15-41d
UWUCC App 9/1/15
Senate Info 10/6/15

Template E

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 316/516
Course Title	Introduction to Geographic Information Systems
Adding DE to an Already Approved Course	☒ Yes – *Template E only required* ☐ No – *Template A and E both required*
Type of Proposal	*(See CBA, Art. 42.D.1 for definition)* ☒ Online ☐ ITV
Brief Course Outline – if adding DE to an approved course *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.*	Click here to enter text. *Understanding of:* *1) What geographic information systems (GIS) are and how they work; the historical development of the technology, its present context, and future trends* *2) How geospatial technologies are presently being used by geographers, planners and other scientists and decision-makers* *3) The GIS processes of data acquisition, storage, management, analysis, and output production* *4) Maps as models of the earth, and spatial data derived from maps; the concepts of mapping datums, two and three-dimensional coordinate systems, map projections, map scale, horizontal accuracy, and metadata* *5) Aspects of data models used to represent phenomena in space (for example raster and vector), and appropriate applications for problem-solving* *6) Types of GIS functionality, and contextual applications of GIS tools* *7) Solve geography and planning-related problems involving simple analysis, using GIS tools* *Technical and Analytical Skills in:* *1) The interface logic and effective use of industry-standard GIS software* *2) Application of GIS tools and functionality within industry-standard GIS software to introductory to intermediate-level geography and planning-related problems* *3) The extraction/derivation of desired information from spatial databases*
Rationale for Proposal (Required Questions from CBA)	

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How is/are the instructor(s) qualified in the Distance Education delivery method as well as the discipline?	Instructor (John Benhart, Jr.) has three years of experience teaching distance education courses at IUP. Dr. Benhart has taught at IUP since 1994.
For each outcome in the course, describe how the outcome will be achieved using Distance Education technologies.	1) Understand what geographic information systems (GIS) are and how they work; the historical development of the technology, its present context, and future trends (Students will read the text and other readings, study notes, and review websites. An online quiz will be administered to assess mastery of concepts.) 2) Explain how geospatial technologies are presently being used by geographers, planners and other scientists and decision-makers (Students will read the text and other readings, study notes, and review websites. An online quiz will be administered to assess mastery of concepts.)3) Describe the GIS processes of data acquisition, storage, management, analysis, and output production (Students will read the text and other readings, study notes, and review websites. An online quiz will be administered to assess mastery of concepts.) 4) Understand maps as models of the earth, and spatial data derived from maps; the concepts of mapping datums, two and three-dimensional coordinate systems, map projections, map scale, horizontal accuracy, and metadata (Students will read the text and other readings, study notes, complete textbook-based exercises, and review websites. Software based labs will be assigned to encourage students to learn and master simple data-based analysis and cartographic visualization using GIS software. For example, students will be given an assignment to produce maps of Pennsylvania using different map projections and coordinate systems. They will be asked to explain the varying representations of Pennsylvania, as well as the resultant coordinate systems.) 5) Describe data models used to represent phenomena in space (for example raster and vector), and appropriate applications for problem-solving (Students will read the text and other readings, study notes, complete textbook-based exercises, and review websites. Software based labs will be assigned to encourage students to learn and master simple data-based analysis and cartographic visualization using GIS software. For example, students will be given an assignment to produce maps at varying scales, and to use both raster and vector data to appropriately represent phenomena on the earth's surface.) 6) Identify and explain types of GIS functionality, and contextual applications of GIS tools (Students will read the text and other readings, study notes, complete textbook-based exercises, and review websites. Software based labs will be assigned to encourage students to learn and master simple data-based analysis and cartographic visualization using GIS software. For example, students will be given an assignment to US Census data to identify spatial demographic trends in the US between 1990 and 2010. By querying the databases, creating new variables, and appropriately mapping them, the students will be able to document spatial patterns of population change in the US.)7) Solve geography and planning-related problems involving simple analysis, using GIS tools (Students will read the text and other readings, study notes, complete textbook-based exercises, and review websites. Software based labs will be assigned to encourage students to learn and master simple data-based analysis and cartographic visualization using GIS software. See above and below).8) Apply the interface logic and effective use of industry-standard GIS software (Students will read the text and other readings, study notes, complete textbook-based exercises, and review websites. Software based labs will be assigned to encourage students to learn and master simple data-based analysis and cartographic visualization using GIS software. See above and below). 9) Demonstrate application of GIS tools and functionality within industry-standard GIS software to introductory to intermediate-level geography

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	and planning-related problems (Students will read the text and other readings, study notes, complete textbook-based exercises, and review websites. Software based labs will be assigned to encourage students to learn and master simple data-based analysis and cartographic visualization using GIS software. For example, students will be to saolve a problem where they determine the extent of a 200 meter buffer zone surrounding a target stream, generate a buffer, and then determine land use/land cover characteristics that would dictate land use management efforts..) 10) Extract/derive desired information from spatial databases (Students will read the text and other readings, study notes, complete textbook-based exercises, and review websites. Software based labs will be assigned to encourage students to learn and master simple data-based analysis and cartographic visualization using GIS software. See above).
How will instructor-student and student-student, if applicable, interaction take place?	D2L interface, email
How will student achievement be evaluated?	Quiz and exam scores, evaluation of software based laboratories, assignments and white papers submitted through the Dropbox interface of learning management system.
How will academic honesty for tests and assignments be addressed?	Most learning management systems address most of these issues. Randomized timed quizzes and exams, thorough instructor review of submitted laboratories and assignments