SUMA K4350 Seminar in Project Methods and Analysis
Summer Session X: Tuesdays, 6:10-8:00 PM

Instructor: Kizzy Charles Guzman, Lecturer, kc2688@columbia.edu
Office Hours: 5-6 PM on Tuesdays in 2929 Broadway Conference Room or by appointment
Response Policy: I will respond to emails within 24 hours during the work week and on Mondays following the weekend.

Course Overview

In this course, students will learn how sustainability managers manage projects and conduct analysis. The course will emphasize the requisite skills and techniques for defining the problem that a sustainability project is intended to solve, developing a method of analysis for finding a solution to the problem, organizing and managing a team to conduct the analysis, cultivating the relationship with a client, and writing reports and making presentations. Students will hone these skills and techniques as they have already studied them, to one extent or another, in courses that they have taken previously in the program. They will then apply these skills and techniques, as well as their knowledge of the field of sustainability management, which they have acquired throughout their study in the program, to a project for a real-world client. The project will be sufficiently complex, with elements of general and financial management, quantitative analysis and economics, sustainability, and public policy, so that it will enable students to integrate their learning in meeting the client’s objectives. Therefore, the course fulfills the M.S. in Sustainability Management program’s capstone workshop requirement. This course will be offered in the summer session only.

Learning Objectives

By the end of this course, students will be able to apply the skills and techniques necessary to define, analyze, and manage a sustainability problem. Students will be able to:

- Define the problem that a sustainability project is intended to solve.
- Develop a method of analysis for making sense of the complexity associated with sustainability issues.
- Design and apply a work plan to reach the solution to the problem.
- Demonstrate the ability to work with colleagues in a team setting.
- Analyze information to formulate a solution.
- Produce briefings and a report that persuade the client of the effectiveness of the solution.
- Synthesize, apply and communicate sustainability knowledge to solve environmental problems.

Readings


When the sustainability project topic and scope are finalized by the project client, instructor, and group, students will complete a comprehensive literature review related to the topic. Topics will be finalized by Week 3 of the semester. As an example of the scope of the literature review, included below is a sample list of suggested readings for a literature review of the topic of water systems management for reference:
• Cane, M. The ENSO Mechanism.
• Dinar, A. Water allocation mechanisms--- principles and examples.
• Håkan Tropp (2007), Water governance: trends and needs for new capacity development
• Loucks, DP (2005). Water Resources Systems Planning and Management.
• Oki & Kanae (2006). Global Hydrological Cycles and World Water Resources
• Pearce, F (2006). When the rivers run dry: water, the defining crisis of the twenty--- first century.
Resources
Duplicating Support

The Master of Science in Sustainability Management program administrators duplicate and pay for midterm and final-briefing booklets, as well as the final workshop reports. Please follow the duplication guidelines below.

- All PowerPoint slides should be turned in to the Sustainability Management program office. Please send them via email to Allison Ladue (aladue@ei.columbia.edu). Presentations are due by \textbf{9:00 AM the day prior to the scheduled} midterm briefing and \textbf{by 9:00 AM on the day prior to the scheduled} final briefing. We request that groups comply with this deadline so that we can ensure on-time delivery of hard copy.

- If applicable, groups must submit both a \textbf{print version} and an \textbf{electronic version} of the presentation by that time.

- The program pays for the duplication of a limited number of copies of the final workshop report. This typically includes a copy for each member of the group, up to five copies for the client, and one copy for the program’s files. In addition to any deadlines set by the client, reports are due to Allison Ladue for printing at least 5 business days prior to the client presentation.

Audio/Visual Equipment

Audio/visual equipment is available for any group that requires it. To reserve A/V equipment, a member of the group should contact the MSSM program office at least three business days in advance.

Room Reservations

To reserve a room for dry-run briefings or meetings, a member of a group should request a room from the Program office. The request should be made as soon as possible and no later than 72 hours in advance. While we cannot guarantee that we will be able to find a room for every group meeting session, we guarantee that we will try our best to accommodate every group’s needs.

Course Requirements (Assignments)

The outputs required for the course include:

1. Project control plan (PCP or work plan) (20%)
   The plan is a tool to guide the project and keep it on track. It must include the following: “main goals or expected products; the tasks and deliverables to achieve the goals; the timelines for performing the tasks and the deadlines for completing them; and those who are responsible for the tasks.
   The following components are also taken into consideration as part of the PCP:
   a. In-class exercise on team management and team building.
   b. In-class simulation of a negotiation.
   c. First draft of the project work plan.
   d. Second draft of project work plan and literature review.
   e. Briefing on project status.
   f. Briefing on project status.

