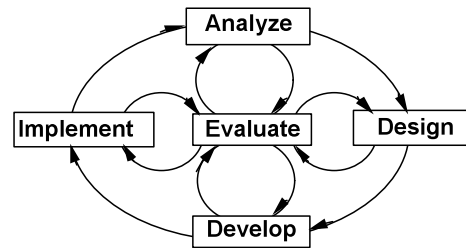


# Introduction to Educational Technology

Syllabus Fall 2009



**Dr. Allison Rossett**

Teaching assistant: Colleen Cunningham  
([colleen.mary.cunningham@gmail.com](mailto:colleen.mary.cunningham@gmail.com))

Office: North Education 283  
Office Hours: 2-4 W; 2-4 TH  
Email: [arossett@mail.sdsu.edu](mailto:arossett@mail.sdsu.edu)  
Telephone: 619.594.6088

## COURSE OVERVIEW

*Welcome to EDTEC 540!* This graduate-level survey course is devoted to introducing YOU to the field of educational technology and the theory and practice of instructional design. EDTEC 540 is for individuals planning to enter San Diego State University's Master of Arts program in Education with a concentration in Educational Technology. Do others enjoy the course? Yes, they do. Can you use it if you plan a career in journalism or health education? Yes, you can. Many have. But you should know that the main purpose of the class is to lay the foundation for the instructional design and development that is at the heart of the graduate program in EDTEC at SDSU.

EDTEC 540 examines antecedents, foundations, issues, trends and practices associated with...

1. a systematic approach to instructional and informational design and to the design of materials, products, strategies and policies that influence individual and organizational performance;
2. analysis of given challenges/opportunities and determination and justification of appropriate learning and information solutions;
3. design and development of instructional and informational products and events, as manifested in class expectations;
4. development and assessment of outcomes as instructional objectives; and
5. appreciating much that is involved in instructional design, educational technology, learning online, training and development, curriculum development and evaluation, human performance and many other words and phrases associated with our field.

In this class, you will learn how to *speak and do educational technology* and to appreciate the ways it can help you advance education, training and performance.

## COURSE COMPETENCIES

Students will be able to:

1. define educational and performance technology; define education, training, information and knowledge management; describe emergent technologies in the field and their implications for institutional reform;
2. describe the implications of cognitive and behavioral psychology, adult learning theory, systems, and communications technologies for education and training;
3. describe a systematic approach to the design of instruction presented in the ADDIE model;
4. compare systematic approaches to the design of instruction to other ways of approaching the tasks of education and training;
5. state reasons for using a systematic approach to the design of instruction; describe how a systematic approach might change the way you provide instruction;
6. describe analyses and ways of approaching given needs and challenges;
7. use performance analysis and goal analysis to approach given needs and challenges, including a challenge of your own choosing;
8. define the differences between performance analysis, needs assessment, goal, task, audience and subject matter analysis and most important of all, ways you might use them to launch projects;
9. from given missions and challenges, conduct lean analysis and design stages of ISD;
10. identify the characteristics of a "well-formed" instructional objective; rewrite objectives that are ill-formed; generate well-formed objectives from given goals;
11. compare and contrast criterion-referenced and norm-referenced testing;
12. determine whether a given test item matches a given instructional objective;
13. describe Gagne's Nine Events of Instruction and implications for design of instruction;
14. differentiate between instruction and information (job aids and performance support); describe conditions that make this an effective way to improve performance; comment on information and instructional combinations with potential for improving performance;
15. design and develop a job aid or performance support tool that focuses on the needs of an audience; write a brief report detailing the audience, need, format, and rationale;
16. describe, and differentiate between, the basic attributes of different learning theories and how they influence the ways we build program, in rooms and online;
17. list the features of the ARCS model of motivational design and describe how you would use this model to enhance strategy;
18. identify the personal and professional attributes that contribute to success in the field; assess yourself in light of these characteristics and establish goals for future development that take emergent career opportunities into account;
19. use professional resources (e.g., ERIC, Love Library and local professional associations) to establish professional habits; and
20. describe how EDTEC 540 has influenced you.

## EDTEC 540 EXPECTATIONS

Students in EDTEC 540 are expected to:

- Make use of online course materials via Blackboard (<http://blackboard.sdsu.edu>). Access is available to registered students.
- Attend and participate in classes and related events. Please be on time for class — latecomers distract us, as do students who depart early.
- Complete readings and assignments by the dates indicated on the syllabus. Instructional designers work in a world where deadlines are a fact of life. In order to simulate real-world conditions, late assignments will result in grade penalties.
- Begin preparation for assignments and exams well in advance of due dates.
- Successfully prepare for, and complete, the midterm and final exams. The final exam will be comprehensive and rely upon a variety of item formats reflecting course competencies.

