

Computer Programs

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In 2008, the programs of the Computer Information Systems Department were recognized. No program was eliminated. Programs were assigned to different academic departments. The program descriptions that follow indicate the new department to which the offerings are assigned.

All programs and options award students an Associate in Applied Science (AAS) degree, except for the Computer Science Program, which awards the Associate in Science (AS) degree and the Certificate in Digital Media Arts.

Computer Science:

Mathematics, Engineering and Computer Science Department

The major in Computer Science is appropriate for those students interested in mathematics and/or computer science who plan to transfer to a senior college for further study in computer science. Graduating students will be prepared for careers as programmers for business and/or scientific applications.

Programming and Systems:

Business and Technology Department

The Programming and Systems curriculum provides training for entry-level jobs as well as for transfer to a senior college as a business or information sciences major. Graduates of this program may qualify for positions as programmers or programmer trainees.

Computer Operations:

Mathematics, Engineering and Computer Science Department

The Computer Operations curriculum prepares students to operate computer equipment. After graduation, students will qualify for positions as input/output control clerks, computer operators, and console operators.

Computer Operations - Computer Network Administration and Security Option:

Mathematics, Engineering and Computer Science Department

This option will provide graduates with a thorough knowledge of network operating systems, thereby enabling graduates to support fully client/server environments. In addition, students will be prepared to take certification examinations in UNIX and Windows.

Computer Technology:

Mathematics, Engineering and Computer Science Department

This curriculum provides the skills needed for careers in a rapidly growing technical area. Students will be prepared for careers as field engineers specializing in microcomputer repair and network diagnosis. Students will be prepared to transfer to a bachelor of technology program at a senior college.

Computer Technology - Telecommunications Option:

Mathematics, Engineering and Computer Science Department

The option in Telecommunications provides students with skills for working in data switching centers, maintaining data lines, and repairing communication devices. In addition, students have the opportunity to plan advanced studies in teleprocessing and telecommunications. Students will be prepared to transfer to a bachelor of technology program at a senior college.

Microcomputer Systems and Applications:

Business and Technology Department

Students who wish to employ the latest in end user computer applications in the workplace will be interested in this program. Graduates will be qualified to fill positions in technical support, training, and office administration, as well as jobs as computer aides or applications software specialists. Students will be offered the opportunity to take qualification exams for certification by Microsoft.

New Media Technology:

Humanities Department

The New Media Technology curriculum prepares students for varied careers in new media including webmaster, multimedia applications developer, Internet programmer, streaming video, and digital film producer. Students have a choice of specialization between Multimedia Design and Web Programming.

Students who need additional skill development in reading, writing, mathematics, and communication will be required to take basic skills and/or ESL courses. These courses are not listed in the curriculum. The particular courses students must successfully complete are determined by their scores on the college placement test. For more information on basic skills requirements, see page 175. Descriptions of courses in these majors begin on page 105.

Computer Science Curriculum: AS Degree

Counseling

New Student Seminar 0

English: 6 credits

Composition I ENC/G101 3

Writing Through Literature ENG102 3

Humanities: 3 credits

Liberal Arts Elective* 3

Math, Engineering & Computer Science: 39 credits

Introduction to Computer Science MAC101 4

Object-Oriented Programming MAC190 4

BASIC Assembler Language for Computer Science MAC196 5

Data Structures MAC286 3

Computer Architecture MAC295 4

Calculus I MAT201 4

Calculus II MAT202 4

Calculus III MAT203 4

Linear Algebra MAT210 3

Introduction to Discrete Mathematical Structures MAT230 4

Social Science: 3 credits

*Choose one of the following courses**:* 3

Any history course except SSN183, SSN199, SSN240

Cultural Anthropology SSA101

Introduction to Anthropology SSA100

U.S. Power and Politics SSP101

Political Ideas and Ideologies SSP250

General Psychology SSY101

Introduction to Sociology SSS100

Introduction to Microeconomics SSE103

Introduction to Macroeconomics SSE104

Business and Technology: 3 credits

Introduction to Business BTM101 3

Cooperative Education: 6 credits

Fundamentals of Professional Advancement CEP121 3

Full-Time Internship CEP201 3

(Both Day and Extended Day students are required to take CEP121. Extended Day students may take CEP201 or an unrestricted elective course.)

TOTAL CREDITS: 60

* Elective must satisfy the urban study requirement.

**For transfer to New York City College of Technology, General Psychology SSY101 is recommended.

Note: Students should consult with a counselor and/or faculty advisor in the selection of elective courses to ensure maximum transferability of credits taken.

