



College of Engineering

TO: The Engineering Faculty

FROM: The Faculty of the School of Engineering Education

RE: New graduate course – ENE 58700, Teaching Engineering Online

The Faculty of the School of Engineering Education has approved the following new graduate course. This action is now submitted to the Engineering Faculty with a recommendation for approval.

FROM (IF ALREADY OFFERED WITH TEMPORARY NUMBER):

ENE 59500 – Teaching Engineering Online

Semester Offered:	FALL SEMESTER (TYPICALLY) BUT SPRING SEMESTER 2026		
Total Number of Credits	3	Credits Broken Down by Schedule Type	3 LEC
Prerequisite(s):	NONE		
Previous Offerings with Enrollment:	FALL 2024 – 1 in person + 1 online; SPRING 2025 - 3 in person + 1 online; SUMMER 2025 – 1 in person + 1 online		

TO:

ENE 58700 – Teaching Engineering Online

Semester Offered:	FALL SEMESTER		
Total Number of Credits	3	Credits Broken Down by Schedule Type	3 LEC
Prerequisite(s):	NONE		
Previous Offerings with Enrollment:	NONE		

RATIONALE:

The course has been taught on an experimental basis for three terms. Most of the students who have taken the course so far are experienced instructors or teaching assistants who have found it to be very helpful in developing new online courses or restructuring existing ones. It is an option available in the ENE graduate certificate, Teaching and Learning in Engineering (TLEN), which is available to any Engineering Ph.D. student at Purdue as well as to others online. It is also available online for students in the Master's in Engineering Education or the Doctorate of Engineering degree.

Joyce Main
Interim Head, School of Engineering Education
Professor of Engineering Education

Link to Curriculog entry: Curriculog not yet submitted

SYLLABUS

Engineering Education 58700, Teaching Engineering Online

On-campus Section

Course Time: Thursdays, 10:30 a.m. – 1:20 p.m.

Course Location: ARMS 3109

Credit: 3 credit hours

Instructors: Prof. Audeen W. Fentiman

e-mail: fentiman@purdue.edu

Phone: 765-494-7781

Office: ARMS 1353

Office hours: By appointment

Course Description and Goals: This course is designed for students or professionals who either are teaching online or want to be prepared to teach in that mode. The course is organized in three five-week modules. The first module covers fundamental concepts important when developing and teaching an online course including backward course design, community of learning, using a learning management system, integrating multimedia and virtual sessions into a course, strategies for helping students succeed in online courses, establishing an inclusive learning environment, making course materials accessible, and assessing both student learning and the course. In the second five-week module, each student will design an online instructional unit teaching theory and applications related to a narrowly focused topic the student knows well to an audience the student expects to address. This will be an online version of a unit that would traditionally be taught as a "lecture course." Students will be guided through the design, adding a new feature each week after a quick review of a fundamental principle introduced in the first 5-week module. The third five-week module will be very similar to the second module except students will be designing an online instructional unit for a "laboratory course."

Course Learning Outcomes: At the end of this course, students will be able to

1. Describe at least five features of an effective online instructional unit

2. Develop an online instructional unit, incorporating at least five features that make the unit effective, for an engineering or other STEM course that is typically taught in lecture mode, such as a theory and applications course
3. Develop an online instructional unit, incorporating at least five features that make the unit effective, for an engineering or other STEM course that is typically taught as a hands-on or laboratory course

Grading: Students will be graded on weekly written assignments, some presentations of their units, and class participation. There will be no quizzes or mid-term exams.

<u>Assignment</u>	<u>Points</u>
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Module 1 – Fundamentals

Assignment #1: Reflection on backward design	50
Assignment #2: Reflection on Community of Learning	50
Assignment #3: Quiz on important concepts	80
a. Quiz questions - 30	
b. Rubric to evaluate quiz - 30	
c. Evaluation of quiz - 20	
Assignment #4: Reflection on course inclusivity	50
Assignment #5: Topic and audience	50
Feedback on Module 1	50

Module 2 – Theory and Applications Courses

Assignment #6: Instructional unit outline/backward design	100
Assignment #7: Instructional unit Community of Learning	100
Assignment #8: Instructional unit communication strategy	50
Assignment #9: Instructional unit inclusivity	50

Assignment #10: Instructional unit assessment/final unit 100

Feedback on Module 2 50

Module 3 - Laboratory Courses

Assignment #11: Instructional unit outline/backward design 100

Assignment #12: Instructional unit Community of Learning 100

Assignment #13: Instructional unit communication strategy 50

Assignment #14: Instructional unit inclusivity 50

Assignment #15: Instructional unit assessment/final unit 100

Feedback on Module 3 50

Feedback on course as a whole 50

Grading Scale

90% - 100% A 80% - 89% B 70% - 79% C

Absences

If you are ill, please do not attend class. Send an e-mail to the instructor before class stating that you are ill. The absence will be excused. Written assignments due the day of the absence should be submitted electronically on time unless other arrangements have been made with the instructor. Presentations missed due to an excused absence will be rescheduled.

