



Aalto University
School of Engineering

Advanced Energy Project (AEP) Course

Sam Cross

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Assistant Professor of Energy Conversion and Storage

Markus Laitinen

PhD student, Energy Conversion and Storage group

8th September 2018

Schedule

- Course introduction
- Motivation – Annukka
- Course project agreement

Advanced Energy Project (AEP)

During this course You will:

- Carry out projects for external companies supported by Aalto staff
- Develop and advance the projects at workshops
- Practice consultancy skills

The study background of the students:

- Energy Technology
 - Electrical Engineering
 - Building Technology & HVAC
 - Chemical Engineering
 - Exchange students
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- Different levels of thinking, MSc & PhD

Sam - promoting alternatives to oil to EU policymakers....



EV “lobbying taxi”, 2009, EC HQ, Brussels

Annukka – in the move of Energy Transition



Project work course Guru



Aalto University
School of Engineering

Markus – The course assistant



B. Course details

- The students form multidisciplinary teams which work to solve problems which have been defined by companies
- Each team has a project manager and 3-4 participants
- The final outcome will be a report and accompanying presentation
- Additional self-reflection reports and peer assessment support your professional growth
- Course runs through periods I – II
(September – December 2020)

B: Intended learning outcomes

- Formulate and clarify project content with company representatives and Aalto staff
- Developing an entrepreneurial mindset and adapting to the business environment
- Develop project management & consultancy skills
- Function as a member of a multidisciplinary project team
- Develop pitching and communication skills
- Solve energy-related problems as a part of a group
- Utilize one's own capabilities and expertise in project environment
- Pitch and present the group findings in the projects
- Create a network of peers and company representatives

C. Learning methods

- Introductory workshops (team forming and build-up)
- Supporting workshops on work life skills (guest lecturers)
- Project advancement support at workshops (new tools)
- Engagement with companies
 - identifying the customer needs by interviews
 - Several project meetings
 - Wider stakeholder analysis and interviews
- Project work in student teams
- Use of project & team management tools used in industry (e.g. Microsoft Teams)
- Pitching to peers and final presentations to wider audience

D. Course schedule in Period I - preliminary

Workshop 14-16 pm	Location/online	Facilitator	Topic	Individual assignment	Team assignment
PERIOD I					
8.9.2020	Zoom & MS Teams	Sam Cross, Annukka Santasalo-Aarnio, Markus Laitinen	Course introduction and introduction to projects		
15.9.2020	Zoom & MS Teams	Markus	Team building exercise	Self-reflection (100 words) submission to MyCourses (Me as a Team Member) DL 14.9	First contact/interview with your assigned company Team to return signed company agreement (where applicable)
22.9.2020	Zoom	Laura Sivula (BIZ)	Project planning & working with clients in an online setting		Written Project Plan, DL: 28.9. at 22:00.
29.9.2020	In person	Langdon brothers	Communication & Negotiation/Team building		
6.10.2020	Zoom	Annukka	Business model canvas	Self-assessment report 1, DL 11.10	Pitch 1, project problem & outline DL 12.10
13.10.2019	Zoom	Christa Uusi-Rauva, Sam	Pitching the project problem & outline (you give Pitch 1 here)		Submit outline of project report (also to Team supervisors) DL 16.10
EXAM WEEK – 20.10					

D. Course schedule in Period II, preliminary

Date (always Tuesdays 14-16h)	Location (online)	Facilitator	Topic	Individual assignment	Team assignment
PERIOD II					
27.10.2020	Zoom	Christa Uusi-Rauva	Pitching Lesson Here you get professional feedback on Pitch 1		Pitch 2 Slides, DL: 2.11.
03.11.2020	Zoom & MS Teams	Markus, Annukka, Sam	Pitch #2: last half spent on team work/brainstorming		
10.11.2020	Zoom	Annukka, Sam, Markus	Project workshop		Feedback Pitch 2 Slides (you feedback on another team), DL: 16.11
17.11.2020	Zoom	Annukka	Entrepreneurial online game -> applying to own project	Self-Assessment Report 2, DL: 22.11	
24.11.2020	Zoom	Annukka, Sam, Markus	Group work		Final Draft Report due for Aalto supervisor 27.11, send by e-mail (feedback from supervisor 4.12)
1.12.2020	Zoom	Annukka, Sam, Markus	In-class support from Aalto supervisors (Team work session)		Prepare for final presentations; (not in MyCourses, e-mail to supervisor)
8.12.2020	Zoom	Annukka, Sam, Markus	Final Draft Presentation Pitch		Final report submission, DL: 11.12. Presentation slides for final workshop, DL 15.12
15.12.2020	Physical	Annukka, Sam, Markus	Final presentation gala (with companies)	Inter-peer assessment, DL: 20.12	

Project flow

Week	Project flow
1	Mid-set + contract
2	Us as a team (contacting the client (+ meet)) + background
3	Detail project planning (meeting the client)
4	Marketing -> what is OUR solution
5	Stakeholder (who else are involved -> interviews)
6	First pitch
7	Exam week (period 1)
8-9	Our solution and how to sell it
10-12	Combining the work
13-14	Complete solution and visualization
15	Final Gala

F. Course assessment

- **Individual part**

– Me as a team member	4 p.
– Self-assessment report 1	8 p.
– Self-assessment report 2	8 p.
– Feedback (Webpropol)	5 p.
– Inter-peer assessment	15 p.
– <u>Personal performance in project</u>	<u>10 p.</u>
Total	50 p.

- **Group part (common for all group members)**

– <u>Aalto staff evaluation</u>	<u>20 p.</u>
– <u>Company evaluation</u>	<u>20 p.</u>
– <u>Final presentation (audience evaluation)</u>	<u>10 p.</u>
Total:	50 p.