



ELEC-E7120 Wireless Systems (5 cr)

Instructions for Course Group Project Fall 2023 (Period I)

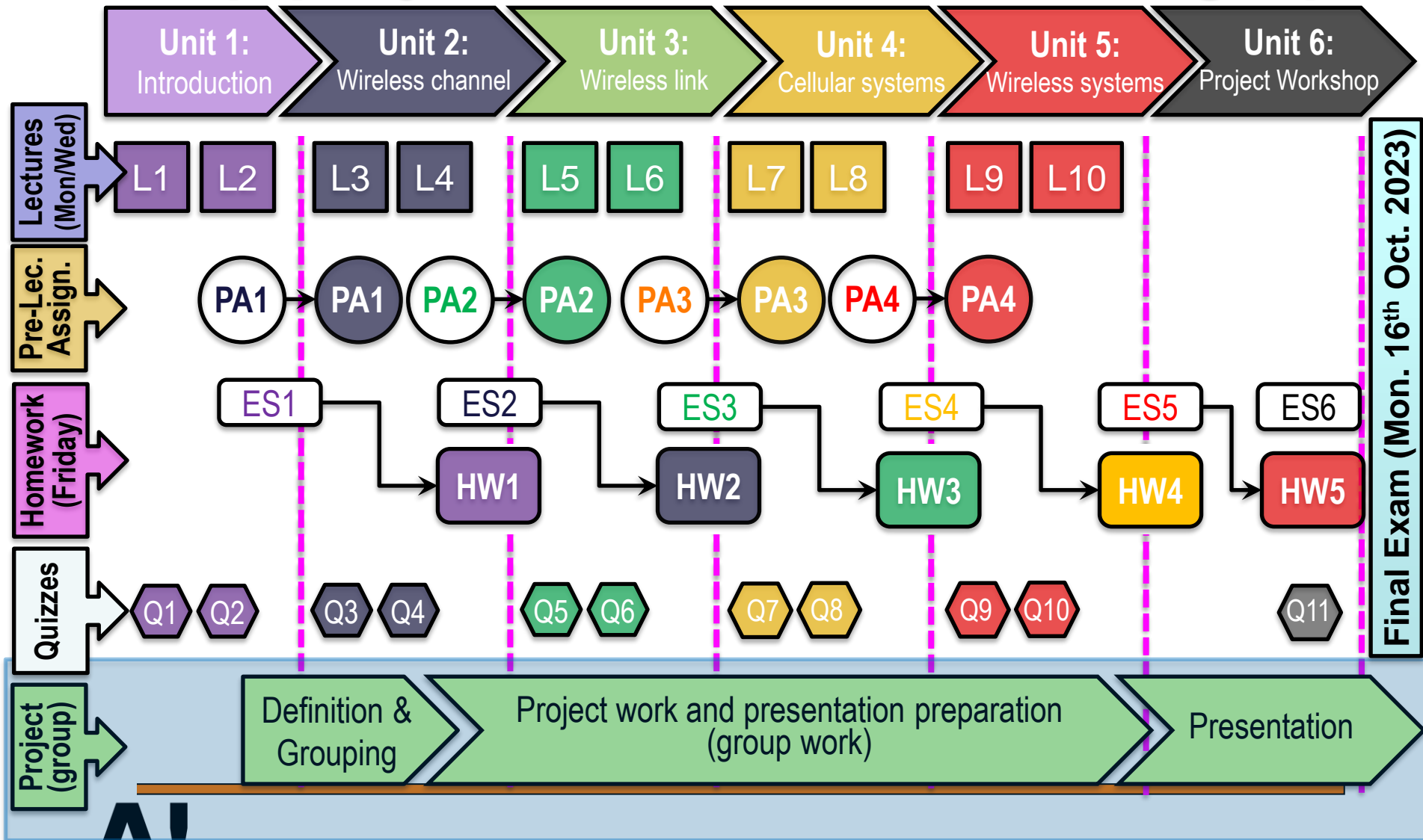
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Updated 15.9.2023



