

THE ROLE OF FACULTY, STUDENT GROUPS, TEACHING ASSISTANTS, AND THE WEB IN TEACHING LARGE MANAGEMENT CLASSES

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Today I Will Discuss These Questions:

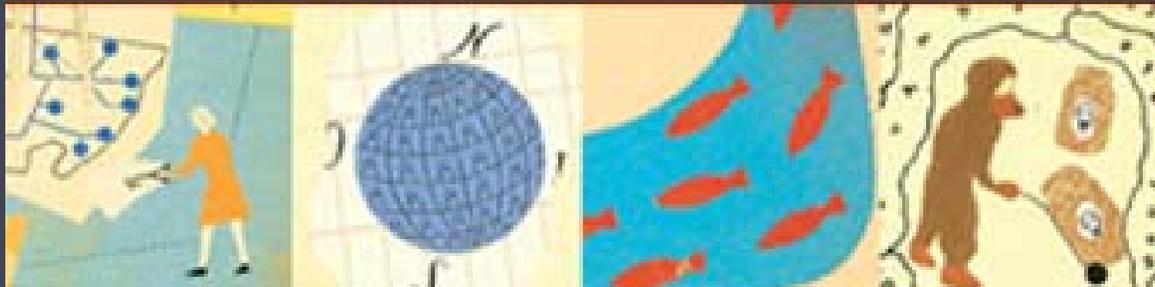
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1. What are the MPA in Environmental Science and Policy and the MS in Sustainability Management programs?
2. How do these programs differ?
3. What is the Workshop in Applied Earth Systems Management?
4. What is the Sustainability Management course?
5. What can we conclude?

1. What are the MPA in Environmental Science and Policy and the MS in Sustainability Management Programs?

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- The Master of Public Administration (MPA) in Environmental Science and Policy began in 2002 to train sophisticated public managers and policymakers who apply **innovative, systems-based thinking** to environmental issues.
- The program's objective is to provide students with the analytic, communication, and work skills required to be **problem-solving earth systems professionals**.



1. What are the MPA in Environmental Science and Policy and the MS in Sustainability Management Programs? (cont'd)

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- The Master of Science (MS) in Sustainability Management was developed in 2010 to formally train and educate sustainability practitioners.
- The program draws upon the most sophisticated environmental measurement tools, cutting-edge environmental science, and world class management and policy studies to help students fully understand the **systematic and organizational role of sustainability** in any organization.

1. What are the MPA in Environmental Science and Policy and the MS in Sustainability Management Programs? (cont'd)

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□ **Both programs:**

- Emphasize the complex and systemic nature of environmental issues and focus on the practical skills necessary to deal with such issues;
- Offer students an **interdisciplinary learning experience**, combining courses in the natural sciences with traditional management, economics and policy courses.
 - Science courses include: Climatology, Urban Ecology, Sustainable Water, and the Dynamics of Energy Efficiency.
 - Environmental science is also integrated into management and policy course materials using carefully selected data, examples, cases, and assignments.

2. How do these two programs differ?

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MPA in Environmental Science & Policy

- Students prepare for careers in environmental science and policy.
- Requires **54 credits** over a 12-month period. Students must **enroll full-time** at 18 credits per semester.
- Curriculum and course schedule were developed specifically for the program; only three courses are electives.
- **60 students** enrolled in Fall 2011

MS in Sustainability Management

- Students are already mid-career professionals.
- Requires **36 credits** and allows students to **enroll part-, half- or full-time**.
- Students can take advantage of the program's evening course offerings while working full-time during the day.
- **250 students** enrolled in Fall 2011.

3. What is the Workshop in Applied Earth Systems Management?

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- The Workshop is the core, required management course for the MPA in Environmental Science and Policy program. All 60 students are enrolled each semester.
- The Workshop's teaches students how to integrate their understanding of natural science, social science, policy studies, and management in a **problem-solving exercise**.
- The first two semesters of the workshop are a **management simulation**.
- The final semester is a real-world analysis for a public or non-profit sector client.



3. What is the Workshop in Applied Earth Systems Management? (cont'd.)

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□ Method of Instruction: Management Simulation

- The Workshop simulates a functioning organizational environment.
- Students are placed into groups of **12-13 member teams**, each led by a faculty-selected Manager and Deputy Manager, where they **analyze an important public policy problem**.
- Teams analyze a piece of proposed but not yet enacted environmental law or treaty.
- Deliverables include 11 specific outputs produced in 14 weeks over the Summer semester and 12 outputs produced in 13 weeks for the Fall semester.

3. What is the Workshop in Applied Earth Systems Management? (cont'd.)

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□ Group Work

- Each group is lead by a Project Manager and a Deputy Manager who develop the work plan, chair meetings, and ensure outputs are completed on schedule.
- Groups are divided into task teams, with each team member responsible for an output as well as assisting on one or two additional outputs.
- Each group determines its own processes and rules.
- Structure offers **peer-to-peer managerial learning** experience.



3. What is the Workshop in Applied Earth Systems Management? (cont'd.)

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□ Class Structure

- At the first session, faculty introduce legislation for each group, assign students to group and appoint group managers.
- Course meets for two hours twice a week, in addition to group meetings.
 - In the first hour of class, faculty give **traditional lectures** focused on training on project-related skills.
 - After the lecture and discussion, the class breaks into **two concurrent sections** where **each group presents an output** to classmates.
 - Then, students hold individual group meetings where they discuss work or group issues with their faculty advisor.
 - Each group meets again for a second two-hour session later in the week.