Programming and Systems Curriculum: AAS Degree

Counseling

New Student Seminar 0

English: 6 credits

Composition I ENC/G101 3

Writing Through Literature ENG102 3

Humanities: 3 credits

Liberal Arts Elective 3

Math, Engineering & Computer Science: 4 credits

Precalculus MAT200 4

Introduction to Computers and Their Applications MAC100 3

Introduction to Visual Programming MAC109 3

Systems Analysis and Design MAC110 3

C/C++ Programming MAC125 3

Comparative Operating Systems MAC230 3

Database Concepts and Programming MAC250 3

Introduction to Teleprocessing MAC260 3

Any CIS course except MAC105 3

Social Science: 3 credits

*Choose one of the following courses:*** 3

Any history course except SSN183, SSN199, SSN240

Cultural Anthropology SSA101

Introduction to Anthropology SSA100

U.S. Power and Politics SSP101

Political Ideas and Ideologies SSP250

General Psychology SSY101

Introduction to Sociology SSS100

Introduction to Microeconomics SSE103

Introduction to Macroeconomics SSE104

Business and Technology: 7 credits

Principles of Accounting I BTA111 4

Introduction to Business BTM101 3

Cooperative Education: 6 credits

Fundamentals of Professional Advancement CEP121 3

Full-Time Internship CEP201 3

(Both Day and Extended Day students are required to take CEP121. Extended Day students may take CEP201 or an unrestricted elective course.)

Liberal Arts Electives: 5 credits

Any course in Communication Skills; Education and Language Acquisition; English; Human Services; Humanities; Library; Mathematics, Engineering, and Computer Science; Natural Sciences; or Social Science EXCEPT when noted as unrestricted elective in DegreeWorks or College Catalog. See page 176 for these courses. 5

Unrestricted Electives: 2 credits

One elective must be urban study course. See page 178 for these courses. 2

TOTAL CREDITS: 60

Computer Operations Curriculum: AAS Degree

Counseling

New Student Seminar 0

English: 6 credits

Composition I ENC/G101 3

Writing Through Literature ENG102 3

Math, Engineering & Computer Science: 3 credits

Elementary Statistics MAT120 3

Social Science: 3 credits

*Choose one of the following courses:** 3

Any history course except SSN183, SSN199, SSN240

Cultural Anthropology SSA101

Introduction to Anthropology SSA100

U.S. Power and Politics SSP101

Political Ideas and Ideologies SSP250

General Psychology SSY101

Introduction to Sociology SSS100

Introduction to Microeconomics SSE103

Introduction to Macroeconomics SSE104

Business and Technology: 7 credits

Principles of Accounting I BTA111 4

Introduction to Business BTM101 3

Introduction to Computers and Their Applications BTC100 3



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COMPUTER OPERATIONS OPTION

Humanities: 3 credits

Liberal Arts Elective 3

Math, Engineering & Computer Science: 15 credits

Principles of Programming MAC109 3

Systems Analysis and Design MAC110 3

Comparative Operating Systems MAC230 3

Introduction to Teleprocessing MAC260 3

Computer Information Systems Elective 3

(choose any CIS course except CIS105; recommended: CIS241, CIS250 or CIS265)

Business and Technology: 6 credits

Data Center OPS: Basics BTC270 3

Data Center OPS: Advanced BTC275 3

Cooperative Education: 6 credits

Fundamentals of Professional Advancement CEP121 3

Full-Time Internship CEP201 3

(Both Day and Extended Day students are required to take CEP121. Extended Day students may take CEP201 or an unrestricted elective course.)

Liberal Arts Electives: 5 credits

Any course in Communication Skills; Education and Language Acquisition; English; Human Services; Humanities; Library; Mathematics, Engineering, and Computer Science; Natural Sciences; or Social Science EXCEPT when noted as unrestricted elective in DegreeWorks or College Catalog. See page 176 for these courses. 5

Unrestricted Electives: 3 credits

One elective must be urban study course. See page 178 for these courses.

TOTAL CREDITS: 60

* For transfer to New York City College of Technology, General Psychology SSY101 is recommended.

Note: Students should consult with a counselor and/or faculty advisor in the selection of elective courses to ensure maximum transferability of credits taken.

