

INFORMATION SYSTEMS AND TECHNOLOGY

The program may be completed entirely on campus, entirely online, or through a combination of on-campus and online courses.

Admission

Bachelor's degree in engineering, a physical science, computer science, applied mathematics, business administration, or liberal arts with a minimum cumulative GPA of 3.0 or higher

Prerequisite Courses

- A course in Data Structures (IMSE 350/351, CIS 350/352, or equivalent)
- A course in computer programming, such as C++ or Java (IMSE 255, IMSE/CIS 150, CIS 205 or equivalent)

These course requirements may be completed after admission into the program.

The MS in IS&T program is a response to the need of students who want to complement, extend, and integrate technical and organizational knowledge on information systems. The program designed meet the need of the industry to incorporate enterprise wide information systems to be competitive in the global market place. Students who possess either technical knowledge about computers and information systems, or knowledge about information needs and information system requirements in organizations, but who want to expand their knowledge in a constructive way, constitute an important part of the intended audience.

The degree aims to achieve simultaneously the following educational goals.

1. Provide access to advances in the information systems field.
2. Provide necessary skills to effectively integrate information technology in organizations.
3. Provide training in specialized areas of information systems and technology.

Degree Requirements

The degree MS in IS&T requires a minimum of 30 credit hours.

Minimum Grade Requirement in addition to maintaining a minimum cumulative GPA of 3.0 or higher every semester.

1. Courses in which grades of C- or below are earned cannot be used to fulfill degree requirements.
2. No more than two courses in which grades of B- or below are earned can be used to fulfill degree requirements.

A minimum of a 3.0 cumulative GPA or higher is required at the time of graduation.

Advanced Standing

Up to six graduate credit hours (grade of B or better) may be transferred from another accredited institution as.

Students may transfer up to one-half (1/2) the minimum number of credit hours required for their master's or professional degree from another University of Michigan program.

Graduate Academic Policies can be found below:

<http://catalog.umd.umich.edu/academic-policies-graduate/>

Program Requirements

The program of study must satisfy the following distribution and course requirements:

Core Courses

Code	Title	Credit Hours
IMSE 556 or CIS 556	Database Systems Database Systems	3
IMSE 570	Enterprise Information Systems	3
IMSE 5725 or CIS 572	Object Oriented System Design Object Oriented Systems Design	3
Total Credit Hours		9

Concentration (15 credit hours)

Six concentration areas exist in the program. Five of the concentration areas are identified below while the sixth is an individual concentration that student develops jointly with the Program Advisor. Each concentration area includes one concentration core course (3 hrs), one cognate course (3 hrs) selected from one of the four remaining concentration areas in the program, and three concentration electives (9 hrs)

Area 1: Information Management Applications

Code	Title	Credit Hours
Concentration Core		
IMSE 5715	Modeling of Int Info Syst	3
Concentration Electives		
ACC 505	Devel & Interp Financial Info	3
HRM 561	Human Resource Management	3
IMSE 515	Fundamentals of Program Mgt	3
IMSE 516	Project Management and Control	3
IMSE 5215	Program Budget, Cost Est & Con	3
IMSE 564	Meth & Tech in ERP Sys Develop	3
IMSE 5755	Bus Proc Int using Entrpr Tech	3
IMSE 586	Big Data Aanal & Visuliztn	3
MKT 515	Marketing Management	3

Area 2: Supply Chain and Information Systems Design

Code	Title	Credit Hours
Concentration Core		
IMSE 5655	Supply Chain Management	3
Concentration Electives		
IMSE 538	Intelligent Manufacturing	3
IMSE 559	System Simulation	3
IMSE 5715	Modeling of Int Info Syst	3
IMSE 580	Prod & Oper Engineering I	3

IMSE 581	Prod & Oper Engineering II	3
CIS 544	Computer and Network Security	3

Area 3: Information Security and Quality

Code	Title	Credit Hours
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Concentration Core

CIS 544	Computer and Network Security	3
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Concentration Electives

IMSE 5715	Modeling of Int Info Syst	3
CIS 527	Computer Networks	3
CIS 546	Securty&Privacy Wireless Ntwk	3
CIS 548	Sec and Priv in Cloud Comp	3
CIS 553	Software Engineering	3
CIS 565	Software Quality Assurance	3
CIS 568	Data Mining	3
or ECE 537	Data Mining	

Area 4: Web Information Management

Code	Title	Credit Hours
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Concentration Core

CIS 562	Web Information Management	3
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Concentration Electives

CIS 525	Web Technology	3
CIS 527	Computer Networks	3
CIS 534	Semantic Web	3
CIS 559	Prin of Social Netwk Science	3
CIS 568	Data Mining	3
or ECE 537	Data Mining	
IMSE 577	Human-Computer Interaction	3
or CIS 577	S/W User Interface Dsgn&Analys	
CIS 550	Obj-Oriet Prog and Its Applic	3
CIS 571	Web Services	3
CIS 586	Advanced Data Management	3

Area 5: Information Systems Engineering

Code	Title	Credit Hours
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Concentration Core

CIS 586	Advanced Data Management	3
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Concentration Electives

CIS 527	Computer Networks	3
CIS 568	Data Mining	3
or ECE 537	Data Mining	
CIS 544	Computer and Network Security	3
CIS 553	Software Engineering	3
IMSE 5715	Modeling of Int Info Syst	3
IMSE 577	Human-Computer Interaction	3
or CIS 577	S/W User Interface Dsgn&Analys	
CIS 578	Advanced Operating Systems	3
CIS 562	Web Information Management	3
CIS 550	Obj-Oriet Prog and Its Applic	3
CIS 575	Software Engineering Mgmt	3

Electives (6 credit hours)

Other CIS, ECE, IMSE and business graduate courses may be taken per advisor approval.

A thesis may be substituted for six hours of electives, on approval by the program director.