



ESE 6939 Instructional Design



The mission of the College of Education is to prepare exemplary practitioners and scholars; to generate, use and disseminate knowledge about teaching, learning and human development; and to collaborate with others to solve critical educational and human problems in a diverse global community.

Syllabus

| | |
|-------------------------|---|
| Course Number: | ESE 6939 |
| Course Title: | Instructional Design |
| Number of Credit Hours: | 3 |
| Term: | Fall 2008 |
| Day and Time: | Thursday, 10-E1: 5:10-8:10 PM |
| Location: | G 513 |
| Course web site: | http://online.education.ufl.edu |
| Professor: | Dr. C. Cavanaugh |
| Office: | G 518B |
| Office Hours: | Thursday 2-4 PM; by appointment |
| Telephone: | 352-392-9191, ext. 295; 904-620-1751 |
| Email Address: | cathycavanaugh@coe.ufl.edu |
| Instructor web site: | http://education.ufl.edu/faculty/cathycavanaugh/ |

Required text:

Morrison, Ross & Kemp. (2007). *Designing Effective Instruction*, 5th ed. Wiley.

Course Description

This course focuses on the application of instructional design principles to the development of instruction. Topics include contemporary issues and trends in instructional design, foundations in learning research, requirements for instruction, task and needs analysis, learning situations and instructional models, learner characteristics, hardware and software innovations, assessing instructional outcomes, and factors affecting utilization.

Topics include:

- Theoretical bases and critical issues in design for learning
- Experience working with collaborative design teams.
- Developing instruction for a range of content areas and grade levels
- Applying design and learning standards
- Developing standards-based instruction

The following concepts are a framework for the course.

- Educators know the subjects they teach and how develop experiences for learning those subjects.
- There are many ways teach well, but learning is mainly an active process.
- There are principles based on theory, research, and experience to guide design of instruction.

Course Goals

In this course, learners will develop and demonstrate dispositions of instructional designers as they analyze and apply systematic strategies for the identification of instructional needs, the design of instructional models, and the selection and design of these models to meet educational and training goals in both K-12 education, and adult education. Learners will use technology as a learning tool and as a tool for reflection on learning. This course has been designed to meet the needs of those individuals involved in designing instruction, incorporating elements of learning theory, evaluation theory and system theory which support the design of instruction. This course will provide teachers, media specialists, and adult educators with those skills needed to design instruction they are responsible for conducting and enable them to consult with others who are responsible for instruction. You will have the opportunity to work in "design teams", building collaborative work environments, addressing the goals and requirements of this class.

This course is project-oriented: development efforts culminate in a proposal for an instructional product and a report on prototype development and testing efforts. However, the goal of the course is not to develop products per se, but to provide opportunities to practice disciplined and collaborative processes for inquiring about learning problems and opportunities, and for inquiring about the value of alternative strategies for addressing these problems and opportunities. The course takes an engineering approach to instructional development. Topics include needs assessment, analysis of subject-matter content, development of goals and objectives, classification and sequencing of objectives, design of instructional strategies, selection and integration of media-based delivery systems, design of print- and/or multimedia-based instruction, and formative evaluation of product prototypes.

Accommodations

Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

Course Objective Matrix

| Course Objective | Knowledge | Skill | Disposition | Impact |
|--|-----------|-------|-------------|--------|
| 1.0 Apply theories of learning, teaching, and instructional design | ☐ | ☐ | | |
| 2.0 Apply instructional design principles to the design of instructional materials | ☐ | ☐ | | |
| 3.0 Describe and practice strategies for evaluation of instructional design and materials, including summative and formative evaluations | ☐ | ☐ | | ☐ |
| 4.0 Use technology to produce instructional material for student learning | ☐ | ☐ | | |
| 5.0 Identify strategies to assess student learning. | ☐ | ☐ | | |
| 6.0 Apply design concepts to a needs analysis, identifying contexts, learning tasks, and aspects of the learner. | ☐ | ☐ | | ☐ |

This course meets the following AECT standards in Educational Communications and Technology, <http://www.aect.org/affiliates/national/ncate.htm>.

