

The Johns Hopkins University
School of Arts and Sciences

Part-Time Graduate Programs:
Environmental Sciences and Policy
Fall Term 2018

420.659.81 FA18: Management for Environmental Results with
Performance-based Management

September 5-December 17

Reading

Required reading, including case studies and general background material, will be provided to each student within the class modules.

Grading

Two individual presentations (50% of class grade), Two peer reviews of classmates' draft presentations (14% of grade), and participation in weekly discussions (36% of grade)

Class schedule

Class 1 - September 5-9

Introduction

In our first class, I want you to give a little thought to some broad overarching questions that frame our class topic. Our conversation together will constantly return to the question of how to define environmental goals and design programmatic initiatives intelligently to meet them. Here's a threshold "what" question for you: What is the goal of all environmental protection programs? And a "why" question: Why measure? It turns out that the answers to these two questions are related in many varied ways. We'll uncover a few of them as we spend this first class learning a little about the class topic and each other.

Learning Objectives

- Understand course objectives and syllabus, assignments, responsibilities, grading.

- Evaluate the following question: What is the ultimate goal of environmental protection programs?
- Participate in an Icebreaker activity using a few basic concepts.

Reading:

You'll dig in right here by reading the attached excerpts from The Regulatory Craft by Malcolm Sparrow for insight into the ultimate goal of environmental protection programs.

Read: The Regulatory Craft, Malcolm Sparrow, Harvard Press, 2000

Read and complete: Icebreaker activity as directed in class module.

Assignments

- At least three posts to the Discussion Forum responding to questions and comments from the instructor or fellow classmates by 11:30pm Saturday night.
- Optional: Post a brief description of a topic for your first presentation to the Water Cooler.

Class 2 - September 10-16

Introduction

Last week you read one author's opinion of what the ultimate goal is of environmental protection programs. This week we'll ask ourselves a similarly grand question: What do environmental problems -- whether affecting people, ecological resources or important values -- have in common? We'll find that, at first blush, the answer is fairly simple. Upon closer inspection, though, you'll soon see that environmental problems are like onions - you'll need to peel them away layer by layer to gain a core understanding of their important features. For all your trouble, you'll also be rewarded with the keys to solving them.

Learning Objectives

- Understand the concepts underlying "Problem Theory" as a tool for defining environmental problems.
- Survey possible environmental problems as topics for

first student presentations.

Reading

Study this slide presentation as you would a treasure map. It is deceptively easy to understand but challenging to apply. The skill to be learned here is to draw connections between a problem theory's basic analytical features and those of real world environmental problems.

Read Problem Theory Overview

Assignment

At least three posts to the Class 2 Forum responding to questions and comments from the instructor or fellow classmates by 11:30pm ET Saturday night.

Optional: Post a brief description of a topic for your first presentation to the Water Cooler.

Class 3 - September 17-23

Introduction

This week we'll begin moving on two parallel tracks. On the first track, we'll build on last week's Problem Theory discussion by learning how a well-conceived problem theory directs your attention to options for possible points of policy and program intervention -- hence the name, Options Theory. Our second (and possibly third depending on how you're counting) is to begin surveying the history of performance-based theories and initiatives. At first students are surprised at their number and variety. Upon closer inspection, I believe you'll find that they share readily identifiable features in common. As you read about them you'll want to be asking yourself what those common features are.

Learning Objectives

- Understand the concepts underlying "Options Theory" as a tool for identifying points of possible program intervention.
- Critique Balanced Scorecard - a tool for assessing the multiple dimensions of organizational performance
- Critique "The Government Performance and Results Act" (GPRA) -- the legal framework for assessing the design, measurement and performance of federal programs.

Reading

The subject of performance design, management and measurement has deep intellectual roots dating back to the late 1960's, shortly after the creation of the Great Society programs. In the 40+ years since then there have been several waves of intellectual initiative, often responding to perceived failures by government and the private sector to achieve their stated goals. The following are two carefully chosen examples.

