SCHOOL OF INFORMATION STUDIES

Jeff Hemsley, Interim Dean
ischool.syr.edu (http://ischool.syr.edu/)

About the School

The Syracuse University School of Information Studies (https://ischool.syr.edu/) (iSchool) is a leader in the information field, advancing innovation in the digital age through our work at the intersection of business, technology, and society.

The iSchool became the original information school in the U.S. when it embraced information technology and the rise of the internet. Today, we offer an innovative curriculum that is continually updated to meet future industry trends and incorporate rapidly changing technologies.

Our faculty combine expertise in information systems, linguistics, computer science, library science, economics, education, business management, school media, digital literacy, management information systems, data science, enterprise and cloud computing, and communication. An active research community (https://ischool.syr.edu/research/) explores topics that reflect the faculty's diverse intellectual backgrounds and interests.

Accreditation

Syracuse University is fully accredited by the Middle States Commission on Higher Education (MSCHE) and all programs are registered with the New York State Education Department. The MSCHE is a voluntary, non-governmental membership association that has been dedicated to quality assurance and improvement through accreditation via peer evaluation since 1919.

Vision and Values

The School of Information Studies, established in 1896 and renamed from the Original Information School in 1974, has a long tradition of leading innovation and change. Our ideals and values are the foundation for our success.

Undergraduate Education

Syracuse University's School of Information Studies (iSchool) students are innovative problem-solvers who are studying at the intersection of technology, business, and society. They explore topics like data science, cloud computing, cybersecurity, machine learning and AI, social media and misinformation.

Our flexible curriculum allows students to pursue a broad array of intellectual areas while providing a core knowledge of the technical, organizational, and communication skills necessary to succeed in our digital economy.

We offer dual degree programs with Syracuse University's Martin J. Whitman School of Management (http://coursecatalog.syr.edu/preview_entity.php?catoid=26&ent_oid=806) and S.I. Newhouse School of Public Communications (http://coursecatalog.syr.edu/preview_entity.php?catoid=26&ent_oid=808). Students from other schools and colleges at SU can enroll as a double major in the iSchool in one of the iSchool's three minors.

Student Learning Outcomes

In the course of earning their degree, students are expected to achieve the following learning outcomes:

- Identify and analyze the use of information, technologies, and data to solve problems in various contexts in the age of digital transformation
- Present ideas through oral and written communication using data and information technologies
- Identify and propose solutions to issues of diversity, equity, inclusion, and accessibility in the ethical use of data and information technologies
- Compare the use of information technologies and data in a global context in the age of digital transformation

iSchool Bachelor of Science Degree Requirements

The B.S. degree in Applied Data Science, Information Management and Technology, or Innovation, Society, and Technology requires 120 credits, distributed as indicated below.

I. iSchool Major (30-31 credits)

Students are required to complete a primary core for each major as a requirement for graduation. See individual program pages for detailed core requirements.

II. iSchool Electives (15 credits)

Students must complete five additional courses to fulfill their elective requirement.

Students are required to complete at least one of our course concentrations as a requirement with a minimum of three courses in that concentration for graduation in the B.S. degree in Information Management and Technology or Innovation, Society, and Technology.

Students in the B.S. degree in Applied Data Science may complete one iSchool concentration or obtain a minor outside the iSchool that leverages the use of analytics (e.g., Sport Analytics, Business Analytics, Computer Science, Applied Statistics, Economics). Students who choose to obtain a minor (or double major) outside the iSchool can count two analytical focused courses as part of their 15 credit iSchool electives.

Data Science Concentration

Required

Code	Title	Credits
IST 359	Introduction to Database Management Systems	3
IST 387	Introduction to Applied Data Science	3

Concentration Electives

Code	Title	Credits
IST 407	Data Mining	3
IST 414	Data-Driven Inquiry	3
IST 418	Big Data Analytics	3
IST 421	Information Visualization	3
IST 469	Advanced Big Data Management	3

Digital Retail Strategies Concentration

Required

Code	Title	Credits
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

Code	Title	Credits
IST 263	Introduction to Front-End Web Development	3
IST 353	Graphic Design for the Web	3
IST 486	Social Media in the Organization	3
IST 487	The Impact & Analytics of Social Media Network Influence	3

Information Security Management Concentration
Required

Code	Title	Credits
IST 323	Introduction to Information Security	3

Concentration Electives

Code	Title	Credits
IST 336	Leading Issues in Information Security	3
IST 342	Information Security Policy	3
IST 402	Digital Forensics	3
IST 425	Enterprise Risk Management	3
IST 431	Security in a Networked Environment	3
IST 476	Applied Information Security	3

