

Academic Programs - Certificate

The college offers certificate programs to persons who desire to take college courses but who do not wish as extensive a program as those leading to degrees. The selection of college courses is a unique task for each student, since needs, objectives, and tastes differ from one individual to another.

The certificate in special studies may be awarded upon completion of courses listed in the certificates in special studies areas found below. The certificate in individual studies may be awarded upon completion of 30 credit hours which meet half of the liberal arts and science requirements of the Associate in Arts, the Associate in Science, or the Associate in Applied Science degree. Students interested in earning the certificate in special studies or individual studies should consult their faculty advisors to insure the proper selection of courses.

CERTIFICATE PROGRAM:

COMPUTER-AIDED DESIGN & COMPUTER NUMERICAL CONTROL

curriculum code: 1681

Hegis code: 5303

minimum credit hours required: 27-28

This certificate prepares students for entry level manufacturing positions requiring skills in engineering drawing, computer-aided design, and computer numerical control. Students will receive instruction on systems including SolidWorks, AutoCAD, a three-axis machining center and a CNC turret lathe. Upon completion of this certificate, students will be prepared to assume job titles including CAD operator, CAD designer, CNC operator, and CNC programmer.

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| General Certificate Requirements | 10 credit hours |
| Humanities | 3 |
| ENG 1530: English Composition II | |
| Social Sciences Elective | 3 |
| ECO 2610: Macroeconomic Principles is recommended | |
| Mathematics/Sciences Elective | 4 |
| MAT 1220: Applied Mathematics for Technology | |
| Program Core Requirements | 17-18 credit hours |
| MCT 1240: Engineering Drawing with AutoCAD | 3 |
| MCT 1270: Machine Theory and Operations | 3 |
| MCT 1280: CNC/Machine Tools | 3 |
| MCT 1380: Introduction to Solid Modeling | 3 |
| MCT 2380: Advanced Solid Modeling | 3 |
| Program Elective | 2-3 |
| Engineering elective (MCT 1390: AutoCAD is recommended) | |

IMPORTANT POINTS:

- All first time, full-time students are required to take INT 1520: Student Success Seminar.

CERTIFICATE PROGRAM:

DIGITAL AUDIO PRODUCTION

curriculum code: 1781

Hegis code: 5008

minimum credit hours required: 31

The primary goal of the certificate in digital audio production is to provide students a sequence of study that will offer them aesthetic and technical skills vital to the contemporary audio production workplace. The coursework is intended to provide suitable preparation for entry level employment in digital audio production; it also enables people currently employed in the field of audio recording a means to upgrade and expand their skills.

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|--|---------------------------|
| General Certificate Requirements | 9 credit hours |
| Humanities | 3 |
| ENG 1530: English Composition II | 3 |
| Social Sciences Elective | 3 |
| HIS 1540: US History II or PSY 1510: General Psychology are recommended. | 3 |
| Mathematics/Sciences Elective | 3 |
| CSC 1510: Introduction to Computer Science is recommended. | 3 |
| Program Core Requirements | 22-23 credit hours |
| CMM 1750: The Rhetoric of Vision and Sound | 3 |

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| MUS 1570: Music Theory I | 3 |
| MUS 1670: Beginning Piano | 3 |
| MUS 1710: Audio Recording | 3 |
| MUS 1730: Music and the Digital Studio | 3 |
| MUS 2890: Digital/Audio Studio Seminar | 3 |
| One course chosen from the list below | 3 |
| MUS 1510: Introduction to Music | |
| MUS 1590: American Music: Classic Popular | |
| Applied Music Electives | 1-2 |
| MUS 1750-2880: Music Ensemble courses are not required, but are suggested if eventually working toward an associate's degree. | |

IMPORTANT POINTS:

- Students are advised to select program electives after careful consultation with their advisors.

CERTIFICATE PROGRAM:

DIGITAL GRAPHIC DESIGN & PUBLISHING

curriculum code: 1782

Hegis code: 5012

minimum credit hours required: 33

The primary goal of the certificate in digital design and publishing is to provide students a sequence of study that will offer them artistic and technical skills vital to the contemporary media design workplace. The coursework is intended to provide suitable preparation for entry level employment in computer design and publishing; it also enables people currently employed in computer design and publishing a means to upgrade and expand their skills.