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## EDTEC 540 ASSIGNMENTS

**Assignment Background:** You have two major assignments for this class. For both, we ask you to focus on a problem or opportunity for a population **to which you have access**. You will conduct an analysis surrounding your chosen opportunity or problem and, eventually, you will develop a job aid or performance support tool that contributes to solving that problem or advancing that opportunity. Yes, both projects address the same audience and problem.

**Assignment Considerations:** The topic and audience you select is important; you will concentrate there for much of the semester.

First, identify a challenge of some type, think about the various people affected by the opportunity/problem, and consider what you think will influence resolution of the identified challenge. Now, answer these questions: Do you know these people, at least a little? Can you get some of them to talk to you, to allow you to visit them in their setting? Will managers, teachers, parents, or whoever is involved provide access? Do you know the subject matter on which you will focus? Will your effort matter to somebody or some organization? In other words, is the problem

Keep this in mind.....

**We value grammar and expression:** Please ensure that anything you submit has been proofread for grammar, spelling, active voice, and clarity. Technology can support such pursuits, but it does not eliminate the need for you to proofread carefully. Better yet, invite someone to read your materials to ensure clarity and focus. Successful educational technologists write well, very well.

**Organization and Submission of Assignments:** The world of instructional design often requires practitioners to streamline, condense, and selectively present content. Knowing which “corners to cut” and how to organize information in logical and efficient ways are abilities instructional designers must possess. Please note each assignment’s page limit, then select and present the most appropriate findings. Use headings, tables, and bulleted lists to guide the reader. Do not think of your assignments as “term papers.” That’s the wrong model and form for educational technology.

**Do it on time!** You must do readings and submit assignments on time. That’s the way it is in the world and the way it is here. There are grade penalties for tardy submissions.

**Do your best!** You must earn a grade of B+ or better to continue in the MA in EDTEC. But there are other reasons to excel. In this class, you will learn important skills and you make an impression on the instructor, teaching assistant and classmates. You establish your reputation. In our world, that matters.

worth solving? Note that *now is not the time to foray into a totally new arena*. See BlackBoard for a selection tool to help you pick an appropriate audience and topic. Go to the Discussion Board and discuss your thoughts with classmates, Allison and Colleen.

Some examples of good choices:

- A middle school teacher notices that sixth-graders come to middle school confused and alienated by their new environment. She might analyze what causes their confusion and address the challenge of orienting new students to her school and to the middle school experience.
- A Navy Chief who manages a department in a hospital notices an unusually high error rate associated with one of the new computer programs that was supposed to make the job easier. He might conduct an analysis to determine why the new software's promise has gone unfulfilled.
- A non profit organization has created a better way to help seniors deal with problems associated with choking on food. They want to train waiters and other care givers in senior living facilities about how to prevent the occurrence and execute the procedure, should a senior begin to choke. You might conduct the analysis to enable them to roll out this important information.
- A sales manager is faced with getting her sales folks "up to speed" on a new product. You might look into the best approach to "reach" these people and support successful sales of the new product.
- Your company is sending employees to Belarus. They want a class to be developed for employees and their families to prepare them to live, work and thrive in this foreign land. You might conduct an analysis to figure out what to put in the class, or even if a class is the right solution.

## EDTEC 540 ASSIGNMENTS: DESCRIPTIONS

### Assignment #1 – Performance Analysis Report

With your topic in hand, you will plan and conduct a Performance Analysis, and then write and submit performance analysis report that is no longer than 1250 words. Your report will be assessed using a rubric posted on the course website in BlackBoard. Yes, now is a good time to check it out.

In the PA report, you will: describe your audience, select sources of information that will give you fresh perspectives, ask questions regarding broad needs and purposes and drivers/causes/barriers, and eventually, articulate the entire solution system necessary to solve the identified performance problem. You will conclude your report by identifying the portion you will 'handle' through information support (job aids or performance support) and tentative goals and objectives.

Your well-written performance analysis report should:

- Move from a broad and general view of the situation to actionable specifics
- Include data gathered from real sources
- Show off your analysis skills, particularly demonstrating that you can do performance analysis, involving description of the audience and broad needs, examination of drivers/barriers, description of the solution system, presentation of results, and the carving out of an appropriate focus for your job aid/PST effort

- Use your analysis to identify tentative goals and objectives achievable through information support (job aids or PST)
- Enable you, later in the semester, to focus on the 'right' portion of the topic
- Provide a rationale for all decisions, including presenting data as support, where appropriate
- Tell a good story, make it readable
- Use APA style for references and citations. It is a good habit to establish.

### Assignment #2 – Job Aid/Performance Support and Report

This assignment has you working *systematically*, as you use the results of your performance analysis effort to enlighten the development of a job aid or PST. Please note, your job aid or PST need not solve the identified performance problem in its entirety. Rather, it should be one component of a solution system that, when completely implemented, will solve the identified challenge. Of course, you will want to describe the entire solution system in your report. What would it all look like? Then tell us what you are focusing. Make it clear to readers.

