Online learning

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**0858-610 Online learning**

**Description:** Students will learn the foundations of instructional design and understand how to integrate technology in meaningful ways in K-12, higher education or other educational settings. Students will also learn how to develop and assess learning plans that are aligned to technology standards and/or other learning outcomes.

**Keywords:** online learning, hybrid learning, blended learning, virtual schools, distance learning, distance education, MOOC, flipped classroom

## Course Goals

Online, blended and web-enhanced learning is a major part of both higher education and K-12 teaching, learning. Students need to become aware of this new method of teaching, learning and instructional delivery. Students who wish to become educational professionals need to understand the pedagogy, best practices, interactivity and student-centered instructional design principles required for quality online, blended and web-enhanced learning. Students should also have an understanding of the political issues surrounding online, blended and web-enhanced learning such as cost, technical infrastructure, teacher development, student and teacher support and profit. By the end of the course, students should be able to:

* understand the basic tenets, movement and use of online, blended and web-enhanced learning in K-12 and higher education;
* understand various technologies used for teaching and learning and course delivery in online, blended and web-enhanced environments;
* apply principles for the development of engaging and interactive online, blended and web-enhanced curriculum;
* design learning environments that address the challenges of creating interaction and community in online and virtual environments;
* apply best practices for teaching in online, blended and web-enhanced environments.

Office Hours

Mon 12-2 PM (Alumnae Hall 234) Tues 4-5 PM (ONLINE) Wed 1-2 PM (ONLINE)

## Bibliography

Bender, T. (2012). *Discussion-based online teaching to enhance student learning: Theory, practice and assessment.* Stylus Publishing, LLC.

Clark, R. C., & Mayer, R. E. (2016). *E-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning*. John Wiley & Sons, Incorporated.

Ferdig, R. E., Cavanaugh, C., & Freidhoff, J. R. (2015). Research into K-12 online and blended learning. *Online, blended, and distance education in schools: Building successful programs*, 52-58.

Lowenthal, P. R., York, C. S., Richardson, J. C., Hodge, A. M., Love, B., Grandgenett, N., & Swift, A. (2014). *Online learning: Common misconceptions, benefits and challenges.* Nova Science Publishing.

Means, B., Bakia, M., & Murphy, R. (2014). *Learning online: What research tells us about whether, when and how.* Routledge.

Nilson, L. B., & Goodson, L. A. (2017). *Online teaching at its best: Merging instructional design with teaching and learning research*. John Wiley & Sons.

Yan, D., Von Davier, A. A., & Lewis, C. (Eds.). (2016). *Computerized multistage testing: Theory and applications.* CRC Press.

## Class Schedule

Week

Topics

Readings

Due

1

Introduction

* Syllabus (this page)
* Moodle (this website)
* Tutorials
* Progress Report (shared with your Adelphi student account)

Syllabus Quiz

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Foundations

* Bender (2012) Paradigm lost
* **one** of these topics:
  + K-12: Means et al (2014) Blending teacher and online instruction in K-12 schools and Ferdig et al (2015) Research into K-12 online and blended learning (both readings)
  + Learning theory: Bender (2012) Rethinking learning theory within the online class
  + Out-of-school learning: Means et al (2014) Interest-driven learning online
  + Higher education: Means et al (2014) Online and blended learning in higher education

Register a [SnatchBot](https://snatchbot.me/) account

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Flipped Classrooms

* Flipped Classrooms
* Lowenthal et al (2014) Benefits and challenges of flipping the learning of procedural knowledge
* Tabert (2017) The history and theory of flipped learning

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Multimedia Theory

* Clark and Mayer (2016) Applying the Multimedia Principle
* **one** of these chapters:
  + Clark and Mayer (2016) Applying the Contiguity Principle
  + Clark and Mayer (2016) Applying the Modality Principle
  + Clark and Mayer (2016) Applying the Redundancy Principle
  + Clark and Mayer (2016) Applying the Coherence Principle

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Instructional Design

* Nilson and Goodson (2018) Setting significant outcomes
* Nilson and Goodson (2018) Designing a coherent course
* Nilson and Goodson (2018) Applying cognitive science to online teaching and learning strategies

Narrated Tutorial

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Universal Design

* Novak and Thibodeau (2016) The case for better online course design
* Novak and Thibodeau (2016) Fewer barriers, more support: UDL guidelines in action

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Foundations

* Davidson-Shivers and Reese (2014) Are online assessments measuring student learning or something else?
* Yan et al (2014) Overview of computerized multistage tests

Adaptive Quiz

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Social Presence

* Bender (2012) Discussion-based online teaching to enhance student learning
* Novak and Thibodeau (2016) Cultivating “instructor presence” to support engagement

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MOOCs

* Bell (2015) The fairy tail MOOC
* Rhoads (2015) The rise of the MOOC

MOOC

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Bots

Chatbot

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Prototyping I

Present your Prototype or participate in two of your peers’ units.