If you have a death in the family, you (or your representative) should contact the Office of the Dean of Students. That office will then notify your instructors. Check the Grief Absence Policy on Purdue's website.

If you are called up for active duty or mandatory military training, your commanding officer can provide the Dean of Students a copy of your orders. The Dean of Students may then contact your instructors; however, please let me know at the beginning of the semester if you expect to be absent for military duty.

If you need to adjust deadlines for a religious observance, you must let me know a week in advance, minimize the length of your absence, and be flexible in arranging alternative times to complete the assignments you may miss.

For all absences related to COVID or other infectious diseases, please see the Protect Purdue website.

Academic

Integrity

Under the Brightspace University Policies and Statements content is a hyperlink called “Purdue’s Student Guide for Academic Integrity” that links to the Office of Student Rights and Responsibilities Academic Integrity webpage and a link named “Use of Copyrighted Materials” that links to a University Policy Office webpage.

Nondiscrimination

Statement

A link to Purdue’s Nondiscrimination Policy Statement is also included in the Brightspace course under University Policies and Statements content.

Accessibility

Ensuring that Purdue students have access to equitable learning experiences is a university-level commitment and is the responsibility of all members of the Purdue community. The Disability Resource Center (DRC) is a key partner in this work and is a resource for students and instructors. The Student Services widget links to the DRC. You are also encouraged to contact the instructor and/or the Disability Resource Center at: drc@purdue.edu or by phone: 765-494-1247, if accommodations are needed.

Mental

Health/Wellness

Statement

Information on CAPS (listed as Purdue Counseling and Psychological Services) is in the Brightspace Student Services widget. The University Senate (Senate Document 19-18) calls for the university to require a mental health statement on your syllabus. You are also urged to speak to students during the first week of classes about the various resources available to them regarding mental health.

Disclaimer: This syllabus is subject to change. You will be notified of any changes as far in advance as possible via an announcement on Brightspace. Monitor your Purdue email daily for updates.

Weekly Course Learning Objectives, Topics, and Assignments

MODULE 1 – Fundamentals

Week 1 - January 16

Week 1 Learning Objectives

At the end of this week, the student will be able to

1. Outline the course goals, organization, and content
2. Explain five features of an effective course – regardless of delivery mode
3. Describe the backward course design process

Week 1 Topics

- Course Introduction
 - Goals of this course
 - How the course will be conducted
 - Weekly topics and assignments
- Designing a Course – any delivery mode
 - Knowing your audience
 - Five features of an effective course
- Backward Course Design

- Writing clear and measurable course objectives
- Designing methods to assess student learning
- Developing content and activities aligned with course objectives and assessments

Week 1 Assignments

- **Assignment #1:** Reflection on Backward Design. Choose a technical course you have taken or taught, and write an approximately 500-word reflection on how well backward design appeared to have been used in developing that course. Address the course objectives, assessment methods, and content presentation/learning activities as well as the alignment of those three components. If you recall, address your or other students' reactions to the course and how the reactions may have been related to the extent to which the backward design process was used to develop the course. Finally, suggest ways to improve the course using the backward design process. In your reflection, please state the topic and level (first year, sophomore, junior, senior or graduate) of the course, but you do not need to mention the instructor or the institution where the course was taught. **Due in Brightspace on Tuesday, January 21, by 11:59 p.m.**

Week 2 – January 23

Week 2 Learning Objectives

At the end of the week, the student will be able to

1. Discuss advantages and challenges of teaching online
2. Describe three ways to help students become successful online learners
3. Describe the three core components of a Community of Learning

Week 2 Topics

- Online Teaching and Learning
 - Evolution of online learning technology
 - Evolution of demand for online learning
 - Advantages and challenges of online teaching
 - Helping students become successful online learners
- Community of Learning (COL) Framework
 - Building a learning community
 - Encouraging a sense of student presence
 - Developing a sense of instructor presence

