

INFORMATION SYSTEMS (MS)

Graduate School

CIP: 11.0103 | HEGIS: 0702.00 | NYSED: 35915

Graduate Field

Applied Information Systems (<https://catalog.cornell.edu/graduate-school/applied-information-systems/>)

Program Description

Offered through the Jacobs Institute - a two-year, highly technical program focusing on the technologies, platforms and ecosystems that are involved in the recent convergence of communication, information and media. Graduates of this program will receive two degrees: one from Cornell University and one from the Technion – Israel Institute of Technology. The Cornell degree is awarded by the Graduate School.

The MS in Information Systems immerses students in the core technical, human and business factors at the convergence of information and technology. Students receive training in entrepreneurship and innovation management and engage in extensive R&D projects with tech companies in New York City.

Concentrations

- Connective media
- Health tech
- Urban tech

The Connective Media concentration focuses on the technology driving digital media, as well as the psychological, social and business forces at play in today's connected media environment. Students are prepared to go into industry for software engineering/development, product development and user experience research, and data science at the convergence of communication, information, and media. Graduates are technologists with deep expertise in the human, social, and media aspects of technology.

The Health Tech concentration emphasizes the technical and entrepreneurial skills needed to create new digital technologies for patients, clinicians and communities. Students are trained to create better healthcare information systems, mobile healthcare applications, and medical devices for medical monitoring. Graduates are prepared for leadership roles in mobile/consumer health startups, insurance, hospital systems, 360-degree medical providers, health IT companies, healthcare cloud computing and data analytics companies, and foundations and nonprofits.

The Urban Tech concentration emphasizes the integration of Urban Design, Architecture and Computer Science to build smarter more interconnected cities. Students are trained to use technology to improve mobility and transportation, sustainable urban development, and urban systems. Graduates are prepared for leadership roles in mobile/consumer urban tech startups, real estate, utilities, construction, and NGOs.

Cornell Tech Program Policies

- Cornell Tech campus policy indicates that students enrolled in full-time masters programs are required to maintain a minimum of 12 credits of enrollment each semester. Students are advised to enroll in an average of 15 credits each semester, unless your program

requirements notes otherwise, to ensure progression towards degree completion.

- Students may not enroll in more than 18 credits per semester without Program Director approval, which will be granted only in exceptional circumstance.
- All classes must be taken for a letter grade (with the exception of classes that are only offered S/U).
- For Studio courses, students must receive a B or higher in TECH 5900 Product Studio or TECH 5910 Startup Studio/TECH 5920 BigCo Studio/TECH 5930 PiTech Impact Studio.
- Students must receive a C- or better in all graded courses. Any course that a student receives a grade of below C- will not count towards graduation requirements.
- Students must maintain a cumulative GPA of 2.5 or higher.
- Students must comply with the above requirements in order to be in good academic standing. Students who are not in good standing may be asked to leave the program.
- Please note Curricular Practical Training credits (TECH 5999) does not count towards graduation/degree requirements.

Program Information

- Instruction Mode: In-Person
- Program Location: New York City, NY
- Minimum Credits for Degree: 60
- Length of Program: Full-time study

Program Requirements for Information Systems (MS) - all concentrations

Coursework

Code	Title	Hours
Jacobs Programmatic Core: 17 credits		
TECHIE 5901	Preparing for Spec	1
Studio Courses: 8 credits ¹		
TECH 5900	Product Studio	
TECH 5910	Startup Studio	
	or TECH 5920 BigCo Studio	
	or TECH 5930 PiTech Impact Studio	
1 credit of a TECH Studio Elective		
Specialization Project: 8 credits		
Project requirements consist of 8 credits, spanning over two semesters, and can be completed in one of two tracks: Anchor Course + Paired-prototyping Project OR Faculty-Directed Independent Study* *Students are required to enroll in the Specialization Project over the course of 2 semesters (Spring YR1, Fall YR2). ²		

¹ Please note: TECHIE prefixes do not qualify as Studio electives.

² More information on the different tracks can be found here (<https://studentaffairs.tech.cornell.edu/academics/curriculum/specialization-project/>).

Code	Title	Hours
Jacobs Technical Core: 10 credits		
CS 5112 or CS 5356	Algorithms and Data Structures for Applications Building Startup Systems	3
CS 5785 or CS 5781 or INFO 5368	Applied Machine Learning Machine Learning Engineering Practical Applications in Machine Learning (PAML)	3
INFO 6410 Ethics ¹	HCI and Design	3

¹ Students should take an approved one-(or more) credit course related to ethics in technology to satisfy the Jacobs Technical Core requirement. Alternatively, with Program Director approval, students can identify other courses they have completed where topics related to ethics in technology are heavily covered to waive the 1-credit requirement. Approved list of courses can be found on the Student Affairs website (<https://studentaffairs.tech.cornell.edu/academics/curriculum/ms-in-information-systems-connective-media/>).