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|--|------------------------|
| General Certificate Requirements | 9 credit hours |
| Humanities | 3 |
| ENG 1530: English Composition II | 3 |
| Social Sciences Elective | 3 |
| PSY 1510: General Psychology or HIS 1540: US History II are recommended. | 3 |
| Mathematics/Sciences Elective | 3 |
| CSC 1510: Introduction to Computer Science is recommended. | 3 |
| Program Core Requirements | 24 credit hours |
| ART 1510: Drawing | 3 |
| ART 1530: 2-D Design and Color | 3 |
| ART 1730: Introduction to Computer Art and Design | 3 |
| ART 1740: Graphic Design, Layout and Publishing | 3 |
| ART 1750: Graphic Design Applications | 3 |
| ART 2730: Digital Video/Animation, 3-D and Internet | 3 |
| One course chosen from the list below | 3 |
| ART 1610: Studio Problems - Computer Graphics | |
| ART 2610: Studio Problems - Digital Video/Animation | |
| One course chosen from the list below | 3 |
| ART 1500: Introduction to Art | |
| ART 1550: Survey of Visual Art: Prehistoric through Medieval | |
| ART 1560: Survey of Visual Art: Renaissance through Contemporary | |
| ART 1570: Basic Black and White Photography | |
| ART 2610: Studio Problems | |
| (If Studio Problems course is selected, it must be a course in multimedia or digital video.) | |

IMPORTANT POINTS:

- Students are advised to select program electives after careful consultation with their advisors.

CERTIFICATE PROGRAM: EARLY CHILDHOOD DEVELOPMENT

curriculum code: 0968

Hegis code: 5503

minimum credit hours required: 33-34

This certificate program is designed to enable students to obtain the skills, values, and knowledge necessary to work at entry level positions in early childhood education/child care such as assistants in preschools, Head Start programs, child care centers and family day care homes, and in school-age child care. In addition, the program provides opportunities for those already employed in child care facilities, including family care provider and those holding the Child Development Associate (CDA) credential, to update and refresh their knowledge and skills. The program also provides interested students the opportunity to continue their education beyond the level of a certificate to that of an Associate in Science degree with the added possibility of transferring to a bachelor's level program in early childhood education. This certificate can be used as part of a more complete career ladder in early childhood education and care.

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|---|---------------------------|
| General Certificate Requirements | 6 credit hours |
| Humanities | 3 |
| ENG 1530: English Composition II | 3 |
| Social Sciences Electives | 3 |
| PSY 1510: General Psychology I is recommended | 3 |
| Program Core Requirements | 27-28 credit hours |
| HUS 1210: Introduction to Human Services | 3 |
| HUS 1250: Early Childhood Development | 1 |
| HUS 1260: Health, Safety & Nutrition in Early Childhood Development | 1 |
| HUS 1290: Introduction to Early Childhood Education & Care | 3 |
| HUS 1300: Observation and Guidance of Young Children | 3 |
| HUS 2150: Infant/Toddler Development & Education | 3 |
| HUS 2210: Field Placement I: Foundations of Education Focus* | 4-5 |
| HUS 2440: Children's Literature | 3 |
| HUS 8501: Philosophy and Techniques of Early Childhood Education | 3 |
| PSY 2520: Child Development | 3 |

IMPORTANT POINTS:

- HUS 1250, 1260, and 1300 do not have an ENG 1530 eligibility prerequisite and are, therefore, ideal starting points for the student pursuing a certificate in early childhood development.
- Individuals who have earned the Child Development Associate (CDA) will receive these 10 JCC credits: HUS 1250, HUS 1260, HUS 2210, and HUS 2320.
- Early childhood development certificate courses are designed as a career ladder leading to the associate degree. They therefore change according to changes in New York state education requirements.
- Students must be willing to obtain and pay for any necessary physical or medical examinations or tests, which are required by some internship agencies.
- Enrollment in the program does not guarantee acceptance into field placements in the program.
- Students must complete an application for internship and approval of the application is required for all field placement.
- Some internship agencies require FBI or Child Abuse Registry checks. These processes can be lengthy and may require up to four months in order for approval to be obtained prior to placement.
- Field placement will take place with children in an educational setting.

