Course Change Request

Date Submitted: 02/12/18 4:53 pm

Viewing: **GEOG 380: Workshop in Environmental Studies**

Last approved: 01/12/18 3:23 am
Last edit: 03/02/18 9:25 am
Changes proposed by: cbarnn3

Catalog Pages referencing this course:
- Department of Geography
- GEOG - Geography (GEOG)

Programs referencing this course:
- BS-ENG: Environmental Geosciences - BS
- BS-ENST: Environmental Studies - BS
- BS-GEOG: Geography - BS
- BS-GIST: GIS & Geoinformatics - BS
- BS-Earth Systems Science

Faculty Senate Number

Contact(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>E-mail</th>
<th>Phone</th>
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</thead>
<tbody>
<tr>
<td>Andrew Klein</td>
<td><a href="mailto:klein@tamu.edu">klein@tamu.edu</a></td>
<td>979 845 5219</td>
</tr>
</tbody>
</table>

Rationale for Course

Edit

Other
The proposed changes are part of a routine curriculum review.

Explain other rationale

**Sections of this course will be taught as part of a faculty-led study abroad program.**

Course prefix: GEOG
Course number: 380

Department: Geography
College/School: Geosciences
Academic Level: Undergraduate
Undergraduate course level justification (Select One)

Academic Level (alternate): Graduate
Effective term: 2018-2019
Complete Course Title: Workshop in Environmental Studies
Abbreviated Course Title: WRKSHP IN ENVIR STDIES

Catalog course description:
The study, understanding and solution of human environment problems based on principles learned in the classroom; library, laboratory and field work carried out by individuals and in groups; reports on work accomplished.

Prerequisites and Restrictions:
GEOG 330.

Concurrent Enrollment: No

In Workflow:
1. GEOG Department Head
2. Curricular Services Review
3. GE Committee Prep
   UG
4. GE Committee Chair
   UG
5. GE College Dean
   UG
6. UCC Prep
7. UCC Chair
8. Faculty Senate Prep
9. Provost
10. President
11. Curricular Services
12. Banner

Approval Path:
1. 03/01/18 7:22 pm
   Dave Cairns (cairns):
   Approved for GEOG
   Department Head
2. 03/02/18 9:25 am
   Sandra Williams
   (sandra-williams):
   Approved for Curricular
   Services Review
3. 03/02/18 10:40 am
   Roxanna Russell
   (rrussell):
   Approved for GE Committee Prep
   UG
4. 03/02/18 12:46 pm
   Christian Brannstrom
   (cbrannst):
   Approved for GE Committee Chair
   UG
5. 03/02/18 12:49 pm
   Christian Brannstrom
   (cbrannst):
   Approved for GE College Dean
   UG
6. 03/05/18 9:06 am
   Sandra Williams
   (sandra-williams):
   Approved for UCC Prep
   7. 03/09/18 3:33 pm
   Sandra Williams
   (sandra-williams):
   Approved for UCC Chair

History
Enforced Prerequisites / Concurrent Enrollment

<table>
<thead>
<tr>
<th>And/Or</th>
<th>Course Prefix/Number</th>
<th>Min Grade/Score</th>
<th>Academic Level</th>
<th>)</th>
<th>Concurrency?</th>
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<tr>
<td>GEOG 330</td>
<td>D</td>
<td>UG</td>
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<td></td>
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</tr>
</tbody>
</table>

Crosslistings
- No
- Crosslisted With

Stacked
- No
- Stacked with

Semester
- 2-6
Contact Hour(s)
- 0
Lecture:
- 0
Lab:
- 2-6
Other:
- 0
Total:
- 2-6

Repeatable for credit?
- Yes

Number of times repeated for credit
- 2
- OR - Maximum number of hours

When will this course be repeated?
- Within the same semester

Three-peat?
- Yes

CIP/Fund Code
- 4507010001

Default Grade Mode
- Letter Grade(G)

Alternate Grade Modes
- Satisfactory/Unsatisfactory

Method of instruction
- Laboratory

Will sections of this course be taught as non-traditional? (i.e., parts of term, distance education)
- Yes

Learning Outcomes
- Meets traditional face-to-face learning outcomes.