Innovation, Design & Startups Concentration
Required:

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

Network and Cloud Computing Concentration
Required

Code	Title	Credits
IST 233	Introduction to Networks and Cloud Computing	3

Concentration Electives

Code	Title	Credits
IST 346	Information Technology Management and Administration	3
IST 408	Blockchain Management	3
IST 431	Security in a Networked Environment	3
IST 452	Advanced Computer Networking	3

Project Management Concentration
Required

Code	Title	Credits
IST 345	Managing Information Systems Projects	3

Concentration Electives

Code	Title	Credits
IST 352	Information Analysis of Organizational Systems	3
IST 425	Enterprise Risk Management	3
IST 442	Agile Project Management Methodologies	3
IST 456	Information Policies and Decision Making	3

Web Design & Management Concentration
Required

Code	Title	Credits
IST 263	Introduction to Front-End Web Development	3

Concentration Electives

Code	Title	Credits
IST 341	Human-Centered Design	3
IST 349	Human Computer Interaction	3
IST 353	Graphic Design for the Web	3
IST 363	Advanced Front End Web Design	3
IST 486	Social Media in the Organization	3
IST 487	The Impact & Analytics of Social Media Network Influence	3

University-wide Requirements
The iSchool participates in students' knowledge and skill development through the Shared Competencies (https://coursecatalog.syracuse.edu/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 transfer students are required to take a 1-credit FYS 101 First Year Seminar course, and a 3-credit IDEA course that can be selected from an approved list .

IST courses appearing on the approved IDEA course requirement list may be taken to fulfill both requirements.

III. Skills Electives (15-17 credits)

A. Programming Skills
Students are required to complete one of the computer programming courses listed below. Students who wish to take another programming course not listed below must submit a petition and have it approved prior to registration:

Code	Title	Credits
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

B. Communication Skills (9 credits)
Students are required to take 12 credits in communications skills, including IST 344 Information Reporting and Presentation , as well as one course from each of the three categories below:

Code	Title	Credits
WRT 105	Studio 1: Practices of Academic Writing	3
or WRT 109	Studio 1: Practices of Academic Writing (Honors)	

WRT 205	Studio 2: Critical Research and Writing	3
or WRT 209	Studio 2: Critical Research and Writing (Honors)	
WRT 303	Advanced Writing Studio: Research and Writing	3
or WRT 307	Advanced Writing Studio: Professional Writing	

C. Quantitative Skills (6-8 credits)
Students are required to attain minimum competence in mathematics by completing the quantitative skills requirement of the Liberal Art Core curriculum of the College of Arts and Sciences.

All IMT and IST 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.

All ADA majors are required to attain minimum competence in mathematics. Students should take MAT 121 Probability and Statistics for the Liberal Arts I / MAT 122 Probability and Statistics for the Liberal Arts II or MAT 221 Elementary Probability and Statistics I / MAT 222 Elementary Probability and Statistics II

IV. Arts & Sciences Divisional Requirements (12 courses; minimum 36 credits)

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.

V. General Electives (20-23 credits)

Students need 120 credits to graduate from Syracuse University. If after meeting all program and University requirements, a student is still lacking credits to meet the 120 credits needed for graduation, the student 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.

VI. International Experience

Students will be required to complete one international experience to graduate with their iSchool undergraduate degree. 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

Programs

Major

- Applied Data Science, BS (https://coursecatalog.syracuse.edu/undergraduate/information-studies/applied-data-analytics-bs/)
- Information Management and Technology, BS (https://coursecatalog.syracuse.edu/undergraduate/information-studies/information-management-technology-bs/)
- Innovation, Society and Technology, BS (https://coursecatalog.syracuse.edu/undergraduate/information-studies/innovation-society-technology-bs/)

Minor

- Applications of AI Minor (https://coursecatalog.syracuse.edu/undergraduate/information-studies/applications-of-ai-minor/)
- Applied Data Science Minor (https://coursecatalog.syracuse.edu/undergraduate/information-studies/applied-data-analytics-minor/)
- Cybersecurity Studies Minor (https://coursecatalog.syracuse.edu/undergraduate/information-studies/cybersecurity-studies-minor/)
- Information Management and Technology Minor (https://coursecatalog.syracuse.edu/undergraduate/information-studies/information-management-technology-minor/)
- IT Innovation, Design, and Startups Minor (https://coursecatalog.syracuse.edu/undergraduate/information-studies/it-innovation-design-startups-minor/)

