Program Change Request

Date Submitted: 02/28/25 5:09 pm

Viewing: **BAC-ITEC : Bachelor of Information Technology**

Last approved: 05/18/23 9:39 pm

Last edit: 02/28/25 5:09 pm

Changes proposed by: trygstad

Catalog Pages
Using this Program
[Bachelor of Information Technology](#)

Program Status	Active
Requestor	Name **Raymond Trygstad** ~~Patty Johnson Winston~~ E-mail
trygstad@iit.edu	
Origination Date	**2025-2-28** ~~2023-5-18~~
Is this an interdisciplinary program?	No
Academic Unit College	Information Technology & Mgmt College of Computing
Program Title	Bachelor of Information Technology
Effective Academic Year	**2025** ~~2023~~ - **2026** ~~2024~~ Effective Term Fall 2025
Academic Level	Undergraduate

In Workflow

1. ITMG Chair
2. Academic Affairs
3. Undergraduate Academic Affairs
4. CC Dean
5. Undergraduate Studies Committee Chair
6. Faculty Council Chair
7. Academic Affairs

Approval Path

1. 03/01/25 8:19 am Gurram Gopal (gopal): Approved for ITMG Chair
2. 03/02/25 4:22 pm Ayesha Qamer (aqamer): Approved for Academic Affairs
3. 03/03/25 9:14 am Joseph Gorzkowski (jgorzkow): Approved for Undergraduate Academic Affairs
4. 03/03/25 9:22 am Lance Fortnow (lfortnow): Approved for CC Dean

History

1. Mar 3, 2023 by Raymond Trygstad (trygstad)
2. Mar 31, 2023 by Raymond Trygstad

If all courses in a subject in your department are required, please enter each subject followed by the number ranges in the "Quick Add" field in the pop up box when you click the green plus button below. For example: ARCH 100-499.

What courses will
factor the major
GPA?

Program Type   Degree

Degree Type   Professional Bachelor (BAC)

CIP Code
   11.0902 - Cloud Computing.

Is there more than one Academic Unit proposer?

   No

Program Code   BAC-ITEC

Program Attribute

Total Program   120 ~~127~~
Credit Hours

Rationale for
change in program
credit hours.
   To align with the reduction in university required hours for a Bachelor's Degree from 126 hours
   to 120 hours.

Please provide a
summary and
rationale for the
requested program
revision.
   This is a change in Program Title and the corresponding Program Code only. Nothing else is
   changed. This change was requested by the university's partner for this degree, Coursera.

   05/18/2023, PJW: Corrected format/spaces in course requirements narrative.

   02/28/2025 RET: Reduce total hour required for the degree from 127 to 120 by a reduction in
   free or technical electives from 36 hours to 29 hours.

Program Narrative and Justification

Narrative description of how the institution determined the need for the program. For example, describe what need this program will address and how the institution became aware of that need. If the program is replacing a current program(s), identify the current program(s) that is being replaced by the new program(s) and provide details describing the benefits of the new program(s). If the program will be offered in connection with, or in response to, an initative by a governmental entity, provide details of that initiative.

The university was asked by an external partner, the online course provider Coursera, to provide a degree in this area.

Narrative description of how the program was designed to meet local market needs, or for an online program, regional or national market needs. For example, indicate if Bureau of Labor Statistics data or State labor data systems information was used, and/or if State, regional, or local workforce agencies were consulted. Include how the course content, program length, academic level, admission requirements, and prerequisites were decided; including information received from potential employers about course content; and information regarding the target students and employers.

Market analysis of cloud computing via gartner.com, an industry-leading IT consultancy.
Global spending on public cloud services forecasted to total $592B in 2023, a 21% annual growth
Cloud computing continues to be a bastion of safety and innovation
More than 50% of enterprises will use cloud platforms by 2027 Cloud
$1.6T in revenue will be generated across the cloud sector by 2030
SaaS spending to reach $195 billion in 2023, 17 percent increase
Higher-wage and more skilled staff are required to develop modern Software as a Service applications

Narrative description of any wage analysis the institution may have performed, including any consideration of Bureau of Labor Statistics wage data related to the new program.

From Coursera, out partner in this effort:
Cloud computing is one of the hottest skills in the job market
The top 16% of Cloud Professionals (U.S.) make over $150K a year
Cloud Engineer median salary (U.S.) is $103K
Cloud Architect median salary (U.S.) is $123K
Cloud Developer median salary (U.S.) is $95K
Cloud Administrator median salary (U.S.) is $73K
Cloud Profession entry-level positions median salary (U.S.) is $82K

Narrative description of how the program was reviewed or approved by, or developed in conjunction with, one or more of the following: a) business advisory committees; b) program integrity boards; c) public or private oversight or regulatory agencies (not including the state licensing/authorization agency and accrediting agency); and d) businesses that would likely employ graduates of the program. For example, describe the steps taken to develop the program, identify when and with whom discussions were held, provide relevant details of any proposals or correspondence generated, and/or describe any process used to evaluate the program.

