

INNOVATION, SOCIETY AND TECHNOLOGY, BS

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<https://ischool.syr.edu/academics/innovation-society-and-technology-bachelors-degree/>

Introduction

The School of Information Studies offers a bachelor of science degree (B.S.) in Innovation, Society, and Technology. This program is for students interested in research, innovation, and social justice in the impact of technology in society.

The recent article, "A Crisis of Ethics in Technology Innovation", MIT Sloan Management Review, March 2020 demonstrates the need for individuals with a background in ethics and social justice in the information technology industry. This degree program satisfies student demand at the Syracuse University School of Information Studies (iSchool) for a general program in information studies that provides research-focused students the opportunity to gain expertise in the modern impact and societal challenges of information technology.

Students in this program will receive coursework in information studies, information innovation, information technology, and information in society. Graduates may continue their studies in a graduate program or provide expertise in the societal impacts of technology at an organization.

Student Learning Outcomes

In addition to the comprehensive iSchool Bachelor of Science learning outcomes students are expected to achieve in the course of earning their Bachelor's degree, students in the Innovation, Society and Technology major at the iSchool are also expected to achieve the following learning outcomes:

1. Employ critical thinking skills in identifying, evaluating, and designing innovative practices in the age of digital transformation.
2. Examine and critique how individuals, organizations and society are created and impacted by data and information technology in the age of digital transformation.

iSchool Bachelor of Science Degree Requirements- Innovation, Society and Technology

The B.S. degree in Innovation, Society and Technology requires 120 credits, distributed as indicated below.

Code	Title	Credits
Innovation, Society and Technology Curriculum		
<i>Innovation, Society and Technology Primary Core</i>		

Students who transfer into the iSchool as an IUT or add an iSchool major after their first year of study, are not required to take IST101.

IST 101	First-Year Forum	1
IST 195	Information Technologies	3
IST 256	Introduction to Python for the Information Profession	3
or IST 356	Programming Techniques for Data Analytics	
IST 344	Information Reporting and Presentation	3
IST 477	Capstone in Innovation, Society & Technology (IST)	3

Information Innovation Core

Select two of the following:		6
IDS 301	What's the Big Idea?: Technology Innovation	
IST 341	Human-Centered Design	
IST 421	Information Visualization	
IST 429	Technology and the Future of Work	
IST 486	Social Media in the Organization	

Information Technology Core

Select two of the following:		6
IST 233	Introduction to Networks and Cloud Computing	
IST 323	Introduction to Information Security	
IST 346	Information Technology Management and Administration	
IST 359	Introduction to Database Management Systems	
IST 363	Advanced Front End Web Design	
IST 387	Introduction to Applied Data Science	

Information in Society Core

Select two of the following:		6
IST 305	Globalization, Collaboration, Culture, Systems & Data	
IST 343	Data in Society	
IST 382	Cultural Competence for Information Professionals	
IST 419	Economics of Digital Transformation	
IST 426	Information Justice & Community Engagement	
IST 456	Information Policies and Decision Making	

Concentrations and Electives

Students must complete five additional iSchool courses to fulfill their 15 IS&T elective requirement. Students are required to complete one iSchool concentration which typically consists of three courses. The remaining two courses may be any IST 100-599 level courses or IDS courses

Completing a concentration allows students to select course work that matches their professional interests and planned career paths. Students may petition the Undergraduate Program Director to approve three courses to be considered a concentration in an area of interest that is not shown in the official list of concentrations. These three courses must provide depth in an area of study.

Courses cannot be used to satisfy both a core requirement, a concentration, and an IST elective. Students select from one of the following concentrations below. Please note each concentration has one or more required course.

Students must declare their concentration in the spring semester of Sophomore year.

- Data Analytics Concentration
- Digital Retail Strategies Concentration
- Information Security Management Concentration

Innovation, Design, and Startups Concentration		
Network and Cloud Computing Concentration		
Project Management Concentration		
Web Design and Management Concentration		
University Wide Requirements		
The iSchool participates in students' knowledge and skill development through the Shared Competencies, Syracuse University's institutional learning goals that highlight the knowledge and skills students can expect to gain through their major courses, liberal arts requirements and co-curricular activities.		
All incoming and external transfer students are required to take FYS101, a 1-credit course.		
FYS 101	First Year Seminar	1
IDEA		
All incoming and transfer students are required to take a 3-credit IDEA course that can be selected from the approved IDEA Course Requirement list .		3
IST courses appearing on the approved IDEA course requirement list may be taken to fulfill both the IDEA requirement and/or a core or concentration requirement.		
You can find the full list of approved IDEA courses here. (https://coursecatalog.syracuse.edu/undergraduate/university-requirements/idea-course-requirement/)		
Skills Electives		
Programming Skills		
Students are required to complete one computer programming course listed below. Students can also petition another programming course to count towards the Programming Skills, which should be filed and approved prior to registration.		
IST 256	Introduction to Python for the Information Profession	3
IST 356	Programming Techniques for Data Analytics	3
IST 387	Introduction to Applied Data Science	3
Communication Skills		
Students are required to take 12 credits in communications skills, including IST 344, as well as one course from each of the three categories below:		12
WRT 105 or WRT 109	Studio 1: Practices of Academic Writing Studio 1: Practices of Academic Writing (Honors)	
WRT 205 or WRT 209	Studio 2: Critical Research and Writing Studio 2: Critical Research and Writing (Honors)	
WRT 303 or WRT 307	Advanced Writing Studio: Research and Writing Advanced Writing Studio: Professional Writing	
Quantitative Skills		
All IS&T majors are required to attain minimum competence in mathematics. Students may satisfy this requirement by completing the quantitative skills requirement of the Liberal Arts Core curriculum of the College of Arts and Sciences.		
Find the Quantitative Skills Requirements here. (https://coursecatalog.syracuse.edu/undergraduate/arts-sciences/liberal-arts-core/quantitative-skills/)		
Arts & Sciences Divisional Requirements		

