



COURSE SEQUENCE GUIDE | FULL-TIME ENROLLMENT
Computer Programmer - Business Applications
College Credit Certificate | Code: 66045 | 36 credits
Effective Term: Spring 2025 (2253)

Semester 1

Course ID	Course Title	Credits	Pre/Co-requisites	Industry Certifications
CGS 1060C	Introduction to Computer Technology & Applications	4		
COP 1047C	Introduction to Python Programming	4		COP 1047C: Python Coding Specialist
COP 1334	Introduction to C++ Programming	4		
Semester Credits		12		

Semester 2

Course ID	Course Title	Credits	Pre/Co-requisites	Industry Certifications
GEB 1432	Applied Artificial Intelligence (AI) in Business	3		
CGS 1540C	Database Concepts and Design	4		
COP 2800	Java Programming	4	Prerequisite: COP 1047C, COP 1334, or COP 2270	Oracle Certified Associate: Java Programmer
Semester Credits		11		

Semester 3

Course ID	Course Title	Credits	Pre/Co-requisites	Industry Certifications
COP 2041C	Python Programming 2	4	Prerequisite for COP 2041C: COP 1047C	
COP 2335 ---OR--- COP 2805C	Object Oriented Programming Using C++ ---OR--- Advanced Java Programming	4	Prerequisite for COP 2335: COP 1334 Prerequisite for COP 2805C: COP 2800	
Elective	CAI*, CEN*, COP*, CTS*, CGS2091, CIS 2331, EET 1033C, PHI 2680	5	Note: See academic advisor for requisites.	
Semester Credits		13		
Program Total		36		

Academic Pathway at MDC: The College Credit Certificate in Computer Programmer - Business Applications is a pathway to the Associate in Science (AS) in Computer Programming and Analysis with a concentration in [Business Application Programming](#) (Plan Code: 25065). You may additionally want to explore the other available concentrations for the AS, including [Mobile Applications Development](#) (Plan Code: 25070) or [Internet of Things \(IoT\) Applications](#) (Plan Code: 25076). These programs have a pathway to the [BS in Information Systems Technology with a Software Engineering Track](#).

To learn more about program courses, see the [College Catalog](#). Certain courses in this program will prepare you for in-demand industry certifications and costs of exams may be eligible for reimbursement. You may also accelerate your studies via credit for prior learning or credit for attained industry certifications. [Learn more.](#)