Describe how learning outcomes are met or provide justification why they are not met.
- Learning outcomes in the study abroad section match learning outcomes in sections offered in College Station.

Hours
- Meets traditional face-to-face hours.

Describe how hours are met or provide justification why they are not met.
- Academic engagement and student preparation hours in study abroad section are equivalent to sections offered in College Station.

Will this course be taught as a distance education course?
- No

Is 100% of this course going to be taught in Texas?
- No
- Yes

Will classroom space be needed for this course?
- Yes

This will be a required course or an elective course for the following programs:

Required (select program)
Course Syllabus

Syllabus: Upload syllabus

Upload syllabus: [GEOG380_syllabus_2017.pdf](GEOG380_syllabus_2017.pdf)
[CR.pdf](GEOG380_CR.pdf)

Letters of support or other documentation

No

Additional information

One section of this course will be taught in a faculty-led study abroad program. Most sections will be taught at TAMU College Station.

Reviewer Comments

Sandra Williams (sandra-williams) (01/24/18 1:23 pm): Rollback: Please include a traditional and non-traditional (if applicable) syllabus to this request.
Sandra Williams (sandra-williams) (03/09/18 3:33 pm): UCC approved March 9 via e-vote.

Reported to state?

No
Instructor: Dr. İnci Güneralp
Office: 803F Eller O&M Building (OMB)
Office Hours: MW 12:00–13:00 P.M. and by appointment
Email: iguneralp@tamu.edu

Class Meeting Time and Place: MWF 1:50-2:40 P.M., CSA 302

Online Course Information: http://ecampus.tamu.edu/
Credits: 3 lecture hours
Prerequisite: GEOG 330 or equivalent.

Course description
This upper-level undergraduate course requires that students successfully complete a project on an environmental topic. The course is designed to increase the students’ awareness on impact of environmental changes on river systems and their ecosystems and ecosystem services. Globally, rivers have been increasingly impacted by changing climatic patterns and human activities (e.g., land change, mining) and modifications (e.g., dams, bank controls, levees). Such environmental changes results in marked changes in river flow, sediment, and nutrient flux as well as loss of connectivity between rivers and their floodplains and basins. These changes have wider implications for river hydrology, fluvial geomorphology and the conservation and management of freshwater biodiversity. In addition, there are increasing challenges addressing conflicting demands placed upon rivers such as providing flood protection while conserving river ecosystem services and minimizing the loss of biodiversity. In this course, you will develop skills by working on an environmental problem related to rivers that will, ultimately, help you understand the challenges of successful management and preservation of rivers, floodplains, and their ecosystems and ecosystem services.

Course format
The course offers an inquiry-based, experiential learning rather than traditional lecture-format classes. Students are expected to work independently both in and out of class under the supervision and guidance of the instructor. The course consists of three major components: 1) discussion of the literature, 2) modeling/game activities and field work, and 3) group project. The first component is the review the literature on the pressing issues globally affecting rivers systems due to ever increasing environmental changes. It will be based on discussions; thus, you must come to the class having studied the assigned readings prior to class meetings and be prepared to discuss them and lead the discussions. The content of this component is also aimed to inform the second and the third components of the class. The second component will involve computer-modeling and -game activities as well as field data collection and analysis. It will involve a simulation-based analysis of a river to examine different futures of the river-floodplain system under a range of environmental change scenarios. In addition, it will include field visits one of the creeks in CS and the collection and analysis of the field data. The third component is for the design, execution, presentation, and reporting of research projects. You will work in groups to develop a research question and a methodological approach, collect and analyze data, interpret the results of your data analysis, write a report, and deliver a presentation on a project.
The class will meet regularly during scheduled class times. For the field data collection, we will need to devote time outside the class time. In class meetings will serve to clarify any issues during the modeling activity and project execution phase, facilitate the coordination within and between groups, and get feedback from the instructor.

**Learning outcomes**
- Understand the world’s rivers in the face of environmental change and human role in changing rivers,
- Critically think about environment problems created by environmental changes on rivers and their landscapes,
- Understand the impact of extreme events on river systems
- Understand the concept and challenges of river management
- Develop analysis skills to put this understanding into practice in real-life,
- Learn to search for and analyze information beyond that presented by the instructor,
- Clearly communicate research results and information in written form and through oral presentations.

