

GE 532 A1 Research for Environmental Agencies and Organizations
Task and Context: Two Credits
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Course Objectives and Description

To learn about environmental policy by working on real-world problems, students perform research tasks that assist environmental and public health officials or organizations in achieving their missions. Students work individually and in teams on real problems, communicating with government and organization officials to determine and conduct the tasks, and ending the class by presenting their work to them. In past semesters students have presented to the Secretary of the Environment, top officials at the Department of Environmental Protection, officials in the U.S. Environmental Protection Agency's Civil Rights, Water, and Pollution Prevention Assistance Divisions, and the Boston Public Health Commission.

Student work is supervised by a former state and federal environmental official who also teaches environmental law and policy. Students choose between several tasks that Reibstein has worked out with officials, and must take responsibility as leaders of one task, and also act in support of another task. Progress is presented at weekly meetings, where each student participates in considering questions and concerns that relate to the quality, methods, goals and value of the work.

In addition to performing research tasks, students taking this class will participate in additional class time each week to go further into depth concerning the context of the research tasks. Students in this class will learn about such topics as environmental data, its sources, extent, purposes and interpretation; law concerning open government; methods for assuring quality; effectively communicating data; Environmental Justice, chemicals law, regulatory programs, and other law and policy that is relevant to the tasks being undertaken.

Students will also prepare final comments that are recommendations for future work, to inform the work of future students.

They will also produce a strategy for generating greater awareness of the problems and solutions they have researched. For example, if their work for a client shows that lead water service lines can be replaced at reasonable cost, they will research where such information may be shared in order to convince more jurisdictions to invest in lead service line replacement. Or, they may develop a complementary paper on options for implementing the solutions they have found, by others than the client who received their report.

HUB Topics

* Students in this class are not only tasked with using – rather, developing - knowledge of the natural and social sciences, but with applying what they learn, because they are seeking to assist governmental agencies or nonprofit organizations in addressing the important scientific and social questions that they must deal with. Therefore students receive through this class an engagement with issues of public policy as they are manifested in real world situations. Their work on issues related to climate change, toxics, inequality and other health and environmental matters is framed and shaped by the practical perspective of professionals tasked with solving these problems, who by their duties to the public or funders must grapple with the issues at the intersection of many perspectives, and with the information needing to be assessed, from many different sources and disciplines. (Social Inquiry II)

* In assisting these public and nonprofit environmental professionals, students are forced to work hard to understand the basic scientific reasoning that provides the evidentiary basis for policy, and the basic economic and social factors that must also influence decision-making about what programs should do, and to help the agencies and organizations meet the challenges to their arguments for action. In this class the student is given a chance to see the connections among the economic, social, and scientific factors that shape the creation and adoption of effective public policy. (Social Inquiry II)

* All students in the class will be required to read general materials on the policy-making process – as noted below in the section on focus areas. In addition, for each project that students undertake they will have to do research on the context and dive into the particulars. They will have assigned readings that are relevant to the tasks they are doing. For example, in the Spring 2019 semester students are assisting a state Senator with legislative support for a bill to make it easier for victims of lead poisoning to sue companies that put lead into commerce. They will be required to read materials on the history and medical science of lead poisoning, as well as the law pertaining to the liability of producers of lead-containing products. They will be required to read the work of experts who may be invited to testify at hearings. I will assign these readings but they will also be expected to find relevant materials themselves, to bring them to class and share as members of a team. By not simply receiving assignments from me they learn to become partners in the learning process. (Social Inquiry II)

* In this class, by working with state and city agencies and organizations concerned with environmental issues, students are given a chance to actually contribute to their community. When students have helped the Commonwealth understand the science behind pesticide impacts on bees, approaches to

protecting trees, how to build solar canopies, how to site chargers for electric vehicles, how the city of Boston can consider how they might improve communication of information to prevent lead poisoning, and toxics in hair products (these are just some examples of student projects), they have had concrete, not just theoretical exposure to how constructive connections are created and maintained, how a civil society sustains and improves itself. Nearly every student feels keenly the chance to do something that benefits other people in their community, the chance to meet with people who work with or in the community. Most students have made presentations to officials and some to larger meetings, and emerge with some experience of the neighborhoods around them or the communities of professionals working on these issues that pertain to the community as a whole. Their ability to be responsible as individuals and to be engaged members of diverse communities is, I believe, the chief benefit of the class, along with the fact that by focusing on a specific project they see how quickly they can develop expertise. It is true that not every single student makes full use of the opportunity, but it is not just the most talented who benefit from this class. (The Individual in the Community)

