# DATABASE PROGRAMMING, CAREER PATHWAY CERTIFICATE OF COMPLETION

The Career Pathway Certificate of Completion: Database Programming is a less than one year certificate that includes Computer Science and SQL/Database core subjects. This certificate is intended for students focused on gaining skills to becoming employable. Student completing this certificate will be prepared to seek entry-level employment in occupations involving databases, networking, data collection, or data mining and software development.

Click here (https://www.socc.edu/pathways/roadmapsaz/312-cis-software-development-roadmap) to learn how this Career Pathway Certificate can lead to an AAS in CIS Software Development.

## Graduation Requirements

Students must complete a minimum of 24 credit hours with a minimum Grade Point Average (GPA) of 2.0 or better. All courses must be passed with a grade of 'C' or better. One course must be completed at Southwestern before the Career Pathway Certificate of Completion: Database Programming degree is awarded.

Complete the graduation application process one term prior to the term of completion (e.g., spring term graduates must apply during winter term).

## Pre-Program Courses

Students are required to take the following courses *prior to* the program courses, depending on students' college placement information. See advisor for details:

| Code | Title | Credits |
| --- | --- | --- |
| CIS90 | Computer Basics (or demonstrate proficiency) | 2 |
| MTH60 | Algebra I | 4 |
| WR90 | Paragraph Fundamentals (or placement in higher writing course) | 3-4 |
| or WR90R | Academic Literacy | |

## Program Guide

| Course | Title | Credits |
| --- | --- | --- |
| **First Year** | | |
| **Fall** | | |
| CS160 | Computer Science Orientation | 4 |
| MTH86 | Computer Technology Mathematics | 4 |
| | Credits | 8 |
| **Winter** | | |
| CS161 | Introduction to Computer Science I | 4 |
| | Credits | 4 |
| **Spring** | | |
| CS162 | Introduction to Computer Science II | 4 |
| | Credits | 4 |
| **Second Year** | | |
| **Fall** | | |
| CS275 | Database Management | 4 |
| | Credits | 4 |
| **Winter** | | |
| CS276 | Advanced SQL | 4 |
| | Credits | 4 |
| | Total Credits | 24 |

## Program Student Learning Outcomes

Upon successful completion of this program the student will be able to:

- Plan, write and debug software applications within multiple programming environments.
- Design, administer, and maintain a database.
- Apply project life cycle concepts to assist in finding solutions to business needs.
- Research, interpret, and communicate technical information in written, graphic, diagrammatic, electronic and oral forms.
- Demonstrate the ability to work independently or in a group environment with sensitivity to needs of customers and coworkers.