

COURSE CODE: GIE-475
COURSE NAME: GEOSPATIAL PROJECT MANAGEMENT
CREDIT HOURS: Theory = 02
 Practical = 00
 Total = 02
CONTACT HOURS: Theory = 32
 Practical = 00
 Total = 32
PREREQUISITES: Nil

MODE OF TEACHING:

Instruction: Two hours of lecture per week 100%

COURSE DESCRIPTION:

This course takes a systematic approach to explore the management issues and methods necessary for developing a successful geospatial project.

COURSE OBJECTIVES:

This course targets the development of skills and concepts related to the geodetic parameters behind any GIS project. This course would also remove some of the mystery surrounding the subject and to show its clear link to the other Geo-Science disciplines.

RELEVANT PROGRAM LEARNING OUTCOMES (PLOs):

The course is designed so that students achieve following PLOs:

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|---|----------------------------------|-------------------------------------|----|---|-------------------------------------|
| 1 | Engineering Knowledge: | <input type="checkbox"/> | 7 | Ethics: | <input type="checkbox"/> |
| 2 | Problem Analysis: | <input type="checkbox"/> | 8 | Individual and Collaborative Team Work: | <input type="checkbox"/> |
| 3 | Design/Development of Solutions: | <input type="checkbox"/> | 9 | Communication: | <input type="checkbox"/> |
| 4 | Investigation: | <input type="checkbox"/> | 10 | Project Management: | <input checked="" type="checkbox"/> |
| 5 | Tool Usage: | <input checked="" type="checkbox"/> | 11 | Lifelong Learning: | <input type="checkbox"/> |
| 6 | The Engineer and Society: | <input type="checkbox"/> | | | |

COURSE LEARNING OUTCOMES (CLOs):

Upon successful completion of the course, students will be able to:

S.No	CLO	Domain	Taxonomy Level	PLO
1	Understand managerial skills and techniques suitable for successful geospatial projects.	Cognitive	2	10
2	Utilize project plans demonstrating management knowledge of geospatial projects using planning software.	Cognitive	3	5
3	Adopt managerial skills effectively to communicate and manage project resources and cost	Affective	3	10

PRACTICAL APPLICATIONS:

This course will enable student to understand the basics and modern geodesy along with map projections and their usage in surveying and Geoinformatics engineering through usage of modern tools and techniques.

TOPICS COVERED:**Theory:**

Week	Topics
1	Introduction to Geospatial Program Development
2	Role of planning and management in developing a successful geospatial technology-based projects
3	Governance and Coordination
4	Role of planning and development, organizational structures, leadership and governance, and communications in successful geospatial projects
5	Role of project leadership, team building, capacity building (including opportunities for geospatial certification)
6-7	Multi-organizational agreements (i.e., collaborations) in contributing to successful geospatial programs
8	The financial aspects, such as funding, financial management, monitoring, and reporting
9	Risk management that contributes to successful geospatial programs and the completion of projects on time and on budget
10	Legal issues influence the geospatial sector
11	Ethical issues influence the geospatial sector
12	Role of technical design (system configuration, data, applications) and the development/maintenance of these technical components in contributing to successful geospatial programs
13	Role of the operational environment in helping to shape and sustain successful geospatial programs
14	Modern tools and technologies in practice for successful geospatial project management
15	Current and emerging trends, including the consequences of choosing proprietary vs. open-source software solutions
16	Modern Case Studies
17-18	ESE

TEXT AND MATERIAL:**Textbook (s):**

- a. Croswell, Peter L. 2011. The GIS Management Handbook. Des Plaines, IL, Kessey Dewitt Publications in association with URISA

References Material:

- a. Obermeyer, Nancy J. and Pinto, Jeffrey K. 2008. Managing Geographic Information Systems (Second Edition). New York, The Gilford Press
- b. Tomlinson, Roger 2013. Thinking about GIS: Geographic Information System Planning for Managers (Fifth Edition). Redlands, CA, Esri Press
- c. Hanebuth, Austin Smith 2015. Applications in Geospatial Project Management Student Manual. Digital Quest Incorporated
- d. Harder, Ormsby, and Balstrøm 2013. Understanding GIS: An ArcGIS Project Workbook. Esri Press

ASSESSMENT SYSTEM:

1. CLOs Assessment

Cognitive	Psychomotor	Affective
Spreadsheet	-	Rubrics

2. Relative Grading

Theoretical/Instruction			100%
	Assignments	10%	
	Quizzes	10%	
	Mid Semester Exam	30%	
	End Semester Exam	50%	
Total			100%