Introduction

Applied Quantitative Reasoning II covers the logic of empirical inquiry and the design and implementation of research to address applied problems in urban, public, and nonprofit settings. Among the topics considered are: research designs (experimental, quasi-experimental, and non-experimental) and types of, as well as threats to, validity (internal, statistical conclusion, construct, and external); measurement, measurement validity, and reliability; different forms of analysis, including economic, qualitative, and statistical; and modes of data collection, including survey design and analysis. The course has a strong focus on program evaluation and performance measurement, and covers the ethics of the research process. The prerequisite for the course is UST/PAD/PDD 601 or permission of the instructor.
Course Objectives

At the conclusion of the course students will be able to meet the following objectives:

- Design a research project
- Implement a research project
- Apply a range of research methods depending on the research problem
- Evaluate the quality of measurement in their own research projects as well as in others’ projects
- Evaluate the strengths and limitations of their own research projects as well as others’ projects
- Prepare a logic model
- Make a professional presentation
- Use the vocabulary of applied research

Books


Note: The primary textbook for the course is McDavid and Hawthorn (2006). Wholey, Hatry, and Newcomer (eds.) brings both depth and breadth to the reading list. This book complements the presentation of McDavid and Hawthorn (2006) and offers the range of coverage that will allow students to pursue their particular interests in the field.

Course Requirements and Evaluation of Student Performance

All coursework (readings, assignments, presentations, etc.) is to be completed and submitted on time. If you have a legitimate reason for late work, please notify the instructor immediately, so that the circumstances may be considered. In fairness to all
students, any work submitted after the due date will receive a penalty, unless you have made previous arrangements with the instructor regarding a legitimate reason for late work.

All written work for the course must meet the following standards:

- Typewritten or printed
- 12-point font minimum size (smaller font will **not** be accepted)
- Double-spaced text (single spaced papers will **not** be accepted)
- One-inch margins on all sides of the page
- **Dark type**
- Typed or printed on one side of page only
- Minimum of hand-written annotations or editions

All written work is to be submitted in hard copy, not by email, unless you have obtained permission from the instructor in advance.

Evaluation of student performance will be based on the following components with contribution to the course grade (%) as indicated.

<table>
<thead>
<tr>
<th>Component</th>
<th>Contribution to course grade (%)</th>
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<tbody>
<tr>
<td>Class presentation project and positive course participation</td>
<td>30</td>
</tr>
<tr>
<td>Course assignments and in-class exercises</td>
<td>30</td>
</tr>
<tr>
<td>Final examination</td>
<td>40</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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The class presentation project calls for students to gain in-depth knowledge in one of the topical areas listed under XI below. Students will prepare a PowerPoint (or similar) presentation for the class and lead a discussion of their selected topic. The presentation must incorporate at least two of the readings listed under XI (depending on the topic). The suggested time for the class presentation is 30 minutes. All topics must be approved by the instructor in advance.

The final examination for the course is scheduled for Tuesday, December 11, at the same time as the regular class meetings.

We will discuss all course components fully in class.

**Class Sessions and Readings**

The anticipated schedule for covering the course material appears below. Any changes or updates to the schedule will be discussed with students. All reading is to be done prior to the designated class session.

Readings: None

II. September 4, 2007: Introduction to Program Evaluation and Performance Measurement

McDavid and Hawthorn, Chapter 1, “Key Concepts and Issues in Program Evaluation and Performance Measurement”

Wholey, Hatry, and Newcomer (eds.), “Meeting the Need for Practical Evaluation Approaches: An Introduction”

III. September 11, 2007: Program Logic Models

McDavid and Hawthorn, Chapter 2, “Understanding and Applying Program Logic Models”

Wholey, Hatry, and Newcomer (eds.), Chapter 1, “Using Logic Models”

IV. September 18 - October 2, 2007: Research Design

McDavid and Hawthorn, Chapter 3, Research Designs for Program Evaluations

Wholey, Hatry, and Newcomer (eds.), Chapter 5, “Quasi-Experimentation”

Wholey, Hatry, and Newcomer (eds.), Chapter 6, “Using Randomized Experiments”

V. October 9, 2007: Measurement and Data Collection

McDavid and Hawthorn, Chapter 4, “Measurement in Program Evaluation”

VI. October 16, 2007: Qualitative Evaluation Methods

McDavid and Hawthorn, Chapter 5, “Applying Qualitative Evaluation Methods”
VII. October 23, 2007: Assessing the Need for Programs

McDavid and Hawthorn, Chapter 6, “Assessing the Need for Programs”

VIII. October 30, 2007: Economics-Based Evaluations

McDavid and Hawthorn, Chapter 7, “Concepts and Issues in Economic Evaluation”

Wholey, Hatry, and Newcomer (eds.), Chapter 18, “Cost-Effectiveness and Cost-Benefit Analysis”

IX. November 6, 2007: Performance Measurement

McDavid and Hawthorn, Chapter 8, “Performance Measurement as an Approach to Evaluation”

McDavid and Hawthorn, Chapter 9, “Design and Implementation of Performance Measurement Systems”

X. November 13-20, 2007: An Introduction to Statistical Methods in Applied Research


XI. November 27-December 4, 2007: Student Presentations: The general topics for student presentations are highlighted, followed by particular readings, below:
Designing (Pre) Evaluation Studies:

Wholey, Hatry, and Newcomer (eds.), Chapter 2, “Evaluability Assessment”

Wholey, Hatry, and Newcomer (eds.), Chapter 3, “Implementation Evaluation”

Practical Data Collection Procedures:

Wholey, Hatry, and Newcomer (eds.), Chapter 4, “Performance Monitoring”

Wholey, Hatry, and Newcomer (eds.), Chapter 7, “Meta-Analysis, Systematic Reviews, and Research Syntheses”

Wholey, Hatry, and Newcomer (eds.), Chapter 8, “Trained Observer Ratings”

Wholey, Hatry, and Newcomer (eds.), Chapter 9, “Using Surveys”


Wholey, Hatry, and Newcomer (eds.), Chapter 11, “Role Playing”

Wholey, Hatry, and Newcomer (eds.), Chapter 12, “Using Focus Groups”

Wholey, Hatry, and Newcomer (eds.), Chapter 13, “Collecting Data in the Field”

Wholey, Hatry, and Newcomer (eds.), Chapter 14, “Using Agency Records”

Utilization of Evaluation Results:

Wholey, Hatry, and Newcomer (eds.), Chapter 20, “Managing Evaluation Projects”

Wholey, Hatry, and Newcomer (eds.), Chapter 21, “Writing for Impact”

Wholey, Hatry, and Newcomer (eds.), Chapter 22, “Using Organizational Report Cards”

Wholey, Hatry, and Newcomer (eds.), Chapter 23, “The Use of Evaluation by Nonprofit Organizations”
Developing and Using Professional Judgment:

McDavid and Hawthorn, Chapter 11, “Program Evaluation and Performance Measurement: Joining Theory and Practice”


Read: Wholey, Hatry, and Newcomer (eds.), Chapter 19, “Pitfalls of Evaluation”