

# BACHELOR OF INFORMATION TECHNOLOGY AND MANAGEMENT

## Program for First-Year Students

All students must complete a minimum of 36 credit hours of courses with a significant written and oral communication component, identified with a (C) in the bulletin; 12 credit hours of (C)-coded courses must be taken in the major.

ITM students are required to complete a minor and are strongly encouraged to consider minors which complement their primary program of study; these include (but are not limited to) business, industrial technology, professional and technical communications, circuits and systems, computer architecture, and ROTC. Courses taken to fulfill a minor requirement may not also be used as electives in the major. The minor requirement may be waived for students entering as transfer students or who change their major to information technology and management after completion of 30 credit hours of studies at the university.

A maximum of nine credit hours of ITM graduate courses taken as an undergraduate may be applied to the Master of Information Technology and Management degree, and any graduate courses taken to fulfill undergraduate degree requirements may not also be applied to a graduate degree unless the student is enrolled in a co-terminal or accelerated master's degree program.

## Required Courses

Code	Title	Credit Hours
<b>ITM Requirements</b>		<b>(39)</b>
ITM 100	Intro to IT as a Profession	3
ITM 301	Intro OS and Hardware I	3
ITM 311	Intro to Software Development	3
ITM 313	Intro to Open Source App Dev	3
or ITM 312	Intro Systems Sftwr Prgmng	
ITMD 321	Data Modeling and Applications	3
ITMD 361	Fund of Web Development	3
ITMD 362	Human-Computer Interaction	3
ITMD 411	Intermediate Software Devlpmnt	3
ITMM 471	Project Management for ITM	3
ITMO 340	Intro Data Networks & Internet	3
ITMO 356	Intro Open Source OS	3
ITMS 448	Cyber Security Technologies	3
ITMT 430	System Integration	3
<b>ITM Electives</b>		<b>(18)</b>
Select 18 credit hours from ITM, ITMD, ITMM, ITMO, ITMS, ITMT, and TECH		18
<b>Mathematics Requirements</b>		<b>(6)</b>
MATH 180	Fundamentals of Discrete Math	3
or MATH 230	Introduction to Discrete Math	
Select one course from the following:		3
BUS 221	Business Statistics	3
PSYC 203	Undergrad Stats Bhvrl Sci	4
MATH 425	Statistical Methods	3
<b>Natural Science and Engineering Requirements</b>		<b>(10)</b>
EG 225 is recommended		
See Illinois Tech Core Curriculum, section D		10
<b>Humanities and Social Sciences Requirements</b>		<b>(21)</b>
PSYC 301 is recommended		
See Illinois Tech Core Curriculum, sections B and C		21
<b>Interprofessional Projects (IPRO)</b>		<b>(6)</b>
See Illinois Tech Core Curriculum, section E		6
<b>Minor Electives</b>		<b>(15)</b>
Select 15 credit hours		15

<b>Free Electives</b>	(12)
Select 12 credit hours	12
<b>Total Credit Hours</b>	<b>127</b>

## Bachelor of Information Technology and Management (Program for First-Year Students) Curriculum

Students should be aware that students not completing 30 credit hours of study in their first year will still be classified as a first-year student in the first semester of their second year of study, which may adversely impact some financial aid. Students with issues or questions about this should discuss it with a financial aid counselor.

		<b>Year 1</b>	
<b>Semester 1</b>	<b>Credit Hours</b>	<b>Semester 2</b>	<b>Credit Hours</b>
ITM 301	3	ITM 311	3
ITMD 321	3	ITMO 340	3
Natural Science or Engineering Elective	4	MATH 180 or 230	3
Humanities 200-level Elective	3	Social Sciences Elective	3
		Natural Science or Engineering Elective	3
	13		15
		<b>Year 2</b>	
<b>Semester 1</b>	<b>Credit Hours</b>	<b>Semester 2</b>	<b>Credit Hours</b>
ITM 100	3	ITMD 362	3
ITM 313 or 312	3	ITMD 411	3
ITMD 361	3	ITMO 356	3
Natural Science or Engineering Elective	3	ITM Elective	3
Social Sciences Elective (300+)	3	Statistics Elective (MATH 425, BUS 221, PSYC 203)	3
		Minor Elective	3
	15		18
		<b>Year 3</b>	
<b>Semester 1</b>	<b>Credit Hours</b>	<b>Semester 2</b>	<b>Credit Hours</b>
ITMM 471	3	ITM Elective	3
ITM Elective	3	ITM Elective	3
Minor Elective	3	I PRO Elective I	3
Humanities Elective (300+)	3	Social Sciences Elective (300+)	3
Free Elective	3	Minor Elective	3
Free Elective	3	Free Elective	3
	18		18
		<b>Year 4</b>	
<b>Semester 1</b>	<b>Credit Hours</b>	<b>Semester 2</b>	<b>Credit Hours</b>
ITMS 448	3	ITMT 430	3
ITM Elective	3	ITM Elective	3
Minor Elective	3	I PRO Elective II	3
Humanities Elective (300+)	3	Minor Elective	3
Free Elective	3	Humanities or Social Sciences Elective	3
	15		15

