and set all of your devices to "forget" **Cornell-visitor** and **Redrover**. This will allow everyone in class to connect.

Get the Phone App/Use the web site

Download and install the mobile response app. With the app, you can more quickly access polls and see your history of responses.

- iOS or Android devices: www.polleverywhere.com/mobile

Note: A text-only phone may be used for some questions instead of the smart phone app

Or on a computer:
polleverywhere.com/login

Use your Cornell Net ID email address.

Log In

- Click **Log in**, enter your Cornell Net ID email address, e.g. *ewe2@cornell.edu*, and click/tap **Next**.
- Click/Tap Login with Cornell Net ID.
- Enter your Cornell Net ID and password.
- Your Poll Everywhere account is now created.

In-Class Activities

When class begins, launch the app, log in, and type in the course name **ProfASLitwin** or choose this course from the list.
Or go to the web page at https://pollev.com/ **ProfASLitwin** and log in.
When the instructor activates a poll, you'll be able to respond from the app/web page in real time.

In this course, the system will ask you to "Check In." That's how it knows you're actually in the classroom. So, you must "check in" (and share your location, if it asks) in order to get credit for the quiz, poll, or whatever activity we are doing with Poll Everywhere.

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I may also ask you to install/use/access other educational platforms and applications over the course of the semester. I *cannot* guarantee that they will all be free to use, but I will be sensitive to their cost to you. (You should also let me know if you have a financial hardship, so I can try to help.) In general, I ask that you immerse yourselves in these as best you can. And again, I may want you to access these with me in real time in class.

Readings & Other Assigned Media

This course does not have a single, required text. Rather, I will be asking you to read articles and to engage with other forms of media including podcasts, videos, and interactive web platforms. I will make *nearly all of these* available to you electronically and free of charge and through Canvas. You will see that readings and other assigned media are organized by course module in Canvas. If you have trouble with a file or a link in Canvas, please post that to the Administrative Questions discussion forum as soon as you discover it. I will try to fix it ASAP.

So, which materials will you need to buy?

- I cannot provide direct, free access to Harvard Business School cases. (I wish I could, believe me.) You will have to purchase the course pack or access it through the Cornell Academic Materials Program (CAMP). You should be able to do both through the Course Materials link on Canvas.
- About midway into the semester, we'll be reading a paperback novel, Kurt Vonnegut's *Player Piano* (1952). This, too, is included in CAMP. Likewise, you can 1.) buy it through Course Materials, 2.) find a cheap copy online (any version is fine), or 3.) access/read the e-book for free through Catherwood.

I will generally post a *preliminary* version of my lecture slides on Canvas *before* class. These slides are meant to *supplement* the lectures and activities we undertake in class. Furthermore, I tend to revise slides to include new points, ideas, or activities right up until the start of class, so do not be surprised if there is additional material not included on the versions posted before class. I will also post revised slides to Canvas *after* the relevant class meeting and will mark them "final." My general advice is to use the slides as outline notes, but to make sure you also take your own additional notes on readings, lectures, and activities. You will want to reference them as you prepare your assignments/submissions.

Course Requirements

- I expect you to have done the required reading and consumed the required media *prior* to our treatment of the material in class. For starters, these assignments will be the basis for each day's entry or exit ticket. But more important, your informed and meaningful contributions to and engagement in class discussions will be the lifeblood of this course.

- Your course grade will be based on the following seven items, all of which I will detail separately:
  i. *The Experience of Tech Change*—an individual (i.e., not group), two-part assignment in which you produce an interview and write a short paper—due Thursday, February 13th for **20%** of your grade.

  ii. *In Hindsight*—a small-group assignment in which you research and produce a PechaKucha（ぺちゃくちゃ）—due Thursday, March 27th for **15%** of your grade.

  iii. *Field Observations on Your Use of Generative AI*—an individual (i.e., not group) paper/memo in which you detail and reflect upon your use of LLMs and AI as a student this semester—due Thursday, May 1st for **12.5%** of your grade. (*Write it earlier if you must; I cannot accept any late submissions for this assignment.*)

  iv. *Techno-Polemic Reflective Analysis*—an individual (i.e., not group) paper in which you analyze Vonnegut's *Player Piano* in the context of key themes and concepts covered in the course—due TBD during final exams period for **12.5%** of your grade.