CERTIFICATE PROGRAM: ELECTRICITY/ELECTRONICS

curriculum code: 2016

Hegis code: 5610

minimum credit hours required: 36

This certificate is designed to provide foundation skills required for workforce personnel whose jobs require knowledge of electricity/electronics. The certificate will provide a "letter of authorization" that indicates to employers that the student has completed fundamental coursework in electricity and electronics. Courses are designed to build and strengthen knowledge of basic electrical/electronic theory and provide the background necessary for troubleshooting and repair. The certificate is designed for students whose careers require fundamental

knowledge of electricity and electronics. It is also designed to be an add-on credential for students whose job involves maintenance, equipment servicing, and repair. It is not recommended for students entering college directly from high school. These students would be strongly advised to enter the A.A.S. digital/computer technology degree program.

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| General Certificate Requirements | 10 credit hours |
| Humanities | 3 |
| ENG 1510: English Composition I (or above) | 3 |
| Social Sciences Electives | 3 |
| Mathematics/Sciences | 4 |
| MAT 1220: Applied Math for Technology | 4 |
| Program Core Requirements | 25 credit hours |
| CSC 1320: Introduction to Electronic Word Processing | 1 |
| CSC 1330: Introduction to Electronic Spreadsheets | 1 |
| DCT 1290: DC Electricity | 4 |
| DCT 1300: AC Electricity | 4 |
| DCT 1330: Devices and Circuits I | 4 |
| DCT 2220: Digital Electronics | 4 |
| DCT 1220: Programmable Logic Controllers | 3 |
| Technical or computer science electives | 4 |
| Liberal Arts and Sciences and/or Career Electives* | 1 credit hour |

IMPORTANT POINTS:

- Due to the prerequisite requirements for some courses, the minimum completion time of this certificate is three semesters (beginning with the fall semester).
- All first time, full-time students are required to take INT 1520: Student Success Seminar.

CERTIFICATE PROGRAM: GENERAL STUDIES

curriculum code: 0986

Hegis code: 5699

minimum credit hours required: 30

The objective of this program is to offer a 30-credit certificate program that provides the student the opportunity to complete concentrated study in a particular field. First time, full-time students are also required to take INT 1520: Student Success Seminar. Students interested in earning the certificate in general studies should consult with their faculty advisors to insure proper selection of courses.

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|--|-----------------------|
| General Certificate Requirements | 9 credit hours |
| Humanities | 3 |
| ENG 1530: English Composition II | 3 |
| Social Sciences Elective | 3 |
| Mathematics/Sciences Elective | 3 |
| Liberal Arts and Sciences and/or Career Electives | 21 |

CERTIFICATE PROGRAM: INDIVIDUAL STUDIES

curriculum code: 0987

Hegis code: 5699

minimum credit hours required: 30

The object of this program is to offer a 30-credit certificate program that provides the student the opportunity to complete concentrated study in a particular area of their choice. First-time, full-time students are also required to take INT 1520: Student Success Seminar. Students interested in earning the certificate in individual studies should consult with their faculty advisors to insure proper selection of courses.

| | |
|--|------------------------|
| General Certificate Requirements | 9 credit hours |
| Humanities | 3 |
| ENG 1530: English Composition II | 3 |
| Social Sciences Elective | 3 |
| Mathematics/Sciences Elective | 3 |
| Liberal Arts and Sciences and/or Career Electives | 21 credit hours |

CERTIFICATE PROGRAM: INFORMATION TECHNOLOGY

curriculum code: 1498

Hegis code: 5101

minimum credit hours required: 34-36

The certificate program in information technology provides the student with strong computer user skills and an understanding of fundamental IT concepts. Students who complete the IT certificate are ready for job responsibilities in areas of information processing and IT support such as help desk assistant, information processing support specialist, or in computer sales. This certificate also affords the student with a good foundation for further academic work in a wide range of computer-related degree programs.