Week 2 Assignments

- **Assignment #2:** Reflection on Community of Teaching and Learning. Think about a course you have taken or taught, different from the course you discussed in Assignment #1. Write an approximately 500-word reflection on what elements of a Community of Learning (COL) it included. If you recall, address your or other students' reactions to the course and how the reactions may have been related to the extent to which the course included a COL. Finally, suggest how you might have built a more robust Community of Learning to make the course more engaging and effective. If you happen to be a person who prefers to work alone, which is certainly one approach to learning, think about how you could make the course more engaging and effective for students who prefer to work with and learn from others. In your reflection, please state the topic and level (first year, sophomore, junior, senior or graduate) of the course, but you do not need to mention the instructor or the institution where the course was taught. **Due in Brightspace on Tuesday, January 28, by 11:59 p.m.**

Week 3 – January 30

Week 3 Learning Objectives

At the end of the week, the student should be able to

1. Discuss four key features of a typical Learning Management System (LMS)
2. Describe three multimedia modes that can be integrated into the LMS
3. Describe three strategies for instructor-learner communication and three for learner-learner communication in an all or mostly asynchronous technical course

Week 3 Topics

- Introduction to Learning Management Systems (LMS)
 - Some common LMS platforms
 - Common features of LMS platforms
 - Managing courses on LMS platforms
 - Integrating multimedia into online courses
 - Importance of multimedia in online courses
 - Types of multimedia: audio, video, interactive elements
- Effective Communication in Online Courses
 - Instructor-learner communications
 - Hosting virtual office hours
 - Conducting live virtual sessions
 - Facilitating online discussions

- Learner-learner communications
 - Discussion boards
 - Team projects
 - Peer review

Week 3 Assignments

- **Assignment #3a.** Pairs or teams of students (depending on class size) will identify what they believe to be the 3-5 most important concepts presented in this week's session and prepare short quizzes, requiring no more than a total of 10 minutes to answer, that could be used to determine whether students attending this week's class have understood those concepts. (instructor will assign teams)
- **Assignment #3b.** Each team will also develop a rubric for evaluating responses to its quiz.
- Both the quiz and the rubric are **due in Brightspace on Sunday, February 2 by 11:59 p.m. At the same time, the quiz should be sent via e-mail to another team.** (instructor will specify which teams will exchange quizzes)
- Completed quizzes will be returned to the designing team **and submitted in Brightspace on Tuesday, February 4, by 5:00 p.m. (submit under Assignment #3c)**
- **Assignment #3c.** Teams will evaluate responses to the quizzes they designed. The evaluation will be in the form of a one-page document discussing the responses based on the rubric the initiating team prepared. The responses are **due in Brightspace and by e-mail to the team that took the quiz on Thursday, February 6, by 10:00 a.m.**

Week 4 – February 6

Week 4 Learning Objectives

At the end of the week, the student should be able to

1. Discuss the characteristics of a student-centered online course
2. Describe teaching that recognizes a variety of backgrounds and viewpoints
3. Name the law that requires online materials to be accessible, and describe at least three actions that help make online materials accessible.

Week 4 Topics

- Creating a Student-Centered Online Environment
 - Recognizing and addressing diverse learners' needs
 - Universal design for learning
 - Teaching students with a wide range of backgrounds online
 - Making online courses accessible
 - Accessibility standards and guidelines

Week 4 Assignments

- **Assignment #4.** Write a reflection paper (2-4 pages double spaced) about two courses you have taken, one that was somewhat to extremely student-centered and one that was barely or not at all inclusive. Indicate the topic of the course and the level at which it was taught (college freshman, sophomore, junior, senior or graduate). Do not mention the instructor or the institution. Simply describe the characteristics (course design, teaching style, student attitudes/behavior, etc.) of the course that was at least somewhat inclusive and the characteristics of one that was not very inclusive. You are welcome to include a final paragraph about your reactions to the two courses, but focus most of the paper on an objective analysis of what made the course inclusive or not inclusive. **Due in In Brightspace on Tuesday, February 11 by 11:59 p.m.**

Week 5 - February 13

Week 5 Learning Objectives

At the end of this week, the student should be able to

1. Define formative and summative assessment
2. Describe at least three ways to assess student learning
3. Describe at least two ways to gather feedback on the course

