

CHEM-E0105

Academic Learning Community

Session 1: Kick-Off

Kyösti Ruuttunen
19/09/2022



Aalto University
School of Chemical
Engineering



Today's Agenda

- 8.45** **Welcome to the course; What is it all about?**
(Kyösti, Riikka, Henna, Henni, Sonja, Seija, Jukka)
- 9.30** **Aalto Code of Conduct (Anni)**
- 10.00** **The session ends**

Course Events & Schedule

Orientation week 19.8.-2.9.2022

Information for
International Students
Tue 30.8.

Major-Specific
Orientation
Tue 30.8. or Wed 31.8.

IT services
Thu 1.9.

Laboratory Safety
Exam (online)

Period I 5.9.-23.10.2022

MatLAB
Mon 12.9.

Course kick-off
Mon 19.9.

Scientific Article
Exercise (SAE)
kick-off Mon 26.9.

Career Planning
Exercises, Mon 3.10.

SAE DLs
Mon 3.10., Wed 12.10.

Period II 24.10.-11.12.2022

SAE
Final DL Mon 25.10.

Academic Advising
Meeting, Weeks 44-45

SAE wrap-up
Mon 31.10.

Study Skills
Mon 7.11.

Aalto Talent Expo
Thu 10.11.

Period III 9.1.-26.2.2023

Entrepreneurial
Mindset Workshop
Mon 16.1.
Mon 23.1.

Major-Specific
Feedback Sessions I
Week 3

Entrepreneurial
Mindset Exercise
DLs Wed 1.2., Fri 10.2.

Communication Skills
DL Fri 17.2.

Period IV 27.2.-23.4.2023

Communication
Workshops
Weeks 9 & 11

Communication Skills
DL Week 10^{ca}
ndGroup-specific DLs

Master's Thesis
Review Workshop
Mon 20.3. & Mon 27.3.

Academic Advising
Personal Meeting
Weeks 13-14

Period V 24.4.-11.6.2023

Major-Specific
Feedback Sessions II
Week 17

Master's Thesis
Review Exercise
DL Fri 28.4.

For everyone

*For students outside
of Aalto CHEM*

*Elective module
(1 ECTS)*

Deadlines (DLs)

Intended Learning Outcomes

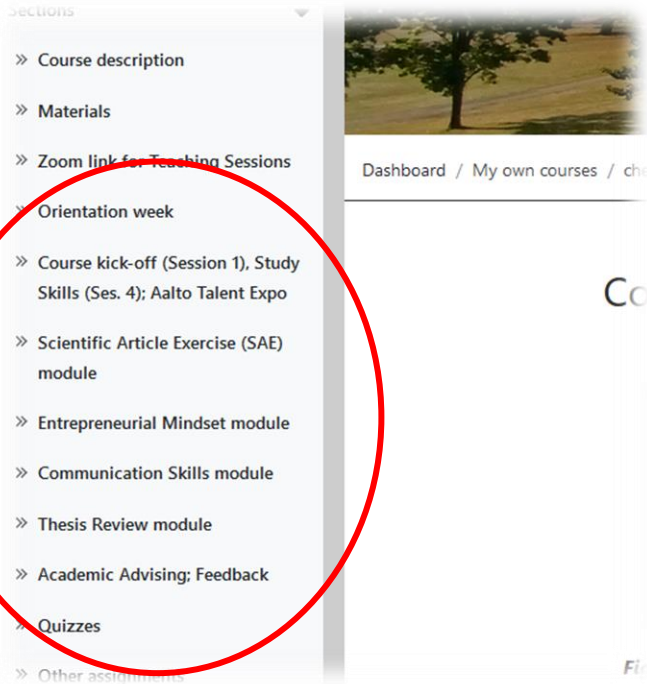
After the course the student can

- adopt the code of conduct of the academic community
- set personal goals for effective learning and skills development
- communicate and collaborate in a multicultural and multidisciplinary learning environment
- identify opportunities for academic entrepreneurship and career development
- work safely in laboratory and conduct the principles of scientific research and communication



**We are the
university!**

Course Contents



Course's MyCourses workspace

- Sections arranged (mostly) based on the modules, which you need to complete
- The sections are being updated...

