

# Computer Programming and Development (A25590CP)

*A.A.S. Degree (Day)*

## PROGRAM PLANNING GUIDE

Updated: Fall 2020

Courses taken more than 5 yrs. ago may not receive transfer credit. Consult your advisor for details.

			Hours Per Week		
			Class	Lab	Credits
<b>FALL SEMESTER</b>					
CSC	120	Computing Fundamentals I	3	2	4
CTI	110	Web, Pgm, and DB Foundations	2	2	3
ENG	111	Writing and Inquiry	3	0	3
NOS	110	Operating Systems Concepts	2	3	3
		Mathematics Elective	3	2	3

<b>SPRING SEMESTER</b>					
CSC	121	Python Programming	2	3	3
CTI	120	Network & Sec Foundations	2	2	3
DBA	120	Database Programming I	2	2	3
WEB	115	Web Markup and Scripting	2	3	3
		Programming Concentration Area	-	-	3

<b>SUMMER SEMESTER</b>					
CTS	115	Info Sys Business Concepts	3	0	3
		English and Communications Elective	3	0	3

<b>FALL SEMESTER</b>					
CSC	154	Software Development	2	2	3
		Programming Concentration Area	-	-	12-13

<b>SPRING SEMESTER</b>					
CSC	227	Cloud Application Development	2	3	3
		Social and Behavioral Sciences Electives	-	-	3
		Humanities and Fine Arts Electives	-	-	3
		Project Elective	-	-	3
		Major Elective	-	-	3

**GRADUATION REQUIREMENT**

**Credit Hours 65**

Registrar's Office Approved 4/7/20

**General Electives****English and Communication Electives**

(choose 3 credit hours from the following courses)

ENG	112	Writing and Research in the Disciplines	3	0	3
ENG	114	Prof Research & Reporting	3	0	3
COM	120	Intro Interpersonal Com	3	0	3
COM	231	Public Speaking	3	0	3

**Humanities and Fine Arts Electives**

(choose 3 credit hours from the following courses)

HUM	110	Technology and Society	3	0	3
HUM	115	Critical Thinking	3	0	3
PHI	240	Introduction to Ethics	3	0	3

**Mathematics Electives**

(choose 3 credit hours from the following courses)

MAT	121	Algebra/Trigonometry I	2	2	3
MAT	143	Quantitative Literacy	2	2	3
MAT	171	Precalculus Algebra	3	2	4
MAT	172	Precalculus Trigonometry	3	2	4
MAT	271	Calculus I	3	2	4
MAT	272	Calculus II	3	2	4

**Social and Behavioral Sciences Electives**

(choose 3 credit hours from the following courses)

ECO	151	Survey of Economics	3	0	3
ECO	251	Principles of Microeconomics	3	0	3
ECO	252	Prin of Macroeconomics	3	0	3
POL	120	American Government	3	0	3
PSY	118	Interpersonal Psychology	3	0	3
PSY	150	General Psychology	3	0	3
SOC	210	Introduction to Sociology	3	0	3

**Required Major Electives****Concentration Area (Select 1 option grouping below)****Option 1 - Java Programming (16 Credit Hours, take in order listed)**

CSC	151	Java Programming	2	3	3
CSC	130	Computing Fundamentals II	2	3	4
CSC	251	Advanced Java Programming	2	3	3
CSC	256	Software Quality Assurance	2	2	3

**Option 2 - C++ Programming (16 Credit Hours, take in order listed)**

CSC	134	C++ Programming	2	3	3
CSC	130	Computing Fundamentals II	2	3	4
CSC	234	Advanced C++ Programming	2	3	3
CSC	256	Software Quality Assurance	2	2	3
<b>Major Elective</b>					
<b>(choose a minimum of 3 credit hours from the following courses)</b>					
CSC	118	Swift Programming I	2	3	3
CSC	221	Advanced Python Programming	2	2	3
CSC	193	Distributed Ledger Technologies - Blockchain	2	3	3
DBA	240	Database Analysis/Design	2	3	3
<b>Project Electives</b>					
<b>(choose a minimum of 3 credit hours from the following courses)</b>					
CSC	289	Programming Capstone	1	4	3
WBL	111	Work-Based Learning	0	10	1
WBL	112	Work-Based Learning	0	20	2
WBL	113	Work-Based Learning	0	30	3
WBL	121	Work-Based Learning	0	10	1
WBL	122	Work-Based Learning	0	20	2
WBL	123	Work-Based Learning	0	30	3

\*Work-Based Learning is an elective. WBL courses completed for one program may not count toward the completion of another program. Contact your academic advisor or WBL faculty coordinator for verification. Students must have approval from the department head and pre register with the Computer Technologies Division office. As an alternative to CSC 289, three credit hours of Work-Based Learning can be taken. The Work-Based Learning work period may be taken as WBL 112, over two semesters as WBL-111 and WBL-112 or over one semester as WBL-113.