Faculty

Jaime Banks, Professor, Katchmar-Wilhelm Professor
Ph.D., Colorado State University, 2013
Human-Machine Communication, Videogames and Avatars, Technology and Interactivity

Carlos E. Caicedo Bastidas, Associate Professor
Ph.D., University of Pittsburgh, 2009
Security, wireless networks, software development, telecommunications management

Scott A. Bernard, Professor of Practice
Ph.D., Virginia Tech., 2001
Enterprise architecture and capital planning, public and private sector chief information officers, federal policy development on information resources management

Renate Chancellor, Associate Professor, Associate Dean for Access, Success, and Belonging
Ph.D., University of California Los Angeles, 2008
Equity, Diversity and Inclusion in library and information services, Library, and Information Science Education, Social Justice in LIS, Human Information Behavior

EunJeong Cheon, Assistant Professor
Ph.D., Indiana University, Bloomington, 2020
Human-computer interaction, computer-supported cooperative work, human-robot interaction, design

Rachel Ivy Clarke, Associate Professor
Ph.D., University of Washington, 2016
Application of design methodologies and epistemologies to librarianship

Alex Corsello, Assistant Teaching Professor
B.S., Coumbia
Business, IT Management, project management, systems analysis

Kevin Crowston, Distinguished Professor of Information Science
Ph.D., Massachusetts Institute of Technology, 1991

Organizational implications of information technologies, computer-supported cooperative work, open source software development, virtual organizations

Raj Dewan, Professor
Ph.D., University of Rochester, 1987
Ph.D., University of Rochester Simon Business School, 1986
Business Analytics, organizational issues in management of information systems, marketing on the internet, the internet industry, strategic use of technology, the use of standards in managing information systems, accounting and financial information systems

Chris Dunham, Assistant Teaching Professor
M.S., SUNY Buffalo, 2012
Data Science, Machine Learning, Big Data Analytics

Sevgi Erdogan, Associate Professor
Ph.D., University of Maryland, 2011
Data-driven policy and decision-making, data science applications in built environment, human infrastructure, and environment interrelations, smart, sustainable, and resilient communities

Ingrid Erickson, Associate Professor
Program Director, PhD Information Science and Technology
Ph.D., Stanford University, 2009
Work and technology, organizational studies, human-centered computing

Laurie Ferger, Assistant Teaching Professor
Program Director, Undergraduate Programs
M.S., Johns Hopkins
Web design, development and programming, database management systems

Michael Fudge, Professor of Practice
M.S., Syracuse University, 2006
Database management systems, data warehousing, programming

Paul B. Gandel, Professor
Ph.D., Syracuse University, 1986
Management of information systems, library administration and services, software engineering, information policy, and visualization of information

LaVerne Gray, Assistant Professor
Ph.D., University of Tennessee, 2018
Social justice in Library and Information Science, critical and cultural studies, Black feminism, intersectionality, community engagement, critical librarianship, academic librarianship, and critical information literacy.

Jeff Hemsley, Interim Dean, Associate Professor
Ph.D., University of Washington, 2014
Social media, viral events, data visualization

Josh Introne, Associate Professor
Ph.D., Brandeis University, 2008
Collective intelligence in new media, misinformation, data visualization

Preeti Jagadev, Assistant Teaching Professor
Ph.D., National Institute of Technology Goa
Artificial intelligence, biomedical engineering, computer engineering

John Jordan, Professor of Practice
Program Director, Doctorate of Professional Studies in Information Management
Ph.D., University of Michigan, 1989
Social media, organizational change, social implications of information technology

Kelvin King, Assistant Professor
Ph.D., University of Texas, Rio Grande Valley
Social media analytics, data science, misinformation, machine learning

Bruce R. Kingma, Professor of Entrepreneurship;
Ph.D., University of Rochester, 1989
Economics of information, digital library economics, cost-benefit analysis

Yiqi Li, Assistant Professor
Ph.D. University of Southern California, 2021
Computational social science, network science, online communities, risk communication

Lee W. McKnight, Associate Professor
Ph.D., Massachusetts Institute of Technology, 1989
Wireless grids, Internet economics and policy, national and international technology policy

Sebastian Modrow, Assistant Professor
Ph.D., University of Rostock, 2014
Cultural heritage preservation, archives and special collections, history of the book

