

Students must choose a minimum of three (3) credit hours from the list of approved humanities courses listed at the end of this section of the catalog.

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Students must choose a minimum (3) credit hours from the list of approved behavioral and social sciences courses listed at the end of this section of the catalog.

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Total Credit Hours 67

Geospatial Technology Certificates (C40220)

Geospatial Technology Certificate - Geographic Information Science (C40220-C1)

Major and Related Course Requirements

	Class	Lab	Hours Clinical	Work Exper.	Credits
GIS 111 Introduction to GIS	2	2	0	0	3
GIS 120 Introduction to Geodesy	2	2	0	0	3
GIS 121 Georeferencing and Mapping	2	2	0	0	3
GIS 240 Air Photo Interpretation	2	2	0	0	3
GIS 125 CAD for GIS	2	2	0	0	3
Total Credit Hours					15

Geospatial Technology Certificate - Advanced Geospatial Specialist (C40220-C2)

Major and Related Course Requirements

	Class	Lab	Hours Clinical	Work Exper.	Credits
GIS 111 Introduction to GIS	2	2	0	0	3
GIS 121 Georeferencing and Mapping Skills	2	2	0	0	3

Students must select a minimum of 2 courses from the following list of courses:

GIS 240 Air Photo Interpretation	2	2	0	0	3
GIS 215 GIS Data Models	2	2	0	0	3
GIS 230 GIS Data Creation	2	2	0	0	3
GIS 232 Spatial Databases	2	2	0	0	3
GIS 252 Utilities in GIS	2	2	0	0	3
GIS 231 GPS Methods	1	4	0	0	3
GIS 249 Remote Sensing	2	2	0	0	3
GIS 225 Advanced Methods in GIS	2	2	0	0	3
GIS 241 Cartographic Production	2	2	0	0	3
GIS 235 Raster GIS	2	2	0	0	3
GIS 222 Internet Mapping	2	2	0	0	3
GIS 246 Principles of Property Mapping	2	2	0	0	3
GIS 259 Photogrammetry	2	2	0	0	3
Total Credit Hours					12

Geospatial Technology Certificate - Database Specialist (C40220-C3)

Major and Related Course Requirements

	Class	Lab	Hours Clinical	Work Exper.	Credits
GIS 111 Introduction to GIS	2	2	0	0	3
GIS 121 Georeferencing & Mapping	2	2	0	0	3
DBA 110 Database Concepts	2	2	0	0	3
DBA 115 Database Applications	2	2	0	0	3
DBA 112 Database Utilization	2	2	0	0	3
Total Credit Hours					15

Geospatial Technology Certificate - Programming Specialist (C40220-C4)

Major and Related Course Requirements

	Class	Lab	Hours Clinical	Work Exper.	Credits
GIS 111 Introduction to GIS	2	2	0	0	3
GIS 121 Georeferencing & Mapping	2	2	0	0	3

Students must select a minimum of 2 courses from the following pairs of courses:

CSC 134 C++ Programming	2	3	0	0	3
CSC 234 Advanced C++ Programming	2	3	0	0	3
OR					
CSC 139 Visual Basic Programming	2	3	0	0	3
CSC 239 Advanced Visual Basic Programming	2	3	0	0	3
OR					
GIS 262 GIS Programming Trends	2	2	0	0	3
GIS 261 Programming in GIS	2	2	0	0	3
Total Credit Hours					12

Geospatial Technology Certificate - Geodetic Specialist (C40220-C5)

Major and Related Course Requirements

	Class	Lab	Hours Clinical	Work Exper.	Credits
GIS 111 Introduction to GIS	2	2	0	0	3
GIS 112 Introduction to GPS	2	2	0	0	3
SRV 111 Surveying II	2	6	0	0	4
GIS 231 GPS Methods	1	4	0	0	3
OR					
SRV 250 Advanced Surveying	2	6	0	0	4
Total Credit Hours					13-14

Geospatial Technology Certificate - Photogrammetry Specialist (C40220-C6)

Major and Related Course Requirements

	Class	Lab	Hours Clinical	Work Exper.	Credits
GIS 121 Georeferencing & Mapping	2	2	0	0	3
GIS 240 Air Photo Interpretation	2	2	0	0	3
GIS 249 Remote Sensing	2	2	0	0	3
GIS 259 Photogrammetry	2	2	0	0	3
Total Credit Hours					12

Geospatial Technology Certificate - Cartography Specialist (C40220-C7)

Major and Related Course Requirements

	Class	Lab	Hours Clinical	Work Exper.	Credits
GIS 111 Introduction to GIS	2	2	0	0	3
GIS 121 Georeferencing & Mapping	2	2	0	0	3
GIS 232 Spatial Databases	2	2	0	0	3
GIS 222 Internet Mapping	2	2	0	0	3
Total Credit Hours					12

Geospatial Technology Certificate - Utilities Specialist (C40220-C8)

Major and Related Course Requirements

	Class	Lab	Hours Clinical	Work Exper.	Credits
GIS 111 Introduction to GIS	2	2	0	0	3
GIS 121 Georeferencing & Mapping	2	2	0	0	3
GIS 252 Utilities in GIS	2	2	0	0	3
GIS 112 Introduction to GPS	2	2	0	0	3
OR					
GIS 231 GPS Methods	1	4	0	0	3
Total Credit Hours					12

Geospatial Technology Certificate with a Specialization in Land Records Specialist (C40220-C9)

Major and Related Course Requirements

	Class	Lab	Hours Clinical	Work Exper.	Credits
GIS 111 Introduction to GIS	2	2	0	0	3
GIS 121 Georeferencing & Mapping	2	2	0	0	3
GIS 246 Principles of Property Mapping	2	2	0	0	3
SRV 220 Surveying Law	2	2	0	0	3
Total Credit Hours					12

Graphic Arts and Imaging Technology (A30180)

The Graphics Arts and Imaging Technology curriculum is designed to provide students with knowledge and skills necessary for employment in the printing, publishing, packaging, and related industries.