Week 5 Topics

- Assessment
 - Assessment of student learning
 - Formative and summative assessment
 - Providing timely and constructive feedback
 - Some learning assessment strategies
 - Assessment and continuous improvement of the course
 - Gathering information
 - Responding to and utilizing the information
- Future Trends in Online Education

Week 5 Assignment

- **Assignment #5** Define the topic for which you will develop an online instructional unit that presents some theory and applications of a topic you know well. (Your time should be spent on developing an effective online unit – not on learning the material you plan to teach.) The length of the unit will depend on your situation. For example, your unit might be a 50-minute session in a semester-long, 3-credit hour course or 30 minutes of a training session for employees. If you are involved in informal education, design the unit to cover one narrowly focused topic in an appropriate time period for the attention span of your expected audience.

Describe the audience you will be teaching. The description might include such things as age, education level, motivation for learning this material and particularly learning it online, size of the audience, diversity of the audience, etc. Provide any information about the audience that you think could make a difference in how you present the material. **Due in Brightspace on Tuesday, February 18, by 11:59 p.m.**

- **Feedback on Module 1. Due in Brightspace on Thursday, February 20, by 10:00 a.m.** Each student will provide feedback on Module 1 of this course. The feedback should have two parts. In the first part, describe two aspects of Module 1 that were useful and should be kept. In the second part, describe two aspects of Module 1 that could be improved and indicate how to make them better.

MODULE 2 – Creating an Online Instructional Unit for Theory and Applications Courses

Week 6 – February 20

Week 6 Learning Objectives

At the end of this week, the student will be able to

1. Apply backward design to create a short online instructional unit with 4-6 specific, measurable learning objectives, a plan for assessing whether students have achieved those objectives, and an outline of the content of the course

Week 6 Topics

- Introduction to Module 2
- A brief overview of backward course design
 - Writing learning objectives
 - Importance of alignment of objectives, assessment, and content/activities
- Examples of how backward course design can be used to develop courses for a variety of settings (academic, industry, informal education)
- Description of Assignment #6

Week 6 Assignment

- **Assignment #6.** This assignment has three parts
 - Write 4-5 specific, measurable learning objectives for your instructional unit.
 - Describe how you will assess how well students meet each of those learning objectives. Recall that different audiences may require very different assessment approaches. For example, industry trainers may require complete mastery of the information before learners are allowed to perform their job tasks, while college instructors typically have to distinguish among differing levels of mastery to assign grades, and informal educators may ask learners to use self-assessment since no certification of learning is provided.
 - Outline the content of the unit providing main topics and subtopics under each main topic. Provide as much detail as you can. Be sure that the topics and subtopics align with the objectives and assessments.
 - **Due in Brightspace on Tuesday, February 25, by 11:59 p.m.** Submit one document with all three items (learning objectives, assessment strategies, and content outline) to Brightspace.

Week 6 Discussion

In this module (Weeks 6-10), a discussion board will be used to ask questions about the assignment. As you work on the assignment and questions arise, please post them. The instructor will attempt to check the discussion board once a day and provide answers within 24 hours. Other students may have already encountered the same issue and will be able to post a description of what they have done. These assignments are opportunities to explore new or creative approaches to teaching online. Do not be afraid to try something you haven't seen or heard about.

Week 7 – February 27

Week 7 Learning Objectives

At the end of this week, the student will be able to

1. Create content to be presented in the online instructional unit
2. Describe how they will establish a framework for a community of learning, encourage student presence in that community, and develop instructor presence

Week 7 Topics

- Brief overview of a community of learning
 - Establishing a framework
 - Encouraging student presence
 - Developing instructor presence
- Examples of communities of learning in variety of settings
- Description of Assignment #7

Week 7 Assignment

- **Assignment #7.** Prepare a set of PowerPoint slides containing the content for your unit presented in a way as similar as possible to what students will see in the learning management system (LMS) and then add notes on how you will build and utilize a community of learning.
 - Make sure each slide is a notes page which both shows the material to be presented and describes how you will present it. Your planned posting to the LMS might be simply the PowerPoint slides, the slides with voice-over, a video of slides with you presenting them, a video of you presenting the material in the classroom, an interactive video that prompts students to provide input at various points in the video, and so on. Be creative. NOTE: You are not expected to actually prepare a voice-over presentation or a

video – just describe how you plan to present the materials on the LMS. It could be that you use the same approach for all slides. In that case, simply state that in the notes on the first slide. If you want to present some slides in a different way, include that information on those slides.

