SCHOOL OF INFORMATION STUDIES

Jeff Hemsley, Interim Dean

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.

The Master of Science in Library and Information Science within Syracuse University's School of Information Studies (iSchool) is accredited by the American Library Association. ALA accreditation indicates that the program has undergone a self-evaluation process, been reviewed by peers, and meets the standards established by the American Library Association and Committee on Accreditation.

The iSchool is also a registered Project Management Institute Education Provider, meaning that the school's curriculum meets an international standard of best practice in the field of project management.

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.

Graduate Education

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

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.

Programs

Master's

- Applied Data Science, MS (https://coursecatalog.syracuse.edu/graduate/information-studies/applied-data-science-ms/)
- Applied Human Centered AI, MS (https://coursecatalog.syracuse.edu/graduate/information-studies/applied-human-centered-ai-ms/)
- Information Systems for Executives, MS (https://coursecatalog.syracuse.edu/graduate/information-studies/information-systems-executives-ms/)
- Information Systems, MS (https://coursecatalog.syracuse.edu/graduate/information-studies/information-systems-ms/)
- Library and Information Science, MS (https://coursecatalog.syracuse.edu/graduate/information-studies/library-information-science-ms/)
- Library and Information Science: School Media, MS (https://coursecatalog.syracuse.edu/graduate/information-studies/library-information-science-school-media-ms/)

Doctorate

- Information Management, DPS (https://coursecatalog.syracuse.edu/graduate/information-studies/information-management-dps/)
- Information Science and Technology, PhD (https://coursecatalog.syracuse.edu/graduate/information-studies/information-science-technology-phd/)

Certificate of Advanced Study

- Cloud Management, CAS (https://coursecatalog.syracuse.edu/graduate/information-studies/cloud-management-cas/)
- Data Science, CAS (https://coursecatalog.syracuse.edu/graduate/information-studies/data-science-cas/)
- Information Security Management, CAS (https://coursecatalog.syracuse.edu/graduate/information-studies/information-security-management-cas/)
- Information Technology Management, CAS (No Longer Admitting Students) (https://coursecatalog.syracuse.edu/graduate/information-studies/information-technology-management-cas/)
- School Library Media, CAS (https://coursecatalog.syracuse.edu/graduate/information-studies/school-library-media-cas/)

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, Ethics, 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., Columbia
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 Media
Ph.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 600 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

IDS 650 Global Information Technology Abroad (3-6 Credits)
Information Studies
Double-numbered with IDS 350
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 655 Global Information Technology Abroad (0 Credits)
Information Studies
Double-numbered with IDS 355
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 660 Information Technology Experience (1-3 Credits)
Information Studies
Double-numbered with IDS 360
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 690 Independent Study (1-6 Credits)
Information Studies
Repeatable

Information Studies

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 553 Information Architecture for Internet Services (3 Credits)
Information Studies
Building and management of Internet information services, including information organization, information management, and information dissemination. Understanding of the use of Internet technologies within an organizational context. Practice with current technologies.

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/)

IST 580 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 1 times for 12 credits maximum

IST 600 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 601 Information and Information Environments (1 Credit)
Information Studies
A broad overview of the field and an orientation to the School of Information Studies. Describes the past, present, and future of information studies.

IST 602 Digital Forensics (3 Credits)
Information Studies
Examination of information technology to establish probative information. Fundamentals of the forensic process, evidence handling and quality assurance as these apply to digital forensics.

IST 604 Cataloging of Information Resources (3 Credits)
Information Studies
History, theories, standards, and practices of bibliographic control of information resources with a focus on the library community. Practice creating original bibliographic and authority records and adapting, editing existing records using various technologies and tools, and applying subject vocabularies and classification systems.
Prereq: IST 616

IST 605 Reference and Information Literacy Services (3 Credits)
Information Studies
Equips students with foundational knowledge of library ethics/standards, user information behavior, information literacy (including core information search, evaluation, and use practices), library resource types and discovery tools, question answering strategies, and related user-responsive library resources and services.