Let's take a closer look!

Orientation week

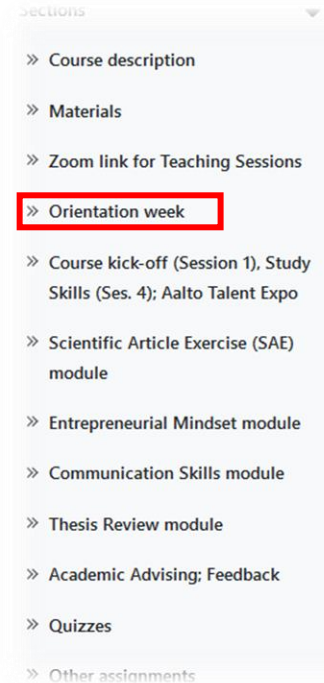
August 29th – September 2nd

How was it?

Everyone should have attended the major-specific orientation event

- If you were absent, contact your major's planning officer

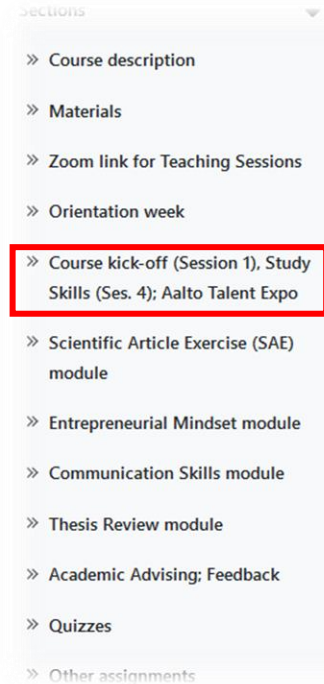
Students with B.Sc. degree outside of Aalto obtain 1 cr for the orientation week



Dashboard / My own courses / ch

Course kick-off (Session 1), Study Skills (Ses. 4); Aalto Talent Expo

These events are presented separately in subsequent slides

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- A screenshot of a course navigation menu. The menu is titled 'sections' and contains a list of items. The item 'Course kick-off (Session 1), Study Skills (Ses. 4); Aalto Talent Expo' is highlighted with a red rectangular box. Other items in the list include 'Course description', 'Materials', 'Zoom link for Teaching Sessions', 'Orientation week', 'Scientific Article Exercise (SAE) module', 'Entrepreneurial Mindset module', 'Communication Skills module', 'Thesis Review module', 'Academic Advising; Feedback', 'Quizzes', and 'Other assignments'.
- » Course description
 - » Materials
 - » Zoom link for Teaching Sessions
 - » Orientation week
 - » **Course kick-off (Session 1), Study Skills (Ses. 4); Aalto Talent Expo**
 - » Scientific Article Exercise (SAE) module
 - » Entrepreneurial Mindset module
 - » Communication Skills module
 - » Thesis Review module
 - » Academic Advising; Feedback
 - » Quizzes
 - » Other assignments

Session 1

This is on right now!

Most important objectives

- Meeting the teachers & students, learning about the course content & events
- Getting to know the Aalto Code of Conduct
- Learning about the role of Aalto and other universities in the Finnish society
- Understanding how the quality of education and learning is assured in Aalto

Methods for achieving the objectives

- Attending (actively) the session
- Watching a lecture recording, studying slides
- Answering Quiz 1

Study skills

by study psychologist Henna Niiva

- To learn elements of successful learning
- To know learning technique that works
- Find ways how to use the most effective study technique
- Wellbeing and success in studies

Monday 7.11. on campus Ke2



Aalto Talent Expo

November 10th

Most important objectives

- Getting to know companies in your field
- Acquiring knowledge about working life
- Attending workshop in relevant topics, *e.g.* writing job search documents