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

Course group project

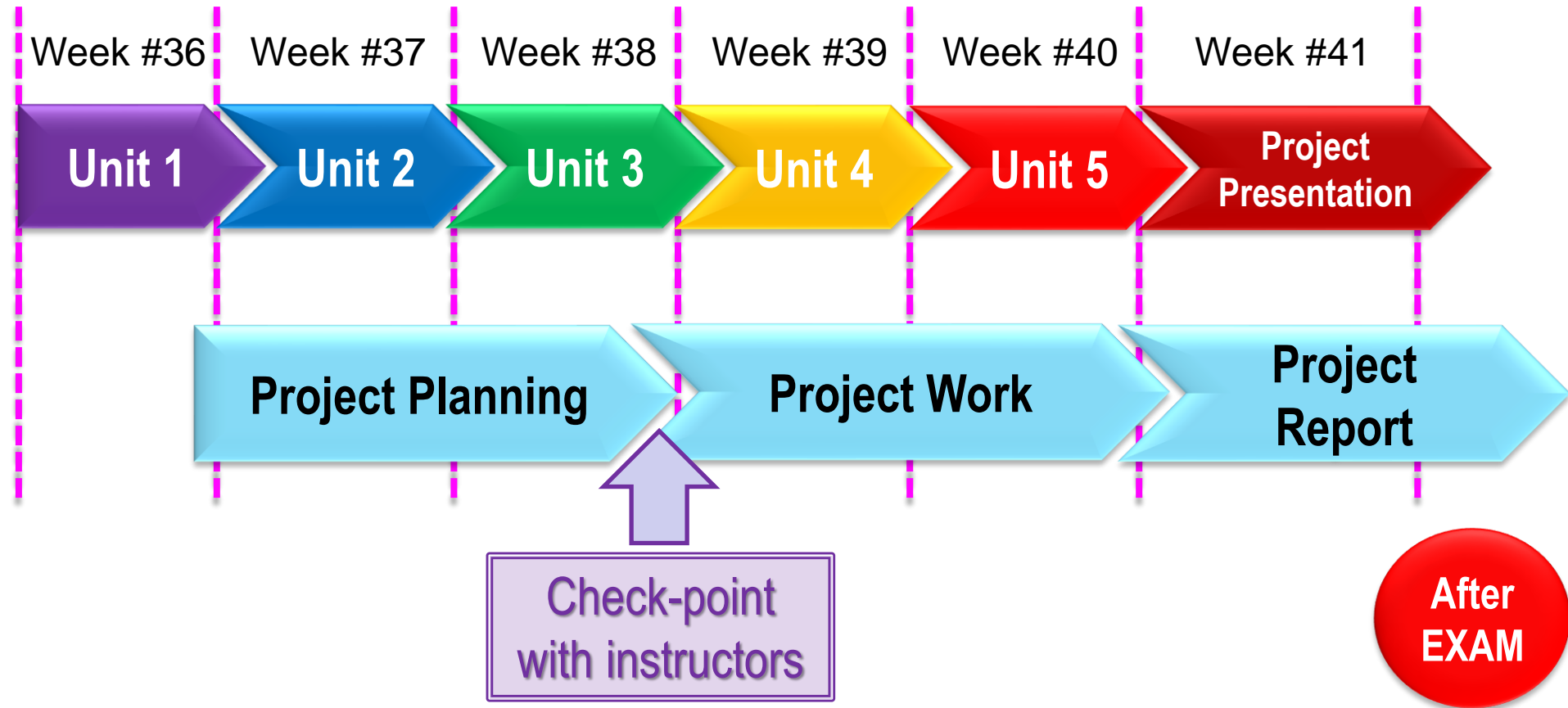
The course group project has five stages:

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

Report group meetings and prepare a project plan during next week

Group Meeting Minutes

1st Group Meeting of Project Work

Date and time: Day of the week, date, time

Location of the meeting: Onsite (e.g., Aalto Campus), Online (Zoom/Skype/etc.), or Hybrid

Agenda

1. Opening of the meeting
2. Agreement on the rules of the group
3. Define details of the four/five group meetings (roles, dates, location)



	Meeting # 1	Meeting # 2	Meeting # 3	Meeting # 4
Secretary	TBD			
Time & Date	TBD			
Location	Onsite			
Expected outcome	TBD			

4. Discussion of the problem that we aim to tackle
 - a. What did you observe? When? (observation)
 - b. Why did this happen? (hypothesis)
 - c. How? (Proposed methodology to collect measurements and collect evidence to validate your hypothesis)
5. Definition of concrete action points for next group meeting
 - a. Member 1:
 - b. Member 2:
 - c. Member 3:
 - d. Member 4:
 - e. Member 5:
6. Any other business
7. Next meeting: Date, time, location
8. Closing of the meeting

Group Project Plan (check-point meeting)

Project Plan Template

A project plan is an essential project management tool that can help you stay on schedule and within budget. It describes the details of your project, from the scope and objectives to the timeline and cost estimates.

HubSpot Tip: A project plan can vary based on the size and complexity of the project. This template provides general guidelines, but you may need to add or remove sections to tailor it appropriately to the needs of your specific project.

Overview

In this section, you should introduce the key components of the project. Think about what your client needs and why they engaged you to complete the project. What is the problem that you need to solve? Who are the main stakeholders?