Standard 1: DESIGN

Candidates demonstrate the knowledge, skills, and dispositions to design conditions for learning by applying principles of instructional systems design, message design, instructional strategies, and learner characteristics.

1.1 Instructional Systems Design (ISD)

"Instructional Systems Design (ISD) is an organized procedure that includes the steps of analyzing, designing, developing, implementing, and evaluating instruction" (Seels & Richey, 1994, p. 31). Within the application of this definition, 'design' is interpreted at both a macro- and micro-level in that it describes the systems approach and is a step within the systems approach. The importance of process, as opposed to product, is emphasized in ISD.

- 1.1.1 Analyzing: process of defining what is to be learned and the context in which it is to be learned.
- 1.1.2 Designing: process of specifying how it is to be learned.
- 1.1.3 Developing: process of authoring and producing the instructional materials.
- 1.1.4 Implementing: actually using the materials and strategies in context.
- 1.1.5 Evaluating: process of determining the adequacy of the instruction.

1.2 Message Design

"Message design involves planning for the manipulation of the physical form of the message" (Seels & Richey, 1994, p. 31). Message design is embedded within learning theories (cognitive, psychomotor, behavioral, perceptual, affective, constructivist) in the application of known principles of attention, perception, and retention, which are intended to communicate with the learner. This subdomain is specific to both the medium selected and the learning task.

1.3 Instructional Strategies

"Instructional strategies are specifications for selecting and sequencing events and activities within a lesson" (Seels & Richey, 1994, p. 31). In practice, instructional strategies interact with learning situations. Instructional models often describe the results of these interactions. The appropriate selection of instructional strategies and instructional models depends upon the learning situation (including learner characteristics), the nature of the content, and the type of learner objective.

1.4 Learner Characteristics

"Learner characteristics are those facets of the learner's experiential background that impact the effectiveness of a learning process" (Seels & Richey, 1994, p. 32). Learner characteristics impact specific components of instruction during the selection and implementation of instructional strategies. For example, motivation research influences the selection and implementation of instructional strategies based upon identified learner characteristics. Learner characteristics interact with instructional strategies, the learning situation, and the nature of the content.

Course Assignments, Expectations and Grading Procedures

GRADING PROCEDURES

Course grades are based on activities, projects, and assignments. Assignments may be turned in during class meetings in print or on disk, or they may be placed in Moodle.

Professional Conduct is necessary to earn an excellent or good grade.
All written work must be created electronically.

| Assignment | Value | Weight |
|---|--------------|---------------|
| Instructional design literature report | 25 | 10% |
| Design Project Report 1 | 36 | 14% |
| Design Project Report 2 | 50 | 20% |
| Design Project Report 3 | 80 | 32% |
| Rough draft of instructional materials | 25 | 10% |
| Design Project Presentation and Unit Plan | 34 | 14% |
| TOTAL | 250 | 100% |

All assignments have a 10% penalty per week for lateness, with no work accepted two weeks after the due date.

- A 90-100 Excellent performance
- B 80-89 Good performance
- C 70-79 Fair performance
- D 60-69 Poor performance

Assignment details and rubrics:

1. Professional conduct

Read assignments and engage in a positive way in all class discussions and activities. On-time attendance is required. Know and follow university policy regarding academic honesty. In your online work, follow standards of netiquette: be accountable for what you send, acknowledge online sources you reference.

2. Instructional design approach/model review

Using relevant print and/or electronic sources, you will locate at least two scholarly articles, which focus on a stage or model of instructional design. The syllabus bibliography and your textbook chapter reference lists are starting points for locating articles. The 2-page report (single-spaced) should include a short summary of each article followed by your discussion of the ideas in the article. (e.g., Does the model/proposal seem feasible in your practice? How might you modify the approach for your own use?) Submit the report electronically.