- Then, using the notes section on the slides, describe how you will build a learning community, encourage student presence, and develop instructor presence for those slides where such information will be useful to you as you prepare the course. In some cases, building the community of learning might require a new slide that, for example, describes a group activity or describes how students will receive feedback on an assignment.
- **Due in Brightspace on Tuesday, March 4, by 11:59 p.m.** You will turn in your PowerPoint file, with notes pages.

Week 7 Discussion

In this module, the discussion board will be used to ask questions about the assignment. As you work on the assignment and questions arise, please post them. The instructor will attempt to check the discussion board once a day and provide answers within 24 hours. Other students may have already encountered the same issue and will be able to post a description of what they have done. These assignments are opportunities to explore new or creative approaches to teaching online.

Week 8 – March 6

Week 8 Learning Objectives

At the end of this week, the student will be able to

1. Describe how they will use the LMS features to organize their course and communicate that organization to the learners
2. Add slides and notes to their PowerPoint file with information about multi-media they plan to incorporate into the presentation
3. Add slides and/or notes to their PowerPoint file with information about activities that will facilitate student-student and student-instructor communication.

Week 8 Topics

- Brief review of characteristics/features of a learning management system (LMS)
- Examples of how multi-media or interactive tools can be incorporated into your unit in an LMS
- Examples of effective communications strategies for instructor-student and student-student interactions

- Description of Assignment #8

Week 8 Assignment

- **Assignment #8** has three parts.
 - Prepare a document, no longer than one page, describing how you will use the various features of an LMS to organize and present your online instructional unit to learners. The description is not expected to be for a specific LMS. Several systems are available. If you know what LMS you will use, you are welcome to build your discussion around it.
 - Beginning with the content of the PowerPoint file you submitted for Assignment #7 (with any revisions based on feedback you received on that file), add slides and/or notes that make clear what multi-media you plan to incorporate into the presentation to enhance student learning.
 - To the PowerPoint file created for the previous bullet, add slides and/or notes about activities that will facilitate student-student and instructor-student interactions.
 - **Due in Brightspace on Tuesday, March 11, by 11:59 p.m.** Submit both the document describing your use of the LMS and the revised PowerPoint file with the changes you made this week.
 - **Due in class on Thursday, March 13, each student will present their PowerPoint file.**

Week 8 Discussion

Same as previous weeks in Module 2.

Week 9 – March 13

Week 9 Learning Objectives

At the end of this week, the student will be able to

1. Design an online course that is inclusive and addresses diverse learner needs
2. Ensure that materials used in an online course are accessible

Week 9 Topics

- Presentations and discussions of PowerPoint files, use of LMS features, and plans to facilitate student-student and student-instructor communication

- Brief review of fostering inclusivity and addressing diverse learner needs, including accommodations in an online instructional unit
- Examples of fostering inclusivity and making course materials accessible in online instructional units offered for a variety of audiences
- Description of Assignment #9

Week 9 Assignment

- **Assignment #9.** Beginning with the PowerPoint file you submitted for Assignment #8 (with any revisions based on feedback you received on that file), add slides and/or notes demonstrating how you will foster inclusivity, address diverse learning needs, and ensure accessibility of the materials in your instructional unit.
- **Due in Brightspace on Tuesday, March 25, by 11:59 p.m.** Submit the revised PowerPoint file.

Week 9 Discussion

Same as previous weeks in Module 2.

March 17 – 22 - SPRING BREAK – No Class

Week 10 – March 27

Week 10 Learning Objectives

By the end of this week, the student will be able to

1. Incorporate formative and summative assessments into an online instructional unit
2. Assess and continuously improve the online instructional unit

Week 10 Topics

- Brief review of formative and summative assessments of student learning and assessment of the instructional unit with the goal of continuous improvement
- Examples of formative and summative assessments of student learning in online instructional units for a variety of audiences
- Examples of assessment of online instructional units for a variety of audiences
- Discussion of Assignment #10

Week 10 Assignment

- **Assignment #10** has three parts
 - Beginning with the PowerPoint file you submitted for Assignment #9 (with any revisions based on feedback you received on that file), add slides and/or notes that demonstrate how you will incorporate formative and summative assessment of student learning into your instructional unit.
 - Add to the PowerPoint file completed in response to the bullet above, slides and/or notes that describe how you will assess the instructional unit itself and how you will use that information for continuous improvement of the unit.
 - Review and polish the PowerPoint file, considering feedback you have received from the instructor or others as well as new ideas that have occurred to you as you progressed through the assignments in Module 2.
 - **Due in Brightspace on Tuesday, April 1, by 11:59 p.m.** Submit the final PowerPoint file (using notes slides) for the instructional unit you have designed.
- **Feedback on Module 2 due in Brightspace on Thursday, April 3, at 10:00 a.m.**
The feedback should have two parts. In the first part, describe two aspects of Module 2 that were useful and should be kept. In the second part, describe two aspects of Module 2 that could be improved and indicate how to make them better.