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| General Certificate Requirements | 9-10 credit hours |
| Humanities | 3 |
| ENG 1530: English Composition II | 3 |
| Social Sciences Elective** | 3 |
| Mathematics/Sciences Elective* | 3-4 |
| Program Core Requirements | 16 credit hours |
| CSC 1510: Introduction to Computer Science | 3 |
| CSC 1560: Microcomputer Applications I | 4 |
| CSC 1570: Programming Concepts and Applications | 2 |
| CSC 1580: Microcomputer Hardware and Systems Software | 3 |
| CSC 1590: Computing Fundamentals I | 4 |
| Certificate Concentration | 9-10 credit hours |
| Students must complete one of the following four tracks: | |
| Networking | |
| CSC 2510: Introduction to Networks | 3 |
| CSC 2470: Network Administration | 3 |
| CSC 2480: Advanced Networking & Computer Security | 3 |
| Database | |
| CSC 1760: Microcomputer Applications II | 3 |
| CSC 2540: Introduction to Systems Analysis | 3 |
| CSC 2660: Database Management | 4 |
| Applications/Help Desk | |
| CSC 1680: Introduction to Visual BASIC | 3 |
| CSC 1760: Microcomputer Applications II | 3 |
| CSC 2330: Applications Troubleshooting & Computer User Support | 3 |
| Web | |
| CSC 1530: Web Publishing | 3 |
| CSC 1680: Introduction to Visual BASIC | 3 |
| CSC 2410: Web Programming | 3 |

IMPORTANT POINTS:

- * Mathematics courses are selected based on a student's background. Note that CSC 1590 and CSC 1760 have a corequisite of MAT 1530 or MAT 1590.
- ** PSY 1570: Psychology of the Workplace is a recommended social science elective.
- Due to course prerequisites, it may take more than one year to complete this certificate program.
- All courses required for this degree are available online.

CERTIFICATE PROGRAM: MACHINE TOOL TECHNOLOGY

curriculum code: 2027

Hegis code: 5312

minimum credit hours required: 30

This program is designed to provide foundation skills necessary for workforce personnel whose jobs require knowledge of machine tools. It will provide a credential that indicates to employers that the student has completed fundamental coursework in machine tools. Students will become proficient in the operation of basic machine tools such as lathes, milling machines, grinders, drill presses and precision measurement equipment. Basic courses are designed to build and strengthen knowledge of machine tool theory. Courses in solid modeling and CNC programming are included to provide an introduction to two specific areas that are important for overall understanding of the field. Students will also develop skills in basic mathematics and writing appropriate to a machinist position.

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| General Degree Requirements | 10 credit hours |
| Humanities | 3 |
| ENG 1510: English Composition I (or above) | 3 |

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| Social Science Electives | 3 |
| Mathematics/Sciences | 4 |
| MAT 1220: Applied Math for Technology | 4 |
| Program Core Requirements | 20 credit hours |
| CSC 1330: Introduction to Electronic Spreadsheets | 1 |
| MCT 1240: Engineering Drawing w/AutoCAD | 3 |
| MCT 1270: Machine Theory and Operation | 3 |
| MCT 1280: CNC Manual Programming of Machine Tools | 3 |
| MCT 1300: Machine Tool Technology II | 4 |
| MCT 1340: Manufacturing Drawings and GD&T | 3 |
| MCT 1380: Introduction to Solid Modeling | 3 |

CERTIFICATE PROGRAM: MEDICAL OFFICE TECHNOLOGY

curriculum code: 1665

Hegis code: 5214

minimum credit hours required: 31

This program is designed to provide students with the specialized skills necessary to prepare them for employment in a medical office and to develop students' office skills along with specialization directed toward medical terminology, medical insurance and medical office procedures. The program may also offer short-term training to those seeking to increase their marketability or seeking a career change. The certificate provides students with the basic core of work and problem-solving abilities and constitutes the first half of the associate degree in medical office technology.

