

LSC Use Only Proposal No:
LSC Action-Date:

UWUCC Use Only Proposal No: 11-136c.
UWUCC Action-Date: App-4/19/12

Senate Action Date: App-5/01/12

Curriculum Proposal Cover Sheet - University-Wide Undergraduate Curriculum Committee

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Proposing Department/Unit Geography & Regional Planning	Phone 357-2250

Check all appropriate lines and complete all information. Use a separate cover sheet for each course proposal and/or program proposal.

1. Course Proposals (check all that apply)

- | | | |
|--|--|---|
| ☒ New Course | ☐ Course Prefix Change | ☐ Course Deletion |
| ☐ Course Revision | ☐ Course Number and/or Title Change | ☐ Catalog Description Change |

Current course prefix, number and full title:

Proposed course prefix, number and full title, if changing: GEOG/RGPL 404/504 Transportation Planning

2. Liberal Studies Course Designations, as appropriate

This course is also proposed as a Liberal Studies Course (please mark the appropriate categories below)

- | | | | |
|--|---|---|---|
| ☐ Learning Skills | ☐ Knowledge Area | ☐ Global and Multicultural Awareness | ☐ Writing Across the Curriculum (W Course) |
| ☐ Liberal Studies Elective (please mark the designation(s) that applies – must meet at least one) | | | |
| ☐ Global Citizenship | ☐ Information Literacy | ☐ Oral Communication | |
| ☐ Quantitative Reasoning | ☐ Scientific Literacy | ☐ Technological Literacy | |

3. Other Designations, as appropriate

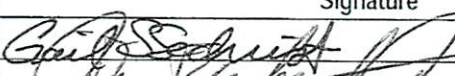
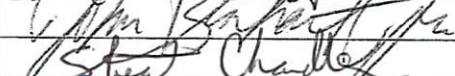
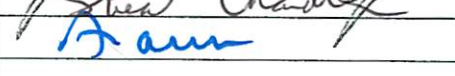
- | | |
|--|---|
| ☐ Honors College Course | ☐ Other: (e.g. Women's Studies, Pan African) |
|--|---|

4. Program Proposals

- | | | | |
|---|--|--|------------------------------------|
| ☐ Catalog Description Change | ☐ Program Revision | ☐ Program Title Change | ☐ New Track |
| ☐ New Degree Program | ☐ New Minor Program | ☐ Liberal Studies Requirement Changes | ☐ Other |

Current program name:

Proposed program name, if changing:

5. Approvals	Signature	Date
Department Curriculum Committee Chair(s)		11/20/11
Department Chairperson(s)		11/20/11
College Curriculum Committee Chair		3/7/12
College Dean		3/23/12
Director of Liberal Studies (as needed)		
Director of Honors College (as needed)		
Provost (as needed)		
Additional signature (with title) as appropriate		
UWUCC Co-Chairs		4/19/12

Received

APR 16 2012

Liberal Studies

Received

MAR 27 2012

Liberal Studies

Received

MAR 26 2012

Liberal Studies

Syllabus of Record

DESCRIPTION:

GEOG/RGPL 404/504 TRANSPORTATION PLANNING

3c-01-3cr

Prerequisite: GEOG/RGPL 333, RGPL 350, or one course from the Economic Geographer Track. Introduces the major themes and methods of transportation planning, particularly in an urban context. It is project-oriented and supported by readings from the scholarly literature covering themes such as modes of transit, land use implications, and commercial development. Reading assignments are organized topically and coordinated with two work-book projects that develop applied skills. Topics include theory, empirical description, and methodological practice.

COURSE OUTCOMES:

Students will be able to:

1. Recognize the effect transportation systems have on patterns of metropolitan development.
2. Analyze and discuss scholarly literature and demonstrate skills of scholarly criticism.
3. Relate the theories of transportation geography and planning to policy issues by organizing information according to its empirical or theoretical type and judging case studies of transportation strategies. Because readings deal with controversy, students will argue for a position and support the position with evidence.
4. Use the vocabulary of transportation geographers and planners in a written report that demonstrates the ability to translate knowledge from the theoretical and conceptual readings into the new context of the regional issue.
5. Distinguish between different modes of transportation and analyze their various implications for urban planning.
6. Apply quantitative skills and access data sources used in transportation planning. The exercises measure problem solving technique using a prescribed set of skills.
7. Summarize news media reports and follow an issue as it develops over a period of three months. This is accomplished by becoming intimately familiar with one theme of transportation planning as it applies to the Pittsburgh Metropolitan Area (each student develops a unique theme).
8. Prepare for internship or entry-level positions with local planning agencies, state agencies, and consulting firms that deal with various aspects of transportation.

