

# USP 493/593: Public Participation Geographic Information Systems Spring 2014

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<b>Course Info:</b> Public Participation GIS* Location: URBN 225	3 Credit Hours (CRN: 65540) Tuesdays: 1:00 – 3:40PM
<b>Instructor:</b> Vivek Shandas Tel: 503.725.5222 Email: <a href="mailto:vshandas@pdx.edu">vshandas@pdx.edu</a>	<b>Office Hours &amp; Location:</b> By Appointment Urban Center (URBN) 370L

## Course Description and Objectives

The rapid emergence of web-based services supporting the collection, dissemination, and cartographic representation of spatial information from members of the public constitutes a major new development in the area of geographic information systems (GIS). Just ten years ago, GIS adoption and use by institutions of civil society was a central development affecting the societal role and impacts of geographic information. Today, these geographic information services are altering how spatial data are produced and shared due to the increasing involvement of community-based organizations in urban planning and political processes. Systems such as Google Earth™, Global Positioning Systems (GPS), and the general availability of spatial data provide an exceptionally fruitful lens for asking whether and how the goals of community-based organizations can be met through spatial analysis. Indeed, such questions are central to understanding how accessibility, sustainability, and appropriateness of technology will enable the public to be increasingly involved in decision-making processes.

This seminar focuses on the use of GIS and data for supporting regional and community planning. We discuss approaches to information needs, system requirements, technology implementations, and the integration of analytical with representation systems. We will explore and critique spatial analytical systems, with an aim to improve civic capacity so that members of the public can be increasingly connected to the mechanism that link information gained through spatial analysis with the political process. Through team-based investigations, reading, discussion, research, field trips, and videos this course will address persistent problems about the way spatial data resources are marshaled, and the process for expand citizen and community involvement as data contributors. The specific learning objects of this course include:

- Critically assess the pathways through which spatial analysis has been applied to public discourse in urban and regional planning;
- Discern the information needs, system requirements, technology implementations, and the integration of analytical with representation systems for a specific community-based-organization;
- Apply publicly available spatial analysis data for addressing pressing needs in urban and regional planning organizations; and
- Develop a critical understanding of the opportunities and barriers when applying spatial tools to public engagement processes.

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\* *Working Syllabus: While the learning objectives and core requirements will not change over the term, there may be minor modifications to assignments, order of presentations, and timing of topics. Modifications will be described in class and students are required to be up-to-date on any changes. Last updated: March 31, 2014.*

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*Participation in this seminar requires GIS knowledge, at least in the form of an introductory GIS course, and a willingness to engage community-based organizations.*

### Required Reading and Materials

The readings for this course will be available through the online course management system (Design to Learn), and no book or other reader will be necessary. Each week, participants are responsible for reading up to four articles consisting of peer-reviewed material and book chapters. A 1 GB storage device will be necessary for storing and transporting GIS data, maps, and other course material.

### Course Structure

This course is generally divided into lecture, discussion, and lab sessions, although depending on the specific needs of the participants, some sessions may vary in their format. Most course meetings will begin with a lecture describing historical developments, theoretical foundations, and characteristics of PPGIS. Interactive discussion sections consist of student-led presentation, which will on a peer-reviewed article, and a discussion about weekly readings. Presentations by students are on a specific reading, while general discussion sessions enable students to collectively apply lecture and reading materials to critically assess the opportunities and barriers in linking spatial analysis and public discourse on urban and regional planning. The attached 'Course Outline' (pg. 6) identifies significant dates and discussion topics.

### Evaluation Criteria

Since course participants can enroll as in the undergraduate (USP 493) or graduate section (USP 593), we will distinguish the evaluation criteria for both cohorts. While undergraduate participants will be required to complete all the requirements for the course, graduate students will also be required to conduct extensive literature review on a topic of their choice and facilitate a class discussion on one peer-reviewed journal article. Undergraduates will only present a peer-reviewed paper, and will not be required to contextualize the paper in the larger discourse of PPGIS. In terms of evaluation, graduate students will be expected to make an original contribution to the field of Public Participation GIS, either by developing innovative participatory techniques, integrating disparate literatures, and/or another acceptable contribution in their final project.

