Eastern Illinois University
New/Revised Course Proposal Format
(Approved by CAA on 4/3/14 and CGS on 4/15/14, Effective Fall 2014)

Banner/Catalog Information (Coversheet)

1. __X__New Course or ____Revision of Existing Course

2. **Course prefix and number:** GEO 5000

3. **Short title:** GIScience Seminar

4. **Long title:** Geographic Information Science Seminar

5. **Hours per week:** 1 Class 0 Lab 1 Credit

6. **Terms:** ___ Fall ___ Spring ___ Summer _x_ On demand

7. **Initial term**: _x_ Fall ___ Spring ___ Summer Year: 2021

8. **Catalog course description:**

   This course provides students with an introduction to the history, practice and research methods in geographic information science.

9. **Course attributes:**

   General education component: _____n/a_____

   ___ Cultural diversity ___ Honors ___ Writing centered ___ Writing intensive ___Writing active

10. **Instructional delivery**
    Type of Course:

    _x_ Lecture ___ Lab ___ Lecture/lab combined ___ Independent study/research

    ___ Internship ___ Performance ___ Practicum/clinical ___ Other, specify: _____

    Mode(s) of Delivery:

    _x_ Face to Face _x_ Online ___ Study Abroad

    _x_ Hybrid, specify approximate amount of on-line and face-to-face instruction

       75% online 25% F2F

11. Course(s) to be deleted from the catalog once this course is approved.

    None.

12. **Equivalent course(s):** None

    a. Are students allowed to take equivalent course(s) for credit? ___ Yes ___ No

13. **Prerequisite(s):** None

a. **Can prerequisite be taken concurrently?** ___ Yes   ___ No

b. **Minimum grade required for the prerequisite course(s)?** ___

c. **Use Banner coding to enforce prerequisite course(s)?** ___ Yes   ___ No

d. **Who may waive prerequisite(s)?**

   ___ No one   ___ Chair   ___ Instructor   ___ Advisor   ___ Other (specify)

14. **Co-requisite(s):**   none

15. **Enrollment restrictions**

    a. **Degrees, colleges, majors, levels, classes which <u>may</u> take the course:**

       PSM in GIScience

    b. **Degrees, colleges, majors, levels, classes which may <u>not</u> take the course:**

       all except PSM in GIScience

16. **Repeat status:** _x_ May not be repeated   ___ May be repeated once with credit

17. **Enter the limit, if any, on hours which may be applied to a major or minor:** ___

18. **Grading methods:** _x_ Standard   ___ CR/NC   __ Audit   ___ ABC/NC

19. **Special grading provisions: n/a**

    ___ Grade for course will <u>not</u> count in a student's grade point average.

    ___ Grade for course will <u>not</u> count in hours toward graduation.

    ___ Grade for course will be removed from GPA if student already has credit for or is registered in:
    _____

    ___ Credit hours for course will be removed from student's hours toward graduation if student already has credit for or is registered in: _____

20. **Additional costs to students:**
    Supplemental Materials or Software_____

    Course Fee _x_No ___Yes, Explain if yes

21. **Community college transfer:**

    ___ A community college course may be judged equivalent.

    _x_ A community college may <u>not</u> be judged equivalent.

    Note: Upper division credit (3000+) will <u>not</u> be granted for a community college course, even if the content is judged to be equivalent.

Rationale, Justifications, and Assurances (Part I)

1. _x_ Course is required for the major(s) of _PSM in GIScience_____

    ___Course is required for the minor(s) of _____

    ___Course is required for the certificate program(s) of _____

    ___ Course is used as an elective

2. **Rationale for proposal** :

    This course will provide a common theoretical foundation for all students in the PSM in GIScience.

3. **Justifications for (answer N/A if not applicable)**

Similarity to other courses:	N/A
Prerequisites:	N/A
Co-requisites:	N/A
Enrollment restrictions:	N/A
Writing active, intensive, centered:	N/A

4. **General education assurances (answer N/A if not applicable)**

General education component:	N/A
Curriculum:	N/A
Instruction:	N/A
Assessment:	N/A

5. **Online/Hybrid delivery justification & assurances (answer N/A if not applicable)**

    Online or hybrid delivery justification:

    The course will be offered online to support the online delivery of the PSM which serves young professionals in the GIS field. The course may be offered hybrid to facilitate greater personal engagement depending on the geography of student enrollment. Hybrid delivery will utilize the same techniques to ensure course quality as online delivery.

    Instruction:

    OCDI training will be required of all instructors. The course will utilize online learning technologies including EIU's learning management system and videoconferencing technology to provide rigorous instruction and engage students in discussion and critical evaluation of research articles. Active discussion including summary presentations of important articles in analytic geography and GIScience will be a major component of the final grade.

