

Distance Education Course Proposal Template

Steps to the approval process:

1. Complete the applicable template(s) and email them to the departmental or program curriculum committee chair. (If this is a new course that will include DE, complete Templates A and E. If adding DE to an existing course that is otherwise unchanged, complete Template E only. If revising a course and adding DE, complete Templates A and E.)
2. The curriculum chair emails the proposal to the curriculum committee, then to the department/program faculty for a vote and finally to the department/program chair.
3. The department/program chair emails the proposal to curriculum-approval@iup.edu; this email will also serve as an electronic signature.
4. Curriculum committee staff will log the proposal, forward it to the appropriate dean's office(s) for review within 14 days and post it on the X Drive for review by all IUP faculty and administrators. Following the dean's review the proposal goes to the UWUCC/UWGC and the Senate.
5. Questions? Email curriculum-approval@iup.edu.

Contact Person:	John Benhart, Jr.	Email Address:	jbenhart@iup.edu
Proposing Depart/Unit:	Geography & Regional Planning	Phone:	7243572250

Course Prefix/Number	GEOG/RGPL 417/517
Course Title	Technical Issues in Geographic Information Systems
Adding DE to an Already Approved Course	<input checked="" type="checkbox"/> Yes – <i>Template E only required</i> <input type="checkbox"/> No – <i>Template A and E both required</i>
Type of Proposal	(See CBA, Art. 42.D.1 for definition) <input checked="" type="checkbox"/> Online <input type="checkbox"/> ITV
<p>Brief Course Outline – if adding DE to an approved course <i>Give an outline of sufficient detail to communicate the course content to faculty across campus. It is not necessary to include specific readings, calendar, or assignments.</i></p>	<p>Click here to enter text. <i>Introduction, Review Syllabus.</i> <i>Review of Course Policies, Text.</i> <i>Discussion of semester projects</i> <i>Review of Key Intro. GIS Concepts</i> <i>Review of ArcGIS Concepts</i> <i>Spatial Data - General information and issues.</i> <i>Needs Assessment and Requirements Analysis</i> <i>The GIS Project Life Cycle</i> <i>Understanding the Organization</i> <i>Needs Assessment</i> <i>System Planning -- System Requirements</i> <i>Components of a needs assessment</i> <i>Needs Assessment and Requirements Analysis.</i> <i>Conducting Client Interviews</i> <i>Interpreting the Needs Assessment</i> <i>System data requirements.</i> <i>System application requirements.</i> <i>Data Conversion appraisal.</i> <i>Needs Assessment/Requirements Analysis Procedure .</i></p>

Template E

	<p><i>Designing Spatial Data</i></p> <ul style="list-style-type: none"> <i>Spatial Data Models</i> <i>Assessing existing spatial data sources</i> <i>Representing Geographic Features</i> <i>Topological vs. Non-topological</i> <i>Complex Spatial Objects (DynSeg, TIN)</i> <i>Accuracy, precision, completeness of Spatial Data</i> <i>Map Projection and Coordinate System Issues</i> <i>Synthesis/Integration of Spatial Data</i> <p><i>Data Development/Conversion Methods</i></p> <ul style="list-style-type: none"> <i>Spatial Data Formats</i> <i>Global Positioning Systems (GPS)</i> <i>Georeferencing and Digitizing</i> <i>Geocoding and Address Matching</i> <i>Raster-to-Vector Conversion</i> <i>Development of attribute databases</i> <i>Developing correct topology</i> <p><i>Implementation: Applying Procedures to Projects</i></p> <ul style="list-style-type: none"> <i>Converting from developmental to usable system</i> <i>Fine Tuning the System - Project feedback Period</i>
Rationale for Proposal (Required Questions from CBA)	
<p>How is/are the instructor(s) qualified in the Distance Education delivery method as well as the discipline?</p>	<p>Instructor (John Benhart, Jr.) has three years of experience teaching distance education courses at IUP. Dr. Benhart has taught at IUP since 1994.</p>
<p>For each outcome in the course, describe how the outcome will be achieved using Distance Education technologies.</p>	<p>Upon Completion of this course, the student should be able to:</p> <ol style="list-style-type: none"> 1) Conduct a needs assessment to determine client requirements for a geographic information system (GIS), and write-up the assessment using industry standard protocols (Students will read the text and other readings and study notes to understand what a needs assessment is, and what it entails. They will obtain feedback from clients via email and/or video interview that will inform the development of the needs assessment document. Students will be required to submit a needs assessment document, which must be graded and approved by the instructor before moving forward with the semester project. The needs assessment document will be submitted through Dropbox (or a similar file submittal system)) 2) Identify the functional requirements necessary for the GIS to meet client needs, and articulate system requirements (GIS functional requirements analysis is routinely included in the needs assessment phase of a GIS project. Students would be required identify each specific GIS application identified by clients in the needs document applications in the needs assessment document, including its data needs and analysis component) 3) Define project deliverables, timelines and milestones (Definition of GIS project deliverables, timelines and milestones is routinely included in the needs assessment report. Students would be required to provide a master data list detailing all of the data to be developed for a project, as well as a Gantt chart graphically depicting project milestones and timelines in the needs assessment document) 4) Determine spatial data requirements for a given project (Students will be required to include a Master Data List and an Applications/Data Item Matrix as part of the needs assessment document. Instructor will evaluate how accurate and realistic these products are relative to the overall needs assessment analysis. The instructor will communicate via email with a student if significant modifications need to be made) 5) Evaluate spatial data processing techniques to determine appropriate procedures that should used to produce required project data (Students will read the text and other readings, study notes and complete labs to understand how spatial data processing techniques work, and how to implement them. They will also communicate with and obtain

Template E

	<p>feedback from the instructor as to the most appropriate techniques to pursue to produce data) 6) Implement spatial data processing techniques necessary to produce spatial data within a GIS to client requirements (Students will read the text and other readings, study notes and complete labs to understand how spatial data processing techniques work, and how to implement them. They will also communicate with and obtain feedback from the instructor as to the most appropriate techniques to pursue to produce data. Products from labs will be submitted through Dropbox (or a similar file submittal system)) 7) Understand metadata produced by other spatial data developers, and produce metadata that meets federal standards (Students will read the text and other readings, study notes and complete labs to understand the purpose of metadata, and federal/international metadata standards. Labs will focus on how to produce compliant metadata using industry standard software) Products from labs will be submitted through Dropbox (or a similar file submittal system) 8) Produce high quality cartographic products in support of GIS development goals 9) Produce high quality spatial data and metadata in support of GIS development goals 10) Produce high quality documents in support of GIS development goals, including sections on context of GIS development; data development procedures; analysis results and final products; discussion of GIS functionality; instructions for clients/users; and metadata (Addresses outcomes 8 through 10. Students will read the text and other readings and study notes to understand what the final project documents and data package entail. Students will be required to submit final project document and data package to the instructor and the client, which will be graded based on the project scope and parameters established in the needs assessment document, as well as standards addressed during the course of the semester via readings, notes and labs. The final project documents and data package will be submitted through Dropbox (or a similar file submittal system)).</p>
<p>How will instructor-student and student-student, if applicable, interaction take place?</p>	<p>D2L interface, email, phone, Skype</p>
<p>How will student achievement be evaluated?</p>	<p>Evaluation of several software based laboratories, needs assessment document, final project documents and data package submitted through the Dropbox interface of learning management system.</p>
<p>How will academic honesty for tests and assignments be addressed?</p>	<p>Most learning management systems address most of these issues. Thorough instructor review of submitted laboratories and assignments. Each project will be unique, so the instructor should have a very good handle on the details of individual projects.</p>