**USP 493/593: Public Participation Geographic Information Systems**  
*Spring 2019*

<table>
<thead>
<tr>
<th>Course Info:</th>
<th>Public Participation GIS*</th>
<th>3 Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>URBN 311 &amp; 225</td>
<td>Mondays: 1:00 – 3:40PM</td>
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</tbody>
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<thead>
<tr>
<th>Instructor:</th>
<th>Vivek Shandas, PhD</th>
<th>Office Hours &amp; Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tel:</td>
<td>503.725.5222</td>
<td>After class and by apt.</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:vshandas@pdx.edu">vshandas@pdx.edu</a></td>
<td>Urban Center (URBN) 370L</td>
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**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.

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.

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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: April 1\(^{st}\), 2019.*
Required Reading and Materials
The readings for this course will be available through the online course management system (D2L, Desire 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 presentations, and a discussion about weekly readings. Presentations by graduate students are on a specific reading, while general discussion sessions enable students to collectively apply lecture materials to critically assess the opportunities and barriers for linking spatial analysis and public discourse on participatory planning. The attached ‘Course Outline’ (pg. 6) identifies significant dates and discussion topics.

Evaluation Criteria
Since this course includes both undergraduate (USP 493) and graduate students (USP 593), we will distinguish the evaluation criteria. Undergraduates will be required to complete all the requirements for the course with the inclusion of attending a community event that provides an opportunity to develop a ‘spatial narrative,’ which we will discuss in class. Graduate students will be required to facilitate a class discussion on one peer-reviewed journal article. Graduate students will also 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. 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.

<table>
<thead>
<tr>
<th>Graduate Level (USP 593)</th>
<th>Undergraduate Level (USP 493)</th>
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<tbody>
<tr>
<td>Weekly Assignments (250 points): 25%</td>
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<tr>
<td>Final Project (350 points): 35%</td>
<td>Final Project (350 points): 35%</td>
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<tr>
<td>Paper Presentations (200 points): 20%</td>
<td>Community Event (200 points): 20%</td>
</tr>
<tr>
<td>Course Participation (200 points): 20%</td>
<td>Course Participation (200 points): 20%</td>
</tr>
<tr>
<td>TOTAL (1000 POINTS) 100%</td>
<td>TOTAL (1000 POINTS) 100%</td>
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Presentations, Community Event, Assignments, and Final Project
To pass this course you will need to complete four assignments, a final team-based project, and participate in class discussions and exercises. Undergraduate students will be asked to attend a community event of their choosing. The purpose of attending a community event is to identify an topic or challenge for which participatory mapping may be applied. Events such as a neighborhood
association meeting, a discussion about a proposed policy, or a conference/workshop are all eligible. The first step will be to select an event, and address the following questions in less than 2 pages: (1) What was a topic (or problem) discussed at the event? and (2) In what ways can a participatory mapping process help address this topic (or problem)? In addition to attending a community meeting, graduate students will be expected to facilitate a discussion on a peer-reviewed journal article -- 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. No submission is necessary for the article presentation.

Assignments will be provided each week, and will be submitted online before the following class session, unless otherwise noted. Assignments will generally consist of exercises that were conducted during lab sessions, with specific spatial analysis and narrative components. Course work is cumulative, assuming that in-class exercises will be helpful in completing the final project.

The culminating ‘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 2-3 people), 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.

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?
  - Who can you engage to begin learning about the organization’s needs?
- The Work Plan – April 22 (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?
    - 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 will be the final ‘deliverable’ to the organization?
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• **Critical Assessment – April 29 (two pages)**
  
  o 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?
    - 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**
  
  o Final project presentations will be evaluated on content (60%), organization (20%), and effective communication (20%)
  
  o 30 minute Presentations (20 min. + 10 min. questions/comments)
  
  o 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?

• **Final Report – June 10 by 5 PM (submitted online)**
  
  o 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.
  
  o 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.

  The 350 points attributed to this project will be divided according to your written (225 points), and final in-class presentation (125 points).

**Academic Integrity**

Students are expected to be ethical not only in the classroom, but also out of the classroom. It is in all students' interest to avoid committing acts of academic dishonesty and to discourage others from committing such acts. Academic dishonesty includes, but is not limited to, the following examples: engages in any form of academic deceit; refers to materials or sources or uses devices not authorized by the instructor for use during any quiz or assignment; provides inappropriate aid to another person in connection with any quiz or assignment; engages in Plagiarism. Plagiarism is the act of claiming someone's work as your own through copying it without giving the creator of the work credit. Plagiarism can also include using another person's theories, ideas, or phrases without proper attribution. The simplest way to avoid plagiarizing is to always cite the sources from which you gather information or develop arguments – just cite anything you use from someone else (it actually makes your work stronger!). Plagiarism is a serious issue and is a violation of the PSU Student Conduct Code.
Disabilities
PSU values diversity and inclusion; we are committed to fostering mutual respect and full participation for all students. My goal is to create a learning environment that is equitable, useable, inclusive, and welcoming. If any aspects of instruction or course design result in barriers to your inclusion or learning, please notify me. The Disability Resource Center (DRC) provides reasonable accommodations for students who encounter barriers in the learning environment. If you have, or think you may have, a disability that may affect your work in this class and feel you need accommodations, contact the Disability Resource Center to schedule an appointment and initiate a conversation about reasonable accommodations. The DRC is located in 116 Smith Memorial Student Union, 503-725-4150, drc@pdx.edu, https://www.pdx.edu/drc.