**Textbook**
There is no required textbook. The sources to the readings will be provided for your own access. Most of these readings are drawn from books, articles and news published in scientific journals, reports, news and factsheets distributed by federal and state agencies and environmental organizations.
Tentative weekly schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>1st day of the week</th>
<th>Component 1 Literature discussions</th>
<th>Component 2 Modeling/game/field</th>
<th>Component 3 Term project (TP)</th>
<th>Due dates</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Aug 28</td>
<td>No class (Aug 28, campus is closed due to Hurricane Harvey) Introduction (WF)</td>
<td></td>
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<tr>
<td>2</td>
<td>Sep 4</td>
<td>Rivers under changing environments (MW)</td>
<td>General discussions (F)</td>
<td>Questionnaire (Sep 8, F)</td>
<td></td>
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<td>3</td>
<td>Sep 11</td>
<td>Impact of extreme events on river systems (MW)</td>
<td>Literature search, discussions (WF)</td>
<td>Assignment #1 (Sep 15, F)</td>
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<td>4</td>
<td>Sep 18</td>
<td>River-floodplain dynamics (RFD) under changing environments (MW)</td>
<td>RFD model introduction (F)</td>
<td>Literature search, constructing research questions (MWF)</td>
<td>TP Proposal (Sep 22, F)</td>
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<td>5</td>
<td>Sep 25</td>
<td>RFD modeling &amp; discussions (MW)</td>
<td>Literature review &amp; data collection (MWF)</td>
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<tr>
<td>6</td>
<td>Oct 2</td>
<td>Flooding (M)</td>
<td>Literature review &amp; data collection (MWF)</td>
<td>Assignment #2 (Oct 6, F)</td>
<td></td>
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<tr>
<td>7</td>
<td>Oct 9</td>
<td></td>
<td>Literature review &amp; data collection (MWF)</td>
<td>Interim TP Report #1 (Oct 13, F)</td>
<td></td>
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<tr>
<td>8</td>
<td>Oct 16</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>9</td>
<td>Oct 23</td>
<td>Flooding field data analysis &amp; discussions (MWF)</td>
<td>Data analysis (MWF)</td>
<td></td>
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<tr>
<td>10</td>
<td>Oct 30</td>
<td>Flood resilience (FR) game (MW)</td>
<td>Data analysis, interpretation, discussion (F)</td>
<td>Interim TP Report #2 (Nov 3, F)</td>
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<tr>
<td>11</td>
<td>Nov 6</td>
<td></td>
<td>Interpretation, discussion (WF)</td>
<td>Assignment #3 (Nov 10, F)</td>
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<td>12</td>
<td>Nov 13</td>
<td>FR game (MWF)</td>
<td>Interpretation, discussion (MWF)</td>
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<td>13</td>
<td>Nov 20</td>
<td>FR game discussions (M)</td>
<td>Conclusions, final preparations (MWF)</td>
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<td>14</td>
<td>Nov 27</td>
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<td>Final preparations (M), Presentations (WF)</td>
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<td>15</td>
<td>Dec 4</td>
<td></td>
<td>Presentations (MW)</td>
<td>Final TP report (Dec 8, F)</td>
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Monday (M), Wednesday (W), Friday (F)

* Please note that this outline is tentative and subject to change at the discretion of the instructor.

** Reading list will be provided separately.
Course evaluation

Coursework will comprise the following. The percentages in parentheses indicate grade distribution of final grade:

- Attendance and class participation (10%)
- Assignments (15%)
- Project proposal (5%)
- Interim project reports (15%)
- Final report (35%)
- Group participation (10%)
- Presentation (10%)

Attendance and class participation (10%)
Attendance and participation during the course is required. Throughout the semester, we will have readings assigned, and you are expected to lead at least one discussion. The list of readings relevant to the topics to be covered and further details on the reading assignments will be provided during the semester.

Assignments (15%)
There will be three assignments (each 5%). These assignments will be based on assigned readings, the analysis of data, and modeling/game activities. The specifics on the assignments will be provided along with the assignments. The assignments will help you to develop your research skills (e.g., library search, data analysis and interpretation) to improve your understanding of geoenvironmental problems.

