



ELEC-E7120 Wireless Systems (5 cr)

Instructions for Course Group Project Fall 2023 (Period I)

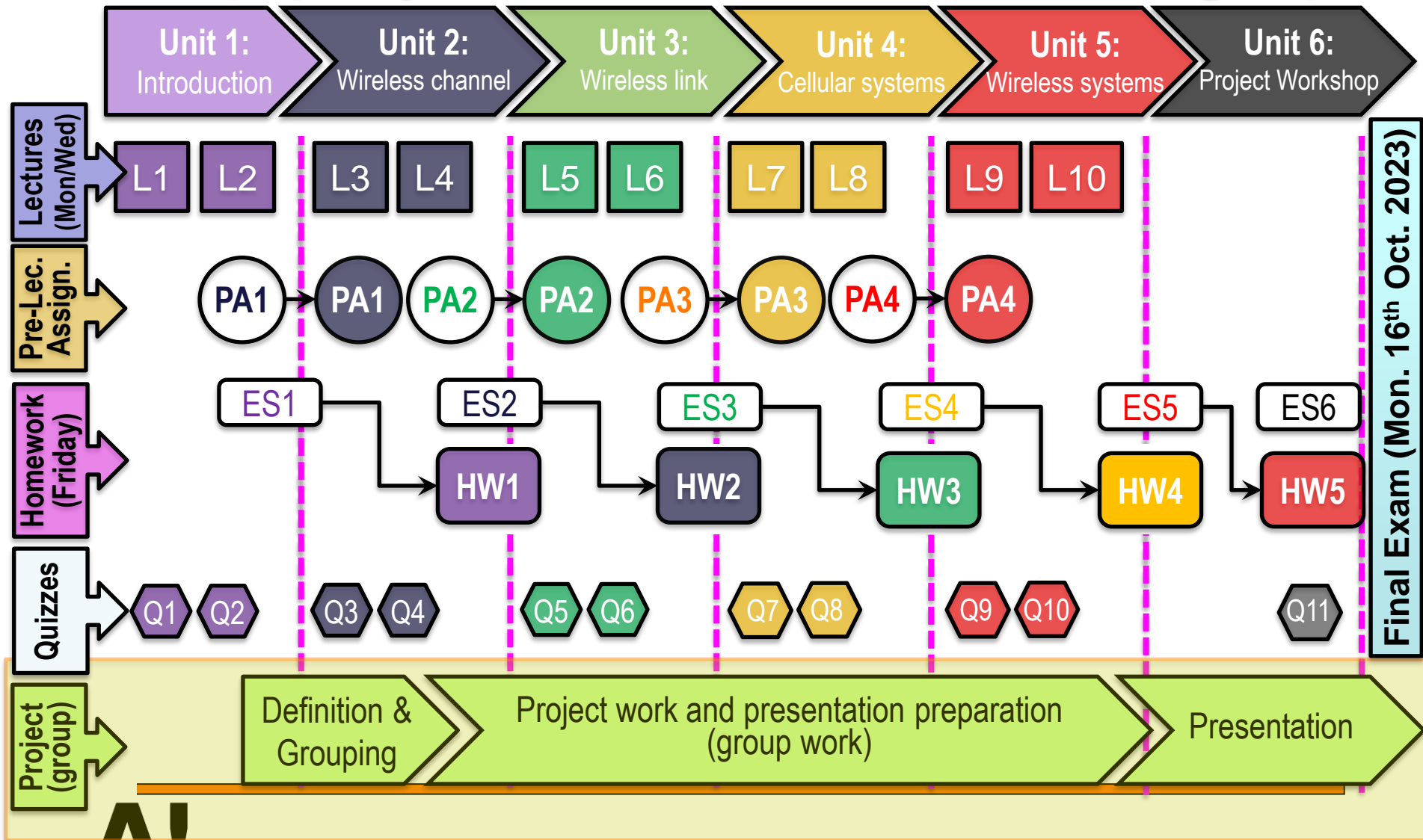
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Updated 8.9.2023



Group project in the Course Flowgraph



Why group project?