- If you already have accommodations, please contact me to make sure that I have received a faculty notification letter and discuss your accommodations.
- Students who need accommodations for tests and quizzes are expected to schedule their tests to overlap with the time the class is taking the test.
- For information about emergency preparedness, please go to the Fire and Life Safety webpage (https://www.pdx.edu/environmental-health-safety/fire-and-life-safety) for information.

Title IX Reporting Obligations
As an instructor, one of my responsibilities is to help create a safe learning environment for my students and for the campus as a whole. Please be aware that federal, state, and PSU policies require faculty members to report any instances of sexual harassment, sexual violence and/or other forms of prohibited discrimination. Similarly, PSU faculty are required to file a report if they have reasonable cause to believe that a child with whom they come into contact has suffered abuse, or that any person with whom they come into contact has abused a child. If you would rather share information about these experiences with an employee who does not have these reporting responsibilities and can keep the information confidential, please contact one of the following campus resources:

- Women’s Resource Center (503-725-5672)
- Queer Resource Center (503-725-9742)
- Center for Student Health and Counseling (SHAC): 1880 SW 6th Ave, (503) 725-2800
- Student Legal Services: 1825 SW Broadway, (SMSU) M343, (503) 725-4556

For more information about the applicable regulations please complete the required student module Creating a Safe Campus in your D2L.

Web-Based Course Management
We will be using Desire 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.
# USP 493/593: Public Participation Geographic Information Systems

## Spring 2019

### Course Outline

<table>
<thead>
<tr>
<th>Module Objectives</th>
<th>Final Project</th>
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<tbody>
<tr>
<td>Learn principles of public participation; work directly with spatial analysis software; consider the integration of local community-based organizations.</td>
<td>Conduct background research on a local community-based organization.</td>
</tr>
<tr>
<td>Develop a collective (group) work plan by applying publicly available spatial analysis data for addressing pressing needs for urban and regional planning organizations.</td>
<td>Select an organization and submit the &quot;Project Idea and Organization.&quot; Initial contact with client.</td>
</tr>
<tr>
<td>Discern the information needs, system requirements, technology implementation of, and the integration with representation analytical systems for a specific community-based organization.</td>
<td>Develop work plan and receive feedback from instructor.</td>
</tr>
<tr>
<td>Develop a critical understanding of the opportunities and barriers to applying spatial tools for engaging the public.</td>
<td>Complete project work plan and deliver &quot;Project Plan and Deliverables.&quot;</td>
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### Module

<table>
<thead>
<tr>
<th>Module</th>
<th>Topic(s) Covered</th>
<th>Readings</th>
<th>Topic(s) Covered</th>
<th>Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introductions; Objectives and aims of the course; Course structure</td>
<td>Readings 1; Group formation</td>
<td>The Public and types of participation; the role of an urban and regional planner</td>
<td>Readings 2; Group project idea</td>
</tr>
<tr>
<td>2</td>
<td>Application of spatial analytical tools</td>
<td>Case studies of public involvement using GIS; spatial datasets</td>
<td>Case Study 1: Developing relevant public participation process using spatial analysis</td>
<td>Case Study 2 (guest lecture)</td>
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<tr>
<td>3</td>
<td>Case Study 4: Group project work plan</td>
<td>Case Study 3 (guest lecture)</td>
<td>Case Study 3 (guest lecture)</td>
<td>Case Study 5: The future of PPGIS: Opportunities and barriers</td>
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<td>4</td>
<td>The Public and types of participation; the role of an urban and regional planner</td>
<td>Readings 3; Group project work plan</td>
<td>Work with client organization to refine work plan and &quot;deliverables.&quot;</td>
<td>Complete final analysis and prepare presentation materials</td>
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<tr>
<td>5</td>
<td>Readings 4; Group project work plan</td>
<td>Readings 5; Group project public engagement</td>
<td>Continue working with client organization</td>
<td>Work on final projects</td>
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<tr>
<td>6</td>
<td>Readings 6; Group project public engagement</td>
<td>Readings 7; Group project public engagement</td>
<td>Final Reports Due: June 10 (3PM) on D2L</td>
<td></td>
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<tr>
<td>7</td>
<td>Group project analysis</td>
<td>Group project final analysis</td>
<td>Group Presentations (Regular Class Time)</td>
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<tr>
<td>8</td>
<td>Group project final analysis</td>
<td>Group project final analysis</td>
<td>Group Presentations (Regular Class Time)</td>
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<td>9</td>
<td>Work on final projects</td>
<td>Work on final projects</td>
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<td>Final Reports Due: June 10 (3PM) on D2L</td>
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<td>11</td>
<td>Finale Week</td>
<td>Finale Week</td>
<td>Finale Week</td>
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### Module Objectives

- Week 1: Learn principles of public participation; work directly with spatial analysis software; consider the integration of local community-based organizations.
- Week 2: Develop a collective (group) work plan by applying publicly available spatial analysis data for addressing pressing needs for urban and regional planning organizations.
- Week 3: Discern the information needs, system requirements, technology implementation of, and the integration with representation analytical systems for a specific community-based organization.
- Week 4: Develop a critical understanding of the opportunities and barriers to applying spatial tools for engaging the public.