

AAEC 5104
Research Project Planning Syllabus
Spring 2007

Course Instructor

Darrell Bosch
Professor
308 Hutcheson
231-5265
bosch@vt.edu
Office Hours: 9-10 Tuesday and Thursday.

Secretary

Lisa Blankenship
306-B Hutcheson Hall
231-6921

Course Objectives

1. To enable students to understand the roles of assumptions, theories, models, hypotheses, and empirical techniques in the design of a research plan.

2. To enable students to design a research proposal that adequately and efficiently addresses a researchable problem.

Course Webpage

A website for the course is located on the Virginia Tech Blackboard. Go to the portal: <http://www.learn.vt.edu/> and login with your VT pid and password. Then click on the name of this class under "My Courses" on the right side of the screen. A course syllabus and other documents are posted there.

Course Outline

- I. Introduction
 - A. Science and scientists
 - B. Creativity in research

- II. Methods of science
 - A. Philosophical foundations—logical positivism, normativism, and pragmatism
 - B. Deduction
 - C. Induction
 - D. Falsificationism
 - E. Rhetoric
 - F. Methods, methodology, models, and techniques

- III. Defining and Planning Scientific Research
 - A. Overview of research planning
 - B. Literature review
 - C. Problem identification

- D. Objectives
- E. Conceptual framework
- F. Hypotheses
- G. Techniques
- H. Data sources

- IV. Proposal Preparation and Research Reporting
 - A. Communicating research results
 - B. Student presentations of proposals

Course Assignments and Grading

1. Class discussion (assignment #1)	10%
2. Summary and discussion of outside reading (assignment #2)	20%
3. Review of journal article (assignment #3)	20%
4. Oral presentation of research proposal (assignment #4)	15%
5. Final research proposal (assignment #5)	35%
TOTAL	100%

Explanation of Assignments

1. Class discussion -- Grade is based on quality and quantity of participation. Quality is not necessarily measured by the “correctness” of the answer. Rather quality is based on an honest and reflective attempt to contribute to the class discussion. The lowest weekly score will be dropped in computing the overall grade for class discussion.

2. Article summary and discussion—select an outside reading related to research methods or methodology in economics or another discipline that interests you. Select a date on which you will discuss the reading. Discussion date and reading must be approved by the instructor. Prepare a one-page handout for the class which gives a summary of the major points covered by the author and contains 2-3 discussion questions. Give a 5-10 minute oral summary of the paper and lead the class in discussing the discussion questions. Have copies of the article (hard copy or electronic) made and distributed to the class one week prior to the date you will discuss the article.

Possible examples of readings include:

1) a reference on how creativity can be stimulated and examples of research creativity such as George Ladd's* "Artistic Research Tools for Scientific Minds," American Journal of Agricultural Economics. 61(1979):1-11.

2) viewpoints on research training for graduate students in economics such as Anne Krueger et al.* "Report of the Commission on Graduate Education in Economics." Journal of Economic Literature. 29(1991):1035-1053.

Also:

Arne Hallam.* "Graduate Education in Economics after the COGEE Report: Discussion." American Journal of Agricultural Economics. 72(1998):616-620.

3) views on the research enterprise in Agricultural Economics such as Donald McCloskey's "Agon and Ag Ec: Styles of Persuasion in Agricultural Economics." American Journal of Agricultural Economics. 72(1990):1124-1130.

4) role of ethics in scientific research such as Per Pinstrup Andersen's* "Ethics and Economic Policy for the Food System." American Journal of Agricultural Economics. 87(2005):1097-1112.

5) the performance and future of professional societies in Economics—Steven Buccola's "The Organization of Economics." American Journal of Agricultural Economics. 88(2006):1123-1134.

6) scientific discourse by economists such as Donald McCloskey's "How Economists Persuade." Journal of Economic Methodology, 1(1994):15-32

Or

"Storytelling in Economics" pp. 204-221 in Deirdre McCloskey ed. Measurement and meaning in economics: The essential Deirdre McCloskey. American International Distribution Corporation, Williston, VT, 2002. or

7) scientific writing such as Donald McCloskey's The Writing of Economics New York: Macmillan, 1987.

8) scientific publishing such as D. J. Pannell's.* "Prose, psychopaths and persistence: Personal perspectives on publishing". 46th Annual Conference of the Australian Agricultural and Resource Economics Society. Canberra, Australia, AARES, 2002.

9) Other articles on your scientific discipline that you find interesting and relevant to the class discussion.

3. Journal article review--prepare an essay in which you comment on the article. "Factors Influencing Illinois Farmland Values." by Haixiao Huang, Gay Y. Miller, Bruce J. Sherrick, and Miguel I. Gomez* , American Journal of Agricultural Economics. 88(May

* References marked with an asterisk are available on course Blackboard site in Course Documents section under 'Readings.'

2006):458-470. In your essay be sure you address the points listed below. Be sure to cite any appropriate references from the class reading list (or elsewhere).

