

## COURSE SYLLABUS FOR THE DOCTORAL PROGRAM

1. **Course Number** (ETEC/IREC 895)
2. **Course Name** (Overview of Current Educational Technology Practice)

**Pre-requisite:** This is an advanced research course. As such, candidates should have successfully completed the research core courses. Permission of the instructor is required before taking this course as all pre-requisites must be met before taking this course.

3. **Course Description For Catalog**

This course is designed to induct novices into educational technology research practice via an *apprenticeship-mentoring* approach. Although the overall goals for the course are pre-specified, it is expected that you, as apprentices, will determine the specific knowledge and experiences you need in order to advance your own research skills. As in a traditional apprenticeship shop, each member has skills and knowledge from which others can benefit; thus, we all share responsibility for advancing the skills of our colleagues and ourselves. In line with the apprenticeship approach, the primary goal of this course is to prepare you for future independent research endeavors (including the completion the doctoral dissertation) through direct participation in the entire research process, from designing and conducting a research study to synthesizing and presenting the results in written and oral formats. In addition, it is expected that these skills will be situated within the context of issues that are relevant to the field of Educational Technology Leadership. To prepare you for independent research work, you will be required to complete an *individual* research project that is **embedded within** a *team* research project. That is, starting with a pre-determined topic, we will work as a team to narrow the focus of our study, examine the relevant literature, write our research questions, design our instruments, and gather and analyze our data. This gives us the benefit of learning from each other. Moreover, each student will be involved in every aspect of the study -- you will each write a literature review, develop research questions and data collection instruments, collect and analyze data, and so on. This gives you the benefit of conducting a small-scale study on your own. Then, by comparing (and combining) our findings, we are in a good position to synthesize our work into a publishable scholarly work, which we hope will contribute to the field.

4. **Course Objectives:** Upon completion of this course, you will be able to:
  1. Describe the role of research in the field of Educational Technology (ET).
  2. Design an appropriate research study to investigate a problem relevant to the field of Educational Technology.

3. Conduct a research study in an applied (school, district, or community agency) or experimental (lab, designed) setting.
4. Analyze, interpret, and discuss various sets of data.
5. Write a research report according to APA guidelines.
6. Develop a proposal to present your research at a professional conference.
7. Present the results of a research study according to professional guidelines.

*Apprentice's Goals(to be specified)*

- 1.
- 2.
- 3.
- 4.

**5. Course Outline:**

Course content will be drawn from theory and research, from student experiences, and from discussions in class. Course activities and assignments are designed to help you develop the knowledge, skills, and attitudes needed to become skillful and thoughtful leaders in the field. Learning experiences revolve around two major themes:

1. participation in technology lessons/experiences as a means of developing mental images of what it means to "integrate technology," and
2. reflection on, discussion about, development of, and evaluation of all aspects of the integration of emerging technologies in the educational environment.

**6. Methodologies:**

Course activities and assignments are designed to initiate you into educational technology research practice. Learning experiences revolve around two major themes: 1) in-depth discussion of relevant research issues (e.g., ethics, APA style, specific data collection and analysis techniques), and 2) completion of a research study including design, implementation, and reporting of results.

**7. Evaluation Method:**

**A. Educational Philosophy:** This course is designed to provide an interactive, collaborative environment that fosters the development of educational technology researchers. Participation in all activities is considered essential to this development.

**B. Grading Scale (in percents):**

A = 100 - 90; B = 89 - 80; C = 79 - 70, etc.

C. **Penalties:** A 20% late penalty will be assessed for **late assignments**. No points will be given for late drafts. Assignments and drafts with extensive spelling and grammatical errors will be assessed a 10% **editing** penalty.

### ***Requirements***

**Readings and Class Discussions** (10%). The purpose of the readings and class sessions is to help you understand the relationship between educational technology and educational research. Readings are selected to enable you to translate educational technology issues into relevant research studies that will inform your work as well as the field of educational technology. It is assumed that you will read the assigned readings carefully and come to class prepared to discuss them. **NOTE: In order to set the context for the research study, the majority of the readings are completed within the first half of the semester.** It is important to allocate your time accordingly. As part of our class discussions, we will identify additional topics and issues that you would like to discuss in greater depth during the course. These topics will be selected by/assigned to students who will present more detailed information about these issues to their classmates. (For example, if more information is desired about research ethics, a student may investigate this topic further and then present this information to his/her peers.)