Transportation Planning DETAILED COURSE OUTLINE:

HOURS	TOPIC
1	Introduction
3	Concepts and trends of urban travel.
3	Flows of passengers and freight.
4	Land use impacts
4	Transportation and spatial form in historical geography
2	<i>Land use-transportation exercise (after Alonso, Sinclair)</i>
1	Transportation and Urban Environment.
2	GIS in Urban Transportation Planning.
1	MID-TERM EXAM
3	Transportation planning—Urban Transportation Model System (UTMS)
2	Transportation planning—issues and paradigms
2	<i>Trip distribution model (gravity and intervening opportunity with SW Pennsylvania data) or Modal Split using trip interchange (descriptive) model after Black (2003) Ch. 11.</i>
4	Automobile transport.
4	Public transportation.
3	Politics and finance.
2	Social issues in urban transportation.
1	Review, Final paper due.
2	FINAL EXAM

EVALUATION METHODS:

Exam questions (50%) are based on readings, classroom discussions, and the exercises. The exams include a variety of question formats—multiple choice, matching, fill-in, problem solving, and essay-- commensurate with the range of factual, conceptual, and theoretical material covered in the course. While the multiple choice items are objective in format, they require interpretation and judgment between plausible choices. The exercises (25%) teach quantitative analysis techniques and will be graded on completeness and accuracy.

The 2,000-word essay (25%) is evaluated according to perception and precision. Each student compiles an annotated bibliography of news articles dealing with one theme of transportation planning in the Pittsburgh Metropolitan Area. The bibliography supports an essay that analyzes and explains the theme in the context of relevant concepts from the scholarly readings. Perception means the students' ability to identify a theme that is related to the main points of the assigned journal articles and chapters. The essay should be precisely edited and organized, and must be submitted in proper scholarly format. Individual assistance is available throughout the semester during the instructors posted office hours or by appointment.

Exercise 1	50	A = 360+
Mid-Term exam	100	B = 320-359
Exercise 2	50	C = 280-319
Essay	100	D = 240-279
<u>Final exam</u>	<u>100</u>	F < 240
Total	400	

ATTENDANCE POLICY:

An attendance policy will be developed that is consistent with the undergraduate catalog.

REQUIRED TEXT and MAP:

Hanson, Susan; and Giuliano, Genevieve. *The Geography of Urban Transportation*, 3rd ed. New York: Guilford, 2004.

Universal Map Company. 2007. "Pittsburgh, Pennsylvania, Street Map." Burnaby, B.C.: G.M. Johnson.

BIBLIOGRAPHY

- Casello, J.M. 2007. Transit Competitiveness in Polycentric Metropolitan Regions. *Transportation Research Part A* 41: 19-40. Philadelphia modal split analysis.
- Filion, P.; and McSpurren, K. 2007. Smart Growth and Development Reality: The Difficult Coordination of Land Use and Transportation Objectives. *Urban Studies* 44/3: 501-524.
- Funderburg, R.; Nixon, H.; Boarnet, M.; and Ferguson, G. 2010. New Highways and Land Use Change: Results from a Quasi-Experimental Research Design. *Transportation Research Part A* 44/2: 76-98.
- Giuliano, G.; and Small, K.A. 1999. The Determinants of Growth of Employment Subcenters. *Journal of Transport Geography* 7: 189-201.
- Hodge, David. 1990. Geography and the Political Economy of Urban Transportation. *Urban Geography* 11: 87-100.
- Horner, Mark W. 2004. Spatial Dimensions of Urban Commuting: A Review of Major Issues and Their Implications for Future Geographic Research. *Professional Geographer* 56/2: 160-173.
- Iacoco, M.; Levinson, D.; and El-Geneidy, A. 2008. Models of Transportation and Land Use Change: A Guide to the Territory. *Journal of Planning Literature* 22/4: 323-340.
- Kansky, K.J. 1963. *Structure of Transportation Networks: Relationships Between Network Geometry and Regional Characteristics*. Research Paper 84. University of Chicago Department of Geography.
- Levinson, D. 1998. Accessibility and the Journey to Work. *Journal of Transport Geography* 6/1: 11-21.
- Lin, Wei-Hua; and Lo, Hong K. 2009. Investigating Braess' Paradox with Time-Dependent Queues. *Transportation Science* 43/1: 117-126.
- Muller, E.K. 2001. Industrial Suburbs and the Growth of Metropolitan Pittsburgh, 1870-1920. *Journal of Historical Geography* 27/1: 58-73.
- Pennsylvania Department of Highways. 1961. *Pittsburgh Area Transportation Study*, in cooperation with Allegheny County, City of Pittsburgh. Washington: United States Department of Commerce.

Rodrigue, Jean-Paul; Comtois, Claude; and Slack, Brian. 2006. *The Geography of Transport Systems*. London: Routledge.

Sultana, S. 2002. Job/Housing Imbalance and Commuting Time in the Atlanta Metropolitan Area: Exploration of Causes of Longer Commuting Time. *Urban Geography* 23/8: 728-49.

Taaffe, E.; Gauthier, H; and O'Kelly, M. 1996. *Geography of Transportation*, 2nd ed. Upper Saddle River, New Jersey: Prentice-Hall.