This program was reviewed by Department of Information Technology and Management adjunct faculty who work in the space or manage folks who work in this space every day.

Admission Entry Details

What are the enrollment estimates?

Year 1	100	Year 2	300	Year 3	500

Attach Additional
Program
Justification
Document(s)

Academic Information

Advising

Since quality advising is a key component of good retention, graduation, and career placement, how will students be mentored? What student professional organizations will be formed? How will the department work with the Career Services office to develop industry connections?

Undergraduates will be advised by our current undergraduate advising group, all of whom have worked as professionals in the industry. We have industry partners of the university already working strongly hand-in-hand with the Career Services Center who employ our graduates on an ongoing basis.

Program Resources

Which program resources are necessary to offer this program?
  Personnel
  Facilities

Describe the personnel requirements necessary to offer the program. Describe how and when resources will be made available to hire any additional personnel that are required.

None are needed initially.
As the program expands we expect to need to add additional faculty to handle the load.

Describe the facilities requirements necessary to offer the program. Describe how and when resources will be made available to obtain any additional facilities that are required.

We will need cloud-based server infrastructure. Much of it may be vendor supplied.

Proposed Catalog Entry

Admission
Requirements

Transfer Admission Requirements

Admitted transfer students are expected to have satisfied the following Illinois Institute of Technology Core Curriculum requirements prior to admission. If not, the student must complete them while working on the ITM degree. The degree requires a minimum of 120 ~~127~~ credit hours including transfer and coursework completed at Illinois Tech. A maximum of 68 applicable credit hours of transfer credit is permitted from a two-year college.

Basic Writing Proficiency Requirement

Students must take the Illinois Tech English Proficiency Examination before beginning classes at the university. Within their first year at the university, students who do not pass the Illinois Tech English Proficiency Examination must demonstrate basic writing proficiency by passing a composition course at Illinois Tech.

Introduction to the Profession

Two credit hours; this requirement is waived for transfer students.

Computer Science

Two credit hours of computer programming, may be satisfied by taking ITM 313.

Humanities and Social Sciences

Nine credit hours. Humanities include literature, philosophy (except logic), and history. Social or behavioral sciences typically include anthropology, geography, political science, psychology, sociology, and economics. Studies must include a minimum of three credit hours in humanities and three credit hours in the social sciences.

Free or Technical Electives

29 ~~33~~ credit hours of approved courses. Students should contact the Office of Undergraduate Academic Affairs for additional information.

Mathematics

Five to six credit hours: one course in discrete mathematics, and one course in statistics.

Natural Science or Engineering

Ten to eleven credit hours of natural science or engineering courses. Relevant science courses include physics, chemistry, astronomy, biology, or engineering graphics. Two sequential courses must be from the same field and one must be from another field. In some cases, certain technology courses might be applied to this requirement. See Illinois Tech Core Curriculum section.

Course Requirements

Program Requirements

Transfer students are expected to take 66 credit hours at Illinois Institute of Technology and transfer 54 ~~61~~ credit hours to complete the bachelor's degree for a total of 120 ~~127~~ credit hours. This includes 16 information technology

courses for a total of 48 credit hours in the major. An additional 18 credit hours outside the major must be taken at Illinois Institute of Technology in order to satisfy the remaining Core Curriculum requirements. These include four 300/400-level humanities and social or behavioral science electives and two IPRO courses. Two social or behavioral science electives must be from the same field and one must be from a different field; lower level social or behavioral science electives count towards this requirement. The computer science general education requirement may be satisfied by completion of ITM 311. Students who wish to complete their undergraduate studies in less than five semesters of full-time study at Illinois Institute of Technology are strongly urged to include at least nine credit hours of courses transferable as required or elective ITM courses among their free or technical electives.

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.

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

Courses Transferred	**(54)**
(or taken at Illinois Tech)	54
Mathematics Requirements: Discrete Mathematics and Statistics	6
Natural Science and Engineering Requirements:	
See Illinois Tech Core Curriculum, section D	10
Lower-Level Humanities and Social Sciences Requirements:	
See Illinois Tech Core Curriculum, section B and C	9
~~Free or Technical Electives: 36 credit hours of approved courses.~~	~~36~~
Free or Technical Electives: 29 credit hours of approved courses.	29
Humanities Electives	**(6)**
300/400-level courses	6
Social Sciences Electives	**(6)**
300/400-level courses	6
PSYC 301 is recommended	
Interprofessional Projects	**(6)**
See Illinois Tech Core Curriculum, section E	6
Cloud Computing Requirements	**(48)**
ITM 301	Introduction to Contemporary Operating Systems and Hardware I	3
ITM 313	Introduction to Open Source Application Development	3
ITMD 321	Data Modeling and Applications	3