Megan Oakleaf, Professor, Associate Dean of Academic Affairs
Ph.D., University of North Carolina-Chapel Hill, 2006
Evolution and assessment of information services; theories, methods, and assessment of user education; information services in academic libraries

Carsten S. Oesterlund, Professor, Associate Dean for Research
Ph.D., Massachusetts Institute of Technology, 2002
Distributed and virtual work, organizational learning and knowledge, IT use and organizational boundaries, document and genre analysis, computer-supported collaborative work

Joon S. Park, Professor, Laura J. and L. Douglas Meredith Professor
Ph.D., George Mason University, 1999
Information and systems security; security policies, models, mechanisms, evaluation, survivability, and applications

Beth Patin, Associate Professor
Program Director, M.S. Library and Information Science, M.S. Library and Information Science: School Media, and CAS in School Library MediaPh.D., University of Washington, 2018
Crisis informatics, cultural competence, information equity and justice

Christopher Perrello, Assistant Teaching Professor
M.S., Syracuse University, 2013
Interviewing, Communication and Rhetorical Studies, Information Reporting and Presentation, Career Development, Professional Communication, Research Methods, Instructional Teaching Methods

Jian Qin, Professor
Ph.D., University of Illinois at Urbana-Champaign, 1996
Representation of learning objects, knowledge organization structure, organization of distributed information, knowledge discovery in bibliographic databases, scientific communication

Jeffrey H. Rubin, Professor of Practice
Senior Vice President for Digital Transformation and Chief Digital Officer
M.S., Syracuse University, 1997

Content/knowledge management systems, web-based management tools (including log analysis), user behavior on the Internet

Jeffrey Saltz, Associate Professor,
Program Director M.S. Applied Data Science, M.S. Applied Human-Centered AI, M.S. Information Systems, and M.S. Information Systems for Executives
Ph.D., New Jersey Institute of Technology
Data science, startup ecosystems, experiential learning

Steven B. Sawyer, Professor, Core Faculty of Renee Crown Honors Program
D.B.A., Boston University, 1995
Social informatics, design and development of information systems, information and communication technologies in organizational and social change

Carl Schramm, University Professor
Ph.D., University of Wisconsin, 1973
Economics, entrepreneurship

Jeffrey M. Stanton, Professor
Ph.D., University of Connecticut, 1997
Cognitive-affective models of motivation, evaluation and behavior, science and technology, research methods including psychometrics and statistics

Jennifer Stromer-Galley, Professor
Ph.D., University of Pennsylvania, 2002
Strategic communication on social media, online political participation, human-computer interaction

Zhasmina Tacheva, Assistant Professor
Ph.D., Management, SUNY Buffalo 2020
Artificial Intelligence, data science, critical data studies

Bei Yu, Professor
Ph.D., University of Illinois, Urbana-Champaign
Natural language processing, machine learning, opinion mining

Ping Zhang, Professor
Ph.D., University of Texas at Austin, 1995
Human-computer interaction; affective, cognitive, and behavior aspects of human interaction with technology

Courses

Information Technology, Design and Startup

IDS 301 What's the Big Idea?: Technology Innovation (3 Credits)
Information Studies
Transform innovative ideas into market-ready ventures in this hands-on course. Students emerge equipped with practical tools to navigate the journey from concept to launch for commercial and social ventures.
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/)

IDS 302 Idea2Startup (3 Credits)
Information Studies
Students establish an actionable plan for the launch of their own business or social venture. Focus on establishing a well-conceived, achievable, and actionable path to market.
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/)

IDS 350 Global Information Technology Abroad (3-6 Credits)
Information Studies
Double-numbered with IDS 650
Travel abroad as part of a guided cohort. Course explores how the use of information and digital technologies differ across various cultural, historical, and national contexts. Learn how organizations abroad create and use technology to gain strategic advantage within the competitive global marketplace. Additional work for graduates.
Repeatable 2 times for 12 credits maximum
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IDS 355 Global Information Technology Abroad (0 Credits)
Information Studies
Double-numbered with IDS 655
This course is the travel portion of Global Information Technology Abroad. Students enrolled in IDS 350/IDS 650 will register for this course as a requirement to travel when the trip is scheduled.
Repeatable 2 times for 0 credits maximum
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IDS 360 Information Technology Experience (1-3 Credits)
Information Studies
Double-numbered with IDS 660
Explore the roles that information and digital technologies play in different organizations. Learn how organizations use information technology for strategic advantage in an increasingly competitive global marketplace. Additional work for graduates.
Repeatable 2 times for 6 credits maximum
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IDS 380 International Course (1-12 Credits)
Information Studies
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript.
Repeatable