IST 607 Digital Humanities for Librarians, Archivists, & Cultural Heritage Workers (3 Credits)
Information Studies
Introduction to Digital Humanities (DH) in Libraries, Archives, Museums, and other cultural institutions, with a focus on how information professionals can make use of DH methods and approaches and support and sustain DH work in their communities.

IST 608 Blockchain Management (3 Credits)
Information Studies
Double-numbered with IST 408
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 611 Information Technologies in Educational Organizations (3 Credits)
Information Studies
Information and communication technologies for teaching and learning in all types of libraries: practice with tools along with consideration of pedagogy (instructional design and evaluation of tools for learning objectives) and context (ethics, policies, legislation).

IST 612 Youth Services in Libraries and Information Centers (3 Credits)
Information Studies
Introduction to best practices and methods to support and develop youth services programming in school and public library settings. Students gain skills in collection development, knowledge of youth literature, and information literacy instruction to serve a rich diversity of youth.

IST 613 Library Planning, Marketing, and Assessment (3 Credits)
Information Studies
Enables students to discern gaps between user/community needs/goals and library services, resources, and facilities; students develop recommendations to close gaps. Covers project management, marketing/communications, and assessment. Course content is contextualized in collaboration with partner libraries.
Prereq: IST 605

IST 614 Information Technology Management and Policy (3 Credits)
Information Studies
Basic ideas, concepts and perspectives of management and policy as they apply to the information professions. Students learn to understand and apply these principles to improve organizational effectiveness and promote digital transformation.

IST 615 Cloud Management (3 Credits)
Information Studies
Focus on understanding cloud management principles and practices, cloud service models (IaaS, PaaS, SaaS) and deployment strategies (public, private, hybrid), as well as key concepts like scalability, security, and cost optimization. Practical experience in using, creating and managing cloud services.

IST 616 Information Resources: Organization and Access (3 Credits)
Information Studies
Introduction to theories, tools, and standards for information organization and access, including cataloging rules and formats, content analysis, indexing, classification, and fundamentals of information retrieval systems.

IST 618 Information Policy (3 Credits)
Information Studies
Public policy and the data, library, and information technology sectors. Access, ethical and responsible artificial intelligence, privacy and security, intellectual property, and freedom of expression. Application of economic, legal, and political science concepts to information policy analysis.

IST 620 Advanced Topics in Information Innovation (3 Credits)
Information Studies
Critical and emerging issues in information innovation. The course presents durable concepts of innovation around a specific innovation in the information field. The innovation is used as context for readings and project.

IST 621 Information Management and Technology (3 Credits)
Information Studies
Introduces the concept of digital transformation and its relationship to information systems within an organization. Uses business case studies to explore topics of digitization, strategic decision making, and organizational culture. Assignments emphasize development of analytical problem solving, presentation, and collaboration skills.

IST 622 Introduction to Preservation of Cultural Heritage (3 Credits)
Information Studies
Introduction to field of preservation of cultural heritage, including institutions, contexts and methodologies, concepts of place and culture, objects and resources for study; emphasis also on role of digital applications. Requires research project and presentation.

IST 623 Introduction to Information Security (3 Credits)
Information Studies
Basic concepts and technologies of information security. Students who successfully complete this course will have a comprehensive overview of information security with some hands-on experience.

IST 624 Preservation of Library and Archival Collections (3 Credits)
Information Studies
Introduction to preserving library and archival collections, including paper, audio-visual, and digital objects.

IST 625 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.

IST 626 Information Justice & Community Engagement (3 Credits)
Information Studies
Double-numbered with IST 426
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 628 Arrangement and Description of Archival Collections (3 Credits)
Information Studies
Introduction to the hands-on work of acquiring, processing and preserving archival and manuscript collections. Requires a comprehensive collections project completed at the Special Collections Research Center in Bird Library.

IST 629 Technology and the Future of Work (3 Credits)
Information Studies
Double-numbered with IST 429
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 632 Management and Organization of Special Collections (3 Credits)
Information Studies
Principles, methods, and techniques of management, development and organization of special collections such as rare books, archives, or pictorial materials, including issues such as bibliographic services and preservation.