* In this class students must be able to analyze the most important dimension – that of reality, where a product of some quality must be the end result, and it needs to be on time, as in the real world, and they must do so as something for the public, so are forced by the nature of the project to consider the worldviews and beliefs of everyone in the community who might be related to the work. Because their projects are supervised by the instructor, who worked in government before creating this class, they are helped to understand the respectful approach as they are guided in their research and communications to produce something of use to the community as a whole. The nature of the work imposes the context of the community, makes it a required frame for evaluating the work. (The Individual in the Community)

*By doing work for a client, students are brought to the juncture of their own views and the needs of the client, and must consider how their attitudes and beliefs relate to the task at hand. In order to be effective, they have to try to see how they will be received. The most frequent example is the style of instruction that students will often adopt – a way of writing that commands – drafts that tell government officials that they “must” do this or that. When I see writing like this (fairly standard in first drafts) I have an excellent teaching opportunity to ask the students to put themselves in the place of the government official, who has to deal with the expectations of their executive, the legislature, the public, and the courts, and to see that these are the entities that can impose an imperative, and that they must chart a course in the context of these forces, and find a balance between them. By seeing the context in which their clients operate, students learn that simply declaring what is right may not be effective, and with my editing help, can learn how to express themselves with an understanding of the relational dynamics that determine how their work will be received. Similarly, they learn that the professionals for whom they undertake research tasks do know a great deal, and through this class become more sensitive to the issue of how to address others without projecting a sense that they need to be educated. Students often make the mistake in their first drafts of explaining things to clients that sound as if they think the clients don’t know elementary facts or – more often – moral principles. Through this class they learn how to address clients with respect, and how to remove excessive certainty from their own statements. (The Individual in the Community)

The process of working with clients thus presents an excellent opportunity to get them to think about their own worldviews. I do not ask them to suppress or diminish their own moral beliefs or impulses – but use this class to get them to focus on how they may be effective – after reconsidering these beliefs in the context of the task and other stakeholders. Each task begins with asking the students to be creative and to think about what they want to accomplish, and proceeds to examining the needs and desires of those who will receive or view the work product. By working on specific tasks for specific clients and undergoing the assessment I require of progress, students confront historical, racial, socioeconomic, political, gender, linguistic, religious, and cultural dimensions of the work. These cannot be avoided when working for clients on real problems, and they are confronted in concrete terms, not abstractly. By thinking about – and witnessing in meetings with clients – how their work and ideas are received, their own worldviews and beliefs as well as those of others are directly compared. My role is to help them to do this respectfully and in a way that expands their awareness of different communities. In working with city, state, and federal officials, and members of nongovernment organizations who work with the public, they directly face issues relevant to the larger community in which they live and will work. (The Individual in the Community)

All students in this class are part of a team. The class itself is described to each student as a team. In addition each student works as part of a project team. They are allowed to choose projects but I will assign them to teams if needed, so that no student works alone. They are to meet with the project teams independently, and then report to the class team, as well as to me. Each student is required to take responsibility for a primary project and to work as a support on a secondary project, to report to the group on their primary project and to contribute ideas and assistance on their secondary. In addition, they are to respond with ideas, to these reports. This is explicitly stated, that they should not simply listen but be engaged, and contribute ideas and questions to all projects. All participants share their work at class meetings and are expected to think through each problem and help others to think about them. All students are invited to visits with clients. (Teamwork/Collaboration)