IDS 400 Selected Topics (1-6 Credits)
Information Studies
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.
Repeatable 6 times for 6 credits maximum

IDS 403 iLaunchPad (1-6 Credits)
Information Studies
Venture incubation. Students work with mentors and coaches to develop and deploy a commercial or social venture.
Repeatable 12 times for 12 credits maximum
Prereq: IDS 302
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/); Communication Skills (https://coursecatalog.syracuse.edu/shared-competencies/communication-skills/)

IDS 490 Independent Study (1-6 Credits)
Information Studies
Repeatable

Information Studies

IST 101 First-Year Forum (1 Credit)
Information Studies
Transition to life at the iSchool and Syracuse University, and become more familiar with the information field. Explore the range of possibilities that our undergraduate degree is designed to provide.
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 180 International Course (1-12 Credits)
Information Studies
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript.
Repeatable 3 times for 12 credits maximum

IST 195 Information Technologies (3 Credits)
Information Studies
State-of-the-art technologies in the field. Computer architectures, telecommunication networks, software design and application. Issues in information management and technology use.
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 200 Selected Topics (1-6 Credits)
Information Studies
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.
Repeatable

IST 233 Introduction to Networks and Cloud Computing (3 Credits)
Information Studies
Overview of technology, standards, implementation and management of digital computer networks. Wired and wireless local and wide area networks, Internet protocols, telecommunications, and network security. Includes weekly labs.
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 256 Introduction to Python for the Information Profession (3 Credits)
Information Studies
Computational literacy and learning to code are critical skills of the 21st century. Students are introduced to Python programming language with emphasis on practical applications relevant to everyday lives and common within the information field.
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 263 Introduction to Front-End Web Development (3 Credits)
Information Studies
Learn to create a website from scratch with HTML, CSS and JavaScript. Topics like responding to different screen sizes, accessibility and layout will be covered. We also examine the project management side of the web with wireframes, site maps, copy documents, and more.
Shared Competencies: Communication Skills (https://coursecatalog.syracuse.edu/shared-competencies/communication-skills/); Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 280 International Course (1-12 Credits)
Information Studies
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript.
Repeatable

IST 300 Selected Topics (1-6 Credits)
Information Studies
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.
Repeatable

IST 305 Globalization, Collaboration, Culture, Systems & Data (3 Credits)
Information Studies
Explore the intersection of IT infrastructures and culture in global organizations including issues of globalization, distributed collaboration, global enterprise systems, data, business analytics and knowledge management.
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/); Civic and Global Responsibility (https://coursecatalog.syracuse.edu/shared-competencies/civic-and-global-responsibility/); Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 323 Introduction to Information Security (3 Credits)
Information Studies
Basic concepts and technologies of information security, including security properties, vulnerabilities, cryptography, security policies, access control, authentication, firewalls, wireless security, internet security protocols, real life cases, hands on labs, and other related topics.
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/)

IST 325 Information Management Consultation (3 Credits)
Information Studies
Basic understanding of organizational, technical and management architecture that comprise enterprise systems development environments from a consultant¿s POV. Students meet with a fictitious customer who is looking for an automated solution from their current manual operation. Consulting team works with customer to develop project planning, analysis, and design phases while covering implementation and maintenance. Microsoft Project Tool used
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 335 Introduction to Information-Based Organizations (3 Credits)
Information Studies
Explore how teams and individuals create and utilize technology and data within modern organizations. Examine how organizational leaders navigate challenges and enact strategic change. Learn how managers design work environments to ensure worker effectiveness and wellbeing.
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/); Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 336 Leading Issues in Information Security (3 Credits)
Information Studies
Today's leading issues and challenges in cybersecurity, considering global perspectives that are related to current technology trends. Students will also have research opportunities in the topic area and hands on experiences in information security.
Shared Competencies: Scientific Inquiry and Research Skills (https://coursecatalog.syracuse.edu/shared-competencies/scientific-inquiry-and-research-skills/)

