REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN COMPUTER SCIENCE/MASTER OF SCIENCE
GALLOGLY COLLEGE OF ENGINEERING
THE UNIVERSITY OF OKLAHOMA

Academic Year	General Requirements	Program
For Students Entering the Oklahoma State System for Higher Education **Summer 2019 through Spring 2020**	Minimum Total Credit Hours ..... **138-142** **Minimum Retention/Graduation Grade Point Averages:** Overall - Combined and OU ..... **3.25** Major - Combined and OU **3.25**	**Computer Science** **A235/F235 Q146** Bachelor of Science in Computer Science/Master of Science

OU encourages students to complete at least 28 hours of applicable coursework each year to have the opportunity to graduate in 5 years.

B.S. Portion of the Program Accredited by the Computing Accreditation Commission of ABET, http://www.abet.org

In order to progress in your curriculum in the Gallogly College of Engineering, and as a specific graduation requirement, a grade of C or better is required in each course in the curriculum, including all prerequisite courses.

Two college-level courses in a single foreign language are required; this may be satisfied by successful completion of 2 years in a single foreign language in high school. Students who must take foreign language at the University will have an additional 6-10 hours of coursework.

Students may enter the accelerated program based on the undergraduate degree pattern offered in the year they first enrolled in the Oklahoma State System of Higher Education or later.

Students are eligible for graduate status upon graduation with the Bachelor of Science in Computer Science.

Year	FIRST SEMESTER		Hours	SECOND SEMESTER		Hours
FRESHMAN	ENGL 1113	Principles of English Composition (Core I)	3	ENGL 1213 or EXPO 1213	Principles of English Composition (Core I) or Expository Writing	3
	MATH 1914	Differential and Integral Calculus I (Core I) [1]	4	MATH 2924	Differential and Integral Calculus II [1]	4
	ENGR 1411	Freshman Engineering Experience [2]	1	C S 2334	Programming Structures and Abstractions [3]	4
		Choose one of the following: [3]	1-4		Approved Elective, Natural Science (Core II) [5,6]	3-5
	C S 1323	Introduction to Computer Programming for Programmers [4]				
	C S 1321	Java for Programmers [4]				
	C S 1324	Introduction to Computer Programming for Non-Programmers [4]				
		Approved Elective, Artistic Forms (Core IV) [5]	3			
		CREDIT HOURS	**12-15**		**CREDIT HOURS**	**14-16**
SOPHOMORE	MATH 2934	Differential and Integral Calculus III [1]	4	PHYS 1311	General Physics Lab I (Core II-Lab) [7]	0-1
	C S 2813 or MATH 2513	Discrete Structures or Discrete Mathematical Structures	3	PHYS 2514	General Physics for Engineering and Science Majors (Core II)	4
	C S 2413	Data Structures	3	C S 2614	Computer Organization	4
	ENGR 2002	Professional Development	2		Approved Elective, Natural Science (Core II) [5,6]	3
		Approved Elective, Social Science (Core III) [5]	3		Open Elective [6]	4
		CREDIT HOURS	**15**		**CREDIT HOURS**	**15-16**
JUNIOR	P SC 1113	American Federal Government (Core III)	3		Open Elective [4]	1-4
		MATH 3000-level or above and acceptable for credit for MATH Majors, or Complete a Minor	3	MATH 3333	Linear Algebra I	3
	C S 3113	Introduction to Operating Systems	3	C S 3053	Human Computer Interaction	3
	C S 3203	Software Requirements and Specifications	3	C S 3323	Principles of Programming Languages	3
	C S 3823	Theory of Computation	3		Choose one of the following:	3
		Open Elective [6]	3	MATH 4753	Applied Statistical Methods [8]	
				ISE 3293	Applied Engineering Statistics	
				MATH 4743	Introduction to Mathematical Statistics [8]	
		CREDIT HOURS	**18**		**CREDIT HOURS**	**13-16**
SENIOR	C S 4263	Software Engineering I	3	HIST 1483 or HIST 1493	United States, 1492 to 1865 (Core IV) or United States, 1865 to the Present	3
	C S 4413	Algorithm Analysis	3	C S 4273	Software Engineering II (Capstone)	3
	C S 4513	Database Management Systems	3		C S G4000/5000 Approved Elective [9]	3
		Choose one of the following:	3		C S Approved Elective 10,11	3
		C S G4000/5000 Approved Elective 9,10			Approved Elective, Non-Western Culture (Core IV) [5]	3
	MATH 4073	Numerical Analysis I [8]				
		Approved Elective, Western Civ. & Culture (Core IV) [5]	3			
		CREDIT HOURS	**15**		**CREDIT HOURS**	**15**
FIFTH YEAR		G5000-level Approved Elective [9,10]	3		G5000-level Approved Elective [9,10]	3
		G5000-level Approved Elective [10]	3		5000-level C S Elective [10,12]	3-6
		G5000-level C S Elective [10,12]	3	C S 5990	Independent Studies (or C S seminar course)	3
		CREDIT HOURS	**9**		**CREDIT HOURS**	**9-12**

[1] MATH 1823, MATH 2423, MATH 2433, and MATH 2443 sequence can be substituted for MATH 1914, MATH 2924, and MATH 2934.

[2] Engineering transfer students may take ENGR 3511 in place of ENGR 1411.

[3] Students are required to make a B or better in C S 1323/C S 1324/C S 1321 or C S 2334 before they can enroll in any other CS courses.

[4] The credits from C S 1321, C S 1323, and C S 1324 plus the open electives must add up to 5.

[5] To be chosen from the University-Wide General Education Approved Course List. Three of these 12 hours must be upper-division (3000-4000). See list in the Class Schedule.

[6] At least one of the Natural Science courses must be a non-Physics course. The number of credits in Core II natural science and open electives must be 14 credit hours or more. All science courses must be for science or engineering majors.

[7] Another laboratory science Core II course may be substituted for PHYS 1311.

[8] At least one of these three MATH courses must be completed.

[9] Students must choose the following for these four electives: one Theory elective; two Systems electives; and one Applications elective. No more than one of these courses may be at the 4000-level. Courses for the areas are from the approved list from the School of Computer Science.

[10] No more than two enrollments (six hours) in C S 5970 courses are allowed.

[11] Honors College students may substitute C S 3980 for an approved C S elective.

[12] Thesis option requires a total of 9 hours of 5000-level electives, which must include six hours of C S 5980. Non-thesis option requires a total of 12 hours of 5000-level electives.

Courses designated as Core I, II, III, IV or Capstone are part of the General Education curriculum. Students must complete a minimum of 40 hours of General Education courses, chosen from the approved list.

APPROVED ELECTIVES

Code	Title	Credit Hours
C S 4013	Artificial Intelligence	3
C S 4323	Compiler Construction	3
C S 4513	Database Management Systems	3
C S 4613	Computer Architecture	3
C S 4973	Special Topics	3
Any C S 5000-level course		