

COMPUTER SCIENCE | BACHELOR OF SCIENCE IN COMPUTER SCIENCE

Computer Science is an area of study that involves programming, human-computer interaction, and information security.

Graduates from Fort Hays State University are prepared to enter the workforce as capable programmers and problem solvers. Possessing the knowledge and skills necessary to advance steadily in their careers.

Earning a degree in computer science will place you in high demand at a variety of federal agencies and private software and technology companies. **With both online and in-person degree options**, you will have the flexibility to suit your needs.

Kansas Community College Students: This program is the Baccalaureate Program for the Computer Science Systemwide Transfer Associate Degree. View the Systemwide Associate Degree to FHSU articulation layout for specific details.

Program Summary

Code	Title	Hours
General Education		34
Major Courses		34-36
Required Networking Courses		12
Cognates		17
Open Electives ¹		21-23
Total Hours		120

¹ Open electives are the credit hours required to reach a minimum of 120 total hours and 45 upper division hours. The number listed assumes all courses are completed at FHSU as listed. This number may vary if students transfer courses, or have individual substitutions allowed.

Students should speak with their advisor if either situation applies to determine if the number will vary, and to ensure they enroll in a minimum of 45 upper division hours.

Students entering within 1 year of high school graduation will take UNIV 101 Freshman Seminar and may apply that hour in the open elective category.

Program Requirements

General Education

All undergraduate degrees require completion of the Kansas Systemwide General Education (<https://catalog.fhsu.edu/general-education/>).

Courses identified with ^{GE} on this page may satisfy a general education requirement in addition to the identified degree requirement. Students who apply a degree requirement to satisfy a general education requirement will typically add an equal number of hours to the university elective category. This flexibility may allow you to complete a minor or certificate within the 120 hour degree. Transfer students are especially encouraged to select these courses in completing General Education requirements to maximize the likelihood of completing the degree with 120 credit hours.

Code	Title	Hours
General Education		34-35

Effective in Fall 2025 the math pathway course (<https://catalog.fhsu.edu/general-education/gateway-courses/>) identified below is required for this degree.

The General Education Math Pathways course identified for this major is **MATH 110 College Algebra**. All students pursuing this degree program will be required to complete this course or the corequisite support course. Students who place into a higher level math course may be able to satisfy this requirement; consult with your Academic Advisor for additional information.

Placement measures for **MATH 110 College Algebra** include:

- Math ACT: 22 or higher OR
- Math SAT: 540 or higher OR
- ALEKS PPL: 46 or higher OR
- Accuplacer QAS: 263 or higher OR
- Official GED score (2014 to Present¹): greater than or equal to 165 in Mathematical Reasoning OR
- HS GPA and Course Grade: 3.25 cumulative GPA (unweighted) and B- or higher in Second semester Algebra 2 or Integrated Math 3 OR
- Institutional Measure

Students who do not meet any of the placement measures listed above will need to register for the corequisite support course: MATH 105 College Algebra with Review. Credit for the corequisite support course will satisfy any requirement for the pathway course listed above.

Code	Title	Hours
Major Core Courses		
CSCI 111	Survey of Computer Science	3
CSCI 121	Computer Science I	3
CSCI 221	Computer Science II	3
CSCI 231	Object-Oriented Programming	3
CSCI 241	Foundations of Computing	3
CSCI 251	Data Structures	3
CSCI 321	Assembly Language	3
CSCI 331	Operating Systems	3
CSCI 421	Programming Languages	3
CSCI 431	Computer Graphics	3
CSCI 441	Software Engineering	3
CSCI 675	Seminar in Software Engineering	1-3
Required Networking Courses		
INF 250	Introduction to Web Development	3
INF 651	Front End Web Development I	3
INF 652	Database Design and Programming	3
INF 653	Back-End Web Development I	3
Cognates		
INF 101	Introduction to Computer Information Systems ^{GE, 1}	3
MATH 110	College Algebra ^{GE, 1}	3
MATH 122	Plane Trigonometry ^{GE}	3
MATH 234	Analytic Geometry and Calculus I ^{GE}	5
MATH 250	Elements of Statistics ^{GE}	3

or MATH 245	Elements of Statistics with Review
Total Hours	63-65

¹ Clep exam available.