IST 337 iSchool Support Practicum (1-3 Credits)
Information Studies
This experiential learning course is designed to provide students with opportunities to expand their knowledge of various content areas by working with a professor, assisting with course assignments, labs, and other student support elements.
Repeatable 2 times for 6 credits maximum
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 341 Human-Centered Design (3 Credits)
Information Studies
Learn core principles of human-computer interaction (HCI) design, focusing on design methods to create technology that meets real-world user needs and values. Through a hands-on team project, they gain practical experience in applying HCI design to create meaningful technology solutions.
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/); Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 342 Information Security Policy (3 Credits)
Information Studies
Students develop the skills necessary for understanding, improving and implementing information security policies. Learn the fundamentals of information security frameworks, awareness and training, and effective policy writing, to create successful information security policies.
Prereq: IST 323
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/); Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 343 Data in Society (3 Credits)
Information Studies
Critically examine how individuals, groups, and societies create and are created by digital data and algorithms. You will analyze the social, political, legal, and environmental impacts of data and data-driven technologies across varying contexts including social media and (generative) AI.
University Requirement Course: IDEA Requirement Eligible
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/); Ethics and Integrity (https://coursecatalog.syracuse.edu/shared-competencies/ethics-and-integrity/)

IST 344 Information Reporting and Presentation (3 Credits)
Information Studies
This course teaches students to synthesize and present organized information for various audiences using text, graphics and multimedia. It emphasizes presentation skills, impactful visuals, communication strategies, and foundational training for professional delivery.
Shared Competencies: Communication Skills (https://coursecatalog.syracuse.edu/shared-competencies/communication-skills/)

IST 345 Managing Information Systems Projects (3 Credits)
Information Studies
Double-numbered with IST 645
Project management as a professional discipline in information and communication technology. Introduction to roles, activities, methods, and tools. Critical review and application of principles. Microsoft Project (Industry standard) will be the tool used in class. Additional work required of graduate students
Shared Competencies: Scientific Inquiry and Research Skills (https://coursecatalog.syracuse.edu/shared-competencies/scientific-inquiry-and-research-skills/)

IST 346 Information Technology Management and Administration (3 Credits)
Information Studies
Information technology management principles and practices. Administration of computers, operating systems, and applications. Tools and techniques for managing information technology operations. Includes hand-on labs.
Prereq: IST 233
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 349 Human Computer Interaction (3 Credits)
Information Studies
Students will learn to critically evaluate existing Information and Communication Technologies (ICTs), and how to design ethical and equitable ICTs utilizing user-centered design perspectives and methods.

IST 352 Information Analysis of Organizational Systems (3 Credits)
Information Studies
Introduces information flow as basis of organizational work and role of information systems in managing work. Concept of systems decomposition to facilitate analysis. Skills required to decompose, model, and analyze information systems.
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/); Communication Skills (https://coursecatalog.syracuse.edu/shared-competencies/communication-skills/)

IST 356 Programming Techniques for Data Analytics (3 Credits)
Information Studies
Approaches for building pipelines in data analytics using the Python programming language; data cleaning, extraction, wrangling, API¿s, web scraping. Building data products. Programming experience required. Repeatable 2 times for 6 credits maximum
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/); Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 359 Introduction to Database Management Systems (3 Credits)
Information Studies
Learn relational database basics, including design and development. This course covers SQL for creating tables, querying data, managing metadata, and touches on advanced SQL. It also focuses on database design using ER diagrams and data normalization to optimize relational databases.
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 363 Advanced Front End Web Design (3 Credits)
Information Studies
Further your knowledge of web development with advanced JavaScript, the latest JavaScript frameworks, CSS libraries and more. Topics will include faster styling and layout techniques and projects that help you learn the tools professional web developers use
Prereq: IST263
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 382 Cultural Competence for Information Professionals (3 Credits)
Information Studies
Double-numbered with IST 682
This course prepares information professionals to develop cultural competencies and provide inclusive services to underrepresented populations. It relates cultural competence to meeting information needs of communities through library and information collection development, outreach, and services. Additional work for graduate students.
Shared Competencies: Ethics and Integrity (https://coursecatalog.syracuse.edu/shared-competencies/ethics-and-integrity/)

IST 387 Introduction to Applied Data Science (3 Credits)
Information Studies
Introduction to using data science across many different situations. Covers concepts such as data management, transformation, analysis, and machine learning, using R. No programming experience required. Hands-on projects and real-world problem-solving help identify when data science is useful, with emphasis on ethically applying data science.
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/); Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/); Scientific Inquiry and Research Skills (https://coursecatalog.syracuse.edu/shared-competencies/scientific-inquiry-and-research-skills/)

IST 400 Selected Topics (1-6 Credits)
Information Studies
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