ITMD 361	Fundamentals of Web Development	3
ITMD 413	Open Source Programming	3
ITMM 471	Project Management for Information Technology and Management	3
ITMO 340	Introduction to Data Networks and the Internet	3
ITMO 356	Introduction to Open Source Operating Systems	3
ITMO 444	Cloud Computing Technologies	3
ITMO 454	Operating System Virtualization	3
ITMO 463	Cloud: Software as a Service	3
ITMO 464	Cloud: Platform as a Service	3
ITMO 465	Cloud: Infrastructure as a Service	3
ITMS 448	Cyber Security Technologies	3
ITMS 464	Cloud Computing Security	3
ITMT 430	System Integration	3
Total Credit Hours		120

Sample Curriculum/Program Requirements

Year 1

Semester 1	Credit Hours	Semester 2	Credit Hours
ITM 301	3	ITMD 321	3
ITM 313	3	ITMD 413	3
ITMD 361	3	ITMM 471	3
ITMO 340	3	ITMO 444	3
ITMO 356	3	ITMO 454	3
Social Sciences Elective (300+)	3	Humanities Elective (300+)	3
	18		18

Year 2

Semester 1	Credit Hours	Semester 2	Credit Hours
ITMO 463	3	ITMO 465	3
ITMO 464	3	ITMS 464	3
ITMS 448	3	ITMT 430	3
Social Sciences Elective (300+)	3	Humanities Elective (300+)	3
IPRO Elective	3	IPRO Elective	3
	15		15

Total Credit Hours: 66

Specialization Requirements

Program Outcomes and Assessment Process

What are your learning objectives in this program? Please list each learning objective in the boxes below:

Note: These should be the same as described in your assessment plan at the bottom of this form.

Upload your
assessment plan
here:

Undergraduate Program Requirements

What courses will
factor the major
GPA?

Undergraduate Degree Requirements

Minimum credit   120 ~~127~~
hours

Specialization
required?
   No

Minor required?
   No

Proposed General Curriculum

List Major Course Requirements		
ITM 301	Introduction to Contemporary Operating Systems and Hardware I	3
ITM 313	Introduction to Open Source Application Development	3
ITMD 321	Data Modeling and Applications	3
ITMD 361	Fundamentals of Web Development	3
ITMD 413	Open Source Programming	3
ITMM 471	Project Management for Information Technology and Management	3
ITMO 340	Introduction to Data Networks and the Internet	3
ITMO 356	Introduction to Open Source Operating Systems	3
ITMO 444	Cloud Computing Technologies	3
ITMO 454	Operating System Virtualization	3
ITMO 463	Cloud: Software as a Service	3
ITMO 464	Cloud: Platform as a Service	3
ITMO 465	Cloud: Infrastructure as a Service	3
ITMS 448	Cyber Security Technologies	3
ITMS 464	Cloud Computing Security	3
ITMT 430	System Integration	3
Total Credit Hours		48

List Mathematics Requirements	
Mathematics requirements are fulfilled by transfer requirements. See Transfer Admission Requirements and Course Requirements above.	
Mathematics Courses Transferred	**(6)**
Discrete Mathematics	3
Statistics	3
Total Credit Hours	6

List Science Requirements	
Science requirements are fulfilled by transfer requirements. See Transfer Admission Requirements and Course Requirements above.	
Natural Science and Engineering Courses Transferred	**(10)**
Natural Science and Engineering Requirements: See Illinois Tech Core Curriculum, section D	10

Total Credit Hours	10

List Computer Science Requirements
Fulfilled by ITMD 313.

List Humanities and Social Sciences Requirements
Lower-Level Humanities and Social Science requirements are fulfilled by transfer requirements. See Transfer Admission Requirements and Course Requirements above.

Humanities and Social Science Courses Transferred	**(9)**
Lower-Level Humanities and Social Sciences: See Illinois Tech Core Curriculum, sections B and C Requirements	9
Humanities Electives	**(6)**
300/400-level courses	6
Social Science Electives	**(6)**
300/400-level courses	6
Total Credit Hours	21

List Interprofessional Project (IPRO) Requirements

Interprofessional Projects	**(6)**
See Illinois Tech Core Curriculum, section E	6
Total Credit Hours	6

List Technical Elective Course Options

Free or Technical Elective Courses Transferred	**(29)**
Free or Technical Electives	29
Total Credit Hours	29

List Free Elective Credit Hours (if applicable)

Year 1

Semester-by-semester plan of study for the degree program	Semester 1	Credit Hours	Semester 2	Credit Hours
	ITM 301	3	ITMD 321	3
	ITM 313	3	ITMD 413	3
	ITMD 361	3	ITMM 471	3
	ITMO 340	3	ITMO 444	3
	ITMO 356	3	ITMO 454	3
	Social Sciences Elective (300+)	3	Humanities Elective (300+)	3
		18		18
				Year 2
	Semester 1	Credit Hours	Semester 2	Credit Hours
	ITMO 463	3	ITMO 465	3
	ITMO 464	3	ITMS 464	3
	ITMS 448	3	ITMT 430	3
	Social Sciences Elective (300+)	3	Humanities Elective (300+)	3
	IPRO Elective	3	IPRO Elective	3
		15		15
	Total Credit Hours: 66			

Report to Faculty Council	
Reviewer Comments	

Key: 594