APPLIED COMPUTER PROGRAMMING, BS

Degree Requirements

Requirements for Students Matriculating in or before Academic Year 2026-2027. Learn more about University Academic Regulation 3.1 (https://catalog.okstate.edu/university-academic-regulations/#matriculation).

Minimum Overall Grade Point Average: 2.00
Total Hours: 120

Code	Title	Hours
General Education Requirements		
English Composition		
See Academic Regulation 3.5 (https://catalog.okstate.edu/university-academic-regulations/#english-composition)		
ENGL 1113	Composition I	3
or ENGL 1313	Critical Analysis and Writing I	
ENGL 1213	Composition II	3
or ENGL 1413	Critical Analysis and Writing II	
or ENGL 3323	Technical Writing	
American History & Government		
HIST 1103	Survey of American History	3
or HIST 1483	American History to 1865 (H)	
or HIST 1493	American History Since 1865 (DH)	
POLS 1113	American Government	3
Quantitative Thought & Logical Reasoning (Q)		
MATH 2144	Calculus I (Q)	4
CS 1113	Computer Science I (Q)	3
Understanding Humanities-Human Heritage & Cultures (H)		
Courses designated (H)		6
Reasoning in the Natural Sciences (N)		
Must include one Laboratory-Based Inquiry (L) course.		
Courses designated (N)		6
Exploring Society & Human Behavior (S)		
Course designated (S)		3
Diversity (D)		
Courses designated (D)		3
Global Cultural Competency (G)		
Courses designated (G)		3
Additional General Education		
Additional general education credit hours may be required to meet the total 40-hour minimum. If courses carry more than one general education designation and can be used to meet multiple minimum general education designation hours above, more hours of additional general education will be required here to meet the 40-hour minimum.		
Courses designated (Q), (H), (N), (S), (D), (G), or (F).		0
Hours Subtotal		**40**
College/Departmental Requirements		
UNIV 1111	First Year Seminar (or other approved first-year seminar course)	1
Arts & Humanities		
See note 2.a.		3
Natural & Mathematical Sciences		
CS 1103	Computer Programming (Q)	3
MATH 1813	Preparation for Calculus (Q)	3
or PHIL 1313	Logic and Critical Thinking (Q)	
STAT 4013	Statistical Methods I (Q)	3
or STAT 2013	Elementary Statistics (Q)	
Foreign Languages		
See note 3		
0-6 hours		
Upper Division General Education		
Select 6 hours outside major department (see note 2.c.)		
Hours Subtotal		**13**
Major Requirements		
Minimum major GPA 2.50 with a minimum grade of "C" in each course and all MATH and CS courses		
CS 2133	Computer Science II	3
CS 2433	C/C++ Programming	3
CS 3353	Data Structures and Algorithm Analysis I	3
CS 3363	Organization of Programming Languages	3
CS 3443	Computer Systems	3
CS 3653	Discrete Mathematics for Computer Science	3
CS 4153	Mobile Applications Development	3
CS 4243	Introduction to Computer Security	3
CS 4433	Introduction to Database Systems	3
or MSIS 3333	Database Systems Development	
CS 4273	Software Engineering	3
CS 4983	Senior Capstone Project	3
CS 4883	Social Issues in Computing	3
or PHIL 3783	Ethics of Artificial Intelligence (H)	
CS electives		
Select 9 hours CS electives (upper-division courses)		9
Select 9 hours in the following areas:		9
Computer Science (upper-division courses)		
Engineering (upper-division courses)		
Geography (GEOG 3333, GEOG 4303, GEOG 4323, GEOG 4333, GEOG 4343, GEOG 4353, GEOG 4383)		
Management Science and Information Systems (upper-division courses and MSIS 2203, and excluding MSIS 3103)		
Mathematics (upper-division courses and MATH 2153 and MATH 2163 and MATH 2233, and excluding MATH 3303 and MATH 3403 and MATH 3603)		
Natural Sciences (upper-division courses with natural science designation or upper-division courses in BIOC, BIOL, CHEM, GEOL, MICR, PBIO, PHYS)		
Statistics (upper-division courses)		
Hours Subtotal		**54**
Electives		
Select 13 hours of electives		13
May need to include 6 hours of a foreign language. See note 3		
May need to include 6 hours upper-division general education outside major department (see note 2.c.)		

