

# COMPUTER SCIENCE PRE-MAJOR FOR ASSOCIATE IN SCIENCE

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The following pre-major is recommended for students who are considering completing a Bachelor's of Science degree in Computer Science after transferring to a four-year institution. It is designed for students who have not decided upon a specific four-year college or university. Once a transfer school is selected, students are strongly encouraged to consult the Office of Advising, Transitions, and Student Success and the transfer institution's catalog to select courses that will meet both Oakton and transfer institution requirements.

For more information on course selection or program-specific advising, contact the program coordinator. Part time students should also consult the Office of Advising, Transitions, and Student Success for part-time pre-major recommendations. **General Education courses should be selected from the list of IAI General Education Courses.**

First Year		Hours
<b>Semester One</b>		
EGL 101	Composition I	3
MAT 250	Calculus I	5
Select one of the following:		3
CSC 155	C++ Computer Science I	
CSC 156	Java Computer Science I	
CSC 157	Python Computer Science I	
CSC 170 & CSC 171	Introduction to Numerical Methods and C++ Programming for Engineers	
CSC 170 & CSC 173	Introduction to Numerical Methods and Java Programming for Engineers	
CSC 170 & CSC 174	Introduction to Numerical Methods and Python Programming for Engineers	
Select one Life Science course:		3-4
Note: At least one science course with lab is required for degree completion		
BIO 101	Introduction to Life Science (lab)	
BIO 103	A Survey of Ecology <sup>1</sup>	
BIO 104	Human Genetics	
BIO 105	Human Genetics (lab)	
BIO 106	Introduction to Environmental Science (lab) <sup>1</sup>	
BIO 109	Plants and Society <sup>1</sup>	
BIO 116	Microbe and Society	
BIO 121	General College Biology I (lab)	
<b>Hours</b>		<b>14-15</b>
<b>Semester Two</b>		
EGL 102	Composition II	3
SPE 103	Effective Speech	3
MAT 251	Calculus II	4
Select one of the following:		3
CSC 240	C++ Data Structures	
CSC 241	Java Data Structures	
CSC 242	Python Data Structures	
Select one Physical Science course:		3-5
Note: At least one science course with lab is required for degree completion		
ATR 115	Descriptive Astronomy	
EAS 105	Introduction to Weather and Climate	
EAS 121	Physical Geography	
EAS 125	A Survey of Oceanography	

EAS 205	Environmental Geology	
PHY 221	General Physics I (lab)	
<b>Hours</b>		<b>16-18</b>
<b>Second Year</b>		
<b>Semester One</b>		
CSC 255	Objects and Algorithms	3
Select one of the following:		3-4
CSC 180	Introduction to Artificial Intelligence	
CSC 204	Computer Architecture and Organization	
CSC 206	Software Cybersecurity	
CSC 208	Data Science	
MAT 252	Calculus III	
MAT 260	Introduction to Linear Algebra	
Select one of the following:		3
ECO 201	Principles of Macroeconomics	
ECO 202	Principles of Microeconomics	
PSC 101	American Government	
SOC 101	Introduction to Sociology <sup>2</sup>	
Select one of the following:		3
EGL 117	Introduction to Poetry	
EGL 129	Introduction to Literature	
HUM 127	Introduction to Philosophy	
HUM 140	Introduction to Women's and Gender Studies <sup>2</sup>	
HUM 210	World Mythologies <sup>1</sup>	
PHL 105	Logic	
PHL 106	Ethics	
PHL 205	World Religions <sup>1</sup>	
Select one Physical Science course with lab:		4-5
CHM 101	Introductory Chemistry (lab)	
CHM 105	Elements of Chemistry (lab)	
CHM 121	General College Chemistry I (lab)	
PHY 131	College Physics I (lab)	
PHY 222	General Physics II	
<b>Hours</b>		<b>16-18</b>
<b>Semester Two</b>		
MAT/CSC 144	Discrete Mathematics	3
Select one of the following:		3
CSC 180	Introduction to Artificial Intelligence	
CSC 204	Computer Architecture and Organization	
CSC 206	Software Cybersecurity	
CSC 208	Data Science	
Select one of the following:		3-4
MAT 252	Calculus III	
MAT 260	Introduction to Linear Algebra	
MAT 262	Ordinary Differential Equations	
Select one of the following:		3
ANT 102	Introduction to Social and Cultural Anthropology <sup>3</sup>	
GEG 120	World Regional Geography <sup>1</sup>	
HIS 140	History of Contemporary Non-Western Civilizations <sup>1</sup>	
PSC 202	International Relations <sup>1</sup>	
SSC 201	Introduction to Global Studies <sup>1</sup>	
Select one of the following:		3
ART 114	Art History: Art of the Non-Western World <sup>1</sup>	
HUM 121	Western Culture and the Arts: Renaissance through the 20th Century	
HUM 124	African-American Culture and the Arts <sup>2</sup>	
HUM 142	Women and Creativity <sup>2</sup>	
MUS 236	Music Literature and History	
<b>Hours</b>		<b>15-16</b>
<b>Total Hours</b>		<b>61-67</b>

<sup>1</sup> Course fulfills the Global Studies Requirement. At least one Global Studies course is required for degree completion.

<sup>2</sup> Course fulfills the U.S. Diversity Requirement. At least one U.S. Diversity course is required for degree completion.

<sup>3</sup> Course fulfills both the Global Studies and U.S. Diversity Studies requirements.

**Note:** Pre-major is a recommended sequence and selection of courses. See Associate in Science (A.S.) page for degree requirements.