Assignment rubric: (25 points)

| Value | Meets/exceeds all criteria: 5 | Meets some criteria: 3 | Meets few/no criteria: 0 |
|--|--|---|---------------------------------|
| Professional appearance and structure | Word processed, properly formatted | Less than 2 pages, improper formatting | Requirement absent |
| Clear description of design approach/model | Strategy described in writer's words | Incomplete or erroneous description | Requirement absent |
| Quality of discussion | Relation of strategy to writer | Superficial or inappropriate discussion | Requirement absent |
| Appropriate reference | Full citation, properly formatted, with web link | Incomplete citation | Requirement absent |
| Location and selection | Detailed description of the article search process, and reasons why the articles were chosen | Incomplete information | Requirement absent |

Design Project

You may work as an individual or in a group of 2-3 members to design a unit or module of instruction using the instructional design process. This unit could be an adult education unit for a specific task, or it could focus on a specific grade level or subject content area. For the purposes of this course, the instructional unit should be designed for approximately ten (10) hours or two weeks of instruction. You will pilot test and evaluate the completed unit of instruction to determine if each of the components function together to achieve your instructional unit goal. *Each report of the project is expected to include relevant, current references to the scholarly literature related to both your instructional design approach and your approach to instruction in the content area.*

Your final unit of instruction will be shared on the last day of class. The following must be accomplished as the instructional unit is being developed. These criteria will be used to evaluate the completeness of the unit of instruction:

- a. Establish educational goals when designing instructional units so that they reflect the needs of the curriculum, the students, or the society.
- b. Analyze the learners that will be instructed in your unit. Your analyses should be based on the following categories: social background, experiential background, developmental level, motivation, knowledge level, and learning style. It should provide sufficient information to design the instructional activities and choose the resources for the unit.

- c. Specify instructional objectives, which will enable your learners to achieve the instructional goal that you have identified in your instructional unit. The objectives must contain the necessary elements and represent various levels of learning.
- d. Construct performance measures that evaluate student learning outcomes, including that learning which occurs prior to, during, and following the instruction.
- e. Describe teaching/learning activities for each of the instructional objectives in your unit. Principles of learning theory should be applied to each teaching/learning activity so that none of the learning principles are violated.
- f. Select the instructional resources that will be used in each of the teaching/learning activities. The instructional resources should show evidence of being selected on the basis of implementing a given objective for a specified group of learners.

3. Design Project Report 1

The design team's first report should include the following information, created while planning the instructional unit.

| | |
|--|---|
| <u>Project title</u> | Provide a title for your project that is simple and direct. |
| <u>Project description</u> | Describe in clear terms the purpose of your project, why it is needed, who will be served (provide a learner analysis), and what will be accomplished. |
| <u>Detailed description of your needs assessment (Chapter 2), including development of plan and its use, and goal analysis (Chapter 2)</u> | Provide a detailed description, with examples, of your needs assessment plan. Include a brief analysis of the learning environment. Include information, which details how plan will be enacted and analyzed. |
| <u>Summary of your needs assessment outcome (Chapter 2)</u> | Provide a summary of the data you collected with your needs assessment instrument. What did your team learn about your learners and the learning environment? |
| <u>Goal statement as a result of your assessment (Chapter 2)</u> | Provide a goal statement, which will address the desired outcomes of your project (this is not a listing of performance objectives). |
| <u>List of entry competencies (Chapter 3)</u> | Outline the knowledge, skills, and attitudes that learners need to bring to the instructional process. |
| <u>Learner interview (Chapter 3)</u> | Summary of discussion with a member of the learner group about the goals of instruction. |

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| <u>Description of learners (Chapter 3)</u> | Describe student attitudes, motivation, background, abilities, learning styles, and group characteristics. |
| <u>Performance context and implications for instruction (Chapter 3)</u> | Describe the physical, social, and resource elements of the learning site. |
| <u>Relevant current references</u> | Cite literature related to both your instructional design approach and your approach to instruction in the content area. |