MODULE 3 - Creating an Online Instructional Unit for a Hands-on or Laboratory Course

Week 11 – April 3

Week 11 Learning Objectives

At the end of this week, the student will be able to

1. Apply backward course design to create a short online instructional unit for a hands-on or laboratory course with 4-6 specific, measurable learning objectives, a plan for assessing whether students have achieved those objectives, and an outline of the content of the course

Week 11 Topics

- Introduction to Module 3
- Reminder to review Week 1 information on backward course design, if necessary

- Examples of how backward course design can be used to develop online hands-on or laboratory courses for a variety of settings (academic, industry, informal education)
- Description of Assignment #11

Week 11 Assignment

- **Assignment #11.** This assignment has three parts
 - Write 4-5 specific, measurable learning objectives for your instructional unit.
 - Describe how you will assess how well students meet each of those learning objectives. Recall that different audiences may require very different assessment approaches. For example, industry trainers may require complete mastery of the information before learners are allowed to perform their job tasks, while college instructors typically have to distinguish among differing levels of mastery to assign grades, and informal educators may ask learners to use self-assessment since no certification of learning is provided.
 - Outline the content of the unit providing main topics and subtopics under each main topic. Provide as much detail as you can. Be sure that the topics and subtopics align with the objectives and assessments.
 - **Due in Brightspace on Tuesday, April 8, by 11:59 p.m.** Submit one document with all three items (learning objectives, assessment strategies, and content outline).

Week 11 Discussion

In this module (Weeks 11-15), the discussion board will be used to ask questions about the assignment. As you work on the assignment and questions arise, please post them. The instructor will attempt to check the discussion board once a day and provide answers within 24 hours. Other students may have already encountered the same issue and will be able to post a description of what they have done. These assignments are opportunities to explore new or creative approaches to teaching online.

Week 12 – April 10

Week 12 Learning Objectives

At the end of this week, the student will be able to

1. Create content to be presented in the online instructional unit

2. Describe how they will establish a framework for a community of learning, encourage student presence in that community, and develop instructor presence

Week 12 Topics

- Reminder to review, in Week 2, how to establish of a community of learning, if necessary
- Examples of communities of learning in variety of settings
- Description of Assignment #12

Week 12 Assignment

- **Assignment #12.** Prepare a set of PowerPoint slides containing the content for your unit presented in a way as similar as possible to what students will see in the learning management system (LMS) and then add notes on how you will build and utilize a community of learning.
 - Make sure each slide is a notes page which both shows the material to be presented and describes how you will present it. Your planned posting to the LMS might be simply the PowerPoint slides, the slides with voice-over, a video of slides with you presenting them, a video of you presenting the material in the classroom, an interactive video that prompts students to provide input at various points in the video, and so on. Be creative. NOTE: You are not expected to actually prepare a voice-over presentation or a video – just describe how you plan to present the materials on the LMS. It could be that you use the same approach for all slides. In that case, simply state that in the notes on the first slide. If you want to present some slides in a different way, include that information on those slides.
 - Then, using the notes section on the slides, describe how you will build a learning community, encourage student presence, and develop instructor presence for those slides where such information will be useful to you as you prepare the course. In some cases, building the community of learning might require a new slide that, for example, describes a group activity or describes how students will receive feedback on an assignment.
 - **Due in Brightspace on Tuesday, April 15, by 11:59 p.m.** You will turn in your PowerPoint file, with notes pages.

Week 12 Discussion

Please refer to instructions for Week 11 Discussion.

Week 13 – April 17

Week 13 Learning Objectives

At the end of this week, the student will be able to

1. Describe how they will use the LMS features to organize their course and communicate that organization to the learners
2. Add slides and notes to their PowerPoint file with information about multi-media they plan to incorporate into the presentation
3. Add slides and/or notes to their PowerPoint file with information about activities that will facilitate student-student and student-instructor communication.