Read "Capture, Accountability and Regulatory Metrics", Sidney Shapiro and Rena Steiner, Texas Law Review, 2008

Read Balanced Score Card, Chapters 3-8, Robert S. Kaplan and David P. Norton, 1996

Read Options Theory Overview

Read Managing for Results: Agencies' Trends in the Use of Performance Information to Make Decisions GAO, 2016

Assignment

At least three posts to the Class 3 Forum responding to questions and comments from the instructor or fellow classmates by 11:30pm ET Saturday night.

Optional: Post a proposed paper topic to the Class 3 Water Cooler.

Class 4 - September 24-30

Introduction

This week the plot thickens as we begin to bridge the abstract world of Problem Theory and Options Theory with the real-to-life world of environmental programs. Using Program Theory, we'll begin by asking what an environmental program should look like. From there we'll dive into a few examples to see how well today's best-known programs stand up to our theoretical standards.

Learning Objectives

- Understand the concepts underlying "Program Theory" as a tool for designing an environmental program that is "built to work"

Reading

The Logic Model Guide reading provides a very helpful step-by-step process for developing a program theory. As you'll see, the Kellogg Foundation authors believe that God is in the details of a carefully parsed program theory. Others argue that logic modeling, though valuable for providing a broad-brush picture of program design, quickly runs into diminishing returns at greater levels of detail. Read: Logic Model Guide, Kellogg Foundation, 2006

Read: Program Theory Overview

Assignment

At least three posts to the Class 4 Forum responding to questions and comments from the instructor or fellow classmates by 11:30pm ET Saturday night.

Optional: Post a proposed paper topic to the Class 4 Water Cooler.

Class 5 - October 1-7

Introduction

This week we'll practice fitting the facts of a hypothetical situation into our tool set of Problem Theory, Options Theory, and Program Theory. Red Dragon is chocked full of interesting and relevant information. The question is: how is it relevant and how will you use it to form a systematic understanding of the problem and make rational, fact-based decisions about possible solutions? Perhaps most importantly, what's missing in the way of information you'd like to have? How might new information change your decisions? Plenty to absorb and uncover here, so read carefully and thoughtfully.

Learning Objectives

- Evaluate the problem theory introduced in the Red Dragon Case Study.
- Learn how benefits and costs inform the choice of a program option.

Reading

The following case study is adapted from a similar document developed by my colleagues at EPA to train government workers and the concerned public throughout the world in the principles of sound environmental decision making. I hope you enjoy it.

Read Red Dragon Case Study for Results Class, Parts 1-4.

Assignment

At least three posts to the Class 5 Forum responding to questions and comments from the instructor or fellow classmates by 11:30pm ET Saturday night.

Optional: Post a proposed paper topic to the Class 5 Water Cooler.

Class 6 - October 8-14

Introduction

This week we'll take a brief but hopefully illuminating look at the federal air quality program. Our purpose is once again to hone our skills at identifying and organizing key program features into a systematic overall understanding of program design. My hope with each of the examples we go over is for you to see these programs in a new light. I think you'll agree that the federal air quality program possesses many of the characteristics of sound program design (e.g., a well-defined problem theory, if you look closely). Ask yourself where the program (or the description it provides of itself) falls short.

On a different programmatic scale, we'll also continue our examination of Red Dragon.

Learning Objectives

- Evaluate the legal, regulatory and policy basis for the federal air quality program.
- Participate in Red Dragon program development and decision making.

Reading

Together, this week's readings give you both a bird's eye and worm's eye view of air quality program design and measurement.

Read Our Nation's Air 2016, EPA

Read Red Dragon Case Study, Parts 5-8

Read "Plain English Guide to CAA"

Assignment

At least three posts to the Class 6 Forum responding to questions and comments from the instructor or fellow classmates by 11:30pm ET Saturday night.

Optional: Post a proposed paper topic to the Class 6 Water Cooler.