Assignment rubric:

| Report 1 Contents | Points | Score |
|---|---------------|--------------|
| 1. Goal statement | 4 | |
| 2. Goal analysis 4/Needs assessment 4 | 10 | |
| 3. Identification of entry behaviors | 5 | |
| 4. Description of learner interview | 5 | |
| 5. General description of learners | 5 | |
| 6. Description of performance context, implications for instruction | 5 | |
| 7. References | 4 | |
| TOTAL | 36 | |

4. Design Project Report 2

The design team's second report should include the following information, created while developing the instructional unit.

| | |
|--|--|
| <u>Project title</u> | |
| <u>Revisions since Report 1</u> | Comment on revisions to the project's needs assessment, goals, subskills, learners, or context made since Report 1. |
| <u>Goals statement</u> | Attached your revised goal statement, based on what you learned during the learner assessment. |
| <u>Task analysis tied to the goals (Chapter 4)</u> | Identify the appropriate skills needed for each step of the instructional process. |
| <u>Instructional objectives (Chapter 5)</u> | Identify the skill or behavior the learner will be able to demonstrate at the end of each instructional task, the conditions under which the learner will perform, and the level the student will meet for each objective. |
| <u>Instructional sequence (Chapter 6)</u> | Show a timeline or flow chart with the events of instruction for the unit. |
| <u>Strategies for objectives (Chapter 7)</u> | List strategies that will be employed for teaching the objectives in the lessons. |
| <u>Details on objectives (Chapter 8-9)</u> | Summarize the lessons and materials that will be used to teach each objective. |

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| <u>Practice for objectives (Chapter 8)</u> | Describe how students will practice skills associated with each objective, and the form that feedback to students will take. |
| <u>Preinstructional activities (Chapter 8)</u> | Outline ways that learners will be motivated and prepared for learning, and methods the instructor will use to learn about the students' prior knowledge and/or misconceptions. |
| <u>Groupings and media (Chapter 8-9)</u> | Discuss the student groupings and the instructional media that will be used with the strategies. |
| <u>Sample assessments (Chapter 10-11)</u> | Attach example pre- and post-assessments correlated with the objectives and goals. |
| <u>Relevant current references</u> | Cite literature related to both your instructional design approach and your approach to instruction in the content area. |

Assignment rubric:

| Report 2 Contents | Points | Score |
|---|---------------|--------------|
| 1. Comments on revisions made since Report 1 | 0 | |
| 2. Attached revised instructional analysis and goal statement | 0 | |
| 3. Instructional objectives | 9 | |
| 4. Sample assessment for each objective | 7 | |
| 5. Describe instructional sequence | 2 | |
| 6. Describe preinstructional activities | 2 | |
| 7. Information/example for each objective | 9 | |
| 8. Practice/feedback for each objective | 9 | |
| 9. Strategy for teaching each terminal objective | 2 | |
| 10. Describe student groupings and media selections | 2 | |
| 11. Attached pre- and post assessments used with instruction | 4 | |
| 12. References | 4 | |
| TOTAL | 50 | |

5. Rough draft of instructional materials

Your team will prepare a package of instructional materials for the lessons in your unit. The materials are those resources that the teacher and the students will use for learning the objectives. Include materials that the instructor will use to present information or instructions to students, and materials students will use to guide their learning, practice, and be assessed. The materials may be printed, and they may be other media including transparencies, audio, video, images, diagrams, presentation files, websites, and other electronic or multimedia forms. The expectation is that your lessons will use a combination of existing and original materials—use published materials and materials you create in a variety of formats.