IST 402 Digital Forensics (3 Credits)
Information Studies
Topics include the basic concepts, ethics/codes, procedures, forensic techniques, analysis, example cases, hands on labs, and applications to existing environments such as e-mail, social media, mobile devices, IoT, and others.
Prereq: IST 195
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 407 Data Mining (3 Credits)
Information Studies
Introduction to machine-learning techniques and their underlying algorithms. Students learn to build machine learning pipelines that transform raw data into machine learning models that yield actionable insights using real-world data. Hands on programming experience in the Python language with industry standard technologies.
Prereq: IST 356 and IST 387
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/); Communication Skills (https://coursecatalog.syracuse.edu/shared-competencies/communication-skills/)

IST 408 Blockchain Management (3 Credits)
Information Studies
Double-numbered with IST 608
Students complete distributed ledger labs before developing, implementing, and 'demo or die' sharktanking their own new blockchain project. Blockchain concepts such as decentralization, smart contracts, trust and consensus governance are discussed. Additional work for graduate students.
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/); Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 414 Data-Driven Inquiry (3 Credits)
Information Studies
Theories and techniques for real-world research into human phenomena across various contexts (business, society, friendships, politics). Learn about asking good questions, matching methods with questions, designing ethical studies, and gathering and analyzing both qualitative and quantitative data.
Shared Competencies: Scientific Inquiry and Research Skills (https://coursecatalog.syracuse.edu/shared-competencies/scientific-inquiry-and-research-skills/)

IST 418 Big Data Analytics (3 Credits)
Information Studies
Learn to develop actionable insights from big data using open-source tools (Python and Spark). This course prepares students to build scalable data analytics pipelines and apply advanced machine learning techniques, culminating in a hands-on project tackling real-world challenges.
Prereq: IST 356 and IST 387
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/)

IST 419 Economics of Digital Transformation (3 Credits)
Information Studies
Navigate the economics of our digital world, from network effects to platform dynamics. Explore how technology reshapes markets, pricing strategies, and consumer behavior while analyzing real-world cases from today's leading digital businesses.
Shared Competencies: Scientific Inquiry and Research Skills (https://coursecatalog.syracuse.edu/shared-competencies/scientific-inquiry-and-research-skills/)

IST 421 Information Visualization (3 Credits)
Information Studies
Introduction to skills and techniques related to information visualization, through various programming and illustration tools, data cleaning techniques, design concepts and ethics. Develop static data visualizations to explore and communicate findings from a variety of data sources.
Prereq: IST 256 or IST 356 or IST 359 or IST 387 or SAL 413
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/); Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 425 Enterprise Risk Management (3 Credits)
Information Studies
A multidisciplinary perspective of risk assessment, modeling, and management. Topics include: concepts of personal accountability versus governance and policy; how organizations define and measure risk and loss; and plan for contingencies.
Shared Competencies: Scientific Inquiry and Research Skills (https://coursecatalog.syracuse.edu/shared-competencies/scientific-inquiry-and-research-skills/)

IST 426 Information Justice & Community Engagement (3 Credits)
Information Studies
Double-numbered with IST 626
This course will examine the interrelation of social justice and community engagement in online and naturalistic communities. Areas of emphasis will explore how gender, race, class and community location (on and off-line) affect and are affected by information. Additional work for graduate students.
University Requirement Course: IDEA Requirement Eligible
Shared Competencies: Ethics and Integrity (https://coursecatalog.syracuse.edu/shared-competencies/ethics-and-integrity/); Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 429 Technology and the Future of Work (3 Credits)
Information Studies
Double-numbered with IST 629
Explore the rapidly evolving landscape of work. Examine how emerging technologies like artificial intelligence, robotics, and extended reality are impacting industries, jobs, and the very nature of work itself. Topics include a history of work, labor organizing, work augmentation, work-life balance, and future worker skills and capabilities. Additional work required for graduate students.
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/)

IST 431 Security in a Networked Environment (3 Credits)
Information Studies
This course addresses key concepts, technologies, and management strategies associated with securing enterprise digital computer networks and related devices and applications. Students will gain an understanding of the major threats and vulnerabilities as well as technologies and strategies for protection.
Prereq: IST 233 and IST 323
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 442 Agile Project Management Methodologies (3 Credits)
Information Studies
Practical approach to the Agile framework for the Software Development Life-Cycle. Unique learning approaches to foster the skills and cultural mindset necessary for success in Agile Project Management.
Prereq: IST 345
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/)

