Instructor:  
Tim Nyerges, Professor  
402 Smith Hall, 543-5296  
nyerges@u.washington.edu

Office Hours: T 8:30-9:20 AM, or by appointment

Course Learning Objective:
Provide students an opportunity to explore methods associated with new developments in geographic information technology, particularly as related to participatory GIS to be used for community and regional sustainability work.

Course Description:
Geographic information representation is a fundamental aspect of geographic information use. This seminar provides a setting to discuss the motivations, development, and use of geographic information representations, particularly problem scoping, database design, modeling, and displays of information for land use, transportation and water resource planning and decision making. Special focus will be discussion of Internet GIS, WebGIS, Participatory GIS, and Public Participation GIS technologies. We discuss approaches to information requirements, technology implementations, and the use of systems. We will explore and critique example systems. Feasibility of Internet GIS functionality will be considered in terms of system architectures and component technology. Multiple phases of GIS data processing are addressed in terms of “linked information structures” to promote shared understanding among broad-based groups of people. An information structure is a representation of information potentially understandable by a broad group of people, e.g., value trees, decision paths, maps, timelines, tables, and commenting windows. Such information structures are the underpinnings of intellectual artifacts for analytic-deliberative dialog about complex geographical problems, e.g. land use, transportation, and environmental planning and decision making. A research paper is required that deals with a topic of your choice as contextualized by reading material and discussion from class. Prerequisite: Background in at least one course in GIS and interest in Internet GIS.

Basis of Grades:
1. Class participation (25% of course grade) - All members of the seminar are responsible for reading at least two of the suggested items each week. All participants in the seminar are responsible for bringing two copies of at least two discussion questions/issues to each class session based on your interests related to the readings. One copy of these questions/issues is for Tim Nyerges; the other copy is for the student to keep a record of interests from that session. Students are to use the questions / issues in developing the course synthesis report.

2. Course synthesis report (25% of course grade) - A course synthesis report is to be compiled using the issues / questions you generated for each class discussion. This synthesis is to focus on the learning outcomes you have attained in the class relevant to your subject interest - preferably your own research topic. Taking a subject matter of your concern you should ask yourself the following question before and after each seminar session. How has this seminar session contributed to a better understanding (confusion) of the topics associated with that subject? Please see/email Tim Nyerges early in the course to discuss a research topic of interest to you. Course Synthesis Report is due the last day of class and will be the topic of discussion for that session.

3. Research paper (50% of course grade) - The paper will be your interpretation of design and use of geographic information representations in relation to a topic of your choice - preferably your own research. The paper is to be approximately 10 double-spaced pages in length (a little more or less is OK), not including the diagrams and references. The research paper is due Wed June 11 at noon.
Week 1: What is geographic information representation? What perspectives on research do we hold?
Discuss course syllabus – requirements and topics
Discussion of research interests represented in the course

Week 2: Assuming that we all have some understanding about what a GIS can do, what are some of the fundamentals of public participation and community involvement?

Week 3: What are we really after in regards to GIS and participation/involvement?

Week 4: What are some examples of PGIS?

Week 5: What are some more examples of PGIS?


**Week 6: What’s a PGIS/PPGIS/IGIS/WebGIS in terms of comparative system design?**


**Week 7 What is the potential of participatory GIS in relation to “Sustainability Science”?**

**Week 8: How can we move from information need to system design, and on to system implementation?**


**Week 9 What are student research interests in regards to a research paper?**

**Week 10 How might we reflect on what we have learned this quarter? What is the major challenge with your research interests?**
Bring two copies of course synthesis report to class for discussion. Note: This is not the same as the research paper – but it is likely related. It is a reflection on your interests as they developed over the quarter.
Electronic Reserve Documents
Most are new as provided in the attached collection except, those marked “*” available from ERES Geography 461 pdf list winter quarter 2003.