Week 13 Topics

- For a review of characteristics/features of a learning management system (LMS), see Week 3
- Examples of how multi-media or interactive tools can be incorporated into your unit in an LMS
- Examples of effective communications strategies for instructor-student and student-student interactions
- Description of Assignment #13

Week 13 Assignment

- **Assignment #13** has three parts.
 - Prepare a document, no longer than one page, describing how you will use the various features of an LMS to organize and present your online instructional unit to learners. The description is not expected to be for a specific LMS. Several systems are available. If you know what LMS you will use, you are welcome to build your discussion around it.
 - Beginning with the content of the PowerPoint file you submitted for Assignment #12 (with any revisions based on feedback you received on that file), add slides and/or notes that make clear what multi-media you plan to incorporate into the presentation to enhance student learning.
 - To the PowerPoint file created for the previous bullet, add slides and/or notes about activities that will facilitate student-student and instructor-student interactions.
 - **Due in Brightspace on Tuesday, April 22, by 11:59 p.m.** Submit both the document describing your use of the LMS and the revised PowerPoint file with the changes you made this week.
 - **Due in class on Thursday, April 24, each student will present their PowerPoint file.**

Week 13 Discussion

Please refer to instructions for Week 11.

Week 14 – April 24

Week 14 Learning Objectives

At the end of this week, the student will be able to

1. Design an online laboratory course that is inclusive and addresses diverse learner needs
2. Ensure that materials used in an online course are accessible

Week 14 Topics

- Presentations and discussions of PowerPoint files, use of LMS features, and plans to facilitate student-student and student-instructor communication
- Review information on fostering inclusivity and addressing diverse learner needs, including accommodations in an online instructional unit in Week 4, if necessary
- Examples of fostering inclusivity and making course materials accessible in online instructional units offered for a variety of audiences
- Description of Assignment #14

Week 14 Assignment

- **Assignment #14.** Beginning with the PowerPoint file you submitted for Assignment #13 (with any revisions based on feedback you received on that file), add slides and/or notes demonstrating how you will foster inclusivity, address diverse learning needs, and ensure accessibility of the materials in your instructional unit.
- **Due in Brightspace on Tuesday, April 29, by 11:59 p.m.** Submit the revised PowerPoint file.
- **Feedback on Module 3 due in Brightspace on Thursday, May 1, by 10:00 a.m.** The feedback should have two parts. In the first part, describe two aspects of Module 3 that were useful and should be kept. In the second part, describe two aspects of Module 3 that could be improved and indicate how to make them better.
- **Feedback on the course as a whole due in Brightspace on Thursday, May 1, by 10:00 a.m.** You have already provided feedback on each module individually.

There is no need to repeat that here, unless you want to for emphasis. The focus of this feedback should be on the overall structure of the course and the integration of its modules. This is only the second time this course has been offered. Insights you can provide that would make the course more valuable to you would be appreciated, not only by the instructors, but also by the students who take the course the next time it is offered. Thank you.

Week 14 Discussion

Please refer to instructions for Week 11 Discussion.

Week 15 – May 1

Week 15 Learning Objectives

By the end of this week, the student will be able to

1. Incorporate formative and summative assessments into an online instructional unit
2. Assess and continuously improve the online instructional unit

Week 15 Topics

- Review information on formative and summative assessments of student learning and assessment of the instructional unit with the goal of continuous improvement in Week 5, if necessary
- Examples of formative and summative assessments of student learning in online instructional units for a variety of audiences
- Examples of assessment of online instructional units for a variety of audiences
- Discussion of Assignment #15
- Discussion of feedback on Module 3 and the course as a whole

Week 15 Assignments

- **Assignment #15** has three parts
 - Beginning with the PowerPoint file you submitted for Assignment #14 (with any revisions based on feedback you received on that file), add slides and/or notes that demonstrate how you will incorporate formative and summative assessment of student learning into your instructional unit.
 - Add to the PowerPoint file completed in response to the bullet above, slides and/or notes that describe how you will assess the instructional unit

itself and how you will use that information for continuous improvement of the unit.

- Review and polish the PowerPoint file, considering feedback you have received from the instructor or others as well as new ideas that have occurred to you as you progressed through the assignments in Module 3.
- **Due in Brightspace on Tuesday, April 29, by 11:59 p.m.** Submit the final PowerPoint file (using notes slides) for the instructional unit you have designed.