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| General Certificate Requirements | 12 credit hours |
| Humanities | 6 |
| ENG 1530: English Composition II | 3 |
| ENG 1560: English for Careers | 3 |
| Mathematics/Sciences | 3 |
| MAT 1230: Mathematics of Business | 3 |
| Social Sciences Elective | 3 |
| Program Core Requirements | 13 credit hours |
| BUS 1220: College Keyboarding | 3 |
| BUS 1320: Word Processing | 3 |
| BUS 1410: Accounting Fundamentals | 3 |
| CSC 1560: Microcomputer Applications I | 4 |
| Certificate Specialization | 6 credit hours |
| MOT 1410: Medical Terminology | 3 |
| MOT 1420: Medical Office Procedures | 3 |

CERTIFICATE PROGRAM: MULTIMEDIA PRODUCTION

curriculum code: 1785

Hegis code: 5012

minimum credit hours required: 33

The primary goal of the certificate in multimedia production is to provide students a sequence of study that will offer them artistic and technical skills vital to the contemporary media design workplace. The coursework is intended to provide suitable preparation for entry level employment in multimedia design and production, one of the most rapidly growing employment areas in the country. It also enables individuals currently employed in multimedia design and production a means to upgrade and expand their skills.

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|---|------------------------|
| General Certificate Requirements | 9 credit hours |
| Humanities | 3 |
| ENG 1530: English Composition II | 3 |
| Social Sciences Elective | 3 |
| HIS 1540: US History II or PSY 1510: General Psychology are recommended. | |
| Mathematics/Sciences Elective | 3 |
| CSC 1510: Introduction to Computer Science is recommended. | |
| Program Core Requirements* | 24 credit hours |
| ART 1730: Introduction to Computer Art and Design | 3 |
| ART 2730: Animation, Video, 3D, and Internet | 3 |
| ART 2610: Studio Problems | 3 |
| (If Studio Problems course is selected, it must be in Multimedia or Digital Video.) | |

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| CMM 1710: Video Field Production | 3 |
| CMM 1750: The Rhetoric of Vision and Sound | 3 |
| CMM 2530: Writing for Electronic Media | 3 |
| MUS 1730: Music and the Digital Studio | 3 |
| One course chosen from the list below: | 3 |
| <i>(If Studio Problems course is selected, it must be in Multimedia or Digital Video.)</i> | |
| ART 1530: 2-D Design and Color | |
| ART 1750: Graphic Design Applications | |
| ART 1610: Studio Problems | |
| ART 2610: Studio Problems | |

IMPORTANT POINTS:

* Students are advised to select program core electives after careful consultation with their advisors.

CERTIFICATE PROGRAM:

NETWORK ADMINISTRATION

curriculum code: 1507

Hegis code: 5103

minimum credit hours required: 35

The certificate program in network administration is one of four specialized certificates designed primarily as a focused concentration for students earning a degree in computer science, computer technology, information technology, or computer information systems, but may also be obtained independent of these degrees. Any of these certificates are also an excellent complement to a degree in business administration or communication and media arts. These certificate programs are built around a common set of core competencies and provide specialization through a minimum number of additional courses. Once the general education and core competency requirements are satisfied, students may earn additional certificates by taking only the specialization courses for the certificate of choice. Graduates of the certificate program in network administration are able to maintain the operation of a local area network (LAN), administer user accounts, implement and support LAN resources, monitor and track LAN activity, design network configuration modifications, maintain LAN documentation, optimize LAN performance, resolve LAN hardware and software issues, and integrate a LAN into business processes for enhanced operations.

| | |
|---|------------------------|
| General Certificate Requirements | 9 credit hours |
| Humanities | 3 |
| ENG 1530: English Composition II | 3 |
| Social Sciences Elective | 3 |
| Mathematics/Sciences Elective | 3 |
| MAT 1540: Elementary Statistics | 3 |
| Program Core Requirements | 17 credit hours |
| BUS 1500: Introduction to Business | 3 |
| CSC 1510: Introduction to Computer Science | 3 |
| CSC 1570: Programming Concepts and Applications | 2 |
| CSC 1580: Microcomputer Hardware and Systems Software | 3 |
| CSC 2480: Advanced Networking and Computer Security | 3 |
| CSC 2510: Introduction to Networks | 3 |
| Certificate Specialization | 9 credit hours |
| CSC 2470: Network Administration | 3 |
| CSC 2540: Introduction to Systems Analysis | 3 |
| BUS 2570: Principles of Management | |
| or BUS 2580: Management and Organizational Behavior | 3 |