Methods for achieving the objectives

1. Setting objectives
2. Attending Aalto Talent Expo
3. Reflection

Scientific Article Exercise (SAE) Module

September 26th – October 31st

Professor Riikka Puurunen

Most important objectives in a nutshell

- **Scientific literacy.** *What is a scientific article, and what it is not?* Understanding (better) the complex and transforming area of scientific publishing.
- **Ability** to search, fetch, analyse (in many ways, including impact) and cite **scientific articles reporting primary research**, of interest to oneself
- **Familiarity** with peer review and similarity check software

Methods for achieving the objectives

- Kick-off session, six short video lectures, wrap-up session
- Learning by doing: everyone fetches and analyses one article reporting primary research (MyCo-based exercises with teacher's feedback & peer review)



Riikka Puurunen

SAE helps to complete your reports & M.Sc. thesis

Entrepreneurial Mindset – January 16 and 23, 2023



Teacher: Sonja Hilavuo,
Aalto Ventures Program

What will you get out of this module?

1. What is entrepreneurial mindset and entrepreneurial skills
2. Why engineers need entrepreneurial mindset and capabilities
3. Guest speakers with CHEM background to reflect
 - Choices they have made
 - Experiences from large corporates and start-ups
 - Leading others and leading oneself
 - Developing innovations
 - Insight from working with customers and partners

Communication Skills Module

Weeks 7 – 11 (February and March 2023)

University Teacher Henni Kervinen

After successfully completing the Communication Skills module, the students

- have improved their skills and competences in communication and collaboration in a multicultural and multidisciplinary environment
- can identify possible further development needs and are ready to make a plan for enhancing their personal communication skills and competences

To successfully complete this module, the students:

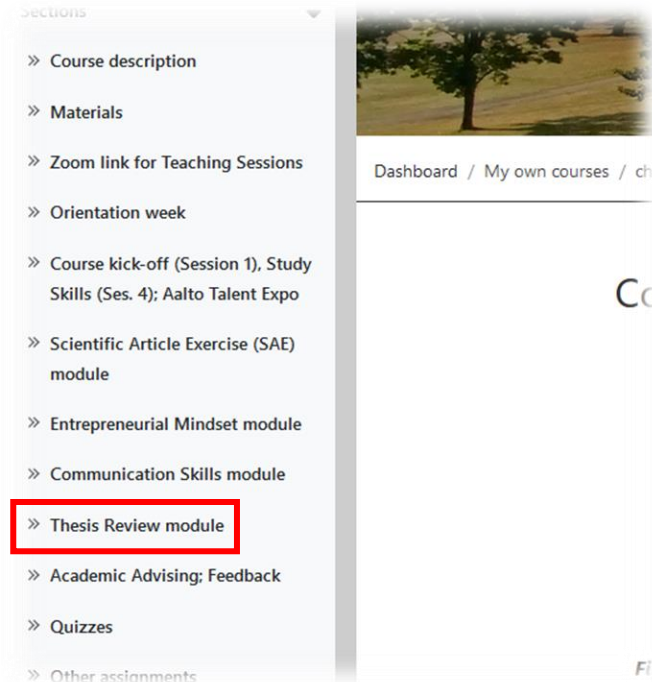
1. Participate the two communication workshops (on weeks 9 & 11)
2. Finish the two assignments (DL's on 17.2. and on week 10)



Henni (Henriette) Kervinen

Thesis Review Module

March 23rd – April 28th, 2023



**Senior University Lecturer Kyösti Ruuttunen and
Univ. Teacher Matthew Billington (Language Centre)**

Most important objectives

- Learning what a master's thesis is and how it is done at Aalto CHEM
- Getting familiar with the intended learning outcomes, as well as the evaluation criteria, of master's thesis
- Looking into communication styles in science