Class 7 - October 15-21

Introduction

Our objectives for this week are ambitious. Begin by reading the three assignments related to water quality monitoring and assessment. Then review the presentation on Measurement Theory, the last tool in our theory tool box. As you read and review, ask yourself two questions: How does the water quality program measure (e.g., where and what gets sampled)? And what types of measures do they report on (e.g., physical, chemical, biological)? How do your answers compare with those for the air quality program?

Last, review the PART presentation. You'll be looking back on what was probably the most serious effort of the past 40 years to assess and compare the performance of federal government programs. While the Bush Administration took credit for it, the initiative originated within OMB in the final days of the Clinton Administration.

Learning Objectives

- Critique how the federal water quality program reports to Congress and the American public on environmental progress
- Compare and contrast performance measurement systems for federal air and water quality programs
- Evaluate OMB's Program Assessment Rating Tool (PART), as a federal synthesis of performance models

Reading

The following readings describe the design of modern water quality monitoring and measurement programs. The programs you'll learn about employ probabilistic sampling, after nearly 40 years of uncoordinated grab bag sampling or worse (anyone hear of a windshield assessment?) by state and

local governments.

Read "General Overview of Probabilistic Surveys", EPA, 2007

Read "Introduction to Aquatic Resources Monitoring", EPA, 2007

Read "National Aquatic Resources Survey: An Update"
EPA, October 2010

Read Measurement Overview Briefing

Read: OMB PART Briefing

Read: Assessment of PART

Assignment

At least three posts to the Class 7 Forum responding to questions and comments from the instructor or fellow classmates by 11:30pm ET Saturday night.

Optional: Post a proposed paper topic to the Class 7 Water Cooler.

Class 8 - October 22-28 (First presentation due)

Introduction

This week I'll be handing over the keys to you and a group process designed to help everyone do their absolute best on our first major assignment. I strongly encourage you to budget your time to complete a solid draft of your first presentation on schedule and devote plenty of time and mental energy to provide helpful review comments on the draft presentations posted by your group members. Although I'll be following your progress, I hope to remain a silent partner in this week's activities. You may still call on me if timing issues threaten to keep your group from meeting its objectives.

Learning Objectives

- Provide positive critical comments on the presentations of your fellow students.

Reading

There is no required reading for this class.

Assignment

PLEASE READ CAREFULLY.

There are two major parts of this week's assignment.

FIRST:

Each student will develop a presentation, composed of graphics and explanatory text totaling 7-10 pages in length.

Students can choose their own topics, but all topics must be approved by the instructor.

- This paper will address a small-scale environmental problem (e.g., a polluted pond, air quality in a single home, invasive plant in a public park). The student will develop graphics for a:
 - Problem theory,
 - Options theory,
 - Program theory, and
 - Measurement theory,

and provide bulleted text that explains each major element.

Students will post their draft presentations by Monday evening, at the beginning of this week. They will then respond to questions and comments from a small peer group of classmates selected by the instructor. After revising their presentations in response to peer group comments, students will submit them in final version to the instructor, no later than Sunday at the end of the week.

SECOND:

You have been assigned to one of several Peer Groups. On the page that has been created for your Peer Group, you and the other members of your Peer Group will post your draft presentations and provide each other with constructive comments and suggestions. Your comments on other papers must be posted no later than Thursday night. The first file in your Group File Exchange contains a set of review questions as the basis for your presentation reviews.

Students will review all the presentations of their group members and provide at least one helpful suggestion on each. Post all of your comments on the Peer Group discussion board. Group members should confer and organize the discussion board any way you wish. Be sure to identify the presentation you are commenting on using an abbreviated title and the author's first name.

Class 9 - October 29-November 4

Introduction

Ecosystem protection is a term that attempts to cast a net over a vast collection of environmental concerns. Ecological risks are as diverse as animal and plant species, as varied as ecosystem functions and uses, and as personal as value systems. The challenges of defining and measuring problems often impede progress toward agreement on priorities. This week we'll take a brief look at efforts of the past decade to reach consensus on how to measure and report on ecological status and trends. We'll also use the Dan River case study to take a closer look at how ecological values fare in a world of competing demands for land and water resource use.

