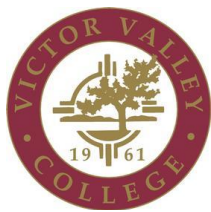


Programming I Certificate



CATALOG 2021-22

GE Pattern: none
 Total Units: 18 Units
 Program Code: [PROG1.CERT](#)

Potential Career Options

Possible employment includes:

- *Computer and Information Systems Managers, Research Scientists, Analysts, and Programmers
- *Software and Web Developers
- *Computer Systems Engineers/Architects

Average Salary Information

\$90,025 Annually

*Upon Completion of Bachelor's degree or higher

STUDENT SUCCESS TEAM SUPPORT

School Dean

Hamid Eydgahi
 (760) 245-4271 Extension 2942
Hamid.Eydgahi@vvc.edu

RAMPath Counselor

Lyman Insley
 (760) 245-4271 Extension 2208
Lyman.Insley@vvc.edu

Faculty Advisor

Vacant

EXPLANATION OF CATEGORIES

| | | |
|-------------|---------------------|---|
| Req | Required Core | A course that is required for this degree |
| GE | General Education | A course that fulfills a specific general education requirement for this degree, which can be replaced with another course that meets the same requirement |
| RE | Restricted Elective | A course selected from a list of elective courses specified for this degree in the course list in the catalog, which can be replaced with another course from the same list |
| Elec | Elective | A degree-applicable course that is part of a degree roadmap to ensure that there is a total of at least 60 units, which is a requirement for an associate degree |

Year 1, Semester 1

Total: 4.0

| Category | Course | Title | GE Area | Unit |
|----------|---------|------------------------------------|---------|------|
| Req | CIS 201 | Programming Concepts and Methods I | | 4.0 |

*MATH 105 College Algebra, is recommended for the computer programming field.

Year 1, Semester 2

Total: 7.0

| Category | Course | Title | GE Area | Unit |
|----------|---------|-------------------------------------|---------|------|
| Req | CIS 202 | Programming Concepts and Methods II | | 4.0 |
| Req | CIS 264 | Discrete Structures | | 3.0 |

Year 2, Semester 1

Total: 7.0

| Category | Course | Title | GE Area | Unit |
|----------|---------|---|---------|------|
| Req | CIS 104 | Object Oriented Analysis and Design | | 3.0 |
| Req | CIS 83 | Programming in Python Other options: CIS 205 Javascript or CIS 206 Programming in Java | | 4.0 |