

Information Sciences and Technologies (MS-IST)

- The M.S in **Information Sciences and Technologies (IST)** is an in-depth career-oriented program that explores how information is analyzed, managed, and visualized in the modern computing industry.
- The curriculum covers **two main areas of study**, allowing students the flexibility to choose a course load that matches their career goals.
- IST students will learn about **big data analytics, web and mobile services, data integration, database management and tuning, NoSQL systems**, and more.
- Type of graduate we try to produce
 - Data analyst, data engineer, database administrator, web/mobile developer, software developer
 - Job opportunities: Oracle, Amazon, IBM, paychecks...

Curriculum

Term: Fall 1			
Course Number & Title	CR	NEW	Prerequisite(s)
ISTE-605 Scholarship In Information Sciences And Technologies	3		
ISTE-610 Non-Relational Data Management	3		1 year programming in an object-oriented language; ISTE-608 or equivalent; 1 web course
Domain Elective	3		
Domain Elective	3		
Term Credit Total:		12	
Term: Spring 1			
Course Number & Title	CR	NEW	Prerequisite(s)
ISTE-600 Foundations of Data Mining	3		1 statistics course
Domain Elective	3		
ISTE-612 Information Retrieval and Text Mining	3		1 year programming in an object-oriented language; ISTE-608 or equivalent; 1 web course; 1 statistics course
Domain Elective	3		Matriculation in Program
Term Credit Total:		12	
Term: Summer 1			
Course Number & Title	CR	NEW	Prerequisite(s)
None	0		
Term Credit Total:		0	
Term: Fall 2			
Course Number & Title	CR	NEW	Prerequisite(s)
Choose one of the following: <ul style="list-style-type: none"> Project Option: ISTE-791 Project In Information Sciences And Technologies plus 1 Domain Elective Thesis Option: ISTE-790 Thesis in Information Sciences and Technologies 	6		Approval of Graduate Program Director
Term Credit Total:		6	
Program Totals (credits)		30	
For Master's programs, identify the required comprehensive, culminating element(s) (e.g., thesis), including course number if applicable:		Project Option: <ul style="list-style-type: none"> ISTE-791 Project In Information Sciences and Technologies Additional Domain Elective (3cr) Thesis Option: <ul style="list-style-type: none"> ISTE-790 Thesis in Information Sciences and Technologies 	

Curriculum (Cont'd)

Course Number	Course Name	Information Management & Database Technology	Data Analytics
ISTE-721	Information Assurance Fundamentals	X	
ISTE-722	Database Connectivity and Access	X	
ISTE-724	Data Warehousing	X	X
ISTE-726	Database Management and Access	X	
ISTE-728	Database Management and Access II	X	
ISTE-780	Data Driven Knowledge Discovery		X
ISTE-782	Visual Analytics		X
ISTE-764	Project Management		
ISTE-792	Capstone Guidance Colloquium		
ISTE-730	Foundations of IOT (prerequisite for 732)		
ISTE-732	IOT Analytics (requires ISTE-730)		X

Human-Computer Interaction

- The M.S in **Human-Computer Interaction (HCI)** explores the design, evaluation, and implementation of interactive computing systems
- Degree topics include user experience, accessibility and assistive technology, information design, wearable and interactive design, and usability testing.
- Type of graduate we try to produce
 - Interaction designer, usability specialist, UX/UI designer, web/mobile developer
 - Job opportunities: Microsoft, Google, IBM, Yelp

Curriculum

Term: Fall 1			
Course Number & Title	CR	NEW	Prerequisite(s)
HCIN-600 Research Methods	3		
HCIN-610 Foundations of Human-Computer Interaction	3		
HCIN-620 Information and Interaction Design	3		
Application Domain	3		
Term Credit Total:		12	
Term: Spring 1			
Course Number & Title	CR	NEW	Prerequisite(s)
HCIN-630 Usability Testing	3		HCIN-600, HCIN-610
Application Domain	3		
Program Elective	3		
Choose one of the following:	3		
<ul style="list-style-type: none"> Project Option: HCIN-794 MS Human Computer Interaction Capstone Proposal Thesis Option: Program Elective 			
Term Credit Total:		12	
Term: Summer 1			
Course Number & Title	CR	NEW	Prerequisite(s)
None	0		
Term Credit Total:		0	
Term: Fall 2			
Course Number & Title	CR	NEW	Prerequisite(s)
Choose one of the following:	6		
<ul style="list-style-type: none"> Project Option: HCIN-795 MS HCI Project plus 1 Program Elective Thesis Option: HCIN-796 MS HCI Thesis 			<ul style="list-style-type: none"> HCIN-794 and Approval of HCI Program Director Approval of HCI Program Director and advisor for thesis
Term Credit Total:		6	
Program Totals (credits)		30	
For Master's programs, identify the required comprehensive, culminating element(s) (e.g., thesis), including course number if applicable:	Project: <ul style="list-style-type: none"> HCIN-794 MS Human Computer Interaction Capstone Proposal HCIN-795 MS HCI Project Thesis: <ul style="list-style-type: none"> HCIN-796 MS HCI Thesis 		

Curriculum (Cont'd)

Course Number & Title

ISTE-645 Foundations of Web Technologies I
ISTE-646 Foundations of Web Technologies II
HCIN-660 Fundamentals of Instructional Technology
HCIN-661 Interactive Courseware
HCIN-700 Current Topics in HCI
HCIN-720 Prototyping Wearable and Internet of Things Devices
HCIN-722 Human-Computer Interaction with Mobile, Wearable, and Ubiquitous Devices
HCIN-730 User-Centered Design Methods
HCIN-794 MS Human Computer Interaction Capstone Proposal
IGME-770 Geographic Information Science and Technology
IGME-772 Geographic Visualization
PSYC-712 Graduate Cognition
PSYC-715 Graduate Perception

Application Domains:

Students matriculated in this degree will select one two-course application domain representing six semester hours of work. Application domains and corresponding course choices are listed below.

Web Development

ISTE-645 Foundations of Web Technologies I
ISTE-646 Foundations of Web Technologies II

Geographic Information Science and Technology

IGME-770 Geographic Information Science and Technology
IGME-772 Geographic Visualization

e-Learning Technologies

HCIN-660 Fundamentals of Instructional Technology
HCIN-661 Interactive Courseware

Smart Device Application Design and Development

HCIN-720 Prototyping Wearable and Internet of Things Devices
HCIN-722 Human-Computer Interaction with Mobile, Wearable, and Ubiquitous Devices

Special Topics

A two-course (6 semester hours) special topics application domain is available to selected students who wish to pursue an in-depth study of an area not present in the program's offerings. The student will develop a proposal in consultation with the faculty advisor. The Graduate Program Coordinator or the HCI Program Director will review the proposal and approve or deny the request.