May need to include CS 1013 and MATH 1513 if student does not place into MATH 1813.	
Hours Subtotal	**13**
Total Hours	**120**

CS Electives

Code	Title	Hours
CS 3030	Industrial Practice in Computer Science	1-6
CS 3570	Special Problems in Computer Science	1-6
CS 4143	Computer Graphics	3
CS 4173	Video Game Development	3
CS 4183	Video Game Design	3
CS 4283	Computer Networks	3
CS 4373	Agile Software Development	3
CS 4383	Network Security and Defense	3
CS 4483	Network Attack Security	3
CS 4513	Introduction to Numerical Analysis	3
CS 4523	Cloud Computing and Distributed Systems	3
CS 4570	Special Topics in Computing	1-3
CS 4623	Introduction to Cyber Physical Systems	3
CS 4743	Extended Reality	3
CS 4783	Machine Learning	3
CS 4793	Artificial Intelligence I	3
CS 4993	Senior Honors Project	3

Other Requirements

- See the College of Arts and Sciences Requirements.
- **Upper-Division Credit:** Total hours must include at least 40 hours in courses numbered 3000 or above.

College of Arts and Sciences Requirements

1. **Hours in One Department:** For B.A. and B.S. degrees, no more than 54 hours in one department may be required to meet degree requirements. Courses used to satisfy the General Education English Composition, U.S. History, American Government, and Mathematics or Statistics requirements will not count toward the 54-hour maximum required from one department.
2. **A&S College/Departmental Requirements**
   a. Arts and Humanities are defined as any course carrying an (H) designation or courses from AMST, ART, DANC, ENGL (except ENGL 3323 Technical Writing) HIST, MUSI, PHIL (except PHIL 1313 Logic and Critical Thinking (Q), PHIL 3003 Symbolic Logic (Q) and PHIL 4003 Mathematical Logic and Computability), REL, TH, and foreign languages.
   b. Natural and Mathematical Sciences are defined as any course from the following prefixes: ASTR, BIOC, BIOL, CHEM, CS (except CS 4883 Social Issues in Computing), GEOL, MATH, MICR, PBIO, PHYS, and STAT; or courses from other departments that carry an (Q) or (N) general education designation.
   c. Six upper-division hours are required from General Education or any CAS courses outside the student's major department (https://catalog.okstate.edu/college-arts-sciences-major-departments/). This requirement may be satisfied by courses also used to satisfy any part of a student's degree program (i.e., in General Education, College Departmental Requirements, Major Requirements or Electives).
   d. Non-Western Studies Requirement for B.A. and B.F.A.; One course in Non-Western Studies (N.W.). This requirement may be satisfied by courses also used to satisfy any part of a student's degree program (i.e., in General Education, College Departmental Requirements, Major Requirements or Electives).
   e. The College of Arts & Sciences requires a minimum 2.0 GPA in all major requirements and a minimum 2.0 GPA in all major-prefix courses applied to the degree.
3. **Foreign Language Proficiency**
   a. The foreign language requirement for the B.A. may be satisfied by 9 hours college credit in the same language, which must include 3 hours at the 2000-level, or equivalent proficiency (e.g., passing an advanced standing examination; TOEFL exam; presenting a high school transcript which demonstrates the high school was primarily conducted in a language other than English; etc.). Computer Science courses may not be used to satisfy this requirement. Currently Arabic and Mvskoke are not offered at the 2000-level at OSU.
   b. The foreign language requirement for the B.S., B.M. and B.F.A. may be satisfied by presenting a high school transcript which demonstrates two years of study of a single foreign language (passing grades at second-year level of study). It may also be satisfied by 6 hours college credit in the same language, which must include language courses 1713 and 1813, or equivalent proficiency (e.g., passing an advanced standing examination; TOEFL exam; presenting a high school transcript which demonstrates the high school was primarily conducted in a language other than English; etc.). Computer Science courses may not be used to satisfy this requirement.
   c. In addition to a. and b., students pursuing teacher certification must meet novice-high foreign language proficiency by presenting a high school transcript which demonstrates two years of study of a single foreign language with no grade below B. Or, students may complete 3 hours college credit in a single language with no grade below C (or pass an advanced standing examination, College Level Examination Program (CLEP) exam, or Oral Proficiency Interview developed by the American Council on the Teaching of Foreign Languages, equivalent to 3 hours of college credit.) Or, students may meet the requirement by transfer of documentation of meeting the foreign language competency from one of the teacher education programs in the State of Oklahoma approved by the Oklahoma State Regents for Higher Education.
4. **Exclusions**. Courses with ATHL or LEIS prefixes and leisure activity courses may not be used for degree credit.

Additional State/OSU Requirements

- At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 or 50% of the upper-division hours in the major field completed at OSU.
- Limit of: one-half of major course requirements as transfer work; one-fourth of hours earned by correspondence; 8 transfer correspondence hours.
- Students will be held responsible for degree requirements in effect at the time of matriculation and any changes that are made, so long as these changes do not result in semester credit hours being added or do not delay graduation.

- Degrees that follow this plan must be completed by the end of Summer 2032.