

**Fond du Lac Tribal and Community College
COURSE OUTLINE FORM**

01/21/16

Please return this form to the college vice president of academic affairs and the chairperson of the Academic Affairs and Standards Council (AASC)

1. Prepared by: _____

2. Date submitted: _____

3. Date approved: _____ Date revised 11/30/17

4. Department/discipline: Geography

5. Department(s) endorsement(s): _____

(Signatures of the person(s) providing the endorsement are required.)

6. Course Title: GIS Applications

Abbreviated course title (25 characters or less): _____

7. Course Designator: GEOG 8. Course Level: 2050

9. Number of Credits: Lecture 2 Lab 2

10. Control Number (on site) 24 Control Number (online) _____

11. Catalog/Course description:

Comprehensive consideration is given to a real-world geospatial project, either aligning with an external partner or suitable to the student's field of interest. Topics include data and file management, project management, advanced GIS analysis techniques, and developing and presenting products that convey project results. (Prerequisite: GEOG 2001 and GEOG 2005 or consent of instructor)

12. Course prerequisite(s) or co-requisite(s): Accuplacer scores/ Other courses

Prerequisite(s): GEOG 2001 Introduction to GIS & GEOG 2005 Cartography & Visualization or consent of instructor.

Co-requisite:

13. **Course Materials** (Recommended course materials and resources. List all that apply, e.g. textbooks, workbooks, study guides, lab manuals, videos, guest lecturers).

Text: Determined on a yearly basis depending on availability and content

Additional resources:

GIS Lab (Room 208) with Esri's ArcGIS and Adobe Illustrator software installed on networked PCs

Plotter for poster printing

Handheld GPS receivers and associated accessories

One-year Student Licenses for Esri's ArcGIS Desktop (Windows based)

Esri Virtual Campus Courses

Supplemental articles, videos, and case studies

DiBiase, D. (2014). Nature of Geographic Information: An Open Geospatial Textbook. Pennsylvania State University, John A Dutton e-Education Institute. Retrieved from <https://www.e-education.psu.edu/natureofgeoinfo/>

14. Course Content (Provide an outline of major topics covered in course)

GIS Project Management

- Identify spatial problem
- Data needs and sources
- File/folder structure
- Analysis of data (GIS operations/functions)
- Results (maps, charts, tables, pictures, graphics)
- Metadata (created for all new data)
- Conclusion (student presentation to class/stakeholder)
- Advanced topics in GIS

15. Learning Goals, Outcomes, and Assessment

At FDLTCC we have 4 Competencies Across the Curriculum (CAC) areas. They are as follows:

- A. Information Literacy (the ability to use print and/or non-print tools effectively for the discovery, acquisition, and evaluation of information)
- B. Ability to Communicate (the ability to listen, read, comprehend, and/or deliver information in a variety of formats.)
- C. Problem Solving (the ability to conceptualize, apply, analyze, synthesize, and/or evaluate information to formulate and solve problems.)
- D. Culture (knowledge of Anishinaabe traditions and culture, knowledge of one's own traditions and culture, knowledge of others' traditions and cultures, culture of work, culture of academic disciplines and/or respect for global diversity.)

Course Learning Outcomes fulfill the identified competencies.

Course Learning Outcomes.

Upon completion of this course, the student will be able to:

1. Develop a current résumé tailored to their field of study (B, C)
2. Identify the needs of a project to include datasets, data sources, and time commitment (A, B, C)
3. Appraise potential ethical and/or cultural issues associated with geospatial data/analysis for the project (A, B, D)
4. Find and download data, disseminate and incorporate external datasets for a project (A, B, C)
5. Create, edit and manage geospatial data (A, B, C)
6. Customize the ArcGIS interface using programming (C)

16. Minnesota Transfer Curriculum (MnTC): If this course fulfills an MnTC goal area, state the goal area and list the goals and outcomes below:

See www.mntransfer.org

Goal Area(s): _____

Does this course require additional material for specific program requirements?

If yes, please provide.

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