



Course Number and Title: GIS 260 Geospatial Projects

Campus Location:

Stanton

Effective Date:

2018-51

Prerequisite:

ENG 102, GIS 210, GIS 220, GIS 230, MAT 255

Co-Requisites:

None

Course Credits and Hours:

4.00 credits

3.00 lecture hours/week

3.00 lab hours/week

Course Description:

In this capstone project-based course, students compile, analyze, and present geospatial data while emphasizing the value of visual communication.

Required Text(s):

Obtain current textbook information by viewing the [campus bookstore - https://www.dtcc.edu/bookstores](https://www.dtcc.edu/bookstores) online or visit a campus bookstore. Check your course schedule for the course number and section.

Additional Materials:

None

Schedule Type:

Classroom Course

Disclaimer:

None

Core Course Performance Objectives (CCPOs):

1. Describe the role of a geographic information system (GIS) within an organization. (CCC 1, 3, 4; PGC 1, 3, 6, 7, 8)
2. Develop a comprehensive geospatial project plan. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 3, 4, 5, 6, 7, 8)
3. Generate, evaluate, and implement a solution to a geospatial problem. (CCC 2, 4, 5, 6; PGC 1, 3, 4, 5, 6, 7, 8)
4. Summarize data and project results in a meaningful format. (CCC 1, 2, 4, 5, 6; PGC 2, 3, 4, 5, 6, 7, 8)
5. Demonstrate professional and ethical conduct as expected in industry. (CCC 3, 4; PGC 2, 7, 8)

See Core Curriculum Competencies and Program Graduate Competencies at the end of the syllabus. CCPOs are linked to every competency they develop.

Measurable Performance Objectives (MPOs):

Upon completion of this course, the student will:

1. Describe the role of a geographic information system (GIS) within an organization.
 1. Describe the differences among a project, a program, and a product.
 2. Explain organizational systems, structures, and boundaries and the roles of users, sponsors, and stakeholders within and outside of an organization.
 3. Identify project constraints within an organizational structure.
 4. Discuss the relationship between GIS projects and an organization's strategic plan.
2. Develop a comprehensive geospatial project plan.
 1. Explain the GIS project lifecycle.
 2. Describe what a project plan is and how it is developed.
 3. Discuss methods of GIS project planning.
 4. Describe the project procurement process, including statements of work and requests for proposals.
 5. Outline the objectives and deliverables for a geospatial project.
 6. Devise a project plan, including scope, workflow planning, cost management, quality control, risk, and implementation.
3. Generate, evaluate, and implement a solution to a geospatial problem.
 1. Describe the design process, including needs assessment, concept development, planning, prototyping, and evaluation.
 2. Use the design process to model an appropriate approach to solve a geospatial problem.
 3. Develop an appropriate geospatial solution.
 4. Evaluate the functionality of a geospatial solution.
4. Summarize project data and results in a meaningful format.
 1. Interpret project data and results properly.
 2. Design professional, quality maps that illustrate appropriate data visualization and cartographic design principles.
 3. Write a meaningful project summary report.
5. Demonstrate professional and ethical conduct as expected in industry.
 1. Identify the need for self-discipline and time management in technical industries.
 2. Identify standard professional organizations, such as Urban and Regional Information Systems Association (URISA), American Society for Photogrammetry and Remote Sensing (ASPRS), Geospatial Information and Technology Association (GITA), and United States Geospatial Intelligence Foundation (USGIF).
 3. Communicate and function effectively as a member of a team.
 4. Apply professional and ethical responsibilities under the GIS Certification Institute's Code of Ethics and Rules of Conduct.

Evaluation Criteria/Policies:

Students must demonstrate proficiency on all CCPOs at a minimal 75 percent level to successfully complete the course. The grade will be determined using the Delaware Tech grading system:

92	-	100	=	A
83	-	91	=	B
75	-	82	=	C
0	-	74	=	F

Students should refer to the [Student Handbook - https://www.dtcc.edu/handbook](https://www.dtcc.edu/handbook) for information on the Academic Standing Policy, the Academic Integrity Policy, Student Rights and Responsibilities, and other policies relevant to their academic progress.

Core Curriculum Competencies (CCCs are the competencies every graduate will develop):

1. Apply clear and effective communication skills.
2. Use critical thinking to solve problems.
3. Collaborate to achieve a common goal.
4. Demonstrate professional and ethical conduct.
5. Use information literacy for effective vocational and/or academic research.
6. Apply quantitative reasoning and/or scientific inquiry to solve practical problems.

Program Graduate Competencies (PGCs are the competencies every graduate will develop specific to his or her major):

1. Apply knowledge, techniques and skills of geography and geospatial technologies such as geographic information systems (GIS), Global Navigation Satellite System (GNSS), and remote sensing (RS).
2. Employ cartographic design principles to develop effective visual representations of geospatial data, including maps, graphs and diagrams.
3. Design and implement GIS systems using common geospatial software and hardware to acquire, store, manage, analyze and visualize spatial data for a variety of disciplines.
4. Utilize geospatial techniques and common analytical methods to solve problems.
5. Evaluate and employ effective data management and database design techniques.
6. Apply fundamental concepts of programming, application development, geospatial information technology and related technologies.
7. Integrate a commitment to address professional and ethical responsibilities, including a respect for accuracy standards and diversity.
8. Recognize the need for and an ability to engage in self-directed continuing professional development.

Disabilities Support Statement:

The College is committed to providing reasonable accommodations for students with disabilities. Students are encouraged to schedule an appointment with the campus Disabilities Support Counselor to request an accommodation needed due to a disability. A listing of campus Disabilities Support Counselors and contact information can be found at the [disabilities services - https://www.dtcc.edu/disabilitysupport](https://www.dtcc.edu/disabilitysupport) web page or visit the campus Advising Center.