IST 634 Security in Networked Environments (3 Credits)
Information Studies
Security technologies and management in networked/Internet environments with hands-on skills and research opportunities. This course provides students with the concepts, threats, and key components of network security with technologies and effective management.

IST 635 Collection Development and Access (3 Credits)
Information Studies
Advanced investigation of collection development practices across library types. Includes topics such as, acquisition, maintenance of different types of collections; user and collection analysis; policies and guidelines, budgeting and licensing; evaluation and usage statistics; cooperative collection development; preservation; and ethical issues.

IST 636 Leading Issues in Information Security (3 Credits)
Information Studies
This course is intended to cover today's leading issues and challenges in information security, considering social, ethical, management, and global perspectives that are related to current technology trends.
Prereq: IST 623 or IST 323

IST 644 Managing Data Science Projects (3 Credits)
Information Studies
Increase the agility of a data science project by improving the process a team uses to execute their project. Explore data science life cycles (e.g., CRISP-DM, TDSP) and collaboration frameworks (e.g., Kanban, Scrum).

IST 645 Managing Information Systems Projects (3 Credits)
Information Studies
Double-numbered with IST 345
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 649 Human Interaction with Computers (3 Credits)
Information Studies
Human performance characteristics, user/ system communication design alternatives, user behavior research methods, information system organizational impact.

IST 651 Scripting for Enterprise Data Systems (3 Credits)
Information Studies
Scripting methods, languages, tools and theory for the efficient and effective management of resources and services in enterprise data systems.

IST 652 Scripting for Data Analysis (3 Credits)
Information Studies
Introduction to scripting techniques for automating, managing, and analyzing data in various formats. The course focuses on practical applications of Python to preprocess, clean, analyze, and visualize data to support data-driven decision-making and the creation of data analysis pipelines.
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

IST 654 Information Systems Analysis (3 Credits)
Information Studies
Concepts and methods of systems analysis through decomposition and modeling. Extensive practice with structured methodologies. Systems analysis and project management techniques. Introduction to automated tools and technologies. Group project to apply skills.

IST 656 Telecommunications and Enterprise Network Management II (3 Credits)
Information Studies
Hardware and software technologies in telecommunication and information networks. TCP/IP protocols. Design, maintenance and management.
Prereq: IST 653

IST 659 Data Administration Concepts and Database Management (3 Credits)
Information Studies
Definition, development, and management of databases for information systems. Learn data analysis techniques, data modeling, data normalization query writing for information retrieval and query performance tuning using the SQL language.

IST 662 Instructional Strategies and Techniques for Information Professionals (3 Credits)
Information Studies
Prepares students to teach, train, consult, and present programming in information organizations. Focuses on understanding learners and audiences, utilizing educational theory, designing strategies for conveying content, employing inclusive techniques, and assessing effectiveness of instructional episodes.

IST 664 Natural Language Processing (3 Credits)
Information Studies
Linguistic and computational aspect of natural language processing technologies. Lectures, readings, and projects in the computational techniques required to perform all levels of linguistic processing of text. Additional work required of graduate students.

IST 665 Evaluating Disruptive Information Technologies and Trends (3 Credits)
Information Studies
Introduces concepts and methods for identifying, evaluating, and presenting IT analyses in areas that have potential to cause significant disruption in public and private sector organizations with a focus on social, financial and technological impacts.

IST 668 Literacy Through School Libraries (3 Credits)
Information Studies
Introduction to standards-based methods to support and reinforce library instruction, multiple literacies, reading comprehension in all formats, and information fluency. Development of collaborative instruction and programs that foster student agency and voice, family and cultural literacy.

IST 671 Foundations of Research Methods in Information Studies (3 Credits)
Information Studies
Philosophies, approaches, and practices of research in information studies, including quantitative, qualitative, critical, historical, and design-based approaches. Create a proposal for an actionable research project, including research ethics, literature review, data collection and analysis, peer review, and communication of results.