3. What is the Workshop in Applied Earth Systems Management? (cont'd.)

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□ Faculty

- One of the primary ways the program executes the management simulation method for such a large class is by employing multiple faculty members who each serve dual roles as instructor and project advisor.
- In 2010, there were three **full-time faculty members** and **two adjunct professors**.
 - Adjunct professors bring unique expertise from the public and private sector to management instruction and project advising.
 - These individuals serve to emphasize the applied work and financial aspects of the curriculum.
- Workshop **faculty act as clients** for groups' projects and participate in meetings .
- Faculty provide feedback on teamwork, analysis, research sources and group management techniques.

3. What is the Workshop in Applied Earth Systems Management? (cont'd.)

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- CourseWorks: The online component
 - An online course management website is utilized to post the syllabus, lectures, readings, and other course materials.
 - Only registered students and faculty have access.
 - Enables faculty to easily contact all students.
 - Includes a library research guide.

4. What is the Sustainability Management course?

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- It is the core management class for the MS in Sustainability Management program.
 - ▣ Provides instruction on the basics of public management and sustainability management.
- 114 students were enrolled in 2010, **160 students** in 2011.
- Since most of the students attend part-time and work full-time, there is no reason to simulate work processes.
- Instead, we project the students into a wide variety of organizational settings and environments and ask them to **address discrete management problems**.
 - ▣ Instruction centers on the **case method** instead of the management simulation found in the Workshop course.

4. What is the Sustainability Management course? (cont'd)

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- Method of Instruction: Case Method
 - Students analyze **real life management situations** through 17 cases throughout the semester.
 - Students **act as decision-makers**, allowing them to apply the skills and knowledge they have learned in the course to the specific problem presented in the case.
 - Reading includes basic management books, including *The Effective Public Manager* and *Sustainability Management*.

4. What is the Sustainability Management course? (cont'd)

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□ Method of Instruction: Case Method

- Students read and analyze **four individual cases**, for which they write a two-page memo addressing various issues raised in the case.
- One of the ways that faculty manage the large class is by limiting the length of memos and oral briefings.
 - **Page limitations and time constraints** are strictly adhered to, both to provide the simulation of a professional organization as well as to allow enough time to cover all the material necessary.
- Students receive instruction at the first class session on professional communication including memos, work emails, and oral briefings.

4. What is the Sustainability Management course? (cont'd)

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□ Group Work

- Each student also participates in a 5th case in **groups of 5-6**.
- Deliverables include a work plan, a 10 minute oral briefing and a written memo.
- Group work allows students to apply their skills in ways similar to the Workshop.
- Faculty spend less time evaluating student performance for each case while ensuring programmatic quality.
- Each case is analyzed and presented by two groups.
 - This provides opportunities to emphasize that **management is a craft, not a science**. There are no right answers to the questions posed about the case, just a series of difficult trade-off choices.

4. What is the Sustainability Management course? (cont'd)

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□ Course Structure

- The course meets **once a week for two hours** and incorporates presentations, discussion, and instruction into each session.
- Student groups present on cases, then the class discusses as a whole.
 - Students identify similarities and differences in approaches to the case.
 - Students also debate how they might have responded themselves.
- Individual cases are also discussed.
- Instructor lectures on a specific management or sustainability theme.

4. What is the Sustainability Management course? (cont'd)

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□ Faculty and Teaching Assistants

- The course is taught by a single faculty member with the aid of teaching assistants (TAs).
- Group presentations are distributed throughout the semester, allowing for easier support and advice from a single instructor.
- There are typically four TAs, or **1 TA for every 30 students**.
- TAs serve as the first point of contact for students, attend all lectures, and assist students with class work. Usually all TAs have taken the course, and at least one is an Earth Institute staff member.
 - This allows the instructor to focus on preparing lectures and developing instruction materials.

4. What is the Sustainability Management course? (cont'd)

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- Courseworks: The online component
 - ▣ Like the Workshop, Courseworks is used by faculty and TAs to post course documents.
 - ▣ An online discussion board is accessible to all students and managed by TAs to provide answers to frequent questions and foster discussion.



5. What can we conclude?

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- Delivering high-quality instruction in management courses, despite large class sizes, is possible. We utilize:
 - A team teaching environment that combines practitioners with full time faculty;
 - Student-managed work groups;
 - Differently sized sessions for different functions;
 - Full time staff to coordinate assignment grading; and
 - Posting course materials and assignments online.

5. What can we conclude? (cont'd)

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- We use the large class setting as a way to create **excitement, positive peer pressure, and motivation**.
 - ▣ Faculty are asked not to complain about the size of the class, but to seek to use it as a way to **energize the class and inspire learning**.
- Groups facilitate **informal, out of class learning**.
- In professional education, small classes are increasingly uncommon. Large classes, taught in the right type of room, with competent audio-visual support, and sufficient grading assistance can provide a superb teaching environment to the right kind of instructor.
- At Columbia, it is the principle way we provide management instruction.