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Prototyping II

Present your Prototype or participate in two of your peers’ units.

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Prototyping III

Present your Prototype or participate in two of your peers’ units.

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Final Run I

Present your mini-unit or participate in two of your peers’ units.

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Final Run II

Present your mini-unit or participate in two of your peers’ units.

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Final Run III

Present your mini-unit or participate in two of your peers’ units.

## Assignments

### Narrated Tutorial

Create a short (3-5 minute) standalone, narrated video tutorial or mini-lecture and upload it to YouTube. This video should be clearly narrated and thoughtfully designed, following the principles of Multimedia Theory and using an appropriate mix of multimedia (text, visual, audio, etc.) components. The video should also have subtitles (auto-generated captions don’t count), which you can create in YouTube. The topic is up to you, but it should be educational and/or informative. You are encouraged to pick one that you might use for your mini-unit (see below) or in a future lesson. The video can easily be created using applications such as PowerPoint or Keynote, or a screencast application like Screencastify, Quicktime Player or similar application. While you can use clips from other content, most of the video should be original.

### Adaptive Quiz

Adaptive quizzes are quizzes that adjust its questions based on the answers provided, and they can be a powerful way to do pre-assessments and mid-unit checkpoints. For this assignment, design a quiz using Google Forms (or comparable application) or the quiz function in a learning management system (e.g., Moodle, Canvas) with a branching question structure that adapts to the user’s abilities. The quiz should be functional and meaningfully adaptive (i.e., the branching logic makes sense). Like the narrated tutorial, the topic is up to you but it should work as an assessment tool. Avoid “personality tests” (e.g., the ones you see on Buzzfeed) that sort users into arbitrary categories. The quiz should be able to sort test-takers into two distinct levels. It should also be at least five questions deep; in other words, each test-taker should have to answer at least five questions. In addition to submitting the quiz, please also submit a map of the questions that shows all the questions and short rationale on why you designed the adaptive quiz in the way you did. As a class, you will be testing one another’s adaptive quizzes to make sure they are properly designed.

### Chatbot

Chatbots are automated bots with multiple uses, most commonly to answer frequently asked questions. Using SnatchBot, design a simple, functional chatbot that you can use in your class, mini-unit or workplace. Here’s one I designed to show you what it can do. Your chatbot should be able to handle at least three questions that can be asked in any order. The interaction with the bot should be reasonably coherent, so the conversation should not end abruptly. You can build on what you did for your adaptive quiz or design a chatbot that does something different. We will have time during the semester to play around with SnatchBot. In addition to the chatbot, submit a short summary of how your chatbot can be used. Include the Bot scheme that you can save from the application. As a class, you will be testing each other’s chatbot for functionality. Up to +15 Power Ups for chatbots that can answer more questions, that use some of its more advanced features (e.g., variables, operations), and particularly well-designed. Throughout the semester, I will provide you with walkthroughs to help you get started. The guides provided by Snatchbot are actually very good and easy to follow. As you become familiar with the tool, you should play around with it yourself and, if you get stuck and can’t figure it out, you can let us know. Start by asking your fellow peers for help first!

### MOOC

MOOCs stand for massive open online courses, which are online courses that you can often take for free, often offered by reputable institutions and organizations. For this assignment, audit a free course from edX on any topic you want; I recommend the self-paced ones. You don’t have to finish the course but you should go through some of the activities. These courses are not as intense as a credit-bearing course so if you spend at least 15-30 minutes per week on this course, you should be fine. The purpose of this assignment is to: 1) give you direct experience with MOOCs prior to the readings and 2) give you an idea of how online courses are organized (beyond this class). You will turn in a short (3-4 page double-spaced) paper that briefly (~1 page) discusses what you learned, then make connections to the readings and topics from this course (~2-3 pages). Include a PDF of the Progression page on EdX to show how far you got. It should show you completed at least two modules and passed at least one of them. Note: It’s free to audit these courses and that’s all you need to do for this assignment. You will lose access to the course six weeks later, though, so keep an eye on the date and make sure you have all you need to complete this assignment before you lose access. For example, if you forget to get the PDF from the Progress page, then there’s nothing we can do about it.

