

## New 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.
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](mailto: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](mailto: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	See the Registrar's list of Unavailable course numbers at <a href="http://www.iup.edu/WorkArea/linkit.aspx?LinkIdentifier=id&amp;ItemID=129323">http://www.iup.edu/WorkArea/linkit.aspx?LinkIdentifier=id&amp;ItemID=129323</a> GEOG 409
Course Title	Spatial Analysis Applications in the Energy Sectors Workshop
Dual/Cross Listed	<i>Dual Listed</i> - Courses listed at two levels, such as undergraduate and graduate, masters and doctoral, etc. <i>Cross Listed</i> - Course has more than one prefix such as GEOG REGPL 233. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes with: Click here to enter text.
Number of Credits	(UG) Class Hours - 3 (UG) Lab Hours - Click here to enter text. Credits - 3
Prerequisite(s)	GEOG 109
Corequisite(s)	<i>This means that another course must be taken in the same semester as the proposed course</i> Click here to enter text.
Additional Information (Check all that apply. Note: Additional documentation will be required)	<input type="checkbox"/> Liberal Studies (please also complete Template C) <input type="checkbox"/> Teacher Education (Is it Step 1 a prerequisite or is it part of the Professional Education Sequence If so please also complete Template D) <input type="checkbox"/> Distance Education (Please also complete Template E)
Recommended Class Size (optional) (provide justification)	Are you recommending a class size: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No     Number: 25 or less If yes: (check one of the following reasons and provide a narrative explanation) <input checked="" type="checkbox"/> Pedagogical <input type="checkbox"/> Physical limitation of classroom <input type="checkbox"/> Accreditation body standards/recommendations <input type="checkbox"/> Other Explanation (required): The nature of this class will make it challenging to keep up with instructing the students in new complex topics and computer applications, and evaluating individual GIS-based assignments. Having taught this course for over twenty years, we have found that one instructor can effectively interact with a maximum of around twenty five students.

## Template A

Catalog Description	<p><i>Guidelines: Do not include pre/co-requisite information here. The registrar prefers a concise description of course content beginning with an active verb.</i></p> <p>Characterizes the spatial representation and analysis techniques used by public, private and non-profit entities engaged in the energy industries. Focuses in particular on the implementation of energy resource applications including exploration and</p>
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Template A

	development, environmental and cultural compliance, logistics, production analysis, and infrastructure maintenance..
<p><b>Student Learning Outcomes</b></p> <p><i>(These should be measurable, appropriate to the course level, and phrased in terms of <u>student achievement</u>, not instructional or content outcomes)</i></p> <p><i>If dual listed, indicate additional learning objectives for the higher level course.</i></p>	<p>1) Identify the types of spatial representation and analysis applications used by various entities within the energy industries 2) Explain the logic and criteria of energy spatial analysis applications 3) Apply energy-related spatial analysis applications using geographic information systems (GIS) software 4) Calculate quantitative answers to energy development, compliance, logistics, and production-related questions 5) Assess results from energy-related spatial analysis applications to determine how they might be integrated into decision-making processes 6) Compare the applicability of various spatial analysis procedures to industry-standard reporting systems 7) Assess the utility of various spatial analysis procedures to governmental compliance and regulatory requirements for the energy industries</p>
<p><b>Brief Course Outline:</b></p> <p><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><i>Review syllabus / Introduction to energy development, exploration and compliance</i></p> <p><i>Review of spatial approaches to energy exploration, compliance, logistics, analysis, and management</i></p> <p><i>Energy Spatial Applications Typology/ Unit/Lease Analyses; Landman Applications; Site Mapping/</i></p> <p><i>Base Mapping; Production Analyses; Geodatabase Structures and Data Management Issues</i></p> <p><i>Energy Spatial Applications Typology/ Unit/Lease Analyses; Landman Applications; Site Mapping</i></p> <p><i>Base Mapping; Production Analyses; Geodatabase Structures and Data Management Issues</i></p> <p><i>Spatial Application: Unit/Lease Analysis – Existing Lease Analysis; Geologic Analysis</i></p> <p><i>Spatial Application Implementation: Unit/Lease Analysis – Integrating Seismic and Production Data</i></p> <p><i>Spatial Application Implementation: Unit/Lease Analysis – Pipeline/Transmission Proximity and Logistics</i></p> <p><i>Spatial Application: Environmental Compliance – Permitting-based Analyses</i></p> <p><i>Spatial Application: Environmental Compliance – Permitting-based, Groundwater and Surface Water Analyses</i></p> <p><i>Spatial Application: Cultural Compliance – Site and Pipeline Cultural Resource Analyses</i></p> <p><i>Spatial Application: Landman Applications –Cadastral and Permit Investigation</i></p> <p><i>Spatial Applications: Landman Applications/Production Analysis – Capital lease investment and timeframe</i></p> <p><i>Spatial Applications: Production Analysis – Time series analysis, technique vs. production</i></p>