Wang, F. 2000. Modelling Commuting Patterns in Chicago in a GIS Environment. *The Professional Geographer* 52/1: 120-133.

Yang, Jiawen. 2008. Policy Implications of Excess Commuting: Examining the Impacts of Changes in U.S. Metropolitan Spatial Structure. *Urban Studies* 45/2: 391-405.

Course Analysis Questionnaire

Section A: Details of the Course

- A1 How does this course fit into the programs of the department? For what students is the course designed? (majors, students in other majors, liberal studies). Explain why this content cannot be incorporated into an existing course.

The proposed course would become a Economic Geography concentration course within the undergraduate Geography curriculum and would contribute towards both the Land Use/GIS and Environmental Planning concentrations in the Regional Planning program. Transportation planning is a significant subfield within planning, that requires student exposure to significant conceptual and technical material which could not be just "appended" to another course.

- A2 Does this course require changes in the content of existing courses or requirements for a program? If catalog descriptions of other courses or department programs must be changed as a result of the adoption of this course, please submit as separate proposals all other changes in courses and/or program requirements.

Yes. The proposed course would become a new concentration course in the Geography and Regional Planning degree programs. A Program Revision proposal has been submitted for the Economic Geography concentration, and one will be forthcoming for Regional Planning concentrations.

- A3 Has this course ever been offered at IUP on a trial basis (e.g. as a special topic) If so, explain the details of the offering (semester/year and number of students).

No.

- A4 Is this course to be a dual-level course? If so, please note that the graduate approval occurs after the undergraduate.

Yes.

- A5 If this course may be taken for variable credit, what criteria will be used to relate the credits to the learning experience of each student? Who will make this determination and by what procedures?

No.

- A6 Do other higher education institutions currently offer this course? If so, please list examples (institution, course title).

Clemson University: CE 412 Transportation/Land Use Planning

Temple University: CRP 3365 Transportation Planning

University of New Orleans: MURP 4063 Land Use and Transportation Planning

Portland State University: USP 456: Urban Transportation: Policies and Problems

- A7 Is the content, or are the skills, of the proposed course recommended or required by a professional society, accrediting authority, law or other external agency? If so, please provide documentation.

A course of this nature was recommended to us by external reviewers and the site visit team of the Planning Accreditation Board (PAB).

Section B: Interdisciplinary Implications

- B1 Will this course be taught by instructors from more than one department? If so, explain the teaching plan, its rationale, and how the team will adhere to the syllabus of record.
No
- B2 What is the relationship between the content of this course and the content of courses offered by other departments? Summarize your discussions (with other departments) concerning the proposed changes and indicate how any conflicts have been resolved. Please attach relevant memoranda from these departments that clarify their attitudes toward the proposed change(s).

The course proposal has been endorsed by the Departments of Communications Media, History and Political Science (see attached letters). The content of this course does not conflict with any existing courses – it is designed to serve the Geography and Regional Planning majors.

- B3 Will this course be cross-listed with other departments? If so, please summarize the department representatives' discussions concerning the course and indicate how consistency will be maintained across departments.
No

Section C: Implementation

- C1 Are faculty resources adequate? If you are not requesting or have not been authorized to hire additional faculty, demonstrate how this course will fit into the schedule(s) of current faculty. What will be taught less frequently or in fewer sections to make this possible? Please specify how preparation and equated workload will be assigned for this course.
Yes, faculty resources are adequate. Departmental faculty will teach one less regional course per year to offer 404.
- C2 What other resources will be needed to teach this course and how adequate are the current resources? If not adequate, what plans exist for achieving adequacy? Reply in terms of the following:
- *Space
 - *Equipment
 - *Laboratory Supplies and other Consumable Goods
 - *Library Materials
 - *Travel Funds
- No additional resources will be needed to teach this course.**
- C3 Are any of the resources for this course funded by a grant? If so, what provisions have been made to continue support for this course once the grant has expired? (Attach letters of support from Dean, Provost, etc.)
No, resources are not funded by a grant
- C4 How frequently do you expect this course to be offered? Is this course particularly designed for or restricted to certain seasonal semesters?
Once a year during fall semester.
- C5 How many sections of this course do you anticipate offering in any single semester?
One.

- C6 How many students do you plan to accommodate in a section of this course? What is the justification for this planned number of students?
Based on the need to provide access to the course for Geography and Regional Planning majors, the enrollment in the course would be 20-25 students.
- C7 Does any professional society recommend enrollment limits or parameters for a course of this nature? If they do, please quote from the appropriate documents.
No. The Planning Accreditation Board (PAB) places no specific limitations or parameters on a course of this nature.
- C8 If this course is a distance education course, see the Implementation of Distance Education Agreement and the Undergraduate Distance Education Review Form in Appendix D and respond to the questions listed.
This is not a distance education course

Section D: Miscellaneous

Include any additional information valuable to those reviewing this new course proposal.