Project (65%)

Project proposal (5%). This document will include the group’s research question, a brief overview of the relevant literature, the approach the group will follow to answer the stated research question, challenges the group expects to arise during the conduct of the research, and how this research might advance the relevant literature. View the document as a roadmap to completing your project. This document should be approximately 500 words (approximately 2 pages of double-spaced text, Times New Roman 12 pt., 1” margins; The Chicago Manual of Style (CMOS), referencing).

Interim project reports (15%). There will be two interim reports (each 7.5%). These reports will give a summary of the tasks undertaken so far and the preliminary results obtained. It should be about 1000 words (approximately 4 pages of double-spaced text, Times New Roman 12 pt., 1” margins; The Chicago Manual of Style (CMOS), referencing). This document will constitute a preliminary draft of the final report. Further details will be provided later in the semester.

Final report (35%). You will be required to develop a final report. The final report will introduce the research project topic, the research questions, the methodological approach; it will also highlight the key findings and discuss their implications. The report will include (1) a title page with project title, date, and authors, (2) a one page executive summary, and (3) the report with references at the end. This report should be about 3000 words (approximately 15 pages of double-spaced text, Times New Roman 12 pt., 1” margins; The Chicago Manual of Style (CMOS), referencing) excluding figures and tables. Further details will be provided later in the semester.

Group participation (10%). Each member of the research groups is expected to contribute equally to all parts of the project. This portion of the grade will be based on both the instructor’s and the peers’ evaluations. The instructor’s evaluation will be based on class attendance during the project phase; the peers’ evaluation will be based on each member’s role in the project.

Presentation (10%). You will synthesize the findings of your project in a 15 minute presentation to be delivered to the class at the end of the semester. Further guidance will be provided later in the semester.
**Policy on late assignments**
All assignments must be submitted by the due date. **No late assignments will be accepted.** Students who do not turn in an assignment by the due date will receive a score of zero for that assignment.

**Grading**
Please remember that your exam and course grades are not negotiable. Your grades are *earned* based on your performance, *not given* based on effort or need. Your grade reflects your performance in this course, not your potential as a student or a person. If you need to discuss your grade, please see me during my office hours or make an appointment. The Family Educational Rights and Privacy Act (FERPA) does not allow me to provide your grades via e-mail.

The grading system follows the Texas A&M University grading system:

A = Excellent, B = Good, C = Satisfactory, D = Passing, F = Failing

**Grading Scale**
Grades will be assigned based on the following cutoffs: A = > 90%, B = 80-89%, C = 70-79%, D = 60-69%, F = <60%. An average performance in this class will receive a satisfactory grade (C). If it is warranted, the final grades will be calculated based on a curve. In no case will I ever curve the grades to your detriment—in this course, the curve only serves to raise potentially your final course grade.
COURSE AND UNIVERSITY POLICIES

CLASS ATTENDANCE: The University views class attendance as the responsibility of the individual student. I have found that class attendance is usually highly correlated with student performance (the more classes you miss, the lower your grade tends to be). Students who miss class are responsible for getting the notes from a fellow member of the class.

University rules regarding attendance (e.g. excused absences) can be found at http://student-rules.tamu.edu/rule07. It is your responsibility to know these rules and procedures.

Don’t come to class to sleep, surf the web, or text your friends. I will not hesitate to ask you to leave if you are disruptive. I'm sure if our roles were reversed you would expect the same courtesy of me.

EMAIL: All Texas A&M students should use their neo email accounts when emailing the instructor or the teaching assistant. I may send out class announcements via the neo email system and it is your responsibility to check your account regularly.

CELL PHONES: As a courtesy to the instructor and other students please turn cellular telephones to silent mode and do not text. I find it extremely impolite to be interrupted by a cellular telephone or to be distracted by someone texting when I am lecturing.

THE AMERICANS WITH DISABILITIES ACT (ADA): The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit http://disability.tamu.edu

COPYRIGHT AND PLAGIARISM POLICY: All materials used in this course are copyrighted. These materials include but are not limited to syllabi, quizzes, exams, lab problems, in-class materials, review sheets, and additional problem sets. Because these materials are copyrighted, you do not have the right to copy the handouts, unless permission is expressly granted.