IST 672 Public Libraries (3 Credits)
Information Studies
Introduction to public libraries within the context of demographic and technological changes and shifting economic and political forces. Topics covered include issues related to social and political environments, user services, diversity, equity, and inclusive services, collections, programming, budgeting, staffing and community outreach.

IST 674 Academic Librarianship (3 Credits)
Information Studies
Survey of academic librarianship, including a variety of public services and technical services domains within the academic library. Emphasizes the role of academic libraries in higher education and attainment of institutional mission.

IST 675 Dynamics of Human AI Interaction (3 Credits)
Information Studies
Double-numbered with IST 375
Understand, analyze, and critique scientific and practical perspectives on what counts as ¿interactivity¿ and ¿intelligence¿ when AI-driven agents interact with humans

IST 676 Digital Curation (3 Credits)
Information Studies
Introduces key concepts and techniques in digital curation across humanities, social sciences, and sciences and issues in the technical, service, and social dimensions of curating digital assets.

IST 678 Communication for Information Professionals (3 Credits)
Information Studies
Enhances the listening, speaking and writing skills of Informaton Studies students with low TOEFL or IELTS scores, or through departmental recommendation. Includes information studies specific writing presentations. Cannot be counted towards degree. By permission only.

IST 681 Metadata (3 Credits)
Information Studies
Introduces metadata concepts, models, encoding, vocabulary, interoperability, and quality control as well as new development and trends. Students will apply metadata principles, tools, and best practices in creating metadata descriptions and models using established standards.

IST 682 Cultural Competence for Information Professionals (3 Credits)
Information Studies
Double-numbered with IST 382
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 686 Quantitative Reasoning for Data Science (3 Credits)
Information Studies
Contemporary methods of statistical inference for quantitative data, including Bayesian analysis. Students gain practical skills in data preparation, analysis using R, and communicating results for informed, reliable decision-making.

IST 687 Introduction to 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.

IST 688 Building Human Centered AI Applications (3 Credits)
Information Studies
Double-numbered with IST 488
Learn to build Generative AI applications leveraging large language models. Through hands-on projects, students will use libraries and APIs to create conversational agents, Q&A bots, and goal-oriented assistants. Topics covered include prompt engineering, AI conversational memory, output evaluation, and responsible AI practices. Additional work required for graduate students.
Advisory recommendation Prereq: IST 687 or Knowledge of Phython Programming

IST 690 Independent Study (1-6 Credits)
Information Studies
Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department.
Repeatable

IST 691 Deep Learning in Practice (3 Credits)
Information Studies
An introduction to the concepts and techniques needed to build deep learning applications. Gain hands-on experience training neural networks using open-source tools (Python, Tensorflow/Keras). The course culminates in a project applying deep learning methods to real-world challenges.
Prereq: IST 687 OR IST 387 (B grade or higher)

IST 692 Responsible AI (3 Credits)
Information Studies
Through hands-on coding exercises and critical analysis, you¿ll learn to identify and address biases in AI systems, evaluate the social and environmental impact of AI, navigate AI regulations, and apply best practices for responsible AI design and deployment.
Prereq: IST 687 or IST 387 (B grade or higher)

IST 700 Selected Topic (0-6 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 704 Applied Information Security (3 Credits)
Information Studies
Applications of information security including hands-on experience. Students who successfully complete this course will understand how information security technology is applied to real systems.
Prereq: IST 623 or IST 323

IST 707 Applied Machine Learning (3 Credits)
Information Studies
Provides a comprehensive overview of industry standard machine learning techniques, including an introduction to deep learning. Focus on model building and optimization in Python, real-world applications, and stakeholder communication. Students will apply their skills to an original machine learning project to showcase their skills.
Prereq: IST 687 or IST 387

IST 714 Cloud Architecture (3 Credits)
Information Studies
Hands-on enterprise cloud-native software defined network and application/service design, planning and economics; migration/adoption costs, data center resource orchestration. Topics also include cloud elastic sizing, risk management, governance, compliance and data monitoring, and security architecture.

