

Bossier Parish Community College
Master Syllabus

Course Prefix and Number: ENGR 270

Credit Hours: 3-3-0

Course Title: GIS in Engineering

Course Prerequisites: None

Textbook: None

Course Description: GIS in Engineering is an introductory geographic information system (GIS) course. This course will provide professional training on the computer based solution involving the collection, synthesis, analysis and communication of spatially related information within an area. Students will learn its widespread usage in local, state and federal governments. It provides students with knowledge on how to add intelligence to the computer-aided drawing (CAD) maps. This course will expose students to various planning and engineering tasks, including site analysis, water quality analysis, underground services, and soil analysis.

Learning Outcomes:

At the end of this course, the student will:

- A. design and implement of web-based GIS applications;
- B. understand various engineering firms and organizations can benefit from a GIS;
- C. understand key concepts in GIS map creation;
- D. understand data formats and how to effectively organize data in a GIS database; and
- E. use GIS to solve engineering problems related to data and spatial zones.

To achieve the learning outcomes, the students will or will be able to:

(The letter designations at the end of each statement refer to the learning outcome(s).)

1. develop technical skills and training necessary for use GIS for various engineering applications (A, B, C, D, E);
2. work on practical and hands-on projects involved planning/zoning, water utilities, environmental analysis (A, B, C, D, E);
3. design, organize, give, and evaluate oral communications (A, B, C, D, E); and
4. apply engineering knowledge to analyze and solve real life spatial problems with query and analysis (A, B, C, D, E).

Course Requirements:

1. Complete assigned homework and in-class exercises in problem solving and analysis.
2. Complete mid-term and final exams.

Course Grading Scale:

- 90 – 100 = A
80 – 89 = B
70 – 79 = C
60 – 69 = D
0 – 59 = F

Attendance Policy: The college attendance policy is available at <http://www.bpcc.edu/catalog/current/academicpolicies.html>

Course Fees: N/A

Nondiscrimination Statement: Bossier Parish Community College does not discriminate on the basis of race, color, national origin, gender, age, religion, qualified disability, marital status, veteran's status, or sexual orientation in admission to its programs, services, or activities, in access to them, in treatment of individuals, or in any aspect of its operations. Bossier Parish Community College does not discriminate in its hiring or employment practices.

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