# DATA SYSTEMS AND DEVELOPMENT (CONT'D)

Cr. Hrs.

15-16

#### **DATABASE FOUNDATION CERTIFICATE**

Program Code: T.SDV.CER

## Certificate

*Graduation requirement* — 20 semester hours

Focuses on database applications; completion of certificate can be applied to the A.A.S. in Data Systems and Development.

# **Suggested Sequence**

FALL	SPRING	FALL
1st Semester	2nd Semester	3rd Semeste
CIS 122 or	CSC 176	CSC 191
CSC 140	CSC 155	CSC Elec
CSC 128		

Required Program Courses (20 hours)

CSC 140	Computer Science I (Java)		.3
CSC 128	Introduction to Linux		.3
CSC 155	Systems Development I		.3
CSC 176	SQL Fundamentals I		.3
CSC 191	SQL Fundamentals II		
CSC elective			4
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Total Semester Credit Hours 20			20

## **WEB DEVELOPMENT CERTIFICATE**

Program Code: T.WAP.CER

## Certificate

Graduation requirement — 15–16 semester hours

Focuses on web development skills; completion of certificate can be applied to the A.A.S. in Data Systems and Development.

# **Suggested Sequence**

Total Semester Credit Hours

FALL	SPRING	FALL
1st Semester	2nd Semester	3rd Semester
CSC 123 or	CIS 152	CSC 155
CSC 140	CSC 128	CSC 175

Required F	Program Courses (15–16 hours)	
CSC 123	Computer Science I (C/C++) 4	
or CSC 140	Computer Science I (Java)3	
CIS 152	Web Design and Development I3	
CSC 128	Introduction to Linux3	
CSC 155	Systems Development I	
CSC 175	JavaScript Development3	

#### **GENERAL PROGRAMMING CERTIFICATE**

Program Code: T.GPR.CER

## Certificate

Graduation requirement — 13–14 semester hours

Builds foundational programming skills; completion of certificate can be applied to the A.A.S. in Data Systems and Development.

## **Suggested Sequence**

FALL	SPRING	FALL	SPRING
1st Semester	2nd Semester	3rd Semester	4th Semester
CIS 122	CSC 123 or	CSC 125 or	CSC 220
	CSC 140	CSC 256	

Required P	rogram Courses (13–14 hours)	Cr. Hrs.
CIS 122	Introduction to Programming	4
CSC 123	Computer Science I (C/C++)	4
or CSC 140	Computer Science I (Java)	3
CSC 125	Computer Science II (C++)	
or CSC 256	Computer Science II (Java)	3
CSC 220	Data Structures	3
Total Semest	er Credit Hours	13-14

# **MOBILE DEVELOPMENT CERTIFICATE**

Program Code: T.MOB.CER

## Certificate

*Graduation requirement* — 10 semester hours

Builds skills needed to develop mobile apps; completion of certificate can be applied to the A.A.S. in Data Systems and Development.

# **Suggested Sequence**

FALL	SPRING
1st Semester	2nd Semester
CSC 140	CSC 212
	CSC 256

Required	Program Courses (10 hours)	Cr. Hrs.
CSC 140	Computer Science I (Java)	3
CSC 212	Mobile Application Development	4
CSC 256	Computer Science II (Java)	3
Total Seme	ster Credit Hours	10