<i>Paper Presentations (200 points):</i>	20%
<i>Weekly Assignments (250 points):</i>	25%
<i>Final Project (350 points):</i>	35%
<i>Course Participation (200 points):</i>	20%
<b>TOTAL (1000 POINTS)</b>	<b>100%</b>

*Late work will be automatically marked down unless prior arrangements have been made with the instructor. Regular class attendance and participation are necessary and expected. Participation includes: involvement with class discussions (includes listening), asking substantive questions, addressing instructor's questions, working effectively in teams, and sharing relevant news and information.*

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### ***Presentations, Journals, and Final Project***

To pass this course you will need to complete one paper presentation, five assignments, and a final team-based project, and participate in class discussions and exercises. Course work is cumulative, assuming that in-class exercises will be helpful in completing the final project. The paper presentation consists of selecting a peer-reviewed article from the relevant literature, identifying the central tenets in the article -- with a specific focus on the application of spatial technologies within a community-based context – and critically assessing its limitations. The assignments will be provided each week, and to be submitting online before the following class session. Assignments will generally consist of exercises that were conducted during lab sessions, with specific spatial analysis and narrative components.

The 'deliverable' from this course is a final project that draws on the public participation literature, classroom discussions, and applies spatial analysis techniques to improve the civic capacity of a community-based organization. The aim of the final project is to learn about the relationship between public concerns over planning challenges and the collection, dissemination, and cartographic representation of spatial information. Course participants will be divided into teams (consisting of no more than 3 students), and will be responsible for completing a final project paper and presentation. While the final projects can focus on different dimensions of public participation and GIS, the final report must identify the process for engaging the public (including defining 'the public'), opportunities and barriers for applying spatial analytical tools, and a description of how a community-based organization can sustain the application of spatial technologies. Below is a detailed description of each phase of the final project, and due dates for each phase. While the due dates below are to keep groups 'on-track', only the final report and presentation will be graded – the dates below will be used for providing feedback to groups during the development of the project. The 350 points attributed to this project will be divided according to your written (225 points), and final in-class presentation (125 points).

- Project Idea and Organization – April 15 (two pages)
  - Provide a background of the specific topic and organizational needs;
    - How are you defining 'the public' in this project?
    - What are the planning challenges that affect the mission of a specific organization?
    - What information do you need in order to assess whether spatial analysis can be helpful for the organization to achieve its goals?
    - Have such applications been part of the PPGIS literature?
    - What techniques will you need to master to engage this organization?
    - Who can you engage to begin learning about the organization's needs?
- The Work Plan – April 29 (two pages)
  - To engage this organization, you must develop a work plan that describe the following (please be as specific as possible – some reconnaissance may be necessary):
    - What is the nature of the problem faced by the organization?

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- How can the organization benefit from involvement and what are possible risks associated to applying spatial analysis?
- What will you need from the organization to move forward?
- What is the timeline for completing this project?
- What will be the final 'deliverable' to the organization?
  
- Critical Assessment – May 13 (two pages)
  - Assess the opportunities and barriers to applying spatial analysis in public participation challenges faced by a local organization.
    - In what ways did this application help the organization? In what ways does it hinder their mission?
    - How has your engagement with this organization built its capacity to address its mission and objectives?
    - Has your project expanded upon the definition of public participation? If so how?
    - How can this organization sustain the use of spatial analysis?
  
- Presentations – June 3 – regular class time
  - Final project presentations will be evaluated on content (60%), organization (20%), and effective communication (20%)
  - 20 minute presentations (15 min. + 5 min. questions/comments)
  - Focus on the following elements of your project:
    - Background: historical context of the organization, and the public participation challenges it faces;
    - Methods: engaging the organization, identifying the role of spatial analysis, and the techniques employed;
    - Recommendations: how will these tools benefit the organization, what limitations in data did you encounter, and how can the organization sustain the use of spatial analysis to address its mission and goals? What types of skills can the organization transfer to the public so that spatial analysis becomes a democratic force?
  