* Students working on the same projects have meetings in addition to the class meeting, and also with me. In those meetings I review how the projects are working, asking them about the experience of working with others, and discussing how to optimize that experience. What are they contributing? Do they feel that others are doing the work as well? Are there frictions, and how do they respond to that? In this effort it is important to recognize that many students are reluctant to criticize their colleagues and I do not press them to do so, but it is nevertheless possible, through such questioning, to determine whether there are issues. This line of questioning does bring to the fore questions that are important preparation for future work in organizations, and this is explicitly discussed. I ask them to consider what makes the group effort work and what doesn't, and even if they are reluctant to criticize others, it is possible to address issues raised by those who do not contribute. However, it is important to mention that over several years of conducting this class, such issues have been infrequent, as students generally choose projects that engage them and to which they become committed. The most frequent issue has been coordination of their efforts, and finding the particular talent or interest that each student can bring to the table. Some students are good at data analysis, and some are good at big-picture thinking. Talking about what they care about and the skills they want to develop, and getting them to think about

what they can contribute to the group effort, is the primary focus. In this way I try to put the focus on their responsibility and their role, while discussing the group dynamics and functioning.

My emphasis is on the quality of what they produce, and I help them see that this is what will be most likely to be cited and used. For the projects to be published on the course website, they must meet an acceptable level of quality. The aim is utility to the client. If their work is truly useful, the client may post it or distribute it, or take action based on it. In meetings with the students, and my instructions to the project teams, and to the class as a team, my focus is on quality and utility to the client. When students see this result, it is extremely gratifying. Students are identified in reports as members of a team, and they meet with clients as team members. I send news to them about the results of their work and congratulate them as successful team members. The purpose of the class is specifically to learn how to be professional, to be effective as members of a team, to learn how to use the tools and strategies of working successfully together, each taking on roles and responsibilities, each giving and receiving feedback. Our group discussions of the projects have inspired both creative and thoughtful results but also a sense of collective ownership of them.

Through this process students receive explicit training on how to work as team members. I use the vocabulary of cooperation, coordination, mutual respect, honest self-assessment, and work with the students to help them learn how to respectfully discuss issues that arise concerning their ability to work with each other. For example, in previous classes I designated “leaders”, but this unnecessarily differentiated between team members, and I have eliminated that term and now refer to those previously designated leaders as those who have taken responsibility for the quality of the project output. I ask the formerly designated leaders to take that responsibility and then throughout the semester I ask them to report to me on whether they believe the team is producing useful work. This provides a more useful framework for discussing how well the team members are working together. The focus is not on the personalities or shortcomings of other students but on the contribution that is needed for the project to succeed. The tools and techniques of working together successfully are thus contextualized in terms of work product, and the relational dynamics, which could otherwise be about personal likes or dislikes, become manageable. This class provides a focused opportunity to practice and gain sustained experience in teamwork on two levels – in the class as one large team, and in each project team. In individual meetings with me each student reflects on their own process. I monitor the progress of the group as a whole and each project, and continuously describe ground rules for group interaction. In addition I have each student provide to me in their final report an assessment of the team process, what they learned about working with others, and this is part of their grade. They are informed and reminded throughout that this will be required at the end of the semester and that this is one of the primary purposes of the class – to learn how to work effectively as a team, and that this is important preparation for their future life as professionals. (Teamwork/Collaboration)

Projects

Each semester will include tasks pertaining to Environmental Justice, Lead Poisoning Prevention, Preventing or Addressing Toxic Risks, Water Quality Data Analysis, and Clean Energy.

Examples of previous and current projects include: for the Boston Public Health Commission: reducing exposure to toxics and developing plans for municipal Environmental Justice programs. For the Massachusetts Department of Environmental Protection (DEP), US EPA, and the Neponset River Watershed Association, water quality data analysis. For DEP: community solar at waste sites in EJ areas. For the Executive Office of Energy and Environmental Affairs: Carbon Credits for Forest Conservation, a literature search on the effects of pesticides on bees, placement of electric vehicle charging stations.

To see more about previous projects see: www.bu.edu/rccp and go to Current Research Projects.

