

# DIGITAL TECHNOLOGY INTERDISCIPLINARY EDUCATION (TECHIE)

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## TECHIE 5300 - Fundamentals of Modern Software (2 Credits)

This is a crash course in how software works and what it can do. It covers the basics of programming, databases, and web applications. There is a strong emphasis on learning by doing and the course includes weekly programming assignments in Python. Students who complete the course will be able to write simple programs to automate routine tasks. They will have enough familiarity with the modern software stack to quickly absorb new technical information. Even more importantly, they will be able to talk to technologists intelligently and understand the kinds of constraints that shape technical decisions. The course is intended for students with no prior training in programming. It covers the essentials of program implementation and debugging. Students who have significant programming experience may not take this course. Talk to the instructor ASAP if you are uncertain whether this applies to you.

**Enrollment Information:** Enrollment limited to: Johnson and Law Cornell Tech students.

**Last Four Terms Offered:** Spring 2025, Spring 2024, Spring 2023, Fall 2021

Schedule of Classes (<https://classes.cornell.edu/>)

## TECHIE 5305 - Learning Machine Seminar Series (0.5 Credits)

The Cornell Learning Machines Seminar is a semi-monthly seminar held at the Cornell Tech campus in New York City. The seminar focuses on machine learning and related areas, including Natural Language Processing, Vision, and Robotics.

### Learning Outcomes:

- Exposure to state-of-the-art research in NLP, ML, and related areas.

Schedule of Classes (<https://classes.cornell.edu/>)

## TECHIE 5310 - Business Fundamentals (1 Credit)

This course is an introduction to fundamental concepts in business management - strategy, finance and financial accounting, marketing, organizational design, operations management, and negotiations - that are crucial knowledge for any entrepreneur and/or product manager. The course will help you learn the 'language of business,' and prepare you to take business electives in the near term and to run your own firm or product unit in the not-too-distant future, after you graduate from Cornell Tech. Business Fundamentals is not just economics, psychology, sociology, or mathematics, but draws from all of these disciplines. As a result, some of the concepts may sound familiar to some of you, but we will focus on understanding how they are applied to real-world business problems. In order to do so, we will use business cases and exercises in addition to lectures. Analyzing a case study and the resulting deductive learning will help you think in a different way, and will teach you to be comfortable with ambiguity, uncertainty, and contingencies, which are inevitable realities of business life. The general structure of the course is to introduce core concepts in each business area - strategy, finance/ accounting, marketing, organizational design, operations management, and negotiations - through a lecture and a reading and then to apply those concepts in analyzing a custom-written case that draws from current business news.

**Enrollment Information:** Enrollment limited to: non-MBA Cornell Tech students.

**Last Four Terms Offered:** Fall 2024, Fall 2023, Fall 2022, Fall 2021

Schedule of Classes (<https://classes.cornell.edu/>)

## TECHIE 5311 - Introduction to Entrepreneurial Finance: Firm Valuation and Term Sheets (1 Credit)

Crosslisted with LAW 5311

This course is designed to introduce students to the challenges and pitfalls of financing new enterprises. The class sessions will combine lectures and cases. The course covers three broad topics: identifying and valuing opportunities, contract design and financing alternatives, and exit/harvesting strategies.

**Last Four Terms Offered:** Fall 2024, Fall 2023, Fall 2022, Fall 2021

Schedule of Classes (<https://classes.cornell.edu/>)

**TECHIE 5315 - Emerging Technologies and Markets (1 Credit)**

Highly current information about new and upcoming technology-powered trends and markets to offer the most up-to-date industry knowledge.

These emerging technologies may lead to status quo disruption, and we will explore the latest technological advances affecting traditional business models. Industry pioneers will be guest speakers. Experts will provide an insider's view on the rapidly developing capabilities. The insight will enable students to enter into/continue in the workforce with current marketplace knowledge providing strategic advantage to their organizations, careers, and entrepreneurial efforts. Review of new technologies plus converging to create synergistic growth and ways exploiting these symbiotic effects. Approximately ten new technology areas/industries will be covered in this four-consecutive-night intensive pre-semester seminar course.

**Enrollment Information:** Enrollment limited to: full time students enrolled at Cornell Tech.

**Last Four Terms Offered:** Winter 2025, Fall 2024, Winter 2024, Winter 2023

**Learning Outcomes:**

- Ability to understand technology-influenced business impacts including what areas to investigate and what questions to ask.
- Ability to make effective managerial decisions regarding technology-led, technology-dependent, or technology-based business endeavors.
- Established personal foundation for making difficult, high-integrity, and honorable business management decisions regarding the use of nascent technologies in an organization.
- Managerial effectiveness and decision-making confidence regarding senior-level, technologically based leadership decisions.

Schedule of Classes (<https://classes.cornell.edu/>)

**TECHIE 5320 - Law for Non-Lawyers (1 Credit)**

This class introduces the principal legal issues involved in starting, managing and operating a technology-oriented business by entrepreneurs. It is intended to provide non-law students with an understanding of many of the laws and regulations to which developing businesses in the United States tech sector are typically subject-from the time an entrepreneur conceives and begins to build a business, implements a business plan, and obtains financing, to when she begins operations in anticipation of managing a mature company and considering possible exit strategies. The instructor, a former corporate partner in a large New York City law firm, will adopt the role of a general counsel to a start-up company advising his client/students about how laws and regulations affect their businesses at various stages of development, as well as about typical key contractual terms and negotiating strategies. Practicing lawyers specializing in areas of the law-tax, intellectual property, employment law and others particularly relevant to start-up technology companies-will serve as guest lecturers. The course is designed to impart an understanding not only about substantive areas of the law that intersect with tech businesses but also about the role that lawyers should and should not play in burgeoning business enterprises. Students will gain insights into how lawyers approach business problems and the benefits and limitations of such a perspective.

