

# Bachelor of Science in Computer Science

The Bachelor of Science in Computer Science (BSCS) is designed for students planning a career in computing. Students working toward a BSCS degree must meet all requirements for an applied science degree (<http://bulletin.wustl.edu/undergrad/engineering/requirements/>) from the McKelvey School of Engineering. In addition, there are the following departmental course requirements:

• **Computer Science Core Requirements\*:**

Code	Title	Units
CSE 131	Introduction to Computer Science	3
CSE 132	Introduction to Computer Engineering	3
CSE 240	Logic and Discrete Mathematics	3
or Math 310	Foundations for Higher Mathematics	
CSE 247	Data Structures and Algorithms	3
CSE 332S	Object-Oriented Software Development Laboratory	3
CSE 347	Analysis of Algorithms	3
<b>Total Units</b>		<b>18</b>

\* Each of these core courses must be passed with a grade of C- or better.

• **Computer Science Technical Elective Requirements:**

At least 24 additional units in computer science or computer science-related courses with an S, M, T or A suffix must be taken, of which at least one must be a systems (S) course and at least one must be a machine (M) or application (A) course. In satisfying these technical electives, up to 6 units may be taken outside the CSE department. Independent work (CSE 400E, CSE 497, CSE 498, CSE 499) is possible by finding a suitable faculty mentor for the work. Such work can be classified as S, M, T or A with approval. Some or all of the 6 units may also be satisfied by taking courses in other departments, including those outside of the McKelvey School of Engineering. Students can seek approval for courses by contacting the associate chair.

• **Math Requirements:**

Code	Title	Units
Math 131	Calculus I	3
Math 132	Calculus II	3
Math 233	Calculus III	3
Math 309	Matrix Algebra	3
or ESE 318	Engineering Mathematics A	
ESE 326	Probability and Statistics for Engineering	3
or Math 3200	Elementary to Intermediate Statistics and Data Analysis	

or Math 3211	Statistics for Data Science I	
or DAT 120 & DAT 121	Managerial Statistics I and Managerial Statistics II	
<b>Total Units</b>		<b>15</b>

Upon completing a course in the calculus sequence (Math 131-Math 132-Math 233) with a grade of C+ or better, the student may apply to receive credit for the preceding courses in the calculus sequence by following the mathematics and statistics department's back credit policy (<https://artsci.wustl.edu/resources/back-credit-policy/>).

• **Additional Departmental Requirements:**

Code	Title	Units
CWP 100	College Writing	3
Engr 310	Technical Writing	3
	Natural sciences electives	8
	Humanities and social sciences electives	18
<b>Total Units</b>		<b>32</b>

The College Writing Program, humanities and social sciences requirements are those required of all students in the McKelvey School of Engineering. For information about how to fulfill the school's English proficiency requirement, please visit the Degree Requirements page (<http://bulletin.wustl.edu/undergrad/engineering/requirements/#engprofreq>).

The natural sciences requirement is for 8 units designated NSM (Natural Sciences and Mathematics) from any of the following departments: Anthropology, Biology, Chemistry, Earth and Planetary Sciences, Environmental Studies or Physics. The College Writing Program and natural sciences courses must be completed with a grade of C- or better.

All courses taken to meet any of the above requirements (with the exception of the humanities and social sciences electives) cannot be taken on a pass/fail basis.