2. Mid-term briefing to the class (25%)
a. Dry-run of midterm briefing.
   i. The 10 minute dry-run midterm briefing will be presented to the instructor and a small group of program faculty for their comments in advance of the midterm briefings.

b. Midterm briefing.
   i. The project group will select one student to present the midterm briefing. The midterm briefing to the class will consist of a 10 minute presentation to the class and invited guests followed by a 5 minute question and answer session. The final briefing will be accompanied by a PowerPoint presentation of between 8-20 slides.

3. Final briefing to the class and the client (25%)
   a. Dry-run final briefing
      • The 10 minute dry-run final briefing will be presented to the instructor and a small group of program faculty for their comments in advance of the final briefings.
   b. Briefing to the class
      i. The project group will select one student to present the final briefing. The final briefing to the class will consist of a 10 minute presentation to the class and invited guests followed by a 5 minute question and answer session. The final briefing will be accompanied by a PowerPoint presentation of between 8-20 slides. Samples of final briefings to the class can be viewed here: [http://sustainability.ei.columbia.edu/curriculum/integrative-sustainability-management-courses/integrative-capstone-workshop/](http://sustainability.ei.columbia.edu/curriculum/integrative-sustainability-management-courses/integrative-capstone-workshop/)
   c. Briefing to the client
      • The scheduling and format of the final briefing to the client is subject to negotiation between the client, the faculty advisor, and the members of each research team. A client briefing can vary from 30 minutes to 2 hours and can consist of a formal presentation with presentation slides or a more informal meeting to discuss group findings.

4. Final report (30%)

The final report enables the project team to see the results of its work in a single format. When writing the executive summary, the project team will need to integrate the semester’s work and identify the major themes and findings of the project. Writing a report on a complex topic is a difficult task. The report should be simply structured, easy to read, and tailored to its audience. The formal briefing accompanying the final report gives the entire team and invited guests the opportunity to critically assess the project’s findings. In addition, the final report will provide a permanent record of the combined group effort.

Useful policy-relevant reports tend to be short and to the point. One way to ensure a succinct report is to develop a logical, detailed outline to think through the report before you begin writing. The outline should be organized to answer the questions posed in the problem statement included in the workplan. It should be divided into distinct units to facilitate the assignment of writing responsibilities. Every member of the group should be given responsibility for writing the first draft of one section of the report.

The first draft of the report will be presented to the client for comment. After discussing the client’s comments with the faculty advisor, the group prepares a draft final report for submission to the faculty advisor and client. If the final draft of the report is acceptable to the advisor and client, it becomes the final report. If further revision is needed, the report must be rewritten.

Multiple drafts may seem repetitive; however, they are a necessary part of analysis in professional settings. Analysis will often raise sensitive issues that the client will be more conscious of than the research team. The client may have
additional data or new considerations that need to be reflected in the report and the research team must comply with the client’s needs.

**Evaluation/Grading**
Grades for the each assignment will be graded on a scale of 0-100. Grades will be assigned to individual team members for each assignment. Assignments will be evaluated based on the following criteria:

- **Project control plan (PCP or work plan) (20%)**
  - Clear understanding of the project’s main goals or expected products and of the requisite tasks and deliverables to achieve the goals.
  - Adequate time and appropriate deadlines for performing the tasks.
  - Assignment of responsibility for completing tasks equitably among the group.

- **Mid-term briefing to the class (25%)**
  - Quality and professionalism of the presentation materials.
  - Clear, professional, and articulate presentation.
  - Ability to address questions during question and answer session.

- **Final briefing to the class and the client (25%)**
  - Quality and professionalism of the presentation materials.
  - Clear, professional, and articulate presentation.
  - Ability to address questions during question and answer session.

- **Final report (20%)**
  - Quality of the individual written work.
  -Extent of the integration of the semester’s work and the identification of the major issues and findings of the project.
  - Logical sequencing of the issues and persuasiveness of the recommended actions.

**Course Policies**

*Participation and Attendance*
You are expected to do all assigned readings, attend all class sessions, and engage with others in online discussions. Your participation will require that you answer questions, defend your point of view, and challenge the point of view of others. If you need to miss a class for any reason, please discuss the absence with me in advance.

*Late work*
Unless advance permission has been given by the instructor, there will be no credit granted to any written assignment that is not submitted on the due date noted in the course syllabus. All written assignments must use MLA Style, cite sources, and be submitted to the course website (not via email).