Students will receive hands-on training in computer publishing, imaging technology, offset lithography, screen printing, flexography, and emerging printing technologies.

Graduates should qualify for career opportunities within the printing, publishing, and packaging industries.

Degree Awarded

The Associate in Applied Science Degree-Graphic Arts and Imaging Technology is awarded by the College upon completion of this program.

Admissions

- A high school diploma or equivalent is required.
- Submit high school transcripts as well as any college transcripts.
- Placement testing in English, mathematics, and reading is required to qualify for ENG 111 and MAT 115. Scores on placement tests may require students to take specified Developmental Studies courses. If required, completion of these courses is necessary prior to program admission. Students may, with approval of program chair, take no more than two preadmission courses during their first semester of program admission.
- Students must demonstrate proficiency in microcomputer operations equivalent to or higher than CIS 110 before admission.
- Many courses have prerequisites or corequisites; check the Course Descriptions section for details.

Notes: Students must furnish required hand tools for program. A list of these items can be obtained from the program chair or instructors.

Contact Information

The Graphic Arts and Imaging Technology program is in the Technical Careers Division. For more information, call 704.330.4425 or 704.330.4427. See Graphic Arts and Imaging Technology Program instructors or program counselors for suggested sequence.

Major and Related Course Requirements

	Class	Lab	Hours Clinical	Work Exper.	Credits
GRA 121 Graphic Arts I	2	4	0	0	4
GRA 151 Computer Graphics I	1	3	0	0	2
GRA 152 Computer Graphics II	1	3	0	0	2
GRA 221 Graphic Arts II	2	4	0	0	4
GRA 255 Image Manipulation I	1	3	0	0	2

GRA 256 Image Manipulation II	1	3	0	0	2
GRD 141 Graphic Design I	2	4	0	0	4
Select 9 SHC from the following:					
PRN 155 Screen Printing I	1	3	0	0	2
PRN 140 Bindery and Finish	1	2	0	0	3
PRN 240 Print Estimating/Planning	3	0	0	0	3
PRN 131 Flexography I	2	4	0	0	4
PRN 156 Screen Printing II	1	3	0	0	2
PRN 221 Offset Press Operations	1	4	0	0	4

Electives (Select twenty (20) hours from the following courses)

COE 112 Co-op Work Experience I	0	0	0	20	2
GRA 245 Printing Sales/Service	3	0	0	0	3
GRA 252 Imaging Techniques	1	4	0	0	3
GRA 280 Printing Management	2	0	0	0	2
GRA 222 Graphic Arts III	2	4	0	0	4
GRA 153 Computer Graphics III	1	3	0	0	2
GRA 154 Computer Graphics IV	1	3	0	0	2
COE 132L Co-op III	0	0	0	20	2
GRA 110 Graphic Arts Orientation	2	0	0	0	2
GRA 230 Substrates and Ink	2	0	0	0	2
GRA 140 Graphic Arts Imaging	1	2	0	0	2

*Students planning to transfer should consult advisor.

Required General Education Courses:

ENG 111 Expository Writing	3	0	0	0	3
AND					
ENG 113 Literature-Based Research	3	0	0	0	3
OR					
ENG 114 Professional Research & Reporting	3	0	0	0	3

Select one (1) COM course from the following:

COM 110 Introduction to Communication	3	0	0	0	3
COM 231 Public Speaking	3	0	0	0	3
COM 233 Persuasive Speaking	3	0	0	0	3

Take the following:

MAT 115 Mathematical Models	2	2	0	0	3
OR a higher Math					
PSY 150 General Psychology (or students may choose three (3) credit hours from the list of approved behavioral and social sciences courses listed at the end of this section of the catalog	3	0	0	0	3
ART 111 Art Appreciation (or students may choose three (3) credit hours from the list of approved humanities courses listed at the end of this section of the catalog	3	0	0	0	3

Total Credit Hours 67

Graphic Arts and Imaging Technology Certificates (C30180)

Graphic Arts & Imaging Technology Certificate with a Specialization in Offset Press Technician (C30180-C7)

Major and Related Course Requirements

	Class	Lab	Hours Clinical	Work Exper.	Credits
GRA 121 Graphic Arts I	2	4	0	0	4
GRA 221 Graphic Arts II	2	4	0	0	4
GRA 230 Substrates and Ink	2	0	0	0	2
PRN 221 Offset Press Operations	1	4	0	0	3
MAT 115 Math Models	2	2	0	0	3
COE 112L Co-Op Work Experience	0	0	0	20	2
Total Credit Hours					18