

Associate in Applied Science Degree in Computer Science Programming Option

Careers in Computer Science

If you are planning a career as a computer professional, opportunities are endless! Almost every company, no matter how small or large, employs computer specialists, and most of these companies are always looking for qualified people. During the 2000's and beyond, the number of programmers, systems analysts, and computer operators needed to fill available positions will continue to grow.

In addition to computer specialists, trained personnel are needed in all fields. Whether one is seeking employment as a teacher, an accountant, a writer, a fashion designer, a lawyer, or a number of other jobs, one question is frequently asked: What do you know about computers? Interacting with a computer is part of the daily routine for millions of white- and blue- collar workers. No matter the career choice, in all likelihood, one will be a frequent user of computers.

Program Learning Outcomes

These learning outcomes are established for the Computer Science program at the associate degree level:

1. Have a thorough understanding of computer hardware and software principles and functions.
2. Have a detailed understanding of the fundamentals of computer programming
3. Be familiar with differences between mainframe, midrange and desktop computers.
4. Understand the client-server model for program design and implementation.
5. Be knowledgeable of all phases of the systems development life cycle (SDLC).
6. Be familiar with current networking models and network operating systems.

Purpose of the Curriculum

The curriculum is intended to prepare entry-level computer programmers to create or maintain programs and systems for business, industry, health care, education, and government service. The curriculum is designed to train people who seek employment for the first time and for people already employed in some aspect of information technology who want to upgrade their knowledge and skills. Graduates should be able to transfer their knowledge about computer systems and languages to different systems as technological changes occur.

Restricted Electives: Computer Science students may take selections from CS (excluding CS 106)
CS 202, 204, 216, 220, 266

BA /MIS majors may substitute up to two from BA 209, 300, 304, or 345.
*Math 101 plus Math 102 substitute for Math 121

For More Information, Contact:
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Curriculum/Suggested Sequence

FIRST SEMESTER

| | | | |
|----------------------|-----|---------------------------------|-----------|
| COLL | 101 | College 101 | 3 |
| MATH | 121 | Pre-Calculus | 4 |
| ENGL | 101 | English Composition I OR | |
| ENG | 110 | English Composition I | 3 |
| ITEC | 101 | Prin of Information Systems | 3 |
| HUM | 101 | Intro to Humanities OR | |
| GED | | Gen Ed Fine Arts ¹ | <u>3</u> |
| Total Credits | | | 16 |

THIRD SEMESTER

| | | | |
|----------------------|-----|-------------------------------------|--------------|
| CS | 114 | Intro to Visual Basic OR | |
| CS | 260 | Intro to C++ Programming | 3 |
| CS | 230 | Data Base Mgmt Systems | 3 |
| ECON | 201 | Prin of Economics (macro) OR | |
| ECON | 202 | Prin of Economics (micro) | 3 |
| Elective | | Restricted Elective | 3 |
| GED | | Gen Ed-Science Requirement | <u>3-4</u> |
| Total Credits | | | 15-16 |

SECOND SEMESTER

| | | | |
|----------------------|-----|----------------------------------|--------------|
| BST | 106 | Introduction to Business | 3 |
| CS | 109 | Foundations for Programming | 3 |
| CS | 242 | Web Site Design | 3 |
| CS | 240 | Data Communications OR | |
| ITEC | 183 | Network + | 3-4 |
| ENGL | 102 | English Composition II OR | |
| ENGL | 112 | Technical Writing | <u>3</u> |
| Total Credits | | | 15-16 |

FOURTH SEMESTER

| | | | |
|----------------------|-----|---------------------------|-----------|
| BA | 203 | Business Statistics | 3 |
| BA | 215 | First Year Accounting I | 3 |
| CS | 280 | Intro to Systems Analysis | 3 |
| MATH | 205 | Discrete Mathematics | 3 |
| Elective | | Restricted Electives | <u>6</u> |
| Total Credits | | | 18 |



**Associate in Applied Science Degree in
Computer Science
Web Design Option**

Purpose of the Curriculum

The Associate in Applied Science in Computer Science – Web Design Option prepares students for employment in all areas of web design. Individuals can work for a company or independently as an entrepreneur. Students get hand-on experience using the latest in web design software, database software and networking technologies.

Program Learning Outcomes

1. The student will have fundamental knowledge of the information technology field.
2. The student will have an understanding of computer program design and development using one of more programming languages.
3. The student will have skills in developing and implementing relational databases.
4. The student will understand basic networking technologies.
5. The student will have skills in graphics design.
6. Students will have skills in project management.
7. The student will have skills in designing and developing database-driven web sites with graphical and multimedia content.

CURRICULUM/SUGGESTED SEQUENCE (64-65 credit hours required for graduation)

FIRST SEMESTER

| | | |
|----------|---------------------------------|-----------|
| COLL 101 | College 101 | 3 |
| ENGL 101 | English Composition I OR | |
| ENG 110 | English Composition I | 3 |
| ITEC 101 | Prin of Information Systems | 3 |
| ART 101 | Introduction to Art | 3 |
| MATH 101 | College Algebra | <u>3</u> |
| | Total Credits | 15 |

THIRD SEMESTER

| | | |
|----------|----------------------------------|-----------|
| CS 242 | Intermediate Web Design | 3 |
| CS 214 | Introduction to Visual Basic.Net | 3 |
| CS 230 | Data Base Management Systems | 3 |
| COMM285 | Web Design and Digital Media | 3 |
| ART 213 | Graphic Design | 3 |
| Elective | Social Science Elective | <u>3</u> |
| | Total Credits | 18 |

SECOND SEMESTER

| | | |
|----------|----------------------------------|-----------|
| ART 217 | Computer Graphics | 3 |
| ITEC 183 | Network + | 4 |
| CS 109 | Foundations for Programming | 3 |
| CS 142 | Introduction to Web Design | 3 |
| ENGL 102 | English Composition II OR | |
| ENGL 112 | Technical Writing | <u>3</u> |
| | Total Credits | 16 |

FOURTH SEMESTER

| | | |
|----------|--------------------------------|--------------|
| CS 244 | Advanced Web Design | 3 |
| CS 266 | Introduction to JAVA OR | |
| CS 248 | ASP.Net | 3 |
| CS 210 | Fund of Operating Systems | 3 |
| ITEC 269 | Project Management | 3 |
| GED | Gen Ed Science Requirement | <u>3-4</u> |
| | Total Credits | 15-16 |

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