OR

COMPUTER OPERATIONS: COMPUTER NETWORK ADMINISTRATION AND SECURITY OPTION

Humanities: 3 credits

Oral Communications HUC101 or
Communication in a Professional Setting HUC108 3

Math, Engineering & Computer Science: 22 credits

Comparative Operating Systems MAC230 3
UNIX Network Operating Systems MAC232 3
Windows Network Operating System MAC233 3
Network and Systems Security MAC245 3
Advanced Network and Systems Security MAC246 3
Computer Repair and Network Maintenance MAC293 4

Select one of the following courses: 3

Advanced UNIX Administration MAC252
Advanced Windows NT Administration MAC253

Cooperative Education: 6 credits

Fundamentals of Professional Advancement CEP121 3
Full-Time Internship CEP201 3

(Both Day and Extended Day students are required to take CEP121. Extended Day students may take CEP201 or an unrestricted elective course.)

Liberal Arts Electives: 7 credits

Any course in Communication Skills; Education and Language Acquisition; English; Human Services; Humanities; Library; Mathematics, Engineering, and Computer Science; Natural Sciences; or Social Science EXCEPT when noted as unrestricted elective in DegreeWorks or College Catalog. See page 176 for these courses. 7

One elective must be urban study course. See page 178 for these courses.

TOTAL CREDITS: 60

Note: Students should consult with a counselor and/or faculty advisor in the selection of elective courses to ensure maximum transferability of credits taken.



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New Media Technology Digital Media Arts Certificate

Humanities: 30 credits

Introduction to Computers and Their Applications
BTC100 3
Introduction to New Media HUW112 3
Principles of Multimedia and Web Design HUW161 3
Web Animation and Interactivity HUW162 3
Internet Video and DVD Development HUW163 3
Introduction to Computer Art HUA125 3
The Art of Film HUC150 3
Video Production Workshop HUC240 3
Video Production Workshop II HUC241 3
American Film HUC270 3

Elective: 3 credits

Select one of the following: 3
Web Programming HUW166
Music Audio Recording I HUM146

TOTAL CREDITS: 33

Computer Technology Curriculum: AAS Degree

Counseling

New Student Seminar 0

English: 6 credits

Composition I ENC/G101 3

Writing Through Literature ENG102 3

Humanities: 3 credits

Oral Communication HUC101 3

Math, Engineering & Computer Science: 8 credits

Technical Mathematics I MAT241 4

Technical Mathematics II MAT242 4

Social Science: 3 credits

Urban Sociology SSN187 3

Business and Technology: 6 credits

Introduction to Business BTM101 3

Introduction to Computers and Their Applications BTC100 3

OR

COMPUTER TECHNOLOGY OPTION

Math, Engineering & Computer Science: 28 credits

Computer Electronics I MAC241 4

Computer Electronics I I MAC242 3

Computer Hardware Interfacing and Programming
MAC265 3

Computer Technology Project Lab MAC289 2

Computer Logic, Design and Implementation I MAC291 4

Computer Logic, Design and Implementation II MAC292 4

Computer Repair and Network Maintenance MAC293 4

Computer Architecture MAC295 4

Cooperative Education: 6 credits

Fundamentals of Professional Advancement CEP121 3

Full-Time Internship CEP201 3

(Both Day and Extended Day students are required to take CEP121. Extended Day students may take CEP201 or an unrestricted elective course.)

TOTAL CREDITS: 60

TELECOMMUNICATIONS OPTION

Math, Engineering & Computer Science: 28 credits

Computer Electronics I Computer Architecture MAC241 4

Computer Electronics II MAC242 3

Internet Telephony MAC261 3

Data Communications MAC262 4

Network Operations MAC263 4

Computer Hardware Interfacing and Programming
MAC265 3

Computer Technology Project Lab MAC289 2

Computer Architecture MAC295 4

Cooperative Education: 6 credits

Fundamentals of Professional Advancement CEP121 3

Full-Time Internship CEP201 3

(Both Day and Extended Day students are required to take CEP121. Extended Day students may take CEP201 or an unrestricted elective course.)

Unrestricted Electives: 1 credit 1

TOTAL CREDITS: 60

Note: Students should consult with a counselor and/or faculty advisor in the selection of elective courses to ensure maximum transferability of credits taken.