Learning Objectives

- Understand how Ecosystem Protection serves as a performance framework for locally implementing federal environmental laws.
- Evaluate issues and opportunities in measuring national ecosystem health.
- Learn about problem formulation using Dan River Case Study.

Reading

The following two readings compare national and local scale perspectives on the challenges of ecosystem measurement and management.

Read Dan River Case Study, Problem Formulation Phase

Read The State of the Nation's Ecosystems: Highlights, The Heinz Center, 2008

Assignment

At least three posts to the Class 9 Forum responding to questions and comments from the instructor or fellow classmates by 11:30pm ET Saturday night.

Optional: Post questions and comments about scaling up from your first paper topic to the Class 9 Water Cooler.

Class 10 - November 5-11

Introduction

We'll spend this week dividing our time between two tasks:

- We'll spend time the weeds of Dan River measurement. You'll find that the measurement data and data issues are fairly basic. Not a lot of high-tech collection methods or analysis here. Rather, it's pretty much what you'd expect in a local setting with limited expertise and resources available. Enjoy this hypothetical example of people doing the best they can with what they've got.
- You'll go back in to your peer review groups and help one another figure out how to "scale" up from their first presentation topic to their second one.

Learning Objectives

- Evaluate measurement issues in Dan River Case Study.
- Critique peer review group member proposals for scaling up from their first presentation topic to their second one.

Reading:

Pay attention to the details presented in this week's reading. The quality of data, information and decisions will depend on when, where and how the various measurement data were collected.

Read Dan River Case Study, Analysis Phase

Assignments

At least three posts to the Class 10 Forum responding to questions and comments from the instructor or fellow classmates by 11:30pm ET Saturday night.

Optional: Post questions and comments about scaling up from your first paper topic to the Class 10 Water Cooler.

Class 11 -- November 12-18

Introduction

This week you'll have an opportunity to combine your analytical skills and people skills in small groups to do a Life Cycle Analysis (LCA) thought experiment. LCA has received lots of attention and support over the years from regulatory authorities, industry and the concerned public. Its underlying premise is that what is good for the environment is often what is also industry's best interest. You just need to do the hard work of accounting carefully for resource inputs and outputs to find win-win changes in industrial processes and products. As usual, the truth about LCA lies somewhere between the hype and skeptics (often economists) who hold that win-wins are few and far between.

Learning Objectives

- Evaluate Life-Cycle Analysis as an environmental performance framework for guiding industrial product development.

Reading

This is a somewhat dry, but informative "how-to" guidance for LCA, written by well-intentioned technologists -- LCA's strongest advocacy group.

Read Life Cycle Assessment: Principles and Practices, EPA, Office of Research and Development, May 2006

Read LCA Overview

Assignments

- At least three posts to the Class 11 Forum responding to questions and comments from the instructor or fellow classmates by 11:30pm ET Saturday night.
- Participate in a small group to complete a simple, LCA thought experiment on a topic of your group's choice.

Optional: Post questions and comments on scaling up from your first paper topic to the Class 11 Water Cooler.

Thanksgiving Break - November 19-25

Class 12 - November 26-December 2

Introduction

Over the past 15 years EPA's Chesapeake Bay Program has

gone from being an example of everything that is good about voluntary environmental programs to one of everything wrong about voluntary environmental programs. Its directors have gone from been revered to being reviled. It's a fascinating story of what happens when science is viewed through the prism of political ideology. I'll give you more of the back story as we get into our discussion.

Learning Objectives:

- Evaluate the effectiveness of EPA's Chesapeake Bay Program as an information program to galvanize public and private action.
- Decide: What went wrong with the Chesapeake Bay Program?

Reading

The selected readings and presentations on the Chesapeake Bay Program cover a decade of reported progress and controversy over progress toward the achievement of CBP goals. See if you can sort through the conflicting opinions to form your own.