As commonly defined, plagiarism consists of passing off as one’s own the ideas, words, writings, etc., which belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of that person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without which research cannot be safely communicated.

If you have any questions regarding plagiarism, please consult the latest issue of the Texas A&M University Student Rules, http://student-rules.tamu.edu, under the section “Scholastic Dishonesty.

ACADEMIC DISHONESTY: Texas A&M have a Scholastic Dishonesty policy to which both students and faculty must comply. If you have any questions about the University's Scholastic Dishonesty policy please review the Student Rules or see me. The Aggie Honor program is the new program that will handle all cases of academic dishonesty. The Aggie Honor program website is located at http://www.tamu.edu/aggiehonor.tamu.edu

“An Aggie does not lie, cheat, or steal, or tolerate those who do.”
GEOG 380 - Workshop in Environmental Studies
Summer 2018 - Costa Rica Study Abroad

Course Description
The course focuses on key resources, emphasizing economic, social and political processes that shape society’s use of natural resources. This upper-level undergraduate course requires that students successfully complete a project on an environmental topic. The course is designed to increase the students’ awareness on impact of environmental changes on river systems, their ecosystems and ecosystem services and water security for human use. The case study site for this is Costa Rica.

Learning Objectives
Students will be able to:

- Understand the world’s rivers in the face of environmental change and human role in the hydrological cycle, with attention to water security
- Critically think about environment problems created by environmental changes on rivers and their landscapes
- Understand the complexities of water insecurity and security in Central America
- Understand the concept and challenges of water governance
- Develop analysis skills to put this understanding into practice in real-life,
- Learn to search for and analyze information beyond that presented by the instructor,
- Communicate research results and information in written form and through oral presentations.

Required Books & Materials
There is no required textbook. The sources to the readings will be provided for your own access. Most of these readings are drawn from books, articles and news published in scientific journals, reports, news and factsheets distributed by federal and state agencies and environmental organizations.

The course will be based on short readings and a problem-based approach developed through individual and group projects. Students MUST obtain: (1) colored pencils or pens (5-10); (2) sketchbook, approx 5” x 8”, 60 lb paper, ~50 sheets; (3) composition book, approx 9” x 7”, ~100 pages; (4) handouts (maps, tables, and articles) available on e-campus.

All students must be certified to conduct human subjects research (CITI) before arrival. Details and directions will be provided at pre-trip meetings.

Schedule
In Costa Rica, you will complete activities described below. Consider that: (i) all activities are outdoor, reliant upon walking, and the TA and I will “shadow” you occasionally; (ii) sunrise is early (5 AM), temperatures are high by 11 AM (~30 C), solar radiation is intense, and rainfall is regular after ~2 PM, so you are encouraged to wake early to begin your activities; (iii) we will have regular debriefing meetings ~6 PM; (iv) the activities require reading scholarly papers, field work, reflection, and analysis.

Student Assessment & Assignment Policies
Letter grades will follow the following scheme: A for 100-90%; B 89-80%; C 79-70%; D 69-60%; F below 60%.

1. Journal (20%). All students will complete detailed journals and reflections on a daily basis.

2. Presentation (30%). All students will work in groups on a topic that will be presented at the Soltis center at the end of the 2-week period. Rubrics will be provided in the pre-trip meeting.
3. Activities (35%). All students will complete problem-based activities and associated work. Rubrics and details will be provided in the pre-trip meeting.

3. Citizenship and Participation (15%). Participation refers to contributions in the de-briefing sessions. Citizenship is defined as attitude and actions taken in Costa Rica that reflect on the United States, Texas A&M University, and the study abroad group. Poor citizenship is reflected in behavior such as public drunkenness, egregious instances of cultural insensitivity, and other behaviors that negatively affect the group.

Course Policies
In addition to normal high standards of courtesy and respect expected in any university classroom, please take note of the following:

1. Scholastic Dishonesty. The Aggie Code of Honor is simple: “Aggies do not lie, cheat, or steal, nor do they tolerate those who do.” Instances of scholastic dishonesty will be treated in accordance with Section 20 of the TAMU Student Rules. Please inform yourself on the student rules regarding cheating, plagiarism, fabrication of information, conspiracy at the new website: http://aggiehonor.tamu.edu.