Microcomputer Systems and Applications Curriculum: AAS Degree

Counseling

New Student Seminar 0

English: 6 credits

Composition I ENG101 3

Writing Through Literature ENG102 3

Humanities: 6 credits

Principles of Multimedia and Web Design HUW161 3

Choose one of the following: 3

Oral Communication HUC101 3

Communication in a Professional Setting HUC108 3

Math, Engineering & Computer Science: 6 credits

Choose one of the following: 3

Mathematics and the Modern World MAT107 3

Elementary Statistics I MAT120 3

Choose one of the following: 3

Introduction to Visual Programming MAC109 3

Topics in CIS MAC160 3

Introduction to Teleprocessing MAC260 3

Social Science: 3 credits

Choose one of the following courses:* 3

Any history course except SSN183, SSN199, SSN240 3

Cultural Anthropology SSA101 3

Introduction to Anthropology SSA100 3

U.S. Power and Politics SSP101 3

Political Ideas and Ideologies SSP250 3

General Psychology SSY101 3

Introduction to Sociology SSS100 3

Introduction to Microeconomics SSE103 3

Introduction to Macroeconomics SSE104 3

Business and Technology: 28 credits

Essential Computer Skills BTO116 2

Word Processing I BTO155 3

Word Processing II BTO156 3

Introduction to Business BTM101 3

Introduction to Computers and Their Applications BTC100 3

Spreadsheet Applications BTC170 2

Database Applications BTC171 3

Presentation Graphics BTC172 3

Integrated Software Systems BTC173 3

Introduction to Desktop Publishing BTC175 3

Cooperative Education: 6 credits

Fundamentals of Professional Advancement CEP121 3

Full-Time Internship CEP201 3

(Both Day and Extended Day students are required to take CEP121. Extended Day students may take CEP201 or an unrestricted elective course.)

Liberal Arts Electives: 5 credits

Any course in Communication Skills; Education and Language Acquisition; English; Human Services; Humanities; Library; Mathematics, Engineering, and Computer Science; Natural Sciences; or Social Science EXCEPT when noted as unrestricted elective in DegreeWorks or College Catalog. See page 176 for these courses. 5

One elective must be an urban study course

TOTAL CREDITS: 60

* For transfer to New York City College of Technology, General Psychology SSY101 is recommended.

Note: Students should consult with a counselor and/or faculty advisor in the selection of elective courses to ensure maximum transferability of credits taken.

New Media Technology Curriculum: AAS Degree

Counseling

New Student Seminar 0

English: 6 credits

Composition I ENC/G101 3

Writing Through Literature ENG102 3

Humanities: 15 credits

Introduction to Design HUA104 3

E-Commerce Technology HUW111 3

Choose either: 9

Design Cluster**

Principles of Multimedia and Web Design HUW161

Web Animation and Interactivity HUW162

Internet Video and DVD Development HUW163

or

Programming Cluster***

Web Programming I HUW166

Web Programming II HUW167

Web Programming III HUW168

Math, Engineering & Computer Science: 3 credits

Elementary Statistics I MAT120 3

Database Concepts and Programming MAC250 3

Introduction to Teleprocessing MAC260 3

New Media Project Lab HUW269 3

Computer Information Systems Elective 3

Social Science: 3 credits

*Choose one of the following courses:** 3

Any history course except SSN183, SSN199, SSN240

Cultural Anthropology SSA101

Introduction to Anthropology SSA100

U.S. Power and Politics SSP101

Political Ideas and Ideologies SSP250

General Psychology SSY101

Introduction to Sociology SSS100

Introduction to Microeconomics SSE103

Introduction to Macroeconomics SSE104

Business and Technology: 6 credits

Introduction to Computers and Their Applications BTC100 3

Introduction to E-Business BTM116 3

Cooperative Education: 6 credits

Fundamentals of Professional Advancement CEP121 3

Full-Time Internship CEP201 3

(Both Day and Extended Day students are required to take CEP121. Extended Day students may take CEP201 or an unrestricted elective course.)

Liberal Arts Electives: 9 credits****

Any course in Communication Skills; Education and Language

Acquisition; English; Human Services; Humanities; Library;

Mathematics, Engineering, and Computer Science; Natural

Sciences; or Social Science EXCEPT when noted as unrestricted

elective in DegreeWorks or College Catalog. See page 176 for

these courses. 5

One elective must be an urban study course

TOTAL CREDITS: 60



* For transfer to New York City College of Technology, General Psychology SSY101 is recommended.

** Students selecting the Web Design cluster should consider additional art courses such as HUA165 or HUA166.

*** Students selecting the Web Programming cluster should consider an additional mathematics course such as MAT200.

**** One elective must be urban study course. See page 178 for these courses.

Note: Students should consult with a counselor and/or faculty advisor in the selection of elective courses to ensure maximum transferability of credits taken.