IST 715 LAMS: Libraries, Archives, Museums (3 Credits)
Information Studies
A study of libraries, archives, museums, and national parks as cultural institutions; their missions and operating structures; involvement in joint ventures, both physical and electronic; panelists from and site visits to nearby venues.

IST 717 Library Leadership and Management (3 Credits)
Information Studies
Management of academic, public, and special libraries. Relationship between library and its parent institution; internal organization and operation; library information policies; library financing; legislation affecting libraries.

IST 718 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 687 & IST 707) or (IST 387 & IST 407(B grade or higher))

IST 719 Information Visualization (3 Credits)
Information Studies
A broad introduction to data visualization for information professionals. Students will develop a portfolio of resources, demonstrations, recipes, and examples of various data visualization techniques.
Prereq: IST 687 or IST 387

IST 720 Topics in Library Leadership (1-3 Credits)
Information Studies
Topics related to library leadership offered as available. May include advocacy, budgeting, grant writing, fund-raising, and other topics as appropriate.
Repeatable 3 times for 6 credits maximum

IST 722 Data Warehouse (3 Credits)
Information Studies
Introduction to the concepts of data warehousing and business intelligence (BI). Data warehouse architectures and design. Dimensional modeling, extract-load-transform (ELT) in the SQL language. Emphasis on using data warehouses to make better organizational decisions.
Prereq: IST 659 or IST 359

IST 725 Information Technology Security Architecture (3 Credits)
Information Studies
Introduces concepts and practices, using an organization-wide enterprise architecture as context. The purpose of an IT security architecture is to ensure proper levels of information confidentiality, integrity, and availability are provided for an organization's information and data.

IST 728 Information Security Policy (3 Credits)
Information Studies
Understand and develop information security technology, law and policy risks and vulnerability analysis skills for management and operations of business and government. Technology, law, regulation, and policy for information security best practices and compliance.

IST 736 Text Mining (3 Credits)
Information Studies
Introduces concepts and methods for knowledge discovery from large amount of text data, and the application of text mining techniques for business intelligence, digital humanities, and social behavior analysis.

IST 737 Visual Analytic Dashboards (3 Credits)
Information Studies
Analytic dashboards find valuable insights from large scale data. Students will gain knowledge of human visual reasoning, and obtain technical skills necessary to design, develop and implement analytic dashboards for business, government, or personal data.
Prereq: IST 687

IST 755 Information Systems Capstone (3 Credits)
Information Studies
Seminar. Integration of previous learning on the various components of management, user needs, and technologies. In-depth review and use of case studies on a range of critical information resources management areas.
Prereq: IST 614 and 24 credits completed

IST 769 Advanced Big Data Management (3 Credits)
Information Studies
Double-numbered with IST 469
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 659 or 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 773 Reflective Portfolio (3 Credits)
Information Studies
Creation of an online reflective portfolio that demonstrates successful achievement of all program learning outcomes for the MSLIS degree.

IST 776 Research Methods in Information Science and Technology (3 Credits)
Information Studies
Hands-on experience with qualitative and quantitative research methods in Information Science. Covers the entire research process¿from question development to data analysis¿while emphasizing ethical considerations and diverse research techniques like surveys, interviews, and experiments.

IST 777 Statistical Methods in Information Science and Technology (3 Credits)
Information Studies
Classical statistical procedures used in information transfer research. Emphasis on underlying rationale for each procedure and on criteria for selecting procedures in a given research situation.
Repeatable 1 times for 3 credits maximum

IST 778 Elicitation and Analytical Techniques for Information Science (3 Credits)
Information Studies
Techniques for data elicitation and analysis for research in information science and technology. Includes intellectual history, assumptions, procedures, and practical experience with a range of techniques, including both qualitative and quantitative approaches.

IST 782 Applied Data Science Portfolio (1 Credit)
Information Studies
Reflect on and curate a portfolio of data science projects completed during the program. Through an ePortfolio and reflection document, demonstrate how your work has aligned with your program learning outcomes. The portfolio serves as a professional showcase for future career opportunities. No new projects are required.

