

BACHELOR OF SCIENCE SOFTWARE DEVELOPMENT

Degree Structure

Program Core		
Course Code	Course Name	Credit Hours
BUS110	Principles of Management and Entrepreneurship	3
CS101	Fundamentals of Computing	4
CS111	Code 0: Introduction to Programming and Logic	4
CS115	Web Programming: HTML5, CSS and JavaScript	3
CS130	Introduction to Cybersecurity	3
CS135	Studio 1	3
CS200	User Experience: Application Interface Design and Implementation	3
CS211	Code 1: Intermediate Programming	4
CS221	Linux Programming Environment	3
CS235	Studio 2	3
CS297	Data Structures: Introduction to efficient data storage	3
CS311	Code 2: Advanced Programming	4
CS316	Advanced Web Programming	3
CS325	Algorithms: Memory and CPU Efficient Computing	3
CS335	Studio 3	3
CS341	Network Systems	3
CS360	Database Management Systems	4
CS421	Systems Analysis and Design	3
MATH295	Discrete Mathematics	3
MATH315	Mathematics for Computing	4
RWPS480	Capstone Project A	3
RWPS485	Capstone Project B	3
SWE361	Software QA, Testing and Validation	3
Total Credits		75

Arts & Sciences (GE)		
Course Code	Course Name	Credit Hours
ENG100	English Composition	3
ENG250	Speech and Oral Communication	3
HUM100	Disruptive Imagination	3
HUM470	Silicon Valley Challenge	3
MATH112	College Algebra*	3
MATH114	Trigonometry*	3
SSC380	The Silicon Valley Ecosystem	3
	Humanities/Arts Choice	3
	Written Communication 2 Choice	3
	Physical & Biological Sciences Choice	3
Total Credits		30

Recommended Elective Courses (Choose 15 Credits)		
Course Code	Course Name	Credit Hours
BUS246	Business Intelligence and Analytics	3
CS106	Introduction to Scripting	4
CS189	Object Oriented Programming with Python	3
CS212	Java Programming	4
CS261	Systems Architecture in the Cloud	4
CS262	Software Development in the Cloud	4
CS263	SysOps for Cloud Computing	4
CS320	Operating Systems Concepts	3
CS351	Computer Architecture	3
CS361	Introduction to Compilers	3
CS375	Mobile Programming for iOS	3
CS376	Mobile Programming for Android	3
CS447	GUI and Graphics Programming	3
CS450	Cryptography: Introduction to Modern Cybersecurity	3
CS451	Introduction to Self Driving Cars	3
CS457	Machine Learning and Artificial Intelligence	3
CS459	Big Data and Visualization	3
DAT110	Desktop Production Fundamentals	4
DAT115	Desktop Audio Production	4
DAT210	Digital Sound Synthesis	3
MATH290	Linear Algebra and Transformations	3
SWE449	Tools Programming	3
Total Credits		15

Program Core	75
USV Core & GE	30
Program Approved Courses	15
Total Credits	120