Students are required to take three courses in each of the three divisions of the Arts and Sciences-Natural Sciences and Mathematics, Social Sciences, and Humanities. In addition, three courses in any of the divisions must be completed to fulfill this requirement.

Students are required to complete a minimum of 60 credits of coursework in the College of Arts & Sciences. Courses from Communication Skills, Quantitative Skills and A&S Divisional Requirements will all count towards the A&S minimum credit requirement. Additional A&S courses will be required to reach the 60 credit minimum requirement.

General Electives

Students need 120 credits to graduate from Syracuse University. If 21-24 after meeting all program and University requirements, the student is still lacking to meet the 120 credits needed for graduation, students can take any undergraduate Syracuse University course to reach the graduation credits total. Students can concentrate on a minor, a dual degree, a combined degree, an internship experience, or study abroad to reach the minimum of 120 credits required for graduation.

Courses appearing on the approved IDEA course requirement list may be taken to fulfill both requirements: General elective and IDEA.

Total Credits **128-131**

Data Science Concentration

Code	Title	Credits
Required		
IST 359	Introduction to Database Management Systems	3
IST 387	Introduction to Applied Data Science	3
Concentration Electives		
Select two of the following:		
IST 407	Data Mining	
IST 414	Data-Driven Inquiry	
IST 418	Big Data Analytics	
IST 421	Information Visualization	
IST 469	Advanced Big Data Management	
Total Credits		6

Digital Retail Strategies Concentration

Students who pursue the 18-credit Digital Retail Strategies concentration will be required to take three RMT courses and one additional IST elective, as RMT classes do not count towards the 15 credit IST elective requirement.

Code	Title	Credits
Required		
IST 195	Information Technologies	3
RMT 301	Retailing Fundamentals	3
RMT 407	Retail Buying and Planning	3
RMT 457	Electronic Retailing and Marketing	3
Concentration Electives		
Select two of the following:		6
IST 263	Introduction to Front-End Web Development	
IST 486	Social Media in the Organization	
IST 487	The Impact & Analytics of Social Media Network Influence	
Total Credits		18

Information Security Management Concentration

Code	Title	Credits
Required		
IST 323	Introduction to Information Security	3
Concentration Electives		
Select two of the following:		6
IST 336	Leading Issues in Information Security	
IST 342	Information Security Policy	
IST 402	Digital Forensics	
IST 425	Enterprise Risk Management	
IST 431	Security in a Networked Environment	
IST 476	Applied Information Security	
Total Credits		9

Innovation, Design, and Startups Concentration

All three IDS courses below are required.

Code	Title	Credits
IDS 301	What's the Big Idea?: Technology Innovation	3
IDS 302	Idea2Startup	3
IDS 403	iLaunchPad	1-6
Total Credits		7-12

Network and Cloud Computing Concentration

Code	Title	Credits
Required		
IST 233	Introduction to Networks and Cloud Computing	3
Concentration Electives		
Select two of the following:		6
IST 346	Information Technology Management and Administration	
IST 408	Blockchain Management	
IST 431	Security in a Networked Environment	
IST 452	Advanced Computer Networking	
Total Credits		9

Project Management Concentration

Code	Title	Credits
Required		
IST 345	Managing Information Systems Projects	3
Concentration Electives		
Select two of the following:		6
IST 352	Information Analysis of Organizational Systems	
IST 425	Enterprise Risk Management	
IST 442	Agile Project Management Methodologies	
IST 456	Information Policies and Decision Making	
Total Credits		9

Web Design and Management Concentration

Code	Title	Credits
Required		
IST 263	Introduction to Front-End Web Development	3
Concentration Electives		
Select two of the following:		6
IST 341	Human-Centered Design	

IST 349	Human Computer Interaction	
IST 363	Advanced Front End Web Design	
IST 486	Social Media in the Organization	
IST 487	The Impact & Analytics of Social Media Network Influence	
Total Credits		9

International Experience

Students will be required to complete one international experience to graduate with their iSchool undergraduate degree. iSchool Immersion courses that require domestic travel do not fulfill this requirement. Students can fulfill their international requirement in one of the following ways

- Semester abroad
- University exchange
- Short term abroad program
- International Internship
- Coursework (6 credits from approved list)
- Approved international component - by petition

Undergraduate University Requirements

The following requirements and experiences apply to all Syracuse University Undergraduate matriculated degree programs.

- IDEA Course Requirement (<https://coursecatalog.syracuse.edu/undergraduate/idea-course-requirement/>)
- First Year Seminar (<https://coursecatalog.syracuse.edu/undergraduate/courses/fys/>)