IST 783 Applied Human Centered AI Portfolio (1 Credit)
Information Studies
Reflect on and curate a portfolio of data science projects completed during the program. Through an ePortfolio and reflection document, demonstrate how your work has aligned with your program learning outcomes. The portfolio serves as a professional showcase for future career opportunities. No new projects are required.

IST 790 Theories of Information (1-3 Credits)
Information Studies
Introduces students to a broad range of information-focused theories. Through critical reading, writing, and discussion, students will critically engage course concepts and apply them to their own research interests.

IST 800 Information Studies Seminar (1-3 Credits)
Information Studies
Selected areas within the information field, emphasizing related disciplines and their relationships to the diagnosis of information needs and the collection, storage, management, regulation and dissemination of information.
Repeatable

IST 801 Introduction to Doctoral Studies (3 Credits)
Information Studies
This course defines what it means to be a scientist (Ph.D.) or practitioner/researcher (DPS), what is meant by science, and what are some of the core concepts in the broad intellectual spaces represented by faculty at this (and other) iSchool(s). As such, this overview is very directed towards concepts, perspectives, and issues that are relevant to the doing of science by researchers in iSchools.

IST 810 Practicum in Research (2 Credits)
Information Studies
Practical, mentor-led experience in the research process, including planning, design, data collection, analysis, writing, and/or funding. Experiences are complemented by workshops and discussions.
Repeatable

IST 820 Seminar in Research Methods (3 Credits)
Information Studies
Principles and applications of appropriate research techniques, including probability and statistics, sampling theory, operations research models, survey techniques, interviewing, observation, and experimental design. Problem formulation, proposal writing, preparation and presentation of final report.

IST 830 Theories of Digital Technologies (3 Credits)
Information Studies
Theory and practice in the analysis, design, management, and evaluation of existing and hypothetical information systems, including computerized storage and retrieval systems, libraries, management systems, and networks.

IST 840 Practicum in Teaching (1-2 Credits)
Information Studies
Practical, mentor-led experience in teaching, including work in course design, pedagogical strategies, lecture and activity delivery, grading, classroom management, and/or accessibility. Experiences are complemented by workshops and discussions.
Repeatable 8 times for 8 credits maximum

IST 880 Intensive Seminar (0 Credits)
Information Studies
Residential seminar for Doctorate of Professional Studies distance students. Skill building and mentoring for doctoral coursework and dissertation preparation. Portfolio evaluation of work accumulated during the semester.
Repeatable 7 times for 1 credits maximum

IST 970 Internship (1-6 Credits)
Information Studies
Participation in a supervised and evaluated field experience. Requires contract approved by advisor, faculty supervisor, and field agency before registration.
Repeatable

IST 971 Information Systems Internship (1-3 Credits)
Information Studies
Fully supervised internship experience for graduate students in the MSIS degree program. Must meet GPA requirements and complete a learning agreement with site supervisor.
Repeatable 2 times for 3 credits maximum

IST 972 School Media Practicum (1-6 Credits)
Information Studies
Fully supervised and evaluated school-based library experience at the elementary and secondary levels. Includes online seminar. Must meet GPA/program requirements and complete a learning agreement with site supervisor.
Repeatable

IST 973 Internship in Library Science (1-6 Credits)
Information Studies
Fully supervised internship experience. Must meet GPA requirements and complete a learning agreement with site supervisor.
Repeatable 2 times for 6 credits maximum
Prereq: 9 completed graduate level IST credits

IST 974 Internship in Applied Data Science (1-3 Credits)
Information Studies
Fully supervised internship experience. Must meet GPA requirements and complete a learning agreement with site supervisor. Pre-req: IST ADS master's students only.
Repeatable 3 times for 9 credits maximum

IST 990 Independent Study (1-6 Credits)
Information Studies
Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department.
Repeatable

IST 997 Thesis (1-6 Credits)
Information Studies
Repeatable 7 times for 45 credits maximum

IST 999 Dissertation (1-15 Credits)
Information Studies
Repeatable