Students are members of a team tasked with forming a comprehensive picture of the context of the work that is being done. Each week they will share what they learn with the other students, and determine and commit to their individual contributions.

In the first class, the students consider the list of tasks above, and before discussion, write down their questions about them. What do they want to know, what aspects do they wish to explore, what do they not understand? These individually developed lists of questions begin the investigation. In the first three weeks of the semester, the students do general research on the problem, meet with or hear from the clients, come to class with new questions, and each class leave with their assignments reshaped as we discuss work on an ongoing basis. Research tasks are parceled out each week and each week the student must discuss their progress with the instructor and meet with others working on the same project.

The instructor will also discuss the following concerning the context of our work, in three focus sections.

Section One: Planning the Semester's Work and the Context of Our Work. Classes 1-4.

Lectures will concern Participating In Our Democracy, including such topics as the Administrative Procedure Act, Notice and Comment, open meetings, right to know, public documents, Freedom of Information, mandamus, citizen suit, petition, engagement with legislators, advisory committees, alert lists, whistle-blowers, Federal Tort Claims Act, injunction, public purpose advocacy. Students will learn how citizens may participate in the continuing evolution of health and environmental programs to better fulfill the purposes of government. In addition students will be encouraged to read *The Environmental Citizen*, (Blog, Trinity Publishing).

Assignments: Students will do research on the projects they have chosen. They will report each week on what they have learned and leave each class with a focus refined in terms of what the client needs. They will submit regular progress reports to the instructor. Students will also read materials relevant to their task, including previous reports students have written related to the tasks they have chosen, and reports referenced therein. Students will report on these information sources each week.

Students will also produce by the end of the first section two proposals. One is the workplan for how they will accomplish work for the client, including how what they do serves the team as a whole (unless they are working on a project alone). The second is a description of what they intend their final paper to accomplish: a recommendation for future work, a plan for disseminating findings, or a related product

that furthers the general goals to which the specific tasks relate. This may involve writing a petition, recommendations for legislation, comments on regulatory action, a published article, outreach on the issue. For example, if the specific task is helping reduce chemical risks in hair products, the general goal is raising awareness of, or regulatory action to curtail, toxics in products.

Section Two: *Accessing and Understanding Environmental and Public Health Data Relevant to Our Work.* Classes 5-8.

Lectures will concern: Information sources, information quality, interpreting data, effectively communicating information. Comparing sources and evaluating their reliability.

Assignments for Section Two: Students report each week on what they have learned relevant to their tasks, and at the end of the section submit a paper that describes what they have learned and how that is relevant to the client's needs, and identifies the questions that need to be answered. The paper will detail the resources they have consulted and the experts they have contacted. Students will produce expanded versions of their reading lists, reporting on what they learn from their additional reading. Readings of relevant sources may include: Publications of the Center for Regulatory Effectiveness, *Public Access to Data from Federally Funded Research*, Congressional Research Service, the CDC site – including the National Center for Health Statistics, the CDC's Interactive Database systems, the NIOSH and ATSDR sites and report on what they find relevant to their topic or interest.

Students will produce first drafts of the product for the client.

Section Three: *The Governance We Should Have and Finalizing Product and Delivery.* Classes 9-13.

Lectures will cover the common sense of preventive strategies, values- and rights-based policies, the need for environmental justice, the viability of toxics use reduction, the importance of small business assistance, how to foster innovation and provide compliance assistance, examples of non-enforcement regulation and programs that prompt progress through education, research and demonstration, purchasing preferences, certifications, standards, liabilities, qualifications. The overall message will be to illustrate that there are many tools of governance that can be used to advance environmental and public health progress.

Students will seek reviews of their draft work with experts and others they have contacted, and report on their comments. We will spend most of our time in class going over these draft products and refining them. Students will provide comments on whether they think the product is of use to the client, and what additional work is necessary or desirable to improve its quality. They will comment on each other's work – constructively, identifying questions - but also submit confidential comments to the instructor.

In this section we work as a team to make final changes to the student product before presenting to the client, using powerpoint and writing final reports. Reports will be posted to the course website.

