

Computer Science Program A.A.S. Degree

Programming Option

Students wishing to gain knowledge of computer programming and design should choose this program. Courses are designed to offer hands-on experience to prepare the student for an entry level computer programming position. Focus is on problem analysis, design, coding, testing and debugging. This degree is not designed to transfer, although the student will find that many of the courses which provide a foundation in computer science may transfer.

Graduates of this program will be able to:

- Analyze problems
- Create effective algorithms
- Code, debug, test, and document programs using basic control structures
- Create programs using data structures such as arrays, lists, and stacks
- Design and use classes and objects
- Create programs which use Graphical User Interfaces
- Explain functions of operating systems and computer architecture
- Understand how to store and access data using a database
- Plan and design a computer information system

Requirements

General Education - 20 credits of general education as described on page 51 of the Catalog.

Career Studies - 30 credits as follows:

COMP 126 Computer Logic and Design 3

COMP 135 Computer Architect - 3

Assembly Language

COMP 171 Programming I 3

COMP 185 Programming in Visual Basic.NET 3

COMP 225 Operating Systems Technology 3

COMP 226 Systems Analysis and Design 3

COMP 228 Data Structures 3

COMP 269 Database Concepts 3

COMP 271 Programming II 3

COMP 296 Advanced Software Project 3

Technical Electives - 9 credits from among the following:

COMP 140 Designing/Developing Web Sites 3

COMP 145 Introduction to UNIX 3
COMP 166 Web Design Using HTML 3
COMP 299 Computer Science Internship 3
Elective 1

Suggested Sequence - Computer Science Program

A.A.S. Degree

Programming Option

The following sequence is an example of how this degree can be completed in two years. This sequence is based on satisfaction of all Basic Skills requirements and prerequisites and presumes a Fall Term start date. An individual's program may vary depending on transfer institution, career objectives, or individual needs. See your counselor for other options and to monitor your progress.

Course Code Credits Course Code Credits

SEMESTER 1 SEMESTER 2

COMP 126 3 COMP 135 3

COMP 171 3 COMP 271 3

ENGL 121 3 Communications 3

Mathematics or Science or 3-4 Social Sciences 3

Technological or Info Literacy Technical Electives 3

Technical Electives 3 15

15-16

SEMESTER 3 SEMESTER 4

COMP 185 3 COMP 228 3

COMP 225 3 COMP 296 3

COMP 226 3 General Education(1) 6

COMP 269 3 Technical Electives 3

Humanities 3 15

15

Total Credits for Degree 60-61

(1) One course is recommended from the Cultural & Global Awareness knowledge area.

Programs of Study 75

Computer

Science

Program

A.A.S. Degree

Web Site Development Option

Students wishing to gain a technical proficiency and expertise in planning, design, development, implementation and maintenance of web sites should choose this option. Upon completion, the student will be prepared to enter the web developer field. Students will learn the necessary languages, tools, concepts and technical skills. This degree

is not designed to transfer, although the student will find that many of the courses which provide for a foundation in computer science may transfer.

Graduates of this program will be able to:

- Analyze problems
- Create effective algorithms
- Code, debug, test, and document programs using basic control structures
- Create programs which use Graphical User Interfaces
- Plan and develop interactive web sites
- Enable access to databases
- Efficiently use HTML, XML and web site development tools
- Enhance web sites through scripting and programming
- Analyze and design systems

Requirements

General Education - 20 credits of general education as described on page 51 of the Catalog.

Career Studies - 30 credits as follows:

COMP 126 Computer Logic and Design 3

COMP 145 Introduction to UNIX 3

COMP 166 Web Design Using HTML 3

COMP 171 Programming I 3

COMP 185 Programming in Visual Basic.NET 3

COMP 226 Systems Analysis and Design 3

COMP 267 Client Side Using JavaScript 3

COMP 268 Server Side Scripting 3

COMP 269 Database Concepts 3

COMP 296 Advanced Software Project 3

Technical Electives - 9 credits from among the following:

BUSI 171 E-Business Technologies 3

COMP 140 Designing/Developing Web Sites 3

COMP 265 Spreadsheets Using EXCEL 3

COMP 299 Computer Science Internship 3

NETW 115 E-Commerce System Design 3

Electives 1

Webmaster Administration

Academic Credit Certificate

Students wishing to gain a technical proficiency and expertise in planning, developing, implementing and maintaining web sites should choose this certificate

program. Upon completion of the certificate coursework students will be prepared to enter the webmaster administration field.

Suggested Sequence - Computer Science Program A.A.S. Degree

Web Site Development Option

The following sequence is an example of how this degree can be completed in two years. This sequence is based on satisfaction of all Basic Skills requirements and prerequisites

and presumes a Fall Term start date. An individual's program may vary depending on transfer institution, career objectives, or individual needs. See your counselor for other options and to monitor your progress.

Course Code Credits Course Code Credits

SEMESTER 1 SEMESTER 2

COMP 126 3 COMP 171 3

COMP 145 3 COMP 269 3

COMP 166 3 Communications 3

ENGL 121 3 Mathematics or Science or

Humanities 3 Technological or Info Literacy 3-4

15 Technical Electives 3

15-16

SEMESTER 3 SEMESTER 4

COMP 185 3 COMP 296 3

COMP 226 3 Technical Electives 6

COMP 267 3 General Education (1) 6

COMP 268 3

Social Sciences 3 15

15

Total Credits for Degree 60-61

(1) One course is recommended from the Cultural & Global Awareness knowledge area.

Requirements

General Education - 6 credits:

(Credit hours listed with each course)

Required:

ENGL 121 English Composition: 3

The Writing Process

Recommended:

COMP 129 Information Technology 3

Career Studies - 21 credits as follows:

COMP 126 Computer Logic and Design 3

COMP 145 Introduction to UNIX 3

COMP 166 WEB Design Using HTML 3

COMP 171 Programming I 3

COMP 267 Client Side Using JavaScript 3

COMP 268 Server Side Scripting 3
COMP 269 Database Concepts 3
Technical Electives - 3 credits from among the following:
BUSI 171 E-Business Technologies 3
COMP 140 Designing/Developing WEB Sites 3
COMP 265 Spreadsheets Using EXCEL 3
NETW 115 E-Commerce System Design 3
Total Credits 30

Graduates of this certificate program will be able to:

- Plan and develop interactive web sites
- Enable access to databases
- Efficiently use HTML, XML and web site development tools
- Enhance web sites through scripting and programming

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