Program Overview
This is a 24 credit certificate program exploring the Java programming language and computing platform. The certificate includes a foundation course in computer science, a web fundamentals course, and an in depth study of databases. It then features a two-course sequence in Java programming and a course in Java for web development. This certificate may be completed apart from a degree program or may be selected as an emphasis in the Computer Programming AAS degree.

The student should have above average communications and math skills. He/she should exhibit qualities of patience, perseverance, and preciseness, and should enjoy working in a team environment and also be able to work independently. All programs emphasize training for industry certification.

Career Opportunities
Graduates find excellent opportunities as computer programmers in business, manufacturing, government and education. Jobs for computer programmers for all types of computer systems are found throughout the country with opportunities for good earning and rapid advancement.

Program Outcomes
1. Graduates will be able to design and code production software applications.
2. Graduates will be able to use industry standard database management systems to support their applications.

Program Faculty
Warren Sheaffer
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Program Requirements
☐ Check off when completed

This program is designed for individuals who have computer programming knowledge or are currently employed in the computer programming field.

Course Cr
☐ CSCI 1410 Computer Science & Information Systems ............. 4
☐ CSCI 1450 Web Fundamentals/HTML .......................... 4
☐ CSCI 1541 Java Programming 1 .......................... 4
☐ CSCI 1542 Java Programming 2 .......................... 4
☐ CSCI 1550 Database Management Fundamentals .......... 4
☐ CSCI 2466 J2EE-JSP and Servlets .......................... 4

Total Program Credits .................. 24

Program Start Dates
Fall, Spring, Summer

Course Sequence
The following sequence is recommended for a part-time student. Not all courses are offered every semester. Please contact the Program Faculty for course sequence.

First Semester
CSCI 1410 Computer Science & Information Systems ............. 4
CSCI 1450 Web Fundamentals/HTML .......................... 4
Total Semester Credits .................. 8

Second Semester
CSCI 1541 Java Programming 1 .......................... 4
CSCI 1550 Database Management Fundamentals .......... 4
Total Semester Credits .................. 8

Third Semester
CSCI 1542 Java Programming 2 .......................... 4
CSCI 2466 J2EE-JSP and Servlets .......................... 4
Total Semester Credits .................. 8

Total Program Credits .................. 24

See back of this guide for Course Chart

Minimum Program Entry Requirements
Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 250+ or grade of “C” or better in READ 0722
Writing: Score of 250+ on Reading Comprehension or grade of “C” or better in ENGL 0922
Quant. Reasoning, Algebra & Stats: Score of 250+ or Adv. Algebra & Functions: Score of 215+ or grade of “C” or better in MATH 0910
Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Information is subject to change. This Program Requirements Guide is not a contract.
The below chart illustrates the courses required for completion of this certificate.

**Introductory**

- CSCI 1410 Computer Science & Information Systems
- CSCI 1450 Web Fundamentals/HTML

**Intermediate**

- CSCI 1550 Database Management Fundamentals
- CSCI 1541 Java Programming

**Advanced**

- CSCI 1542 Java Programming 2
- CSCI 2466 JSP and Servlets