    Integrity:

Student grades will be determined on the basis of research article summaries, individual research project proposals and discussion. Written submissions will be checked for plagiarism using online plagiarism detection tools.

Interaction:

Instructor-student interaction will be facilitated through live discussion and/or active message boards. The instructor will engage in discussion questions framed around significant, thought-provoking research articles. In addition, students will be required to summarize 3-4 research articles for the class and present a research project proposal live or by video.

Model Syllabus (Part II)

Please include the following information:

1. Course number and title

   GEO 5000: Seminar in Geographic Information Science

2. Catalog description

   History, practice and research methods in geographic information science.

3. Learning objectives.

   [Text in square brackets indicates corresponding EIU Graduate Learning Goals as per https://castle.eiu.edu/eiucgs/documents/05-22GraduateAssessmentPolicy.pdf: DCK = Depth of Content Knowledge, CTPS = Critical Thinking and Problem Solving Skills, OWC = Effective Oral and Written Communication Skills, AS = Evidence of Advanced Scholarship through Research and/or Creative Activity]

   A. **Critically examine different paradigmatic approaches** to analytic geography, including nomothetic vs. idiographic approaches to the discipline. (DCK,CTPS)
   B. **Identify the main thesis** of a research article and the argument, evidence or methodology supporting that thesis. (CTPS,OWC)
   C. **Locate research articles** relevant to a specific topic or problem. (AS)
   D. **Develop a research or professional project plan** involving spatial data visualization and analysis. (OWC,AS)

4. Course materials.

   The course will be based on reading and discussing prominent historical and modern research articles in spatial analysis and GIScience. Examples of research articles to be distributed include:

   Ellen Churchill Semple (1901). The Anglo-Saxons of the Kentucky Mountains: A Study in Anthropogeography. *The Geographical Journal*, 17(6):588-623.

Fred K. Schaefer (1953). Exceptionalism in Geography: A Methodological Examination. *Annals of the Association of American Geographers*, 43(3):226-249.

Richard Hartshorne (1955). "Exceptionalism in Geography" Re-Examined. *Annals of the Association of American Geographers*, 45(3):205-244.

Carl O. Sauer (1956). The Education of a Geographer. *Annals of the Association of American Geographers*, 46(3):287-299.

Mark Graham (2010). Neogeography and the Palimpsests of Place: Web 2.0 and the Construction of a Virtual Earth. *Tijdschrift voor Economische en Sociale Geografie,* 101(4):422-436.

Alex Singleton and Chris Brunsdon (2014). Escaping the Pushpin Paradigm in Geographic Information Science: (Re)presenting National Crime Data. *Area*, 46(3):294-304.

Paulo Raposo, Guillaume Touya and Pia Bereuter (2020). A Change of Theme: The Role of Generalization in Thematic Mapping. *International Journal of Geo-Information*, 9(371) 18pp.

Harvey J. Miller (2020). Geographic Information Science III: GIScience, fast and slow – Why faster geographic information is not always smarter. *Progress in Human Geography*, 44(1):129-138.

5. Weekly outline of content.
   1. Overview of PSM program
   2. GIScience and GIS Practice.
   3. Citations & references, academic integrity
   4. Assigned literature review (classical paradigms in spatial analysis)
   5. Guest lecture or topical discussion
   6. Assigned literature review (modern paradigms and issues in GIS)
   7. Research project types and strategies
   8. Searching for references
   9. Guest lecture or topical discussion
   10. Individual literature search and review
   11. Guest lecture or topical discussion
   12. Individual literature search and review
   13. Research proposal design
   14. GIS data acquisition
   15. Project consultation
   16. (final exam week) Research project proposal presentations

Students will be individually assigned articles to review in weeks 4 & 6. Student will be required to identify a research topic and locate and review articles related to this topic in weeks 10 & 12.

6. Assignments and evaluation, including weights for final course grade.

The final grade will be determined as a weighted average of course components as follows:
   1. Assigned article summaries   20%

			2.	Individual article summaries	20%
			3.	Participation in class discussion	20%
			4.	Research or professional project proposal	40%

7. Grading scale.

Individual course components will be assigned a letter grade. The overall course grade will be computed as a weighted average using the standard 4.0-point GPA scale.

8. Correlation of learning objectives to assignments and evaluation.

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	A. Critically examine different paradigmatic approaches (DCK,CTPS)	B. Identify the main thesis of a research article (CTPS,OWC)	C. Locate relevant research articles (AS)	D. Develop a research or professional project plan (OWC,AS)
1. Assigned article summaries (20%)	✓	✓		
2. Individual article summaries (20%)		✓	✓	
3. Participation in class discussion (20%)	✓	✓		
4. Research or professional project proposal (40%)	✓	✓	✓	✓