Students will also provide a final report as described above, concerning how the related general goals of the work can be advanced, or better communicated, or describing future work or a useful complementary effort.

Students will also write a short paper on the experience of the class, detailing the work they did and what it taught them, and including recommendations on how such a class can be optimally conducted.

Readings

Additional signed readings will be provided relevant to the projects selected. Almost all will involve reading regulations and official government reports and doing additional research in academic publications, professional or trade publications, reports of nonprofit organizations, and other information sources. The instructor will assign specific readings but students will also search out sources to read and propose them to the instructor for approval. Students will produce a reading list and report on what they read to the team, and expand the list as the project tasks are refined.

Students will be expected to report on their individual research in each class meeting, and if they cannot attend, by email or other means. The instructor will provide handouts during the class and send links to required and recommended reading.

Grading

Students must do their work and support their teams. They will be graded on whether they effectively assume responsibility for producing quality product and whether they seriously explore the context of the problems and think deeply about solving them. They will be graded on the quality of their team and individual work as follows:

Weekly progress reports – (primarily, whether the student does a good job of professionally keeping in touch, asking questions, thinking strategically about how to complete the task, working well with other team members, contributing to project development) 10%

Reading list (primarily, how useful it is and how well the student shares the information and insights in it) – 10%

First Section Proposal for Task Completion (does this represent a way to help the team produce something the client will be able to use?) – 10%

First Section Proposal for Final Paper, Furthering General Goals Related to Task (does this represent a useful contribution to society concerning this topic?)– 10%

Product Draft (does this enable the team to move to successful completion of the task?)– 10%

Final Product (is this something that the team can be proud to have on the website?)– 40%

Final Papers (do they make clear what was done and how, and contain creative and useful ideas clearly expressed?) – 10%

As can be seen, the most important work of the class is the project delivered to the client. In this way students are helped to prepare for professional work.

Attendance

You are allowed 2 (two) absences from class. Each additional absence results in a final grade reduction of one-half of a letter grade. Absences must be explained by email or phone and each student must be in touch with the instructor each week to report progress.

Incomplete Grades:

“I” grades can only be given when specific work has not been completed AND when the student and instructor have conferred and the instructor has assigned a date within the next 12 months for the work to be completed. This becomes a permanent F (undergraduates) or a permanent I (graduates) if the work is not completed with 12 months from when the I was given.

Academic Honesty

Plagiarism, cheating on exams, submitting the same work for more than one course, deliberately impeding the academic performance of others, and other forms of academic misconduct are serious offenses. I take them very seriously and I expect my students to do likewise. I follow the definitions, procedures, sanctions, etc. as set forth in the CAS Academic Conduct Codes (<http://www.cs.bu.edu/ugradprogram/conduct.html>) and <http://www.bu.edu/cas/students/graduate/grs-forms-policies-procedures/academic-discipline-procedures/>. I urge each student to be familiar with these expectations.

Expectations

As noted above, students will be primarily judged by the effective commitment to the responsibility to provide quality product. They should see their tasks as part of a chain of many people engaged in a work in progress. They must make a serious attempt to make a useful contribution, and to support other members of the research team.

About the Instructor

Rick Reibstein created and provided courses on environmental law and pollution prevention for Northeastern University's Continuing Education program throughout the 1990's. Since 2000 he has been teaching environmental law and policy at Boston University. He has also provided courses at Clark, Suffolk, and MIT. Reibstein served for more than two decades as a manager of the Massachusetts Office of Technical Assistance and Technology, one of the nation's first pollution prevention programs, which he helped design and establish. In this position he has provided training for companies throughout the state on environmental compliance and toxics use reduction. Reibstein has also served as an enforcement attorney for both the U.S. Environmental Protection Agency and the MA Department of Environmental Protection. He has provided training and consultation on pollution prevention to EPA, other states, and to environmental agencies in Brazil, Chile, Canada, the Baltics and the Philippines. He is the founder of the Regulated Community Compliance Project, which has provided training to real estate professionals throughout New England on environmental matters.

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