

Career Planning Guide Effective September 2003 for

COMPUTING AND SOFTWARE SYSTEMS

Length of Program: 90 credits

Goal: Associate of Arts (AA) Degree

South Seattle Community College
6000 16th Ave SW
Seattle, Washington 98106-1499
<http://www.southseattle.edu/>
Academic Offices (206) 768-6600

Quarterly Costs – check current schedule:
<http://www.southseattle.edu/services/tuition.htm>

Class schedule and District catalog:
<http://www.southseattle.edu/programs/classCat/>

General Academic Advising:
(206)-764-5387
advisorsouth@sccd.ctc.edu

Computing and Software Systems Faculty Contact:
Mike Steffancin (206)-768-6486
msteffancin@sccd.ctc.edu
RSB 189

PROGRAM DESCRIPTION

With a computing and software systems degree you will work on design, development, maintenance and re-engineering of computer software. Graduates with a computing and software systems Bachelor's degree are prepared for a wide range of careers, including software engineer, computer scientist, systems analyst, systems programmer, applications programmer, database designer and e-commerce software designer. Computing and software systems curriculum draws heavily on computer science, but with a greater emphasis on software engineering and relevant business and management concepts than would be found in a more traditional computer science degree. The Computing and Software Systems Associate of Arts (AA) degree program prepares students for transfer to computing and software systems programs at four-year colleges and universities and will give students basic skills needed by all programmers. Students study basic mathematical and scientific principles with an emphasis on problem solving and critical thinking. Additionally, the program provides students experience with computer programming using commonly used languages and technologies, including Visual Studio.net and Java. The curriculum also develops other job related skills such as communications, human relations and technical report writing. Credits earned with the AA degree at South Seattle Community College can be applied toward the first two years of a four-year bachelor's degree in computing and software systems or a related field such as computer science.

PROGRAM OUTCOMES

Students who successfully complete this program will show:

- An ability to apply knowledge of mathematics and science to computer programming problems.
- An ability to design and conduct experiments, as well as to analyze and interpret data.
- An ability to think critically in evaluating information, solving problems and making decisions.
- An ability to function on diverse, multi-disciplinary teams.
- An ability to access and evaluate information from a variety of sources including the Internet.
- An understanding of professional and ethical responsibility.
- An ability to communicate effectively with written, oral, and visual means.
- The education necessary to understand the impact of programming solutions in a global and societal context.
- A recognition of the need for and an ability to engage in life-long learning.
- An ability to use modern scientific techniques, skills, and technology including computing and programming tools necessary for a career in the computer industry.

CAREER OPPORTUNITIES

With a focus of software engineering principles, software project management, emerging technologies, and several others, students can jump directly into the industry with roles as diverse as the industry. Computer Systems Analysts, Database Administrators, Systems Architects, and Application or System Programmers are just a few of the available positions. The average nationwide starting salary for graduates with a Bachelor's degree in Computer Science in 2006 was \$50,046.

Associate of Arts

Computing and Software Systems Pre-Major

CURRICULUM

The A.A. degree requires 90 credits total. Courses are 5 credits unless otherwise listed.

BASIC REQUIREMENTS (20 credits):

- ENG 101 – Composition
- ENG 102 or ENG 201
- MAT 124* – Calculus I
- MAT 125* -- Calculus II

DISTRIBUTION REQUIREMENTS (45 credits):

Visual, Literary and Performing Arts (15 credits with at least two prefixes)[†]

- Language and Speech (must include 5 credits of oral communications/speech)
- Literature/History of Ideas
- Music, Art and Drama

Individuals, Cultures and Societies (15 credits with at least two prefixes)

- Individuals and Societies (5 cr)
- United States Culture (5 cr)
- Global Studies (5 cr)

Note: Integrated Studies Requirement (8 credits): Individual, linked, or coordinated studies involving courses from the Distribution Requirements list. Counts towards the 45 credits of Distribution Requirements.

The Natural World (15 Credits must include two different prefixes and one lab course)

- PHY 201 Engineering Physics
- MAT 109 Statistics
- Natural World elective

MAJOR AREA OF STUDY (10 credits):

- CSC 142[‡], 143

ELECTIVES (10 credits):

Courses may not be used to satisfy other requirements. **Selection should be made based on advisor recommendation, given the four-year institution that the student plans to attend.**

Recommended: CSC 110[‡], EGR 141, EGR 142, EGR 231, MAT 220

Other science classes offered:

- BIO 210, 202, 203
- CHE 140 (6 cr), 150 (6 cr), 160 (6 cr), 231 (4 cr), 238 (3 cr)
- EGR 110, 111 (4 cr), 123 (4 cr), 124 (4 cr), 170 (4 cr), 171 (1 cr), 210, 215, 220, 230, 260, 298
- MAT 126, 215 (2 cr), 216 (2 cr), 224, 238, 298 (2 credit maximum given for MAT 298)

SAMPLE COURSE PLAN

By starting in the Fall and taking a full-time load, students may complete the curriculum in six quarters. Certain higher-level classes are only offered once a year, **so be sure to consult with advisors here at SSCC and at the 4-year institution you will attend to plan your schedule.**

FRESHMAN YEAR:

First quarter

- MAT 124 Calculus I
- MAT 215 Word Problems for MAT 124
- ENG 101 Composition
- EGR 110 Engineering Orientation
- Distribution Requirement (5 credits)

Second quarter

- ENG 102 Composition II or ENG 201 Advanced Composition
- MAT 125 Calculus II
- MAT 216 Word Problems for MAT 125
- Distribution Requirement (5 credits)

Third quarter

- Distribution Requirement (5 credits)
- CSC 110 Intro to Programming
- PHY 201 Engineering Physics I

SOPHOMORE YEAR:

First quarter

- Natural World Elective
- MAT 109 Statistics
- EGR 142 Computer Programming C/C++

Second quarter

- Distribution Requirement (5 credits)
- MAT 220 Linear Algebra
- CSC 142 Computer Programming for Engineers

Third quarter

- Distribution Requirement (5 credits)
- Distribution Requirement (5 credits)
- CSC 143 Computer Programming for Engineers II

Footnotes:

[†]UW Tacoma/Bothell requires 10 credits of the same foreign language—only 5 will count toward VLPA-- or have taken two years at the high school level.

*MAT 215 must be taken with MAT 124, 216 must be taken with 125

[‡]CSC 110 or EGR 141 is a prerequisite for CSC/EGR 142



ASSOCIATE OF ARTS DEGREE IN COMPUTER AND SOFTWARE SYSTEMS

Note: Students must have a minimum 2.0 GPA for graduation and must take a minimum of 30 credits at SSSC. Final quarter must be at SSSC.

Name	SID#				
No course fulfills more than one requirement	Course Credit	Credit Earned	Grade	College	Quarter
Basic Requirements: 20 credits					
ENG 101	5				
ENG 102 or ENG 201	5				
MAT 124	5				
MAT 125	5				
Areas of Knowledge Distribution Requirements: 45 credits					
Visual, Literary, and Performing Arts (Humanities and Arts): 15 credits					
Individuals, Cultures, and Society (Social Sciences): 15 credits					
The Natural World: 15 credits					
PHY 201	5				
MAT 109	5				
Major Area of Study: 10 credits					
CSC 142	5				
CSC 143	5				
Electives: 10 credits					
Courses may not be used to satisfy other requirements. Selection should be made based on advisor recommendation, given the four-year institution that the student plans to attend.					

Total Credits Required: 90 Evaluator _____ Date _____