Assignment rubric:

| Value | Meets/exceeds all criteria: 5 | Meets some criteria: 3 | Meets few/no criteria: 0 |
|--|---|---|---------------------------------|
| Professional appearance and structure | All materials are good-quality copies and electronically-produced originals, and they include information about their use in the lessons. | Some materials are good-quality copies and electronically-produced originals, and/or some include information about their use in the lessons. | Requirement absent |
| Completeness and quality | All objectives are supported with high quality materials appropriate to the learning context and the learners. | Some objectives are supported and/or the quality and appropriateness needs improvement. | Requirement absent |
| Correlation with objectives | All materials support objectives. | Some materials appear to support objectives. | Requirement absent |
| Variety of materials and media, mix of existing and original materials | Materials represent at least three media types, and at least half are original. | Materials represent fewer than three media types, and/or less than half are original. | Requirement absent |
| References | Complete reference information for all materials used and developed. | Incomplete reference information, or sources for some materials listed. | Requirement absent |

6. Design Project Report 3

The design team's third report should include the following information, created while evaluating and revising the instructional unit.

| | |
|--|--|
| <u>Project title</u> | |
| <u>Revisions since Report 2</u> | Comment on revisions to the project made since Report 2. |
| <u>Goals, objectives and task analysis, and Report 2</u> | Attached your revised goals, objectives, and task analysis, based on what you learned during the project development, and attach Report 2. |
| <u>Plan for one-to-one formative evaluation (Chapter 12)</u> | Describe the learners, materials, and procedures used in the one-to-one formative evaluation. |
| <u>Results of one-to-one formative evaluation (Chapter 12)</u> | Describe the results of the one-to-one formative evaluation, by discussing how the students performed. List revisions made to your unit as a result. |
| <u>Materials and assessments for small-group evaluation (Chapter 12)</u> | Attach a copy of the instructional materials and assessments used in the small-group evaluation. |
| <u>Characteristics of small-group learners (Chapter 12)</u> | Describe the characteristics of the small-group learners. |
| <u>Instruments for small-group evaluation (Chapter 12)</u> | Describe the instruments used in the small-group evaluation. |
| <u>Procedures for small-group evaluation (Chapter 12)</u> | Describe the procedures used in the small-group evaluation. |
| <u>Summary of small-group evaluation (Chapter 12)</u> | Summarize the data from the small-group evaluation by discussing how the students performed. |
| <u>Discussion of small group data (Chapter 12)</u> | Reflect on the small-group evaluation outcome. Discuss what you learned. |
| Revisions for instruction and assessment | List the revisions your group plans for the next version of the unit instruction and assessment. |
| Relevant current references | Cite literature related to both your instructional design approach and your approach to instruction in the content area. |

Assignment rubric:

| Report 3 Contents | Points | Score |
|--|---------------|--------------|
| 1. Comments made on revisions since Report 2 | 0 | |
| 2. Attached instructional analysis and Report 2 | 0 | |
| 3. Describe learners, materials, and procedures used in one-to-one formative evaluation | 5 | |
| 4. Describe results of one-to-one formative evaluation, and revisions made as a result | 10 | |
| 5. Attached copy of instructional materials and assessments used in small-group evaluation | 16 | |
| 6. Describe characteristics of small-group learners | 3 | |
| 7. Describe instruments used in small-group evaluation | 3 | |
| 8. Describe the procedures used in the small-group evaluation | 5 | |
| 9. Summary of data from small-group evaluation | 12 | |
| 10. Discussion of small group data | 10 | |
| 11. Revisions planned for next version of instruction and assessment | 12 | |
| 12. References | 4 | |
| TOTAL | 80 | |

7. Design Project Presentation and Unit Plan

Your group will share an overview of your unit for the class. You will choose the method of presentation. For example, the presentation may take the form of a discussion of the full unit timeline and then a mini-lesson from the unit; a web page with a unit outline and links to instructional materials; an electronic presentation with screen captures showing instructional materials; a combination of methods. Include a theoretical framework (Chapter 13), the context and need for the instruction, your goals and objectives, and a brief summary of the strategies and materials, along with a short synopsis of your assessment experiences, and considerations for planning implementation of instruction (Chapter 15). The presentation should be 15-20 minutes in length and be professional, clear, and logically organized. Prepare an overview or sample lesson handout for each member of the class, and turn in your full unit plan to the course instructor.