- a) Describe the larger problematic situation of which this research was a part.
- b) What particular aspect of the problematic situation, i.e. what problem, is focused on in this article? Does the problem meet the criteria of good problem definition as specified in your readings? In your view, did the authors provide adequate justification for the importance of the problem?
- c) In your view, is the problem posed interesting from a disciplinary perspective, a social (“problem-solving”) perspective, or both? Who do you see as “clients” for the research that was presented?
- d) What was (were) the objective(s) of the research? Were the objectives clearly formulated? Why or why not? Write out the objective(s) of the research in a form suitable for a research proposal.
- e) In your own words write out at least one maintained hypothesis and one research hypothesis for this article. Describe the role these hypotheses served in focusing the research and allowing it to be completed.
- f) What data sources and techniques of analysis were used? Were the data adequate to achieve the objectives of the study? Why or why not?
- g) What implications do the authors draw from their results? Do the results support these implications in your view?

4. Oral presentation of research proposal

Prepare a single-page, typewritten, single-spaced summary of your draft proposal to hand in and to distribute to the class on the day of your presentation. This page should include a very brief problem statement, a list of the objectives, a comment on theory and key assumptions, and the hypothesis(es) to be tested. Make a 10-minute oral presentation of your research proposal for the class (to be followed by 15-20 minutes of class discussion). Include in the oral presentation:

- a. The problem to which your research will be addressed, including a justification of the significance of this problem as an area of study.
- b. The objective(s) of the research.
- c. The conceptual framework describing the role of economic and other theory in problem definition and research approach.
- d. The use of hypotheses in your research.

- e. The procedures to be used including specification of the type and source of data, techniques of analyzing the data, and the basis for their selection.

Each presenter should identify a student to take notes on suggestions from the class during the discussion following the presentation. These notes do not have to be handed in but may be helpful to you in preparing your final proposal.

5. Final research proposal

Prepare a final copy of your research proposal, incorporating comments received on your oral presentation. The proposal should contain problem statement, objectives, conceptual framework, hypotheses, techniques for carrying out the data analysis, and description of proposed data. Grade will be based on logic and content of proposal as well as on format.

Textbook: D. Ethridge, Research Methodology in Applied Economics: Organizing, Planning, and Conducting Economic Research Ames, Iowa: Iowa State University Press, 2004.

Reading Assignments

I. Introduction (10%)

- A. Science and scientists
Ethridge Chapters 1 and 3.

- B. Creativity in research
Ethridge pp. 30-33.

II. Methods of science (20%)

- A. Philosophical foundations—logical positivism, normativism, and pragmatism
Ethridge, Chapter 4.

- B. Deduction
Ian M. T. Stewart, Reasoning and Method in Economics Berkshire, England: McGraw-Hill, 1979. Chapter 2.

- C. Induction
Ian M. T. Stewart, Reasoning and Method in Economics, Chapter 3.

- D. Falsificationism
M. Blaug, The Methodology of Economics, 2nd ed. New York: Cambridge University Press, 1992. pp. 3-26.

- E. Rhetoric
D. N. McCloskey, The Rhetoric of Economics Madison, Wis. : University of Wisconsin Press, 1985. pp. 3-19 and 54-62.

- F. Methods, methodology, models, and techniques
K. J. Cohen and R. M. Cyert, “The Methodology of Model Building,” in Theory of the Firm: Resource Allocation in a Market Economy 1st ed. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1975. Chapter 2.

Ethridge, Chapter 2

III. Defining and Planning Scientific Research (35%)

- A. Overview of research planning
Ethridge, Chapter 5.

- B. Literature review
Ethridge, Chapter 7

- C. Problem identification
Ethridge, pp 101-108.

C. O. Andrew and P. E. Hildebrand, Applied Agricultural Research: Foundations and Methodology, Boulder, Colorado: Westview Press, 1993. pp 74-82.

- D. Objectives
C. O. Andrew and P. E. Hildebrand, pp. 89-92.

Ethridge, pp. 108-111.

- E. Conceptual framework
Ethridge, pp 127-132 and 136-139.

- F. Hypotheses
Ethridge, pp 132-136.

L. K. Fisher and H. W. Ottoson, “Hypotheses--Guides for Inquiry” in Methods for Land Economics Research W.L. Gibson, Jr., R. J. Hildreth, and G. Wunderlich (eds.) Lincoln, Nebraska: University of Nebraska Press, Lincoln, Nebraska, 1966. pp. 41-54.

- G. Techniques
Ethridge, pp. 140-150 and 153-154.

- H. Data sources
J. Bonnen,* “Improving Information on Agriculture and Rural Life,” American Journal of Agricultural Economics, December 1975. pp 753-763.

Ethridge pp. 150-153.

IV. Proposal Preparation and Research Reporting (25%)

Ethridge, Chapter 10. Also skim Appendix B.