  v. *Entry & Exit Tickets*—collectively **20%** of your grade. I will drop your lowest two scores. (Save these two drops for a rainy day! You never know if you might get sick or face some other emergency late in the semester.) [throughout the semester]

  vi. *Constructive Engagement*—**20%** of your grade. Everything I ask you to do counts! Every survey question, every in-class activity, every exercise, any discussion question I post to Canvas. So, think of this as a straightforward way to boost your grade! You can miss a few and still get full credit! [throughout the semester]

Academic Integrity, Entry & Exit Tickets, and the Use of AI

You are responsible for understanding and abiding by the Cornell University Code of Academic Integrity. The university *Code of Academic Integrity* is available on the web. The ILR School also offers students some additional information on this topic on the web for its students. *You all know what constitutes cheating and plagiarism, so I don't anticipate any problems on that front.*

That said, I wanted to call your attention to two points related to academic integrity in this course:

1. ***Re: Entry & Exit Tickets…***You will note that the course includes electronically administered in-class entry and exit tickets. In order to get credit for them you must take them a.) *during the time I provide for them in class*, and b.) *from the classroom*. You are welcome to view the ticket questions from another location if Canvas allows it. You may want to, so you can see what the questions were. But you will only get actual credit for submitting the ticket from the classroom. Answering the questions for a friend or classmate constitutes an honor code violation, as does communicating with a classmate while answering the questions.
2. ***Re: AI/Large Language Models/ChatGPT/etc.…*** This issue is so central to the course content that I will make it a recurring topic in our discussions. In short, I *expect* you to use AI in this course. In fact, some activities will outright *require* it. Learning to use AI strikes me as an emerging skill, albeit one I'm learning alongside you! That said, review my "Student Guidelines for Proper AI Use," accessible through Canvas. Also know that when you use AI, *you must make that clear in your submission. Some of your assignments may include specific instructions for attesting to and acknowledging your use of generative AI. In the absence of such instructions, please append to your assignment all of the exact prompts that you entered as well the LLM's responses/output.* Presumably, this detailed attribution will run a few pages; it will not count toward page limits.

   Failure to properly acknowledge your use of AI constitutes an honor code violation.

   We will talk more in class about AI and how to get the best results from it. For now, suffice it to say you cannot trust its output. And you will be responsible for whatever errors and omissions you accept as fact and use as a basis for your work.

Attendance and Absences

While I genuinely appreciate your messaging me if you are unwell or experiencing a personal hardship, I do not take attendance in any formal manner, nor do I distinguish between "excused" and "unexcused" absences. Everyone will need to miss a class or two over the course of the semester. That's fine, and you can still perform well in the class if you do. That said, I have structured the content and the assignments to reward those who attend class and actively engage in all course-related activities. *If you miss a class or a class-related activity, please work with a classmate to figure out what you missed before following up with me in office hours.*

Pedagogical Approach & Environment: The Case Method

At a few points this semester, we will engage in formal case discussions. This can be daunting for those who have not yet been subjected to "the case method." A case study is *not about getting the latest information on a company*. In fact, the best cases for discussion tend to be from long enough ago that we can make a fair and sober examination of the historical context in which they took place. Moreover, nearly every business case ever written up for classroom discussion is at least partially fictionalized and simplified if not outright made up and formulated to be useful in the classroom. Rather, the goal of case studies is to provide us with a safe place to contemplate critical situations that managers, policymakers, or others address on a regular basis.

Cases allow us to improve our decision-making skills by identifying, defining, and solving, complex management problems in their organizational setting. Learning from case examination takes place in several ways. Some learning comes from the initial preparation, reading, and analysis. Much of the learning comes from the discussion in class when you share your ideas with your peers. The opportunity to see the variety of ideas expressed by your peers and to be exposed to the challenge of defending your ideas in the face of questions they may ask provides another benefit to undertaking case discussions.