IST 452 Advanced Computer Networking (3 Credits)
Information Studies
Technical, design, and management issues related to enterprise computer networking. In-depth investigations of TCP/IP Internet work protocols and popular network technologies including Ethernet and Wireless. Hands-on experience with protocol analysis, network management, and security.
Prereq: IST 233
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 456 Information Policies and Decision Making (3 Credits)
Information Studies
Current and emerging information policy issues, policy formulation and conflict, roles and perspectives of actors in policy-making processes. Decision making on freedom of information, privacy, access, intellectual property rights, information security classification and restriction, cybercrime
Shared Competencies: Civic and Global Responsibility (https://coursecatalog.syracuse.edu/shared-competencies/civic-and-global-responsibility/)

IST 466 Professional Issues in Information Studies (3 Credits)
Information Studies
Integration of management strategies, information uses, and information technologies with an emphasis on professional conduct, ethics, and career strategies. In-depth review and use of case studies. Outside organizations such as EY, Synchrony and Adobe work with the class to have students analyze and resolve real ethical cases they¿ve encountered. Seniors only. iSchool majors and minors.
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/); Ethics and Integrity (https://coursecatalog.syracuse.edu/shared-competencies/ethics-and-integrity/); Scientific Inquiry and Research Skills (https://coursecatalog.syracuse.edu/shared-competencies/scientific-inquiry-and-research-skills/)

IST 469 Advanced Big Data Management (3 Credits)
Information Studies
Double-numbered with IST 769
Analyze relational and non-relational databases and corresponding database management system architectures. Learn to build complex database objects to support a variety of needs from big data and traditional perspectives. Data systems performance, scalability, security. Additional work required for graduate students.
Prereq: IST 359
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/); Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 471 Internship in Information Management and Technology (1-6 Credits)
Information Studies
Fully supervised internship available to IST majors and minors.
Repeatable 6 times for 12 credits maximum

IST 472 Cooperative Education in Information Management and Technology (1-12 Credits)
Information Studies
Fully supervised, paid, cooperative education experience extending over two separate time periods. Students must complete a contract with site supervisor.
Repeatable 6 times for 12 credits maximum

IST 476 Applied Information Security (3 Credits)
Information Studies
This course is intended to explore how to apply information security technologies and approaches to real-life systems and services.
Prereq: IST 323
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/); Scientific Inquiry and Research Skills (https://coursecatalog.syracuse.edu/shared-competencies/scientific-inquiry-and-research-skills/)

IST 477 Capstone in Innovation, Society & Technology (IST) (3 Credits)
Information Studies
Required capstone for BS in Innovation, Society & Technology (IST). Students research a technology, innovation and society topic. This capstone course may build on prior coursework, or demonstrate student capacity for innovating in new directions
Shared Competencies: Critical and Creative Thinking (https://coursecatalog.syracuse.edu/shared-competencies/critical-and-creative-thinking/); Scientific Inquiry and Research Skills (https://coursecatalog.syracuse.edu/shared-competencies/scientific-inquiry-and-research-skills/)

IST 486 Social Media in the Organization (3 Credits)
Information Studies
Introduction to the use and management of social media technologies, including strategies for communication, awareness of challenges, and tools and techniques for analysis of social media in contemporary organizations.
Shared Competencies: Communication Skills (https://coursecatalog.syracuse.edu/shared-competencies/communication-skills/)

IST 487 The Impact & Analytics of Social Media Network Influence (3 Credits)
Information Studies
We live in a digital era of unprecedented interconnectedness and viral information spread. This class explores the intersection of social media communication, influencer marketing, and social networks, covering key concepts, strategies, and analytic techniques to understand influencers, trends, and societal changes in a networked world

IST 490 Independent Study (1-6 Credits)
Information Studies
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

IST 499 Honors Capstone Project (1-3 Credits)
Information Studies
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 3 times for 3 credits maximum

IST 500 Selected Topics (1-6 Credits)
Information Studies
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.
Repeatable

IST 511 Cultural Foundations of Information Studies (3 Credits)
Information Studies
Survey of the professional, social, ethical, and legal issues affecting information service professionals and organizations and prepares students to deal with these issues and work with a diverse community.
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 564 Accessible Library & Information Services (3 Credits)
Information Studies
Provides students on K-12, public, and academic library paths with context, awareness, and strategies to develop programs, services and facilities, and to select resources and technologies that ensure patrons and staff with disabilities have inclusive library experiences.
Shared Competencies: Ethics and Integrity (https://coursecatalog.syracuse.edu/shared-competencies/ethics-and-integrity/); Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)