### Mini-Unit

The online mini-unit constitutes the biggest part of your grade and is split into two phases: Prototype and Final Run. Together these will take up roughly the last six weeks of the semester. During the Prototype phase, you will run a rough and/or partial version of your mini-unit, and the rest of the class will enroll as students. We will give you feedback that you will use to revise for the Final Run, which will have to be polished. You will get feedback again that you can use to revise it one more time. The mini-unit is a culmination of all the readings and assignments you did in this class. It should be a self-contained, complete unit that would take up roughly 3 hours of a student’s time. This means you shouldn’t have students watch a 3-hour long video or read a novel, as it would take up too much time; nor should it be too short. If your unit is intended for a younger audience, let us know and we can adjust our expectations. The mini-unit can be about something you might teach in class or it could be something fun that works well as an online unit. The unit should contain assessment(s) that checks for understanding. It should also contain some logical progression, so it shouldn’t be just a single lesson or tutorial. Finally, it should be designed for a minimum of 15 students. You won’t have that many enrolled in this class but it should be designed to accommodate at least 15 students.

#### Prototype

For the three weeks starting April 6, one third of you will teach a prototype of your mini-unit while the read of us enroll as students. The prototype can be a rough version of the unit or just a partial number of lessons. It should be enough for us to evaluate whether it is headed in the right direction and whether it adequately reflects your understanding of the topics covered in the class. At the very least it should have activities to do and it should be built on a platform of your choice. As the unit designer, you will be in charge of running the unit as the instructor. If you are not presenting that week, then you should enroll in two of your peers’ units that week; this should give everyone plenty of feedback. Don’t use Edmodo: Although some of you may be familiar with Edmodo, the way it is designed makes it difficult to differentiate between different classes. Here’s one done on Weebly that is quite well designed. Students have also used Moodle, Canvas, and Schoology in the past.

Your Prototype will be evaluated based on whether the part you presented was functional and ready; whether you had sufficient interaction with your students; and whether it demonstrated an understanding of design principles we discussed, especially Multimedia Theory and Universal Design. If you are a student, your participation will be evaluated by the unit designer; this grade will go towards your participation grade that week. Participating as a student means getting involved in the activities, not just looking at the website.

#### Final Run

After your Prototype has run, go through the comments you received and list 3-5 of the main, recurring themes that you want to address. As the unit designer, you can choose to accept or reject any comments, provided you give a rationale. This should be turned in as part of your Final Run. (Approximate length: 1-2 pages double-spaced).

The Final Run will occur three weeks after you present your Prototype. That means if you presented your Prototype first, you will do the Final Run first as well. The upside of that is you will have a lot more time to polish it before you turn it in. It should be a fully functional mini-unit. Everything - the activities, the discussions, the assessments - should work. Your evaluation will be based on whether the mini-unit as a whole was cohesive, had a logical progression in topics, had meaningful assessments that let students know how they are doing, was thoughtfully designed and straightforward to navigate. After your unit has run, collect the feedback again and do any additional revisions you want. You will turn in the mini-unit at the end of the semester. As with the Final Run, it should come with a short (1-2 pages double-spaced) description of what feedback you used or rejected. It should also point me to any changes you made since the Final Run.

### Participation

This is a graduate course where you are expected to complete weekly readings and fully participate in discussions in class and on Moodle. In order for the discussion to flow smoothly online, you should respond to the forum discussion by the dates noted on the syllabus, and spend the remainder of the week responding to what your peers have posted. Your responses to your peers should be thoughtful, critical and substantive. Your participation grade will be based on the timeliness and quality of your posts, your responses to your peers, and any other activities that might be associated with the week. Your participation grade is given out on a weekly basis. You can track your participation grade through your Progress Report. Late or missed points cannot be made up, although you can earn points through Power Ups. Any participation posted two days after the deadline cannot be made up. Participation points can only be made up through doing bonus assignments through Power Ups.

### Power Ups

Power Ups give you a chance to earn extra credit points. Specific ways that you can earn (and lose!) points are described in the Progress Report. Power Ups are translated into levels. The higher the level, the more Power Ups you will need to level up (like in a video game). You can get as much as five extra points added to your final grade if you reach Level Five. Power Ups are given at the instructor’s discretion.