Read Chesapeake Bay Barometer -- 2015-16

Read Chesapeake Bay GAO Report -- 2011

Read Chesapeake Bay Indicators overview briefings

Assignments

At least three posts to the Class 12 Forum responding to questions and comments from the instructor or fellow classmates by 11:30pm ET Saturday night.

Optional: Post questions and comments on scaling up from your first paper topic to the Class 12 Water Cooler.

Class 13 - December 3-9

Introduction

This week we'll make the final stop on our route through the many topics related to environmental performance. This final topic may surprise some of you. Socially Responsible Investment seeks to harness the immense power of financial markets to encourage decisions in the public interest by publicly-traded companies. The underlying premise is that investors can "vote their conscience" on social issues

in the marketplace by investing in companies that share their values. Investors can do well by doing good. True or false? You decide.

Learning Objectives

- Interpret Socially Responsible Investment (SRI) as an environmental performance framework.
- Evaluate the effectiveness of the Dow-Jones Sustainability Index as a means of using environmental performance information to guide investor decisions.

Reading

Don't be deterred by some of the unfamiliar financial terminology in these readings. While you may not come away with a full grasp of the details, you should be able to follow the material well enough to form an opinion about SRI as a win-win for the investor's personal and portfolio values.

Read Socially Responsible Investing Overview

Read Dow-Jones Sustainability Index FAQs

Read Dow-Jones Sustainability Index Overview

Assignments

At least three posts to the Class 13 Forum responding to questions and comments from the instructor or fellow classmates by 11:30pm ET Saturday night.

Optional: Post comments and questions about scaling up from your first paper topic to the Class 13 Water Cooler.

Class 14 - December 10-16 (Second presentation due)

Introduction

The instructions for this week's group exercise are identical to those you followed in Week 9, so there should be no surprises. Read the review questions carefully and give yourselves plenty of time both to complete your own draft presentation and comment thoughtfully on the draft presentations posted by your group members.

Learning Objectives

- Provide positive constructive comment on the draft presentations of your fellow students.

Reading

There is no required reading for this class.

Assignment

PLEASE READ CAREFULLY.

There are two major parts of this week's assignment.

FIRST:

Each student will develop a presentation, composed of graphics and explanatory text totaling 5-7 pages in length.

- The second paper will expand on the topic of your first paper by scaling up geographically to include multiple, varied situations in which the environmental problem occurs. Refer to the Class 8 presentation and discussion on "Scaling Up" from first paper to second paper topics for more information.
- The student will develop graphics for a:
- Problem theory,
- Options theory,
- Program theory, and
- Measurement theory,

and provide bulleted text that explains each major element.

Students will post their draft presentations on Monday, at the beginning of this week. They will then respond to questions and comments from a small peer group of classmates selected by the instructor. After revising their presentations in response to peer group comments, students will submit them in final version to the instructor, no later than Sunday at the end of the week.

SECOND:

Unless you hear differently from me, you will work with the same Peer Groups as you did on your first paper.

On the page that has been created for your Peer Group, you and the other members of your Peer Group will post your draft presentations and provide each other with constructive comments and suggestions. Your comments on other papers must be posted no later than Thursday night. The first file in your Group File Exchange contains a set of review questions as the basis for your presentation reviews.

Students will review all the presentations of their group

members and provide at least one helpful suggestion on each. Post all of your comments on the Peer Group discussion board. Group members should confer and organize the blog any way you wish. Be sure to identify the presentation you are commenting on using an abbreviated title and the author's first name.

Course Policies

Getting Help

You have a variety of methods to get help on Blackboard. Please consult the help listed in the "Technical Help" link for important information. If you encounter technical difficulty in completing or submitting any online assessment, please immediately contact the designated help desk listed on the [AAP online support page](http://advanced.jhu.edu/online/help/) (http://advanced.jhu.edu/online/help/). Also, contact your instructor at the email address listed atop this syllabus.

Late Policy

Unless circumstances are exceptional, written assignments not submitted by the due date will be docked one letter grade; not submitted within a week after the due date will be graded "F," not submitted by the end of the course will be graded "0." If a student is unable to complete the final assignments by the last week of class an Incomplete request may be necessary.