**Enrollment Information:** Enrollment limited to: Cornell Tech MBA, M.Eng., and MS students. JD and LL.M students are not eligible to take this course. Johnson NYC students may register with permission of the instructor.

**Last Four Terms Offered:** Spring 2025, Spring 2024, Spring 2023, Spring 2022

Schedule of Classes (<https://classes.cornell.edu/>)

**TECHIE 5325 - Research for Startup Nation: Innovation in Israel iTrek Trip (0.5 Credits)**

This fall course prepares participants for the 10-day academic and cultural course/trip in the winter session (TECHIE 5330/NBAY 5920). Pre-iTrek coursework will introduce topic areas and team requirements for the intensive ideation competition to be held onsite in Israel. This includes in-person sessions, team meetings, meetings with mentors, and a final research proposal. Participation is required for iTrek travel.

**Enrollment Information:** Enrollment limited to: Cornell Tech students.

**Course Fee:** Course Fee, TBA. TBA.

**Last Four Terms Offered:** Fall 2023, Fall 2022

Schedule of Classes (<https://classes.cornell.edu/>)

**TECHIE 5330 - Startup Nation: Innovation in Israel (1.5 Credits)**

iTrek is a 10-day academic and cultural trip offering students of varying backgrounds an opportunity to be exposed to and learn about the growing economy of innovation in Israel with a focus on the established startup ecosystem. Pre-iTrek coursework in New York will introduce topic areas and team requirements for the intensive ideation competition involving two major Israeli hospital systems, while coursework in Israel will focus on the later stages of entrepreneurship and development for real-time application in a design-led workshop.

**Enrollment Information:** Enrollment limited to: Cornell Tech Student.

**Last Four Terms Offered:** Winter 2022, Winter 2021

Schedule of Classes (<https://classes.cornell.edu/>)

**TECHIE 5331 - Cornell Tech Trip (1.5 Credits)**

**Last Four Terms Offered:** Spring 2025, Spring 2024, Winter 2023, Spring 2022

Schedule of Classes (<https://classes.cornell.edu/>)

**TECHIE 5771 - Coupled Policy and Technology Development for Intelligent Urban Systems (1 Credit)**

Efforts to decarbonize economies and the rapid rise in IoT devices, connectivity, and analytics has led to the development of intelligent infrastructure technologies at the regional, city, and building scales that can manage and allocate resources more efficiently and equitably. However, the adoption of intelligent infrastructure technologies has lagged expectations. This course examines policy barriers to adoption of intelligent infrastructure systems and adopts a didactic model that jointly explores policy and technology innovations (e.g. public-private partnerships) that speed the adoption in support of advancing the joint goals of decarbonization, sustainability, equity of resource access, and quality of life. The course will first focus on broad urban-scale policy issues, then sharpen focus to the implementation of building-scale technology solutions for human-centric design and operations management.

**Last Four Terms Offered:** Spring 2023

**Learning Outcomes:**

- Students will be able to identify the costs and benefits of intelligent infrastructure systems viz-a-viz classic infrastructure systems.
- Students will be able to assess the potential barriers to adoption of intelligent infrastructure systems in the policy realms of governance, regulation and markets.
- Students will be able to critically assess the likely impact of proposed modern policy innovations on the adoption of intelligent infrastructure systems.
- Students will learn through the workshop process and projects to develop pitch presentations for joint technology-policy proposals for transition to intelligent infrastructure systems.

Schedule of Classes (<https://classes.cornell.edu/>)

**TECHIE 5901 - Preparing for Spec (1 Credit)**

This course you will review and apply for available Track 1 project topics that are supervised by Cornell researchers; or select Track 2 for which you will choose an anchor course from a set of approved-electives. This class is required for 1st year students in Connective Media, Health Tech, and Urban Tech; and is a prerequisite for INFO 5920.

**Enrollment Information:** Enrollment limited to: Cornell Tech students.

**Last Four Terms Offered:** Fall 2024, Fall 2023, Fall 2022, Fall 2021

Schedule of Classes (<https://classes.cornell.edu/>)

**TECHIE 5990 - Independent Study (0.5-6 Credits)**

Independent research for Cornell Tech students during the summer term.

**Enrollment Information:** Enrollment limited to: Cornell Tech students.

**Last Four Terms Offered:** Summer 2025

Schedule of Classes (<https://classes.cornell.edu/>)

**TECHIE 5998 - Technion – Israel Institute of Technology (1-18 Credits)**

**Last Four Terms Offered:** Fall 2022

Schedule of Classes (<https://classes.cornell.edu/>)

**TECHIE 5999 - Independent Study (0.5-6 Credits)**

Independent research for Cornell Tech students.

**Enrollment Information:** Enrollment limited to: Cornell Tech students.

Schedule of Classes (<https://classes.cornell.edu/>)