HubSpot Tip: Consider your project plan a living document. As circumstances, timelines, team members, and objectives change over the life of your project, make the appropriate adjustments in the project plan and redistribute it to the project team.

Scope

This section sets the foundation for your project and is important for gaining consensus from all stakeholders on what the project will entail. Include a broad description of all of the deliverables you will provide to the client and every activity that will occur.

In this section, it is important to not only delineate what is required in the project, but also to explain what will not be included.

HubSpot Tip: If your customer asks for additional work as the project progresses, the project plan, and in particular the Scope section, serves an excellent reference document to explain why the work cannot be completed without changes to the budget or timeline.

Objectives

You already described the client's needs in general terms in the Overview section. Now, you should list the objectives in more detail, quantifying the expected results with as much specificity as possible. Consider organizing the objectives in a list, as shown below.

1. Objective 1
2. Objective 2
3. Objective 3

HubSpot Tip: Whenever possible, design your project objectives to be SMART (Specific, Measurable, Attainable, Realistic, and Timely). Using this type of objective as a benchmark allows you to measure your success.

1



A WikiPage has been created for all groups in MyCourses

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POST-LECTURE QUIZ #2 (DL: 20.9. at 23:59 EET).-

Pre-Lecture Quiz #2 (DL: 18.9. at 12:00 EET).- (copy)

▼ Course Group Project

Background information required to form the course assignment groups.-

Materials that are relevant for the group work in the course project

Course Group Project WikiPage

▼ Weekly exercise sessi...

Exercise Session #1 (Fri. 8.9.2023)

Homework#1
Submission Link -
Deadline 15.09.2023 10:00 am

Exercise Session #2 (Fri. 15.9.2023)

Homework#2
Submission Link -
Deadline 22.09.2023

Course Group Project WikiPage

Only members of the group have access to the information that is shared in this WikiPage. Please use it as repository for all the documentation that you create as part of the group project, including the agreements and discussion of teachers during the checkpoint meeting.

Separate groups

View

Edit

History

Participation by user

1. Will be used to receive feedback from teacher during the checkpoint meeting (Week #3-4)

2. You can use it as repository to store all the material that is prepared during the different group work phases

Note: Only group members have access to your WikiPage

Start page

Latest edits: Wednesday, 13 September 2023, 1:28 PM (Alexis Dowhuszko); full history

Group #1:

- Name 1 (Email 1)
- Name 2 (Email 2)
- Name 3 (Email 3)
- Name 4 (Email 4)
- Name 5 (Email 5)

Check-Point Meeting with Teacher (Date: TBD at Time EET)

Topic of your group project: to be defined.

What is the objective? to be defined.

How will you do it? (Methodology). To be defined.



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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Course Group Project: Team members

Group #1

- Pavel Arefyev
- David Enberg
- Muhammad Hassaan
- Zhongtian Huang
- Mikko Laasonen

Group #2

- Octavian Axinte
- Norton Hugo Guimarães Gouvêa Oliveira
- Ramya Mummadi
- Tuba Toshi
- Lauri Marekwia

Group #3

- David Carrillo Sanchez
- A S M Imran Hassan
- Yuan Hua
- Julia Niemi
- Tom Strandvall

Group #4

- Frank Eras Camacho
- Shawkot Hossain
- Minfei Lai
- Gilemond Nchiwo
- Venni Oskari Takala

Group #5

- Saeideh Mansouri
- Anh Pham
- Jussi Routila
- Aitor Urruticoechea Puig
- Abdur Rahman

Group #6

- Allan Cuisin
- Itir Karaç
- Markus Syyrilä
- Zheyuan Liu
- Jere Malinen



Course Group Project: Team members

Group #7

- Katarina Pichna
- Shaikhum Monira
- Ferenc Szendrei
- Saqib Usman
- Jingtao Zhong

Group #8

- Huazhi Han
- Tuan Nguyen Cong
- Sachin Samarasinghe Arachchige
- Member 4 (TBD)
- Member 5 (TBD)

Group #9

- Tatu Saarikangas
- Yutong Du
- Jakub Luci
- Svetlana Sannikova
- Saad Khan

Group #10

- Maham Noor
- Ihechukwudere Okoroego
- Xingji Chen
- Mohammed Al-Humairi
- Member 5 (TBD)

Group #11

- Mingli Ma
- Jakub Jarina
- Muhammad Zohaib
- Maëlle Stojanovic
- Junyi Li

Group #12

- Thac Minh Nguyen
- Atif Khan
- Juho Pellinen
- Yuqing Zong
- Member 5 (TBD)

