

# INFORMATION SCIENCE AND TECHNOLOGY, MS

The Master of Science in Information Science and Technology (MSIST) is a professional graduate degree program for those who seek advanced training to meet the ever increasing need for information technology (IT) professionals. The degree will be composed of 36 credit hours and will supplement our Bachelors of Science in Information Science and Technology.

The MSIST will provide essential skills and knowledge in the following areas:

- **User interface (UI) design and human computer interaction (HCI):** Equips students with the necessary knowledge and abilities to develop interaction design that supports and enables users of the mobile applications.
- **Web and mobile design and development:** Equips students with advanced technical knowledge and skills to develop mobile applications.
- **Data management and data science:** Provides students with advanced knowledge and skills to manage data sets generated by applications.
- **Information security:** Focuses on techniques on ensuring the security of all data captured, stored and analyzed through applications.
- **Generalist:** For students who require a customized program to meet their educational and employment needs.

## Admission Requirements

### Application Deadlines

Application deadlines vary by program, please review the application deadline chart (<http://uwm.edu/graduateschool/program-deadlines>) for specific programs. Other important dates and deadlines can be found by using the One Stop calendars (<https://uwm.edu/onestop/dates-and-deadlines>).

### Admission

An applicant must meet Graduate School requirements (<http://uwm.edu/graduateschool/admission>) plus these departmental requirements to be considered for admission to the program:

- A resume.

### Prerequisites

Preference will be given to those students who have a baccalaureate degree in information sciences, computer information systems, computer science, engineering, statistics, or a related field. Students with sufficient background gained through work experience or professional training in information technologies, such as networks, web services, and database development, will also be considered for admission to the program. Those who have neither of the aforementioned qualifications will be encouraged to take the following prerequisites, or their equivalents, before taking related courses:

Code	Title	Credits
INFOST 240	Web Design I	3
INFOST 410	Database Information Retrieval Systems	3
INFOST 440	Web Application Development	3

If taken, these courses must have been completed within the last five years with a grade of B or better (B- not acceptable).

## Credits and Courses

The program requires 36 graduate-level credits, including eight, 3-credit core courses and 12 credits of electives.

Code	Title	Credits
<b>Core Courses</b>		
INFOST 547	User-Centered Interaction Design	3
INFOST 582	Introduction to Data Science	3
INFOST 583	Survey of Information Security	3
INFOST 584	Survey of Web and Mobile Content Development	3
COMPST 701	Mathematical & Computing Fundamentals for IT Professionals	3
COMPST 702	Software Development in Python	3
COMPST 703	Software Engineering Principles	3
Culminating Course		3
<b>Electives</b>		
Select 12 credits from one of the transcript designated tracks below		12
Total Credits		36

### Electives

#### Electives for the User Interaction & Human Computer Interaction Track

Code	Title	Credits
INFOST 465	Legal Aspects of Information Products and Services (G)	3
INFOST 670	Instructional Technologies	3
INFOST 685	Electronic Publishing and Web Design	3
INFOST 691	Special Topics in Information Science:	1-3
INFOST 717	Information Architecture	3
INFOST 788	Information Systems: Analysis and Design	3
ARCH 583	Emerging Digital Technology:	3
ARCH 782	Visualization 1	3
ARCH 783	Visualization 2	3
ART 412	Advanced Digital Studio	3
ART 423	Experimental Typography	3
ART 496	Sequence and Structure	3
ART 929	Advanced Research-Design & Digital Media	1-4
COMPSCI 459	Fundamentals of Computer Graphics	3
COMPSCI 522	Computer Game Design	3
COMPSCI 713	Computer Vision	3
COMPSCI 718	Advanced Computer Graphics: Modeling and Animation	3
COMPSCI 737	Software Project Management	3
COMPSCI 743	Intelligent User Interfaces	3
COMPSCI 747	Principles & Practices of User Interface Design	3
GEOG 403	Remote Sensing: Environmental and Land Use Analysis	4
GEOG 405	Cartography	4

GEOG 525	Geographic Information Science	4
GEOG 804	Advanced Remote Sensing (Previously numbered Geog 703)	3

**Electives for the Web and Mobile Application Design Track**

Code	Title	Credits
INFOST 465	Legal Aspects of Information Products and Services (G)	3
INFOST 691	Special Topics in Information Science:	1-3
INFOST 717	Information Architecture	3
INFOST 788	Information Systems: Analysis and Design	3
ART 325	Web Design II	3
ART 302	Art and Design Workshop:	3
ART 524	Professional Practice in Design:	3-6
BUS ADM 810	Development of Web-Based Solutions	3
BUS ADM 747	Service-Oriented Analysis and Design	3
COMPSCI 481	Server-side Internet Programming (G)	3
COMPSCI 482	Rich Internet Applications (Client Side)	3
GEOG 525	Geographic Information Science	4

**Electives for the Information Security Track**

Code	Title	Credits
INFOST 465	Legal Aspects of Information Products and Services (G)	3
INFOST 691	Special Topics in Information Science:	1-3
INFOST 761	Information Privacy	3
INFOST 788	Information Systems: Analysis and Design	3
BUS ADM 817	Infrastructure for Information Systems	3
COMPSCI 469	Introduction to Computer Security	3
COMPSCI 520	Computer Networks	3

**Electives for the Data Science Track**

Code	Title	Credits
INFOST 465	Legal Aspects of Information Products and Services (G)	3
INFOST 691	Special Topics in Information Science:	1-3
INFOST 714	Metadata	3
INFOST 716	Thesaurus Construction	3
INFOST 719	Advanced Topics in Information Organization	3
INFOST 780	XML for Libraries	3
INFOST 783	Information Storage and Retrieval	3
INFOST 785	Database Management Systems for Information Professionals	3
INFOST 788	Information Systems: Analysis and Design	3
BUS ADM 749	Data and Information Management	3
BUS ADM 816	Business Intelligence Technologies & Solutions	3
BUS ADM 810	Development of Web-Based Solutions	3
BUS ADM 741	Web Mining and Analytics	3
GEOG 525	Geographic Information Science	4
HCA/COMPSCI 744	Text Retrieval and Its Applications in Biomedicine	3

HCA 760	Biomedical and Healthcare Terminology and Ontology	3
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**Electives for the Generalist Track**

Code	Title	Credits
Select 12 credit hours with the faculty advisor's guidance		12

**Program Requirements****Time Limit**

All degree requirements must be completed within seven years from the date of initial enrollment in the Master's program.