Total Credit Hours: 127

## Information Technology Curriculum Specializations

The ITM electives may be chosen from one or more of the following course specializations. ITM required courses may not be counted toward completion of elective requirements for specializations. With the permission of the adviser, other undergraduate or graduate courses in the same area may be substituted for courses in a specialization.

### Data Management

Focuses on the design, development, and administration of traditional and Internet-based data management.

Code	Title	Credit Hours
ITMD 422	Advanced Database Mgmt	3
ITMS 428	Database Security	3
Select two courses from the following:		6
ITMO 444	Cloud Computing Technologies	3
or any ITMD elective(s)		
Total Credit Hours		12

### IT Entrepreneurship and Management

Focuses on the managerial and entrepreneurial skills needed to launch a new enterprise.

Code	Title	Credit Hours
ITMM 470	Fund of Mgmt for Tech Prof	3
ITMM 481	IT Entrepreneurship	3
ITMM 482	Business Innovation	3
Select one course from ITMM or the following:		3
any BUS electives at the 200-level or above		3
or any INTM electives selected with adviser's approval		3
Total Credit Hours		12

### Networking and Communications

Focuses on network applications and management.

Code	Title	Credit Hours
ITMO 441	Network Admin & Operations	3
ITMO 446	Telecomm Over Data Networks	3
Select one course from the following:		3
ITMO 433	Enterprise Server Admin	3
ITMO 453	Open Source Server Admin	3
Select one course from ITMO, ITMT, or the following:		3
ITMD 465	Rich Internet Applications	3
ITMS 443	Vulnerability Analys and Ctrl	3
ITMS 478	Cyber Security Management	3
Total Credit Hours		12

### Software Development

Focuses on programming and the development of sophisticated applications.

Code	Title	Credit Hours
ITMD 415	Advanced Software Development	3
ITMD 462	Web Site App Development	3
Select two courses from the following:		6
ITMD 412	Adv Structured & Systems Prg	3
ITMD 413	Open-Source Programming	3
ITMD 419	Topics in Software Development	3
ITMD 453	Enterprise Intelligent Device	3
ITMD 454	Mass-Market Intelligent Device	3
ITMD 455	Open-Source Intelligent Device	3
or any ITMD elective		3
Total Credit Hours		12

### System Administration

Focuses on the administration and the management of servers.

Code	Title	Credit Hours
ITMO 441	Network Admin & Operations	3
Select two courses from the following:		6
ITMO 433	Enterprise Server Admin	3
ITMO 450	Enterprise End-User Sys Admin	3
ITMO 453	Open Source Server Admin	3
Select one course from the following:		3
ITMO 417	Shell Scripting for Sys Admin	3
ITMO 444	Cloud Computing Technologies	3
ITMO 454	Operating Sys Virtualization	3
ITMS 458	Operating System Security	3
Total Credit Hours		12

### Systems Security

Focuses on application, data, and network security and the management of information technology security.

Code	Title	Credit Hours
ITMS 478	Cyber Security Management	3
Select one course from the following:		3
ITMO 433	Enterprise Server Admin	3
ITMO 441	Network Admin & Operations	3
ITMO 450	Enterprise End-User Sys Admin	3
ITMO 453	Open Source Server Admin	3
Select two ITMS electives		6
Total Credit Hours		12

### Web Design and Application Development

Focuses on the design and development of fully-interactive websites and applications for Internet deployment.

Code	Title	Credit Hours
ITMO 441	Network Admin & Operations	3
ITMD 462	Web Site App Development	3
Select two courses from the following:		6

ITMO 444	Cloud Computing Technologies	3
ITMD 453	Enterprise Intelligent Device	3
ITMD 454	Mass-Market Intelligent Device	3
ITMD 455	Open-Source Intelligent Device	3
ITMD 463	Intermediate Web App Develop	3
ITMD 464	Adv Web Appl Devlpmnt	3
ITMD 465	Rich Internet Applications	3
ITMD 466	Service-Oriented Architectures	3
ITMD 467	Web Systems Integration	3
ITMD 469	Topics in Application Develop	3
Total Credit Hours		12