# Course Abstract: Active Learning in the Flipped Classroom

This is an initial description of the *training of trainers* course offered by Linköping University as a part of the PRINTeL project. The course will take place December 3-7, 2018 in Linköping, Sweden. A detailed training program/course syllabus will be available before August 20, 2018.

## Introduction

Flipped classroom is a course design approach where activities that have traditionally taken place inside the classroom now take place outside the classroom and vice versa. Instead of giving traditional lectures, the teacher prepares video lectures or other kinds of multimedia resources that the students will use to prepare for classroom activities. The scheduled time inside class will instead be used for questions & answers or group-based problem-solving sessions. The idea is that this approach will make the students more active and increase the quality of learning.

In this course we will discuss how to design inside class activities and how to prepare outside class material. We will also have training sessions in how to use tools for interaction inside class, and tools for preparing multimedia presentations. Part of the course will take place in a technology enhanced Active Learning Classroom.

## Overview of the course

This is a preliminary overview of the course. Some activities may be moved to another day due to availability of teachers and classrooms.

### Day 1: Introduction to the course and workshop in an Active Learning Classroom

During the first day the participants will discuss the active learning concept and the flipped classroom approach to course design using their previous experience as a starting point. We will also do a workshop on course design in an Active Learning Classroom.

One of the main pedagogical ideas of the technology enhanced Active Learning Classroom is to facilitate the dynamic switch between large group and small group activities. A session will typically start with a short presentation where the teacher introduces a concept or a question, followed by working in smaller groups. Each group has a screen and a whiteboard, and later on it is possible for one group to share the screen with all the other groups when presenting their findings. This makes it possible to use explorative and collaborative learning methods, but the ideas can be implemented also without the support of special technology.

### Day 2: Designing inside class activities

The second day will focus on activities done inside class. We will discuss how to plan for group-based problem-solving sessions and how to use different tools like backchannels and response systems for interactive collaboration. Participants will complete an assignment in designing a session that integrates different interactive tools and prepare questions in these tools. The design and questions will be presented and discussed with the whole course.

## Day 3: Preparing outside class material

The third day will focus on preparing the material that the students will study before class. We will discuss how to convert a traditional lecture to a recorded lecture. Participants will complete an assignment in designing a recorded lecture, preparing a partial manuscript and finally recording a part of the material. Design and recordings will be presented and discussed with the whole course.

## Day 4: Designing a flipped classroom course

During the fourth day the participants will work in groups with a larger assignment in redesigning an existing whole course. The course design will not be completely finished in the scope of this assignment, but the participants are expected to present at least an outline of the changes to the teaching and learning activities in the course. The following questions will be helpful:

a) How is the course design today? Present an overall picture of the learning outcomes and the current teaching and learning activities.
b) Which method(s) will be used? How will the new teaching and learning activities and/or the examination procedures change?
c) What do I hope to achieve by introducing these methods? In what way is the students' learning supported?
d) How do I explain the purpose and the method to the students?
e) What resources will I need to be able to change the course?
f) How can I measure the outcome of the change?

## Day 5: Presentation

The final day of the course will be devoted to the presentation of the larger assignment prepared during day 4, including reflections and comments from the rest of the course.

# Preparations and requirements

The participants are assumed to be acquainted with the texts indicated in the forthcoming reading list as only short introductions to the theory will be presented during the course. We will also provide a list of articles and books for further study after the course, for those who wish to continue exploring the topic.

Exercises requires participants to bring their own laptops. Since exercises will be done in pairs, it is enough if every other participant brings a computer. We will assume that these laptops have a built-in microphone and web camera, and that they run on Microsoft Windows and have PowerPoint. If participants are unable to bring their own computers or have other kinds of operating systems or presentation software, please contact us at least two weeks before the course, so that we can try to find other solutions for you.

Several of the assignments will assume that the participant already has access to a course or at least a course module and associated course material either as a course leader or as a lecturer in an existing course. The assignments will be facilitated if at least one in every pair brings the following (in digital format):

- a course, including course plan and course description, that will be redesigned using the flipped classroom approach
- lecture material in the form of a traditional PowerPoint presentation