Grades and Feedback

Student contributions to weekly discussion boards will be scored and posted on a weekly basis. Student grades on individual presentations will be posted within 14 days of their due dates and each student will receive an e-mail with my review comments. Group assignments will be graded and posted within seven days of their due dates.

University Policies

General

This course adheres to all University policies described in the academic catalog. Please pay close attention to the following policies:

Students with Disabilities

Johns Hopkins University is committed to providing reasonable and appropriate accommodations to students with disabilities. Students with documented disabilities should contact the coordinator listed on the [Disability Accommodations](#) page. Further information and a link to the Student Request for Accommodation form can also be found on the [Disability Accommodations](#) page.

Ethics & Plagiarism

JHU Ethics Statement: The strength of the university depends on academic and personal integrity. In this course, you must be honest and truthful. Ethical violations include cheating on exams, plagiarism, reuse of assignments, improper use of the Internet and electronic devices, unauthorized collaboration, alteration of graded assignments, forgery and falsification, lying, facilitating academic dishonesty, and unfair competition. Report any violations you witness to the instructor. Read and adhere to JHU's [Notice on Plagiarism](#).

Dropping the Course

You are responsible for understanding the university's policies and procedures regarding withdrawing from courses found in the current catalog. You should be aware of the current deadlines according to the [Academic Calendar](#).

Getting Help

You have a variety of methods to get help on Blackboard. Please consult the resource listed in the "Blackboard Help" link for important information. **If you encounter technical difficulty in completing or submitting any online assessment, please immediately contact the designated help desk listed on the [AAP online support page](#).** Also, contact your instructor at the email address listed in the syllabus.

Copyright Policy

All course material are the property of JHU and are to be used for the student's individual academic purpose only. Any dissemination, copying, reproducing, modification, displaying, or transmitting of any course material content for any other purpose is prohibited, will be considered misconduct under the [JHU Copyright Compliance Policy](#), and may be cause for disciplinary action. In addition, encouraging academic dishonesty or cheating by distributing information about course materials or assignments which would give an unfair advantage to others may violate AAP's

[Code of Conduct](#) and the University's [Student Conduct Code](#). Specifically, recordings, course materials, and lecture notes may not be exchanged or distributed for commercial purposes, for compensation, or for any purpose other than use by students enrolled in the class. Other distributions of such materials by students may be deemed to violate the above University policies and be subject to disciplinary action.

Code of Conduct

To better support all students, the Johns Hopkins University non-academic [Student Conduct Code](#) has been integrated and updated to include all divisions of the University. In addition, it is important to note that all AAP students are still accountable for the [Code of Conduct for Advanced Academic Programs](#).

Title IX

Confidentiality and Mandatory Reporting

As an instructor, one of my responsibilities is to help create a safe and inclusive learning environment on our campus. I also have mandatory reporting responsibilities related to my role as a Responsible Employee under the Sexual Misconduct Policy & Procedures (which prohibits sexual harassment, sexual assault, relationship violence and stalking), as well as the General Anti-Harassment Policy (which prohibits all types of protected status based discrimination and harassment). It is my goal that you feel able to share information related to your life experiences in classroom discussions, in your written work, and in our one-on-one meetings. I will seek to keep information you share private to the greatest extent possible. However, I am required to share information that I learn of regarding sexual misconduct, as well as protected status based harassment and discrimination, with the Office of Institutional Equity (OIE). For a list of individuals/offices who can speak with you confidentially, please see Appendix B of the [JHU Sexual Misconduct Policies and Laws](#).

For more information on both policies mentioned above, please see: [JHU Relevant Policies, Codes, Statements and Principles](#). Please also note that certain faculty and other University community members also have a duty as a designated Campus Safety Authority under the Clery Act to notify campus security of certain crimes, as well as a duty under State law and University policy to report suspected child abuse and/or neglect.

Sample
Syllabus