**Course Schedule/Course Calendar**
List topics, readings, assignments, projects, exams and due dates on an easy-to-read course timeline. Sample:

<table>
<thead>
<tr>
<th>Date</th>
<th>Topics and Activities</th>
<th>Readings (due on this day)</th>
<th>Assignments (due on this date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/26</td>
<td>Introductory session: Purpose of the course; faculty and student introductions; presentation and</td>
<td>Team Management p. 1-1 to – 2-28 (40 pages). The Team Handbook. Scholtes et al, 2003</td>
<td>In-class exercise on team management and team building.</td>
</tr>
<tr>
<td>Date</td>
<td>Event Description</td>
<td>Reading Material</td>
<td>Notes</td>
</tr>
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<tr>
<td>6/3</td>
<td>Presentation and discussion on negotiation and conflict resolution; discussion of project selection.</td>
<td>Negotiation conflict p. 6-1 to 7-13 (36 pgs). The Team Handbook. Scholtes et al, 2003</td>
<td>In-class simulation of a negotiation.</td>
</tr>
<tr>
<td>6/9</td>
<td>Presentation and discussion on work planning; discussion of project scope, client objectives, and methods of analysis.</td>
<td>Workplan p. 3-1 to 3-31 (31 pgs). The Team Handbook. Scholtes et al, 2003</td>
<td>First draft of the project work plan.</td>
</tr>
<tr>
<td>6/16</td>
<td>Presentation and discussion on briefings; review of work plan; discussion of organizing fieldwork and data collection.</td>
<td>Literature Review Readings (TBD based on client topic)</td>
<td>Second draft of project work plan and literature review.</td>
</tr>
<tr>
<td>6/30</td>
<td>Review of work plan; discussion of initial findings and next steps.</td>
<td>Literature Review Readings (TBD based on client topic)</td>
<td>Briefing on project status.</td>
</tr>
<tr>
<td>7/7</td>
<td>Discussion of project status and midterm briefing</td>
<td>Literature Review Readings (TBD based on client topic)</td>
<td>Dry-run of midterm briefing.</td>
</tr>
<tr>
<td>7/14</td>
<td>Midterm briefing to the client and discussion of next steps.</td>
<td>Literature Review Readings (TBD based on client topic)</td>
<td>Midterm briefing.</td>
</tr>
<tr>
<td>7/21</td>
<td>Discussion of project status and the planning of the final report.</td>
<td>Literature Review Readings (TBD based on client topic)</td>
<td>Briefing on project status and final report outline.</td>
</tr>
<tr>
<td>7/28</td>
<td>Discussion of project status, including the recommendations to the client.</td>
<td>Literature Review Readings (TBD based on client topic)</td>
<td>Briefing on project status and first draft of final report.</td>
</tr>
<tr>
<td>8/4</td>
<td>Planning of final briefing.</td>
<td>No assigned Readings</td>
<td>Briefing on project status and second draft of final report.</td>
</tr>
<tr>
<td>8/11</td>
<td>First final briefing dry-run.</td>
<td>No Assigned Readings</td>
<td>First draft of final briefing.</td>
</tr>
<tr>
<td>8/18</td>
<td>Reflections on project methods and analysis. Second final briefing dry-run.</td>
<td>No Assigned Readings</td>
<td>Second draft of final briefing; final report.</td>
</tr>
<tr>
<td>TBD</td>
<td>Client final briefing.</td>
<td>No Assigned Readings</td>
<td></td>
</tr>
</tbody>
</table>
Copyright Policy
Please note -- Due to copyright restrictions, online access to this material is limited to instructors and students currently registered for this course. Please be advised that by clicking the link to the electronic materials in this course, you have read and accept the following:

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Academic Integrity
Columbia University expects its students to act with honesty and propriety at all times and to respect the rights of others. It is fundamental University policy that academic dishonesty in any guise or personal conduct of any sort that disrupts the life of the University or denigrates or endangers members of the University community is unacceptable and will be dealt with severely. It is essential to the academic integrity and vitality of this community that individuals do their own work and properly acknowledge the circumstances, ideas, sources, and assistance upon which that work is based. Academic honesty in class assignments and exams is expected of all students at all times.

SCE holds each member of its community responsible for understanding and abiding by the SCE Academic Integrity and Community Standards posted at http://ce.columbia.edu/student-life-and-alumni-relations/academic-integrity-and-community-standards. You are required to read these standards within the first few days of class. Ignorance of the School's policy concerning academic dishonesty shall not be a defense in any disciplinary proceedings.

Accessibility
Columbia is committed to providing equal access to qualified students with documented disabilities. A student's disability status and reasonable accommodations are individually determined based upon disability documentation and related information gathered through the intake process. For more information regarding this service, please visit the University's Health Services website: http://health.columbia.edu/services/ods/support.