Degree Requirements

Code	Title	Hours
All bachelor degrees require:		
GPA of 2.0 on FHSU courses & 2.0 on all coursework (Higher program requirements prevail over the 2.0 when set)		
A minimum of 30 hours earned from FHSU with a grade of D, C, B, or A		
Successful completion of an upper division Writing and Information Literacy course (Most majors contain a course designated)		
A minimum of 45 hours of recognized upper division credit		
A minimum of 120 hours of recognized college credit		

Degree Maps

Course	Title	Hours
First Year		
Fall		
MATH 110 or MATH 105	College Algebra (Math Pathway Gateway Course: SGE030 - Math and Statistics Discipline Area) or College Algebra with Review	3
ENG 101	English Composition I (SGE010 - English Discipline Area)	3
COMM 100	Fundamentals of Oral Communication (SGE020 - Communication Discipline Area)	3
UNIV 101	Freshman Seminar	1
CSCI 111	Survey of Computer Science	3
Hours		13
Spring		
INF 101	Introduction to Computer Information Systems (SGE070 - Institutionally Designated Area: Personal and Professional Development)	3
SGE040	Natural and Physical Science Discipline Area	4
ENG 102	English Composition II (SGE010 - English Discipline Area)	3
CSCI 121	Computer Science I	3
MATH 122	Plane Trigonometry	3
Hours		16
Second Year		
Fall		
SGE060	Arts and Humanities Discipline Area	3
CSCI 221	Computer Science II	3
INF 250	Introduction to Web Development	3
MATH 234	Analytic Geometry and Calculus I	5
Hours		14
Spring		
SGE060	Arts and Humanities Discipline Area	3
CSCI 231	Object-Oriented Programming	3
CSCI 241	Foundations of Computing	3
INF 652	Database Design and Programming	3
MATH 250 or MATH 245	Elements of Statistics or Elements of Statistics with Review	3
Hours		15
Third Year		
Fall		
SGE050	Social and Behavioral Sciences Discipline Area	3

CSCI 251	Data Structures	3
CSCI 321	Assembly Language	3
INF 651	Front End Web Development I	3
Open Electives		3
Open Electives		2
Hours		17
Spring		
SGE050	Social and Behavioral Sciences Discipline Area	3
CSCI 331	Operating Systems	3
CSCI 421	Programming Languages	3
INF 653	Back-End Web Development I	3
Open Electives		3
Hours		15
Fourth Year		
Fall		
CSCI 441	Software Engineering	3
CSCI 431	Computer Graphics	3
Open Electives		3
Open Electives		3
PHIL 100	Critical Thinking (SGE070 - Institutionally Designated Area: Critical Thinking)	3
Hours		15
Spring		
CSCI 675	Seminar in Software Engineering	3
Open Electives		3
Open Electives		3
Open Electives		3
Open Electives		3
Hours		15
Total Hours		120

Academic Degree Maps are term-by-term sample course plans that specify milestones, courses, and special requirements that are necessary for facilitating on-time completion. Degree Maps are *examples* and are not prescriptive. Individualized choices such as concentration options, transfer credits, optional minors, advisory programs (certificates), etc. can alter the recommended coursework. Course offerings are subject to change. Students should consult with their academic advisors for additional guidance on course planning.

To determine courses to take in the directed choices (often listed as Program Elective Course) and directed elective course blocks see the overview tab for courses. Open electives indicate the student is free to choose courses from any subject, but students should discuss with their advisor how many of these hours must be upper division. To locate approved courses in General Education areas (Undergraduate Programs) see the general education section (<https://catalog.fhsu.edu/general-education/>) of the catalog.

The undergraduate course maps typically advise the most efficient route for students to complete the general education requirements. Courses that are required in the major may be listed as fulfilling relevant general education requirements. This will result in more open elective course hours in some maps than is listed on the degree overview page.