Code	Title	Hours
General Electives: 12 credits		
Select from any offerings on Cornell Tech's campus (CS, ECE, ORIE, INFO, LAW, NBAY, TECH, TECHIE).		
Please note: TECHIE 5310 - Business Fundamentals must be taken as a prerequisite for all business courses.		

Information Systems (MS) - Connective Media Concentration Coursework

Code	Title	Hours
Concentration Core: 9 credits		
INFO 5310	Psychological and Social Aspects of Technology	
6 additional credits from the approved list of Concentration Core courses on the Student Affairs website ¹		
Concentration Electives: 12 credits		
12 credits from the approved list of Concentration Elective courses on the Student Affairs website ¹		

¹ Students Affairs website (<https://studentaffairs.tech.cornell.edu/academics/curriculum/ms-in-information-systems-connective-media/>), MS in Information Systems, Connective Media

Information Systems (MS) - Health Tech Concentration Coursework

Code	Title	Hours
Concentration Core: 9 credits		
INFO 5360	Healthcare Organization and Delivery	
TECH 5999	Independent Study	
INFO 5375	Machine Learning for Health	
3 additional credits from the approved list of Weill Cornell offerings and/or the approved list of Concentration Core courses on the Student Affairs website ¹		
Concentration Electives: 12 credits		

12 credits from the approved list of Weill Cornell offerings and/or the approved list of Concentration Elective courses on the Student Affairs website ¹

¹ Student Affairs website (<https://studentaffairs.tech.cornell.edu/academics/curriculum/ms-in-information-systems-health-tech/>), MS in Information Systems, Health Tech

Information Systems (MS) - Urban Tech Concentration Coursework

Code	Title	Hours
Concentration Core: 9 credits		
INFO 5410	Urban Systems	3
INFO 5420	Urban Design Strategies and Case Studies	3
INFO 5430 or CS 5304	Urban Data Data Science in the Wild	3
Concentration Electives: 12 credits		
12 credits from the approved list of Concentration Elective courses on the Student Affairs website ¹		

¹ Student Affairs website (<https://studentaffairs.tech.cornell.edu/academics/curriculum/ms-in-information-systems-urban-tech/>), MS in Information Systems, Urban Tech

University Graduation Requirements Requirements for All Students

In order to receive a Cornell degree, a student must satisfy academic and non-academic requirements.

Academic Requirements

A student's college determines degree requirements such as residency, number of credits, distribution of credits, and grade averages. It is the student's responsibility to be aware of the specific major, degree, distribution, college, and graduation requirements for completing their chosen program of study. See the individual requirements listed by each college or school or contact the college registrar's office (<https://registrar.cornell.edu/service-resources/college-registrar-directory/>) for more information.

Non-academic Requirements

Conduct Matters. Students must satisfy any outstanding sanctions, penalties or remedies imposed or agreed to under the Student Code of Conduct (Code) or Policy 6.4. Where a formal complaint under the Code or Policy 6.4 is pending, the University will withhold awarding a degree otherwise earned until the adjudication process set forth in those procedures is complete, including the satisfaction of any sanctions, penalties or remedies imposed.

Financial Obligations. Outstanding financial obligations will not impact the awarding of a degree otherwise earned or a student's ability to access their official transcript. However, the University may withhold issuing a diploma until any outstanding financial obligations owing to the University are satisfied.

Learning Outcomes

- Mastery of core technical knowledge in the key areas of machine learning, human-computer interaction and design, and algorithms and software system development. Assessment: Successful completion of the core technical courses.
- Mastery of core domain concepts in an industry-focused concentration area (connective media, health tech, or urban tech). Assessment: Successful completion of the core concentration courses and associated projects.
- Ability to formulate and solve problems, both individually and collaboratively. Assessment: The results of the product-related Studio project as well as the two-semester specialization project. In conjunction with team-based project work completed as part of the M.S. curriculum, there will be a peer assessment process within the team itself.
- Ability to explain the application and impact of core knowledge to problems facing society and/or industry. Assessment: The specialization and Studio project requirements, with a variety of experts providing feedback.
- Ability to apply concepts from the entrepreneurial process and use them to translate technical ideas into products that impact society. Assessment: Successful completion of optional business-related courses as well as (where appropriate) evaluation of a business plan developed in conjunction with the second-year Studio project.