# Cover Sheet: Request 9981

### SLP 2xxx GIS II

**Info**

| | |
|---|---|
| Process | Course\|New\|Ugrad/Pro |
| Status | Pending |
| Submitter | Carr,Margaret H mcarr@ufl.edu |
| Created | 1/29/2015 8:42:18 AM |
| Updated | 2/6/2015 11:29:42 AM |
| Description | Introduction to GIS II is the second course in a Geodesign GIS sequence intended to provide students with fundamental and advanced concepts, principles, and techniques for the use of GIS in the evolving Geodesign process. |

**Actions**

| Step | Status | Group | User | Comment | Updated |
|---|---|---|---|---|---|
| Department | Approved | DCP - Design, Construction and Planning 011501000 | Carr, Margaret H | | 1/29/2015 |
| College | Approved | DCP - College of Design, Construction and Planning | Wehle, Andrew J | | 2/6/2015 |
| University Curriculum Committee | Pending | PV - University Curriculum Committee (UCC) | | | 2/6/2015 |
| Statewide Course Numbering System | | | | | |
| Office of the Registrar | | | | | |
| Student Academic Support System | | | | | |
| Catalog | | | | | |
| College Notified | | | | | |

# UCC1: New Course Transmittal Form

**Recommended SCNS Course Identification**

1. Prefix SLP 2. Level 2 3. Number XXX 4. Lab Code Select

5. Course Title Introduction to GIS II

6. Transcript Title (21 character maximum) Intro to GIS II

7. Effective Term Fall 8. Effective Year 2015 9. Rotating Topic? No

10. Amount of Credit 3 11. If variable, # minimum and # maximum credits per semester.

12. Repeatable credit? No 13. If yes, total repeatable credit allowed #

14. S/U Only? No 15. Contact Type Select Contact Type

16. Degree Type Baccalaureate 17. If other, please specify: Click here to enter text.

18. Category of Instruction Intermediate

19. Course Description

Introduction to GIS II is the second course in a Geodesign GIS sequence intended to provide students with fundamental and advanced concepts, principles, and techniques for the use of GIS in the evolving Geodesign process.

20. Prerequisites

SLP 2XXX Introduction to GIS I

21. Co-requisites

None

22. Rationale and Placement in Curriculum

This is an intermediate course slotted for a student's fourth semester.

23. Complete the syllabus checklist on the next page of this form.

**Syllabus Requirements Checklist**

The University's complete Syllabus Policy can be found at:
http://www.aa.ufl.edu/Data/Sites/18/media/policies/syllabi_policy.pdf

The syllabus of the proposed course **must** include the following:

- ☒ Course title
- ☒ Instructor contact information (if applicable, TA information may be listed as TBA)
- ☒ Office hours during which students may meet with the instructor and TA (if applicable)
- ☒ Course objectives and/or goals
- ☒ A weekly course schedule of topics and assignments.
- ☒ Methods by which students will be evaluated and their grades determined
- ☒ Information on current UF grading policies for assigning grade points. This may be achieved by including a link to the appropriate undergraduate catalog web page: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx.
- ☒ List of all required and recommended textbooks
- ☐ Materials and Supplies Fees, if any
- ☒ A statement related to class attendance, make-up exams and other work such as: *"Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx."*
- ☒ A statement related to accommodations for students with disabilities such as: *"Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation."*
- ☒ A statement informing students of the online course evaluation process such as: *"Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results."*

It is **recommended** that the syllabus contain the following:

- ☐ Critical dates for exams or other work
- ☐ Class demeanor expected by the professor (e.g. tardiness, cell phone usage)
- ☒ The university's honesty policy regarding cheating, plagiarism, etc.

  *Suggested wording: UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.*

- ☒ Contact information for the Counseling and Wellness Center: http://www.counseling.ufl.edu/cwc/, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies

**PLA 2xxx Introduction to GIS II**
Professor: P. Zwick (pdzwick@ufl.edu)
Office Hours: TBD
3 credits, Meeting time and location TBD

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**SYLLABUS**

**Course Description**

Introduction to GIS II is the second course in a Geodesign GIS sequence intended to provide students with fundamental and advanced concepts, principles, and techniques for the use of GIS in the evolving Geodesign process.