Template A

<b>Rationale for Proposal</b>	
Why is this course being proposed?	As part of a multi-disciplinary Shale Gas Certificate in cooperation with Geoscience and Safety Sciences departments.
How does it fit into the departmental curriculum? (Check all that apply)	<input type="checkbox"/> Major Requirement <input type="checkbox"/> Minor Requirement <input type="checkbox"/> Core Requirement <small>(Interdisciplinary core e.g. Business Education)</small> <input type="checkbox"/> Required Elective <input type="checkbox"/> Liberal Studies <input type="checkbox"/> Open Elective <input checked="" type="checkbox"/> Other - As part of a multi-disciplinary Shale Gas Certificate in cooperation with Geoscience and Safety Sciences departments.
Is a similar class offered in other departments?	<input type="checkbox"/> Yes Please provide comment: <a href="#">Click here to enter text.</a> <input checked="" type="checkbox"/> No
Does it serve the college/university above and beyond the role it serves in the department?	<input checked="" type="checkbox"/> Yes Please provide comment: As part of a multi-disciplinary Shale Gas Certificate in cooperation with Geoscience and Safety Sciences departments. <input type="checkbox"/> No
Who is the target audience for the course?	<input type="checkbox"/> Course Designed for Majors ( <input type="checkbox"/> Required <input type="checkbox"/> Not Required) <input type="checkbox"/> Course Designed for Minor <input checked="" type="checkbox"/> Departmental Elective <input type="checkbox"/> Restricted to Majors/Minors <input checked="" type="checkbox"/> Open to Any Student <input type="checkbox"/> Liberal Studies <input checked="" type="checkbox"/> Other - Designed, in part, for professionals already working in the energy industries.
Implications for other departments	<p>A. What are the implications for other departments (For example: overlap of content with other disciplines, requirements for other programs)?</p> <p>This course is to be part of a six course sequence in the proposed Shale Gas Certificate (two courses each from Geography &amp; Regional Planning, Geosciences, and Safety Sciences..</p> <p>B. How have you addressed this with other department(s) involved? What was the outcome of that attempt? (Attach documents as appropriate)</p> <p>These proposals are being sent to the chairs of Geosciences and Safety Sciences, for their review.</p>
Are the resources adequate (i.e. faculty, space, equipment, laboratory supplies, library materials, travel funds, etc.)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Please provide comment: <a href="#">Click here to enter text.</a>
<b>For Dean's Review</b>	
<ul style="list-style-type: none"> <li>• Are resources available/sufficient for this course?    <input type="checkbox"/> Yes    <input type="checkbox"/> No    <input type="checkbox"/> NA</li> <li>• Is the proposal congruent with college mission?    <input type="checkbox"/> Yes    <input type="checkbox"/> No    <input type="checkbox"/> NA</li> <li>• Has the proposer attempted to resolve potential conflicts with other academic units?    <input type="checkbox"/> Yes    <input type="checkbox"/> No    <input type="checkbox"/> NA</li> </ul>	
Comments: <a href="#">Click here to enter text.</a>	