- Final Report – June 3 by 10 PM (submitted online)
  - Follow the above format for outline the final report. Since each project will vary based on the process for engaging the organization, please work with the instructor to identify specific sections as needed.
  - In terms of length, reports should be no more than 15 pages (double-spaced, 12-point font, including figures, but not bibliography). Reports will be graded on how well they have addressed each of the above questions with specific attention to content, organization, and clarity.

### **Academic Integrity**

Portland State University (PSU) takes academic integrity very seriously. PSU strives to provide students with the knowledge, skills, judgment, and wisdom they need to function in

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society as educated adults. To falsify or fabricate the results of one's research; to present the words, ideas, data, or work of another as one's own; or to cheat on an examination or project corrupts the essential process of higher education. Students failing to adhere to these principles of academic integrity will be penalized (e.g. reduction of points, course failure, etc.). For further information please refer to PSU's student conduct code (<http://www.pdx.edu/dos/conduct.html>) or consult the instructor if you are unsure what constitutes a breach of academic integrity.

### ***Disabilities***

Every effort will be made to accommodate individuals with disabilities. Please notify the instructor by the first week of the course so that any necessary accommodations can be arranged. More information can be found at:  
[http://www.pdx.edu/iasc/drc\\_faculty\\_resources.html](http://www.pdx.edu/iasc/drc_faculty_resources.html)

### ***Web-Based Course Management***

We will be using **Design to Learn (D2L)**, a web-based course management system. Many of you may be familiar with WebCT or Blackboard, used extensively at PSU for web-based course management; however PSU is permanently transitioning to D2L as a replacement to WebCT. You will need to use D2L for several course requirements, such as updates to the syllabus, and downloading readings and assignments. Using your PSU account name and password, participants in this course can logon to D2L at: <https://d2l.pdx.edu>.

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Course Outline										
MODULE	Module Objectives	Week	Week & Date	Readings	Topic(s) Covered	Assignment	Final Project			
1	Learn principles of public participation; work directly with spatial analysis software; consider the integration of spatial analysis with local community-based organizations	1	1-Apr		Introductions; Objectives and aims of the course; Course structure					
		2	8-Apr	Readings 1	The Public and types of participation; the role of an urban and regional planner	Assignment 1	Conduct background research on a local community-based organization			
		3	15-Apr	Readings 2	Group formation; Application of spatial analytical tools	Assignment 2	Select an organization and submit the "Project Idea and Organization"; Initial contact with client			
2	Develop a collective (group) work plan by applying publicly available spatial analysis data for addressing pressing needs for urban and regional planning organizations	4	22-Apr	Readings 3	Group project idea; case studies of public involvement using GIS; spatial datasets	Assignment 3	Develop work plan and receive feedback from instructor			
		5	29-Apr	Readings 4	Developing relevant public participation process using spatial analysis	Assignment 4	Complete project work plan and deliver to client organization			
		6	6-May	Readings 5	Case Study 1	Assignment 5	Work with client organization to refine work plan and 'deliverables'			
3	Discern the information needs, system requirements, technology implementations, and the integration of analytical with representation systems for a specific community-based-	7	13-May	Readings 6	Case study 2		Continue working with client organization			
		8	20-May	Readings 7	Open source GIS		Complete final analysis and prepare presentation materials			
		9	27-May	Readings 8	The future of PPGIS: Opportunities and barriers		Work on final projects			
4	Develop a critical understanding of the opportunities and barriers to applying spatial tools for engaging the public	10	3-Jun		<b>Group Presentations (Regular Class Time)</b>					
		11	Finals Week -- June 7		<b>Final Reports Due: June 10 (1PM) on D2L</b>					