

Program Change Request

Date Submitted: 02/20/26 6:55 am

Viewing: BS-CIS-2 : Bachelor of Science in Computer Information Systems

Last approved: 02/10/26 10:47 am

Last edit: 02/20/26 6:55 am

Changes proposed by: bauerm

Catalog Pages
Using this Program
[Bachelor of Science in Computer Information Systems](#)

Program Status	Active		
Requestor	Name	Matthew Bauer	E-mail
	bauerm@iit.edu		
Origination Date	<u>2026-2-20</u> 2025-12-8		
Is this an interdisciplinary program?	No		
Is this stem-eligible?	Yes		
Available for direct application?	Yes		
Academic Unit	Computer Science		
College	College of Computing		
Program Title	Bachelor of Science in Computer Information Systems		
Effective Academic Year	2026 - 2027	Effective Term	
	Summer 2026		
Academic Level	Undergraduate		

In Workflow

- CSCI Chair
- Academic Affairs
- Undergraduate Academic Affairs
- CC Dean
- Undergraduate Studies Committee Chair
- Faculty Council Chair
- Academic Affairs

Approval Path

- 03/02/26 2:11 pm
Mustafa Bilgic (mbilgic): Approved for CSCI Chair

History

- Oct 26, 2017 by clmig-jwehrheim
- Nov 8, 2017 by Sarah Pariseau (sparisea)
- Feb 28, 2018 by Sarah Pariseau (sparisea)
- Mar 15, 2018 by Sarah Pariseau (sparisea)
- Apr 2, 2018 by Sarah Pariseau (sparisea)
- Apr 2, 2018 by Sarah Pariseau (sparisea)
- Jun 19, 2018 by Sarah Pariseau (sparisea)

8. Oct 23, 2020 by
Holli Pryor-Harris
(pryor)
9. Feb 10, 2026 by
Matthew Bauer
(bauerm)

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 Bachelor of Science (BS)

CIP Code

11.0101 - Computer and Information Sciences, General.

Is there more than one Academic Unit proposer?

No

Program Code BS-CIS-2

Program Attribute

Total Program 127
Credit Hours

Please provide a
summary and
rationale for the
requested program
revision.

BS in CIS (total hours reduced from 127 to 121)

• Remove the science elective

• Reduce the free electives from 15 credit hours to 12 credit hours 1) ~~Add an Artificial~~

~~Intelligence specialization (available to both BS in CS and BS in CIS).2) Update the wording for
what courses can be used for a Computer Science elective for BS in CS and BS in CIS degrees.3)
Removed CS 447, which no longer exists.~~

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 initiative by a governmental entity, provide details of that initiative.

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.

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.

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.

Admission Entry Details

What are the enrollment estimates?

Year 1

Year 2

Year 3

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?

Program Resources

Which program resources are necessary to offer this program?

Proposed Catalog Entry

Admission Requirements

Course Requirements

Required Courses

Computer Science Requirements		(18)
CS 100	Introduction to the Profession	2
CS 115	Object-Oriented Programming I	2
CS 116	Object-Oriented Programming II	2
CS 330	Discrete Structures	3
CS 331	Data Structures and Algorithms	3
CS 350	Computer Organization and Assembly Language Programming	3
CS 351	Systems Programming	3
Computer Science Technical Electives		(15)
Select 15 credit hours ¹		15
Computer Science Electives		(6)
Select six credit hours ³		6
Mathematics Requirement		(5)
MATH 151	Calculus I	5
Mathematics Elective		(3)

Select three credit hours	3
Science Requirements	(11)
BIOL 105 Introduction to Biology	3
or BIOL 114 Introduction to Human Biology	
CHEM 124 Principles of Chemistry I with Laboratory	4
PHYS 123 General Physics I: Mechanics	4
Science Elective	
Select three credit hours	3
Psychology Requirements	(6)
PSYC 221 Introduction to Psychological Science	3
PSYC 301 Industrial Psychology	3
Political Science Requirement	(3)
Select three credit hours ²	3
Humanities and Social Sciences Requirements	(21)
See Illinois Tech Core Curriculum, sections B and C	21
Interprofessional Projects (IPRO)	(6)
See Illinois Tech Core Curriculum, section E	6
Minor Electives	(15)
Select 15 credit hours	15
Free Electives	(12)
Select 15 credit hours	15
<u>Select 12 credit hours</u>	<u>12</u>
Total Credit Hours	121

¹

Computer science technical electives are designated with a (T) in the course descriptions.

²

Any 200-level political science course.

³

Computer Science electives: Any CS course at the 300-level or higher, including graduate CS courses, may be used as a Computer Science elective, except [CS 401](#) and [CS 402](#). Up to 6 credit hours of [CS 491](#) or [CS 497](#) may be used as Computer Science electives. Up to two Computer Science electives can be chosen from CSP 400-level or CSP 500-level courses, or from courses in other departments with significant computation content with Computer Science department's prior approval.