Suggested first semester

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| BUS 1500: Introduction to Business | 3 |
| CSC 1510: Introduction to Computer Science | 3 |
| CSC 1570: Programming Concepts and Applications | 2 |
| ENG 1530: English Composition II | 3 |
| INT 1520: Student Success Seminar | 1 |
| MAT 1540: Elementary Statistics | 3 |
| Total | 15 |

IMPORTANT POINTS:

- Note that MAT 1530 or MAT 1590 is a corequisite to CSC 1590.
- Due to course prerequisites, it may take more than one year to complete this certificate program.

CERTIFICATE PROGRAM:

OFFICE TECHNOLOGY

curriculum code: 0981

Hegis code: 5005

minimum credit hours required: 31

The office technology certificate is a 31-credit hour program designed to provide the student with skills necessary to prepare for immediate employment in an office position. Training is available for those who have had no office preparation and for students with limited office skills who desire to enhance or update present skills. The program may also offer short-term training and development to those who may be seeking a career change or return to the job market. The ability to solve problems will be stressed throughout the certificate program. This certification provides a basic core of work which may be applied toward the associate degree requirements. Students often combine this certificate with two-year associate degree programs from other areas. The combination enhances employment opportunities.

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|---|------------------------|
| General Certificate Requirements | 12 credit hours |
| Humanities | 6 |
| ENG 1530: English Composition II | 3 |
| ENG 1560: English for Careers | 3 |
| Social Sciences Elective | 3 |
| Mathematics/Sciences | 3 |
| MAT 1230: Mathematics of Business | 3 |
| Program Core Requirements | 19 credit hours |
| CSC 1560: Microcomputer Applications I | 4 |
| BUS 1220: College Keyboarding | 3 |
| BUS 1320: Word Processing | 3 |
| BUS 1410: Accounting Fundamentals | 3 |
| BUS 1420: Office Procedures | 3 |
| BUS 1500: Introduction to Business | 3 |

CERTIFICATE PROGRAM:

PSYCHOLOGY OF THE WORKPLACE

curriculum code: 1368

Hegis code: 5699

minimum credit hours required: 31

The Psychology of the Workplace certificate is a 31-credit hour program designed to expose the student to applied findings from the field of psychology in order to prepare them for positions in human resources, personnel, management and supervision. In addition, the program will provide the student with interpersonal skills which will help them to be more successful in the workplace. The program may be taken by individuals currently employed in organizations who seek to upgrade their skills. In addition, students can give themselves a competitive edge in today's job market by combining this certificate with a two-year associate's degree from other areas.

| | |
|--|------------------------|
| General Certificate Requirements | 9 credit hours |
| Humanities | 3 |
| ENG 1530: English Composition II | 3 |
| Social Sciences | 3 |
| PSY 1510: General Psychology I | 3 |
| Mathematics/Sciences Elective | 3 |
| Program Core Requirements | 13 credit hours |
| HUM 1650: Leadership Development | 3 |
| PSY 1570: Psychology of the Workplace | 3 |
| PSY 2070: Applied Project in Workplace Psychology | 1 |
| PSY 2530: Social Psychology | 3 |
| PSY 2540: Interpersonal Relations and Group Dynamics | 3 |
| Program Electives: (choose 3) | 9 credit hours |
| BUS 2580: Management and Organizational Behavior | 3 |
| BUS 2630: Human Resource Management | 3 |
| CMM 2500: Interpersonal Communications | 3 |
| PSY 1550: Stress and Coping | 3 |
| SOC 2580: Minorities in American Society | 3 |

IMPORTANT POINTS:

- Additional elective options may be selected in consultation with an advisor.
- All courses required for this degree are available online.

