

Time	Day 1	Day 2	Day 3	Interim	Day 1*	Day 2*
9-12	- Welcome Introduction -Participants learn to use practical features	-Presentation of activities -Active digital and blended learning - Feedback in digital and blended environments	-Presentation of outlines of lessons - Lesson studies as a way to iteratively develop teaching	Participants work to implement their designs for activities, lessons and courses. Small groups to observe each other and for sparring	-Welcome back -Presentation of implementations -What to keep, what to change?	-Presentation of changes -Intention for, implementation, and realization of learning
12-13	Lunch	Lunch	Lunch		Lunch	Lunch
13-15	Participants learn to use practical features	Designing lessons for active learning	Course design		Working to make changes either individually or in small groups	How to proceed from here?
15-17	Making your own activity	Use activities in own lessons	Prepare for interim period			Course ends (evaluation, small talk and so on)

### Welcome and Introduction

Participants arrive and are introduced to us and each other.

Aim of course shown: For participants to be able to design, develop and use hands-on content for e-learning portal.

### Participants learn to use practical features

This long session (interrupted by lunch) aims at giving participants hands-on experience with creating wiki-text, quizzes, annotated videos, simulation tool, and Jupyter apps in the e-learning platform. These are meant as small tasters with focus on functionality.

### Making your own activity

Here, participants choose one type of activity (wiki-text, quiz, annotated video, simulation tool, or Jupyter notebook), and design an activity relevant to learning in their field/a course they are teaching or will teach. The activity need not be done, but participants need to be able to present it for other participants next day. We provide assistance during the work.

**Presentation of activities**

Participants present their activities to other participants. The exact way this is done is dependent on number of participants. Based on pre-defined criteria relevant for learning physics, participants provide feedback to presentations.

**Active digital and blended learning**

An interactive lecture about research into active learning in digital and blended learning environments. Will contain activities where participants are asked to couple presented research with own activities.

**Feedback in digital and blended environments**

An interactive lecture about how to facilitate and provide feedback (both automated and non-automated) in digital and blended environments. Will contain activities where participants are asked to couple presented research with own activities.

**Designing lessons for active learning**

This lesson begins with an observation of an example lesson, which illustrates a particular principle for designing active learning. Participants analyze the example and derive a model for teaching with active learning. We then discuss pros and cons of the model for teaching, including underlying research.

**Use activities in own lessons**

Here, participants use the model for active learning derived in the preceding lesson to begin their own lessons. It should be lessons that they are going to teach at some point. The lessons need not be done, but participants need to be able to outline how the lesson would proceed for other participants next day. To assist this work, we provide a template designed for this purpose as well as assistance.

**Presentation of outlines of lessons**

Participants present their activities to other participants. The exact way this is done is dependent on number of participants. Based on pre-defined criteria relevant for learning physics, participants provide feedback to presentations.

**Lesson studies as a way to iteratively develop teaching**

In this lecture, we introduce the concept of lesson studies. Through examples, we show how one can target specific areas to observe, provide feedback and make changes. Participants work with designing a lesson study when using the e-learning platform.

### **Course design**

In this lecture participants will, through examples, work with some of the central principles for active learning course design. Participants work with applying these principles to the present context.

### **Prepare for interim period**

In this activity, participants outline what they are going to do and when they are going to do it in the interim period. We hope to make small-group constellations of participants who will spar with each other during the period.