**Individual Research Investigation** (60%). The purpose of conducting an individual research study is to provide you with the opportunity to implement a complete study while simultaneously engaging in discussion with your peers and instructor about the issues that you face. This allows you to benefit from the insights and suggestions of your peers, as well as to share your own insights on the questions that they may have. The study that you conduct will 1) address a current issue facing the ET field, 2) be supported by a literature review that clearly indicates how your proposed study extends what has been done previously, and 3) indicate the specific questions you are trying to answer. 4) The research design and methodology must be carefully described, with an emphasis on how the design and methods enable you to answer your research questions. You will be required to 5) summarize your data, 6) analyze and 7) present and interpret the results, and 8) indicate how your results can be applied in practice. 9) Limitations and recommendations for future research should also be included. The final report should include the following major components (20 pages, double spaced, max):

### **Component Number of Pages (approximate)**

#### **Number of Points**

Introduction

Problem Statement

Rationale

1-2 pages

10 pts.

Review of literature  
Research questions/purpose  
5-6 pages  
50 citations  
15 pts.

Methodology  
Overview of design  
Sampling/Selection procedures  
Role of researcher  
Data collection  
Data analysis (validity/reliability)  
5-6 pages  
10 pts.  
10 pts.  
5 pts.  
25 pts.  
25 pts.

Results  
2 pages  
25 pts.

Discussion  
3 pages  
25 pts.

Educational implications  
.5-1 pages  
15 pts.

Limitations/Suggestions for future research  
.5-1 pages  
10 pts.

References/APA style 25 pts.

Reflection (see below)  
1-2 pages  
25 pts.

**NOTE.** In addition, **discuss the perceived strengths and weaknesses of your study** (1-2 pages, 25 POINTS!). Indicate what you would do differently if you had the chance. Finally, **reflect on the worth of this project to you** (1 page). Do

you think that working on this project was a good learning experience for you?  
What suggestions do you have for future versions of this course?

**Conference Proposal** (15%). The purpose of this assignment is to foster the habit of making presentations at professional conferences. Based on the research that you complete in this course, submit a proposal for presentation at a professional conference. Follow the guidelines of the sponsoring organization. NOTE: Please turn in the appropriate guidelines with your proposal.

**Paper Presentation** (15%). Following the AECT guidelines, develop a 9-12 minute presentation that describes the purpose, design, and results of your study. These will be presented in class during the last two class sessions.

**8. Recommended Text:**

Ertmer, P. A. (2005). Research methodology: Choosing an approach. In P.D. Leedy, *Practical Research: Planning and Design* (8th ed),. ISBN: 0-13-110895-6 Englewood Cliffs, NJ: Merrill/Prentice Hall.

**9. Recommended References:**

Creswell, J. W. (2002). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Upper Saddle River, NJ: Merrill/Prentice Hall. (chps 1, 4, 10)

Dufresne, R. J., Gerace, W. J., Hardiman, P. T., & Mestre, J. P. (1992). Constraining novices to perform expert-like problem analyses: Effects on schema acquisition. *Journal of the Learning Sciences*, 2, 307-331.

Edirisooriya, G. (1996). Research presentation in a democratic society: A voice from the audience. *Educational Researcher*, 25(6), 25-30.

Eisenhart, M., & Towne, L. (2003). Contestation and change on national policy on “scientifically based” education research. *Educational Researcher*, 32(7), 31-38.

Ertmer, P. A., & Stepich, D. A. (2005). Instructional design expertise: How will we know it when we see it? *Educational Technology*, 45(6), 38-43.

Klingner, J. K., Scanlon, D., & Pressley, M. (2005). How to publish in scholarly journals. *Educational Researcher*, 34(8), 14-20.

- LeMaistre, C. (1998). What is an expert instructional designer? Evidence of expert performance during formative evaluation, *Educational Technology Research & Development*, 46(3), 21-36.
- Pajares, F. (1997). *Elements of a proposal*. Retrieved December 30, 2005 from <http://www.des.emory.edu/mfp/proposal.html>
- Price, R. V., & Maushak, N. J. (2000). Publishing in the field of educational technology: Getting started. *Educational Technology*, 40(4), 47-52.
- Shaffer, D. W., & Serlin, R. C. (2004). What good are statistics that don't generalize? *Educational Researcher*, 33(9), 14-25.
- Trelogan, T. (2001). *Arguments and their evaluation*. Retrieved December 30, 2005 from <http://www.univnorthco.edu/philosophy/arg.html>