After reading *Job Aids and Performance Support: Moving from Knowledge in the Classroom to Knowledge Everywhere*, refer to your analysis findings, and then develop a job aid or PST targeted to your population and specific performance objective(s). You will also write a **report no longer than 1500 words** to accompany your submitted aid or tool. To be successful, complete the following tasks:

- Write a short *summary* that reminds us of your performance analysis results and the focus of your effort, explain why you chose to concentrate as you did
- Present the appropriate *detailed analyses* that support your job aid development and refined objectives (i.e., content analysis, task analysis)
- Develop a *job aid or PST* appropriate to the challenge, users and setting
- Pilot test the job aid or PST and detail results. Most importantly, did you meet your stated objective(s)? What worked? What did not? How could it be better?
- Limit yourself to 1500 words in APA format for references and citations. May you submit 1000 words? Yes, so long as you cover the bases detailed here.

See Blackboard for more details on this assignment. Attention to the following details will make it easy for us to review and admire what you have done for this important assignment:

Elements of the Job Aid/PST and Report	How to do it...
Describe what you are doing and why.	Refer briefly to your analysis report. Remind us of the nature of your challenge, audience and context.  Given the problem or opportunity you've described, how does the aid or tool fit in with the larger solution system? Review the drivers at play and succinctly describe the solution system – including what the job aid or PST brings to the task. Put it in context. Summarize.
What analyses did you do to find the direction and content for this	Sources? Did you do goal analysis? Did you rely upon task analysis? Content analysis? What were the results? What

Elements of the Job Aid/PST and Report	How to do it...
deliverable? Specify here and share results.	were the objectives that resulted from your analysis that your job aid/tool will attempt to meet? Note: Ensure that you include well-written, complete objectives in your report.
Develop a job aid or PST that works for the portion of the challenge you've selected.	Print? Online? Posters? You pick it. This is the prototype job aid that you will submit to pilot testing.
Pilot the job aid with several potential users. Include at least one subject matter expert.	Detail your pilot procedures. Detail your results. <b>Was your job aid/PST effective in supporting performance? Were your users able to meet the identified objectives you targeted?</b> What unexpected problems arose? What did you learn?
Revise your effort. Detail your revisions here. What would you do differently if you had even more time to make it perfect?	Specify the changes you've made to improve your aid/tool, referring to the results of the piloting.

## EDTEC 540 GRADING

To acknowledge achievements and monitor student progress, the Department needs a realistic and meaningful system for grading performance. The University and the professional community expect the Department to maintain standards that reflect its reputation as one of the foremost programs of its type in the country.

According to our University's *Graduate Bulletin*,

- A means outstanding achievement; available for only the highest accomplishment;
- B means praiseworthy performance; definitely above average;
- C means average, awarded for satisfactory performance.

In general, professors in the department award "A" grades to acknowledge achievements that **go beyond specified course requirements and criteria**. By its very nature, **this type of performance cannot be spelled out clearly in advance**. A's are reserved for *special* efforts that *exceed expectations*, that demonstrate exceptional creativity, boldness, commitment, involvement, ingenuity, or elegance. Meeting the minimum requirements of a stated assignment will typically result in a B-level grade.

Extrapolating from the *University Bulletin* provides additional meaning to letter grades.

- A- excellent performance; clearly exceeds course requirements.
- B+ high achievement; clearly and substantially meets course requirements and criteria.
- B praiseworthy performance; definitely above average.
- B- acceptable performance in a graduate course; meets most course requirements and criteria.
- C+ awarded for satisfactory performance; marginal performance in a graduate course.

and so forth.....

EDTEC 540 grades are weighted as follows:

ACCOMPLISHMENT	PERCENTAGE
Performance Analysis	20%
Job Aid/PST and Report	25%
Mid term Exam (emphasis on ISD and objectives)	15%
Final Exam	25%
Attendance/Participation in Class, Discussion Boards and Twitter	15%
<b>Total</b>	<b>100%</b>

## TEXTS

Course texts are available at the Aztec Stores bookstore or online retailers.

Mager, R. & Pipe, P. (1997). *Analyzing performance problems*. Belmont, CA: Lake Publishing Co.

Mager, R. (1997). *Goal analysis*. Atlanta, GA: CEP Press.

Mager, R. (1997). *Preparing instructional objectives*. Atlanta, GA: CEP Press.

Rossett, A, & Schafer, L. (2007). *Job aids and performance support: Moving from knowledge in the classroom to knowledge everywhere*. San Francisco, CA:

Pfeiffer/Wiley. <http://www.colletandschafer.com/perfsupp/>