Sample
Curriculum/Program
Requirements

Bachelor of Science in Computer Information Systems Curriculum

		Year 1	
Semester 1	Credit Hours	Semester 2	Credit Hours
<u>CS 100</u>	2	<u>CS 116</u>	2
<u>CS 115</u>	2	<u>BIOL 105</u> or <u>114</u>	3
<u>MATH 151</u>	5	Mathematics Elective	3
<u>PSYC 221</u>	3	Humanities or Social Sciences Elective	3
Humanities 200-level Course	3	Social Sciences Elective	3
	15		14
		Year 2	
Semester 1	Credit Hours	Semester 2	Credit Hours
<u>CS 330</u>	3	<u>CS 350</u>	3
<u>CS 331</u>	3	<u>PHYS 123</u>	4
<u>CHEM 124</u>	4	Minor Elective	3
Political Science Course ¹	3	Computer Science Elective ³	3
Humanities Elective (300+)	3	Computer Science Technical Elective ²	3
	16		16
		Year 3	
Semester 1	Credit Hours	Semester 2	Credit Hours
<u>CS 351</u>	3	<u>PSYC 301</u>	3
Minor Elective	3	IPRO Elective I	3
Science Elective	3	Minor Elective	3
Social Sciences Elective (300+)	3	Computer Science Technical Elective ²	3
Free Elective	3	Humanities Elective (300+)	3
<u>Free Electives</u>	<u>6</u>	Free Elective	3
	15		15
		Year 4	
Semester 1	Credit Hours	Semester 2	Credit Hours
Minor Elective	3	IPRO Elective II	3
Computer Science Elective ³	3	Minor Elective	3
Computer Science Technical Elective ²	3	Computer Science Technical Elective ²	3
Computer Science Technical Elective ²	3	Free Elective	3
Social Sciences Elective (300+)	3	Free Elective	3
Free Elective	3		
	15		15

Total Credit Hours: 121

1

Any 200-level political science course

2

Computer science technical electives are designated with a (T) in the course descriptions.

3

Computer Science electives: Any CS course at the 300-level or higher, including graduate CS courses, may be used as a Computer Science elective, except [CS 401](#) and [CS 402](#). Up to 6 credit hours of [CS 491](#) or [CS 497](#) may be used as Computer Science electives. Up to two Computer Science electives can be chosen from CSP 400-level or CSP 500-level courses, or from courses in other departments with significant computation content with Computer Science department's prior approval.

Specialization
Requirements

Artificial Intelligence

A minimum of four courses are required for this specialization.

CS 480	Introduction to Artificial Intelligence	3
Select a minimum of three courses from the following:		6
CS 422	Data Mining	3
CS 429	Information Retrieval	3
CS 481	Artificial Intelligence Language Understanding	3
CS 484	Introduction to Machine Learning	3
CS 512	Computer Vision	3
CS 577	Deep Learning	3
CS 579	Online Social Network Analysis	3
CS 581	Advanced Artificial Intelligence	3
CS 584	Machine Learning	3
CS 585	Natural Language Processing	3
CSP 571	Data Preparation and Analysis	3

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Computer Science Honors Research

A minimum of 13 credit hours are required for this specialization.

CS 492	Introduction to Computer Science Research	1
CS 491	Undergraduate Research	6
or CS 497	Special Projects	

Graduate Computer Science Electives ² 6

1

Students will be required to take [CS 492](#) in their first or second year.

2

Students must take at least two adviser approved 500-level computer science courses.

Data Science

A minimum of four courses are required for this specialization.

BUS 371	Marketing Fundamentals	3
CS 422	Data Mining	3
or CS 584	Machine Learning	
CS 451	Introduction to Parallel and Distributed Computing	3
MATH 481	Introduction to Stochastic Processes	3
or MATH 483	Design and Analysis of Experiments	

Note: [MATH 481](#) has prerequisites of [MATH 332](#) or [MATH 333](#) and [MATH 475](#); [MATH 483](#) has a prerequisite of [MATH 476](#).

Distributed and Cloud Computing

A minimum of four courses are required for this specialization.

CS 442	Mobile Applications Development	3
CS 451	Introduction to Parallel and Distributed Computing	3
CS 455	Data Communications	3
CS 553	Cloud Computing	3

Information and Knowledge Management Systems

A minimum of four courses are required for this specialization.

CS 425	Database Organization	3
CS 482	Information and Knowledge Management Systems	3
Select a minimum of two courses from the following:		6
CS 422	Data Mining	3
CS 429	Information Retrieval	3
CS 481	Artificial Intelligence Language Understanding	3
CS 585	Natural Language Processing	3

Information Security

A minimum of four courses are required for this specialization.

CS 425	Database Organization	3
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CS 458	Introduction to Information Security	3
CS 455	Data Communications	3
CS 549	Cryptography and Network Security	3
or CS 558	Advanced Computer Security	

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 hours 127

Specialization required?
Optional

Notes about specialization requirement

Minor required?
Yes

How many credit hours are required for the minor? 15

Details about the minor requirement

Which courses be shared?

Proposed General Curriculum

Degree credit hours required 127

Specialization credit hour requirement 12

List Major Course Requirements

List Mathematics Requirements

List Science Requirements

List Computer Science Requirements

List Humanities and Social Sciences Requirements

List
Interprofessional
Project (IPRO)
Requirements

List Technical
Elective Course
Options

List Free Elective 15
Credit Hours (if
applicable)

Semester-by-
semester plan of
study for the
degree program

Profession

400-level cred
limit?

500-600-level
Minimum:

Specialization

Report from Faculty
Reviewer
Comments

Key: 44