**Course Objectives**

The course is intended to integrated GIS technologies within the process and simulation of spatially related data that is Geodesign. Therefore the course provides lectures and examples that effectively combine the use of GIS tools, techniques, and models (processes or simulations) for capture, analysis, and display of spatial data that is crucial for planning and design of sustainable communities and natural environments. Advanced GIS for Geodesign concentrates on process analysis for spatial data with the intent of helping students to develop a philosophy regarding the use of GIS tools and simulation that support better design.

**Student Learning Outcomes**

Upon successful completion of the course, students will be able to:

- Integrate GIS technology into a Geodesign process.
- Develop the skills recognize the difference between geoprocessing and the Geodesign process and the components within GIS necessary to support the Geodesign process.
- Explain and interpret how GIS is used in real world spatial analysis relating to urban and natural systems design.
- Discuss how factors such as scale, resolution, and accuracy impact GIS analysis and design.
- Use and apply basic functionality of ArcMap in support of local and regional Geodesign.
- How to integrate basic GIS tools into a process that provides more eloquent solutions to larger more advanced spatial problem analysis.

**Weekly Course Schedule**

| Week | Topics Covered | Assignments |
|---|---|---|
| | | |
| **Week 1** | Course Introduction, Introduction to the Steinitz' Geodesign Processes | Review Class project model. |
| **Week 2** | Continued discussion of Steinitz' Geodesign Processes<br>Discussion of GIS Tools and the development of a Geodesign Process Diagram | Selection of a Geodesign project. |
| **Week 3** | Review of ***ModelBuilder***. ***ModelBuilder*** as a Geodesign foundation for process analysis and simulation. | HW 1: Paper discussing the Geodesign processes presented in Week 1 (5%)<br><br>EX 1: Select 1 Geodesign Process and Diagram a Process (Including the GIS Tools) required to implement the process selected. (5%) |
| **Week 4** | Implementing tools and basic Python coding in ***ModelBuilder***. | HW 2: Paper outlining the student's individual Geodesign project concept. The paper must include a ***ModelBuilder*** conceptual diagram (with tool specifics included). (5%) |
| **Week 5** | Continue lecture started in week 4 | |
| **Week 6** | Continue lecture started in week 4 | Geodesign project midterm presentation for class critique (5%) |
| **Week 7** | Midterm Review (1 hour): | Midterm take home examination (30%) |
| **Week 8** | Project 1; Midterm Review; Midterm Exam | Midterm Take home examination due at the beginning of first class week 8 |
| **Week 9** | | |
| **Week 10** | Using statistics and known distributions for raster suitability building on your introductory skill for zonal statistics. Statistics and trend analysis. | |
| **Week 11** | Using Geostatistics for Surface Interpolation – Local Polynomial and Kriging | |

| | | |
|---|---|---|
| **Week 12** | Optimizing Spatial Clustering | EX 2: Student's Geodesign Process and Diagram of the Process (Including the GIS Tools) required to implementing the process selected. The intent is to show the evolution of student's project process (5%)<br><br>Geodesign project second presentation for class critique (10%) |
| **Week 13** | Trend Suitability vs. Scenario Suitability. | |
| **Week 14** | Reclassifying Raster Data; Project 2; Using the Raster Calculator; | |
| **Week 15** | | Final Project Presentations (15%) |
| **Week 16** | | Continued Final Project Presentations, and<br>Final Project Paper Due (20%) |

**Textbooks**

Required:

Carl Steinitz, "Geodesign", ESRI Press, 2014, 380 New York Street, Redlands CA

David W. Allen, "GIS Tutorial for Python Scripting" for ArcGIS 10.2, ESRI Press, 2014, 380 New York Street, Redlands CA

Optional:

David W. Allen, "Getting to Know ArcGIS ModelBuilder", ESRI Press, 2011, 380 New York Street, Redlands CA

**Methods of evaluation and grading**

This course will incorporate a variety of teaching methods including class lectures, in-class exercises, assignments (Homework and Exercises), supplemental readings, a midterm exam, and a final Geodesign project. Students will be challenged to think critically and independently through a variety of methods that are related to the planning and/or design process using spatial data interpretation and analysis.