In preparing cases for class, I recommend that you read the case at least twice. The first reading should give you a feeling for what the case is about and the types of information contained in the case. The second reading should be more in-depth and *guided by the questions I provide you via Canvas for each case*. The major effort of the second reading should be to understand the issues raised in the case and the factors affecting the decision. Identify the major problems, conceive alternative solutions, and assess the advantages and disadvantages of each solution.

As is often the case in actual decision making, the case may not provide all the information you might like to have. Nevertheless, it is crucial that you develop a well-reasoned plan of action on the basis of data available. If you think that a specific piece of information is crucial to the decision, then explain how this information can be obtained and how the decision is contingent on this information.

There is no right or wrong answer to the cases. The validity of your view rests on its logic and your ability to integrate diverse bits of information to develop an effective course of action. Finally, in my experience, group preparation—even virtually—enhances learning and leads to more effective classroom discussion. I strongly recommend it, in part because it provides perhaps the very best avenue for you to benefit from the combined experiences and brainpower of your peers. You'll miss these opportunities and these people when you graduate!

Much more so than in a conventional classroom environment, you will be learning from one another—not just from me. To do that requires that we incorporate as many voices and perspectives as possible and that we be respectful of one another's ideas, opinions, politics, background, and experiences, especially when they deviate from our own.

For anyone uneasy about this approach, I would be glad to work with you to discuss the most effective methods to prepare for, contribute to, and learn from the case method.

Note on Inclusivity, Diversity, and Disabilities

Cornell University and I both strive to maintain an inclusive learning environment where diversity and individual differences are understood, respected, appreciated, and recognized *as a source of strength*. I expect you to respect differences and to demonstrate diligence in understanding how other peoples' perspectives, behaviors, and worldviews may differ from yours. You should demand the same of me.

Student Disability Services (SDS) provides academic and/or environmental accommodations and services for qualified students with disabilities. If you have, or think you may have a disability, please contact Student Disability Services for a confidential discussion via sds_cu@cornell.edu or 607-254-4545.

For those of you with documented disabilities, your access to accommodations in this course is important. Please request your accommodation letter early in the semester, or as soon as you become registered with SDS, so that there is adequate time to arrange your approved academic accommodations.

Course Plan
The (coarse) course plan that appears here on the syllabus is that *as it exists on the first day of class*. It is subject to change based on what I learn about you and your interests and our discovery of newly-available, relevant materials. Therefore, over the course of the term, for the most detailed and up-to-date list of required readings, media, etc., *please refer to the relevant learning module on Canvas*. *I will update the Canvas learning modules in real-time*, but I do not intend to make regular revisions to this syllabus.

Under each unit below, I list its constituent modules, as I'll title them on Canvas. When you look to the module in Canvas, you'll see they are rich and detailed, replete with seed questions for discussion and wherever possible, direct hyperlinks to the assigned media.

- **Course Introduction**

- **Unit #1**: *Introduction to the Study of Workplace Technological Change (WTΔ)*
  - Employment Relations Foundations for the Study of WTΔ
  - Some Useful, Less Useful, and Altogether False Dichotomies for Dissecting WTΔ

- **Unit #2**: *How WTΔ Affects Workers, Organizations, and Industries*
  - Automation's Micro/Cognitive Implications
  - First- vs. Second-Order Effects
  - Remote and Hybrid Work

- **Unit #3**: *Artificial Intelligence (AI)*
  - The Evolution and Current State of Workplace AI
  - Ethical Considerations Arising from Workplace Applications of AI
  - Humans in the Loop
  - Prompt Engineering
  - From Generative to Agentic
  - Data Analysis and Data Mining
  - Workplace AI Implementation
  - Selected Applications of AI across Sectors and Industries

- **Unit #4**: *Labor Markets and Labor Relations Institutions*
  - Economic Approaches to Workplace Technological Change
  - Technology and Work Systems
  - Platform Capitalism, the Gig Economy, and Algorithmic Management
  - The Technological Innovation Balancing Act
  - Skills, Automation, and Job Loss
  - Robots Old and New
  - Reimagining Worker Voice
  - Reforming and Advancing Labor, Work, and Technology Policy

- **Course Wrap-Up**