2. Grade Disclosure. All personal information concerning your performance in this course is covered by federal privacy legislation, known as the Family Educational Rights and Privacy Act of 1974 (FERPA). No grades or status questions will be provided by telephone or email.

3. ADA Statement. The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities in Room 126 of the Koldus Building, or call 845-1637.

4. Due Dates. All assignments are to be submitted before or at the beginning of class on the specified due date. NO EXCEPTIONS, unless there is a University excused absence. Please see Student Rules http://student-rules.tamu.edu/rule7.htm).

5. Email. Email messages must be sent from a TAMU email address or else they will be treated as spam and will be deleted. Email communications must meet the same standards as the written assignments in this course.

6. Absence. This class follows University policy regarding excused absences. For more information, please see Section 7 of the student rules: http://student-rules.tamu.edu. Specific examples of absences during the study abroad period will be discussed in pre-travel orientation meetings.

7. Communication. You MUST come to office hours if you have an excuse for an absence, missed exam, etc. You may alert me to the situation by email, but you MUST also discuss the situation with me in person.

General Guidance
Safety: Do not put yourself at risk in terms of personal safety while carrying out these tasks;

Documentation: Details matter! Answers to tasks will consist of sketches in sketchbook, based on photographs or images in course packet and essays in composition book, showing engagement with required readings; also description and reaction, or other observation. You may also use ephemera pasted into sketchbook with annotation or caption (eg., scrapbook-style, which will make a unique memory book of your trip). Answers should be labeled with reference to the Activities below.

Work quality: I am not looking for specific answers, but rather coherent and legible hand-written essays that show evidence of dialogue with the required reading in terms of specific referencing, critical comment, or
“testing” of claims, and enough detail to show that your observations were precise and focus (NOT vague and general). Your answers (sketches; essays; notes; etc.) to these activities comprise most of your grade in GEOG 450, so you should devote appropriate time and effort to these answers in expectation of your desired grade; an essay of ~2 pages, with no sketch and little engagement with the required reading, would result in a grade of ~C, while an essay of 5 pages, thoughtful and in dialogue with the readings, with reference to the sketchbook (maps, ephemera), would result in a grade of ~A. In addition, the answers will form the basis for the presentation at the Soltis Center.

**Spanish language:** these activities are designed to minimize conversations in Spanish (which is not required), but if you speak Spanish, then use it, and share your knowledge with your team.

**Teams:** Projects are to be conducted in groups of 2-4 people (which I will “shadow” regularly), but individuals should do their own work to be recorded in the composition book and sketch book—for example, individuals must write answers to the questions included in the task descriptions, and they must draw maps where required.

**Planning:** Relevant course packet materials and notebooks should never be far from you, and you might do some tasks simultaneously, so review the full set of activities for each city, and plan accordingly. Afternoon rain is expected, so you need to use the fair periods for field work, and do writing and reading indoors, during the rain.

**Overview of Activities**

Day 1 and 2: In-Country Orientation
Arrival, Introduction to Soltis Center, Planning projects and team activities; Lecture.

Day 3: Water Security for Communities and Energy
Visit hydroelectric plant; Meet with ASADAS, and prepare for household water insecurity survey

Days 4-5: Water Security for Communities
Conduct household water insecurity survey; data entry

Day 6: Water for Food/Export
Visit pineapple plantations (El Tanque)

Day 7: Water for Energy (and Tourism)
Visit Lake Arenal and dam infrastructure

Day 8: Free day (La Fortuna)

Day 9: Water for Food
Canas, Guanacaste to meet with irrigators association and SENARA, and visit farmers

Day 10: Water for Food
Bagaces, Guanacaste to meet with local leaders and farmers regarding water issues and drought.

Day 11-14: Water for Ecosystems
Nicoya Penninsula, Cirenas campus activities on water management and working with Waterkeepers (NGO)

Day 15: Return to Solits Center (full day travel from Nicoya)

Day 16: Prepare presentations and submit assignments