**Course grades will be determined using the following point values**

Homework Assignments and Class Exercises 20% Total
- First HW Assignment 5%
- First Exercise 5%
- Second HW Assignment 5%
- Second Exercise 5%

Midterm Examination 30% Total

Final Project 50% Total
- First Project Critique 5%
- Second Project Critique 10%

Final Presentation 15%
Final Paper 20%

**Grading Scale**
The following scale and associated letter grades will be used in this course.

| Letter Grade | A | A- | B+ | B | B- | C+ | C | C- | D+ | D | D- | E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Numeric Grade | 94-100 | 90-93 | 87-89 | 84-86 | 80-83 | 77-79 | 74-76 | 70-73 | 67-69 | 64-66 | 61-63 | 0-60 |
| Quality Points | 4.0 | 3.67 | 3.33 | 3.0 | 2.67 | 2.33 | 2.0 | 1.67 | 1.33 | 1.0 | 0.67 | 0.0 |

For greater detail, see the Registrar's Grade Policy regulations at
http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html

**Attendance/Late Work and Make-up Work**

Students will be allowed three unexcused absences without penalty. Each additional unexcused absence will result in the loss of 5% of points used to calculate the final grade.

Every attempt is to be made to submit work on the day assigned. A grade reduction of 10% per day will occur unless there is an acceptable excuse for the late submittal.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:
https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

**E-learning**
For issues with technical difficulties for E-learning, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP
- https://lss.at.ufl.edu/help.shtml

Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem.

**Academic Honesty**
"UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class."

**Disabled Students requesting Accommodations**
Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester, but no later than week 4.

**Counseling Resources**
Students experiencing crisis or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources.
http://www.counseling.ufl.edu/cwc/Default.aspx , 392-1575.
Please call the University Police Department: 392-1111 or 9-1-1 for emergencies.

**Religious Holidays**
The university calendar does not include observance of any religious holidays. The Florida Board of Governors and state law govern university policy regarding observance of religious holidays. Students shall be excused from class or other scheduled academic activity to observe a religious holy day of their faith with prior notification to the instructor. Students shall be permitted a reasonable amount of time to make up the material or activities covered in their absence. Students shall not be penalized due to absence from class or other scheduled academic activity because of religious observances.

**Online Course Evaluation**
Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/.

**Disclaimer**
This syllabus represents our current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.

UF UNIVERSITY of FLORIDA

# UCC: Syllabus Checklist

All UCC1 forms and each UCC2 form that proposes a change in the course description or credit hours must include this checklist in addition to a complete syllabus. Check the box if the attached syllabus includes the indicated information.

**Syllabus MUST contain the following information:**

- ☑ Instructor contact information (and TA if applicable)
- ☑ Course objectives and/or goals
- ☑ A weekly course schedule of topics and assignments
- ☑ Required and recommended textbooks
- ☑ Methods by which students will be evaluated and their grades determined
- ☑ A statement related to class attendance, make-up exams and other work such as: "Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx."
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1. Critical dates for exams and other work
2. Class demeanor expected by the professor (e.g., tardiness, cell phone usage)
3. UF's honesty policy regarding cheating, plagiarism, etc. Suggested wording: UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obliged to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor of TAs in this class.
4. Phone number and contact site for university counseling services and mental health services: 392-1575, http://www.counseling.ufl.edu/cwc/Default.aspx
   University Police Department: 392-1111 or 9-1-1 for emergencies.

**The University's complete Syllabus Policy can be found at:** http://www.aa.ufl.edu/Data/Sites/18/media/policies/syllabi_policy.pdf