Assignment rubric:

| Presentation and Unit Plan | Points | Score |
|---|---------------|--------------|
| Each group member has a significant role in the presentation | 2 | |
| 15-20 minutes in length | 2 | |
| Handout with unit overview or sample lesson | 3 | |
| Theoretical framework relates to design | 2 | |
| Context and need for instruction | 3 | |
| Unit goals and objectives | 3 | |
| Summary of strategies, materials, implementation considerations | 3 | |
| Synopsis of assessment experiences | 3 | |

| | | |
|--|----|--|
| Professional, clear and logically organized | 3 | |
| Unit plan includes: <input type="checkbox"/> Educational goals and a statement of rationale for the goals <input type="checkbox"/> Description of learners: social background, experiential background, developmental level, motivation, knowledge level, and learning style <input type="checkbox"/> Instructional objectives <input type="checkbox"/> Performance measures that evaluate student learning outcomes, including that learning which occurs prior to, during, and following the instruction <input type="checkbox"/> Strategies and materials for each objective | 10 | |
| TOTAL | 34 | |

Websites

Design Links <http://www.coedu.usf.edu/it/resources/design.html>

Instructional Design Glossary <http://www.ehhs.cmich.edu/~rmscott/glossary643.html>

Instructional Design Theories Site <http://www.indiana.edu/%7Eidtheory/>

Theory into Practice Database <http://tip.psychology.org/>

Combining Two Contrasting Philosophies to Instructional Design, By Lois A. Ritter.

<http://www.syllabus.com/print.asp?ID=9876>

| Week | Date | Topic | Reading | Assignment due by Wednesday midnight |
|------|-------|--|----------------|--|
| 1 | 8/28 | Introduction to instructional design; Needs assessment and goal analysis | Chapter 1-2 | |
| 2 | 9/4 | Learner and context analysis; | Chapter 3 | Model/approach report |
| 3 | 9/11 | Task analysis | Chapter 4 | |
| 4 | 9/18 | Objectives | Chapter 5 | Report 1: Goals and analyses |
| 5 | 9/25 | Instructional sequencing; Developing instructional strategies | Chapters 6-7 | |
| 6 | 10/2 | Designing the instructional message | Chapter 8 | |
| 7 | 10/9 | Formative and summative evaluation of instruction | Chapter 12 | |
| 8 | 10/16 | Developing instructional materials | Chapter 9 | |
| 9 | 10/23 | <i>Project planning and conferencing. No class meeting.</i> | | <i>Report 2: Objectives and activities</i> |
| 10 | 10/30 | Evaluation of learning | Chapters 10-11 | |
| 11 | 11/6 | <i>AECT conference: no class meeting. Project planning</i> | | <i>One-to-one formative evaluation; Small group evaluation</i> |
| 12 | 11/13 | <i>Guest speaker: professional instructional designer. Place TBA</i> | | <i>Rough draft of materials</i> |
| 13 | 11/20 | Theories and models for learning | Chapter 13 | |
| 14 | 11/27 | <i>Holiday: no class</i> | | |
| 15 | 12/4 | Implementing instructional design | Chapters 14-15 | Report 3: Evaluations |
| 16 | 12/18 | Summary and sharing (This class may be held 12/11 by mutual agreement) | | Presentation; Plan |

INSTRUCTOR POLICIES

- Attendance: Attendance at each class meeting is required because of the practical, hands-on nature of instruction.
- Academic integrity: Follow the guidelines of the Student Honor Code located at <http://www.dso.ufl.edu/judicial/procedures/studenthonorcode.php>
- Assignment and quality of work: Completion of all assignments is expected during the week indicated. Assignments submitted after the due date are considered late, and a 10% reduction in grade will occur for each class day the assignment is late.

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