- Project gives an opportunity **to complement** the technical content lectured in the course:
 - *Critical thinking and problem solving*: Looking at wireless systems from a more practical point of view
 - *Research and information managements*: Using additional references and sources of information
 - Raise awareness on challenges of multicultural teams:
 - *Team-working and collaboration*
 - *Written and verbal communication* (reporting and presentation)
 - *Project management* skills
 - Increase students' ability to deal with these challenges
 - Good training for future position either in academia or industry
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Course group project

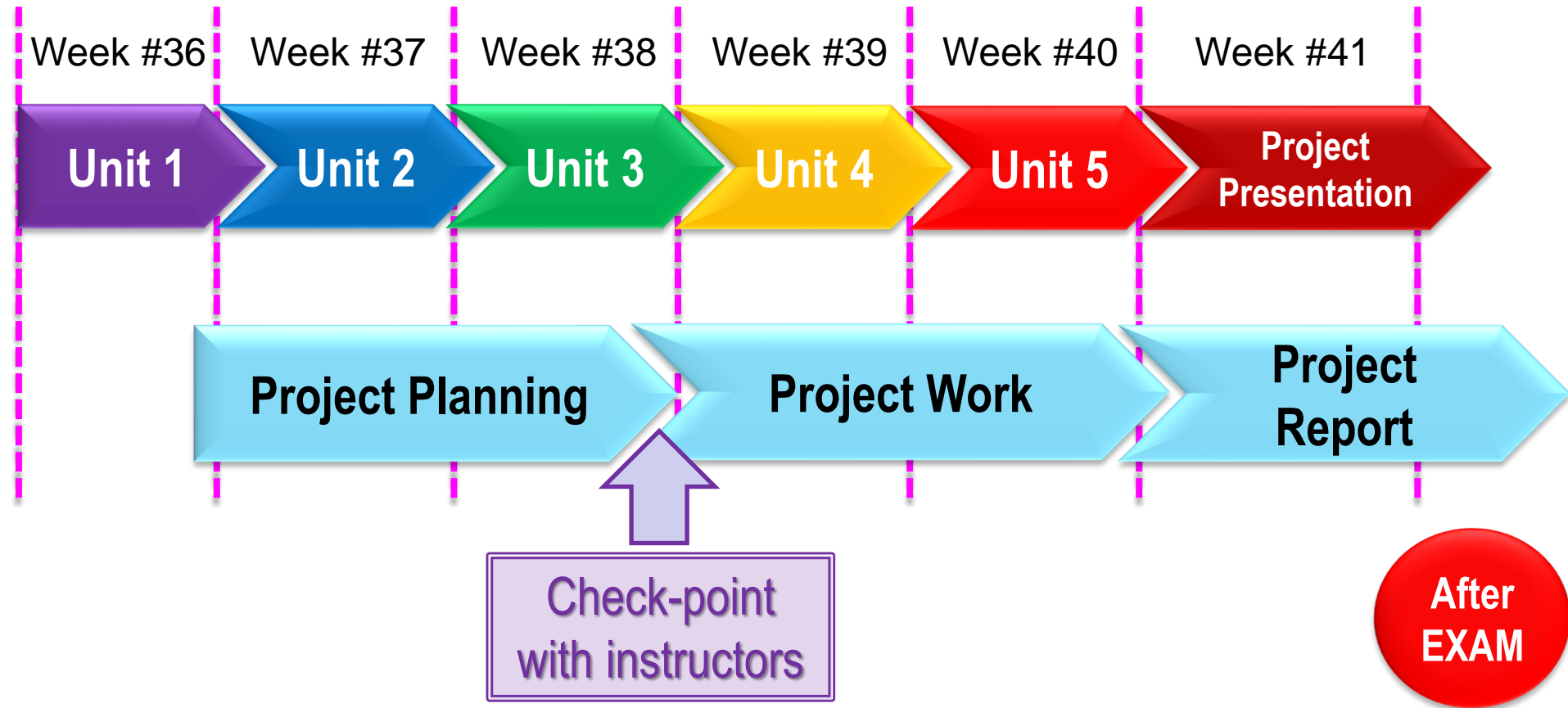
The course group project has five stages:

1. Project planning (course week #2 and #3)
2. Check-point meeting with teacher (course week #3 and #4)
3. Measurement campaign and interpretation of collected data (course week #4 and #5)
4. Presentation of results in workshop (course week #6)
5. Executive Summary of Project (course week #7)

Moreover, students will assess the team-work skills of their peers, as well as the presentation of other groups



Timeline for the course project



During the first group meeting

(group members will be defined during next week)

- Schedule the meeting slots (time and place)
- Get to know each other (exchange contact information)
- Set guidelines for working (common group agreement)
 - What is expected from other members?
 - Useful to carry out peer-assessment of group activity
- Determine the chairman for every meeting
 - Plan the structure and the content of the meeting
 - Summarize discussions and record decisions
- Four project meetings (face-to-face or online)
- A working area will be created for each group in Mycourses

The Process

1. **Observation:** What kind of problem with mobile (4G/5G) or wireless (Wi-Fi) networks have you recently experienced?
2. **Formulate hypothesis:** Based on the knowledge that you have about mobile/wireless systems, what could be the most likely cause of the observed phenomenon?
3. **Plan measurement campaign:** If hypothesis is correct, what should be observed at location 'a', 'b', 'c', ... ?
4. **Gather data:** Carry out field measurements using the measurement tools/apps that you were able to identify?
5. **Analysis:** Give an interpretation of the collected data
6. **Conclusions:** Agree on the most probable source of the problem. Propose a practical solution to tackle it

Plan and design your presentation

- Make an interesting presentation
 - Try to keep the attention of the audience. Make a plan!
 - Demonstration? Pictures? Examples? Questions for audience?
 - Content should be presented as a team, not four individual presentations (one per member)
 - Each group has *15 min. for presentation + 10 min. for interaction/discussion with audience*
 - Please, keep in mind that we have to fit three presentations in a 1.5-hour session slot (week #41)
 - After each presentation, the audience will give group feedback to the presenters (team-work outcome)
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Things to do after today's session

▼ General Information and A...

Announcements

▼ Lecture Sessions and Slides

Lecture #1 04.09.2023
(Monday)

Lecture #2: 06.09.2023 (Wed.)

▼ Quizzes (Pre- and Post-Lec...

Post-Lecture Quiz #1 (DL: 4.9.
at 23:59 EET).-

Post-Lecture Quiz #2 (DL: 6.9.
at 23:59 EET).-

Pre-Lecture Quiz #1 (DL: 11.9.
at 12:00 EET).-

▼ Course Group Project

Background information
required to form the course
assignment groups.-

▼ Weekly exercise sessions a...

Exercise Session #1 (Fri.
8.9.2023)

ELEC-E7120 - Wireless Systems, Lecture, 4.9.2023-16.10.2023

Background information required to form the course assignment groups.-

Closes: Sunday, 17 September 2023, 11:59 PM

Please, provide some general information about yourself such that we, as teachers, could create heterogeneous groups in which, apart from your technical skills, we can also develop other soft skills such as communication in English, inter-cultural abilities, team work, etc.

Model: User's name will be logged and shared with the system.

What is your name?

What is your Gender? (select option): ☐

☐ Female

☐ Male

☐ I prefer not to answer

What is the Master's program (Major's) in which you are enrolled at Aalto (or other University)? (select one option)

Answer the few questions of the poll that is needed to form multi-cultural teams (please, be honest)

- Multi-cultural and gender balance (Optional)
- Planned level of engagement and flexibility to participate in group meetings



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