**CERTIFICATE PROGRAM:
SPECIAL STUDIES**

curriculum code: 0038

Hegis code: 5699

minimum credit hours required: 30

The objective of this program is to offer a 30-credit certificate program that provides the student the opportunity to complete concentrated study in a field predetermined by the college. Students interested in earning the certificate in special studies should consult with their faculty advisors to insure proper selection of courses.

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|--|--------------------------------|
| General Certificate Requirements | 9 credit hours |
| Humanities | 3 |
| ENG 1530: English Composition II | 3 |
| Social Sciences Elective | 3 |
| Mathematics/Sciences Elective | 3 |
| Liberal Arts & Sciences and/or Career Electives | 21 or more credit hours |

IMPORTANT POINTS:

- These courses are in a concentrated study in a particular area.
- All first time, full-time students are required to take INT 1520: Student Success Seminar.

**CERTIFICATE PROGRAM:
WEB DESIGN**

curriculum code: 1846

Hegis code: 5104

minimum credit hours required: 34-35

The web design certificate program helps meet the growing demand by industry for people knowledgeable about web page design and Internet related issues. It provides the student with a strong base in computer technology complemented by an understanding of design principles. Students who successfully complete the web design certificate meet entry level requirements for employment as a web designer or website support specialist.

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|--|-------------------------|
| General Certificate Requirements | 6-7 credit hours |
| Humanities | 3 |
| ENG 1530: English Composition II | 3 |
| Mathematics/Sciences | 3 |
| MAT 1590: College Algebra and Trigonometry or higher | 3-4 |
| Program Core Requirements | 28 credit hours |
| ART 1730: Introduction to Computer Art & Design | 3 |
| ART 2730: Web Design and Animation | 3 |
| CSC 1530: Web Publishing | 3 |
| CSC 1570: Programming Concepts and Applications | 2 |
| CSC 1590: Computing Fundamentals I | 4 |
| CSC 1630: Web Technologies | 3 |
| CSC 1680: Introduction to Visual BASIC | 3 |
| CSC 2410: Web Programming | 3 |
| CSC 2660: Database Management | 4 |

IMPORTANT POINTS:

- Due to prerequisite courses, this program will take more than two semesters to complete.
- CSC 1630 provides an overview of Macromedia Suite (Dreamweaver, Flash, and Fireworks). The prerequisite to CSC 1630 is CSC 1530.

**CERTIFICATE PROGRAM:
WELDING TECHNOLOGY**

curriculum code: 1922

Hegis code: 5308

minimum credit hours required: 32

The welding technology certificate is for students desiring employment in the expanding field of welding and welding technology engineering. Students will have the opportunity to pursue careers such as welding technician, welding supervisor, inspector, and sales engineer, qualifying for technician level positions involved in testing and improving welding processes, procedures, and equipment.

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|---|------------------------|
| General Certificate Requirements | 11 credit hours |
| Humanities | 3 |
| ENG 1510: English Composition I (or above) | 3 |
| Social Science Elective | 3 |
| Mathematics/Sciences | 5 |
| CSC 1320: Introduction to Word Processing* | 1 |
| MAT 1220: Applied Mathematics for Technology**✓ | 4 |
| Program Core Requirements | 21 credit hours |
| WLD 1200: Safety and Cutting Processes | 3 |
| WLD 1350: Shielded Metal Arc Welding | 3 |
| WLD 1360: Gas Metal Arc Welding | 3 |
| WLD 1370: Gas Tungsten Arc Welding | 3 |
| WLD 2250: Advanced SMAW | 3 |
| WLD 2260: Advanced GMAW | 3 |
| WLD 2270: Advanced GTAW | 3 |

IMPORTANT POINTS:

- * CSC 1310-1330 are five-week courses that represent a time commitment of 15 weeks equivalent to a full three-credit hour course.
- ** MAT 1220 has a prerequisite of MAT 0600 or two years of high school algebra/geometry and placement exam.
- ✓ With the appropriate mathematical background students may elect to take MAT 1600 and/or MAT 1710.
- To complete the program in two years, students must begin in a fall semester at the appropriate levels of math.