Methods for achieving the objectives

- Two study sessions
- Reading a master's thesis, writing a review

Major-Specific Feedback Sessions

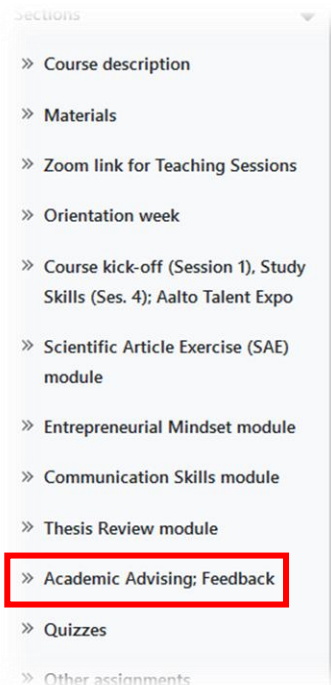
January & April 2023

In each major, two feedback sessions are organized each study year

- Participation in these events a part of the ALC course

Constructive discussion on the quality of teaching and learning

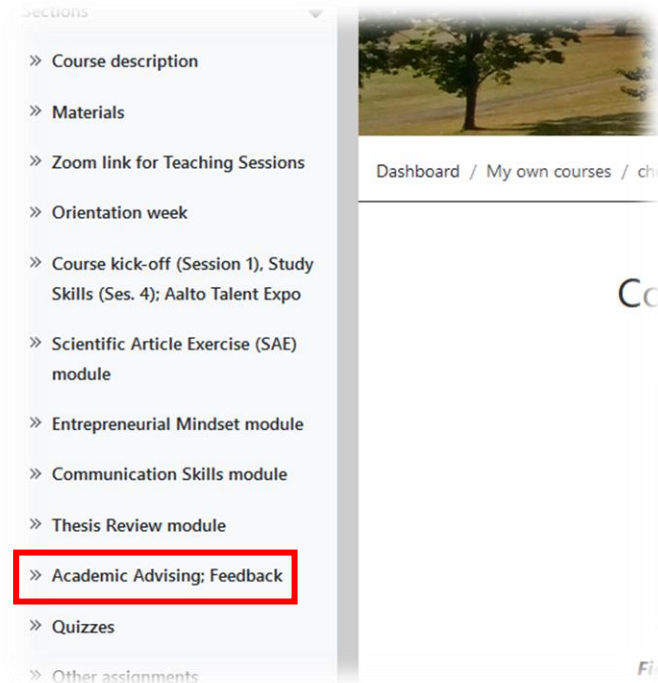
- Major's teaching staff and students present
- Based on the results of the electronic feedback survey (Webropol)



Dashboard / My own courses /

Academic Advising

October-November 2022 & March-April 2023



All of you have an academic advisor!

As a part of this course, two personal student-advisor meetings are required

The objective of the meetings is helping you with your studies; also building the community

- please do not go to the meetings just because they are a part of ALC course!

More information on academic advising provided in additional material

Quizzes

September 19th, 26th; November 7th; March 20th, 27th

The students need to answer five quizzes

- Open after study sessions (today, for example!)
- It is very easy and fast to answer the quizzes if you have attended the session
- You can also give feedback on the ALC course teaching with the quizzes
- The quizzes stay open until the course ends



Elective Modules

You can choose two elective one-credit modules:

- MatLAB basics
- Career Planning Exercises
- The modules will give you up to 5 cr in total for the course
- **Please note:** students with a bachelor's degree outside Aalto School of Chemical Engineering obtain one credit from the orientation week
 - should only choose one of the elective modules

MatLAB Basics Module

September 13th – 30th **ONGOING**

University Teacher Jukka Kortela

Intended Learning Outcomes

After attending the module, the students

- are familiar with the MatLAB environment and can perform basic operations, such as simple programming, importing data and plotting graphics
- are able to create and combine variables (scalars, vectors, matrices)
- are familiar with basic numerical methods, such as numerical differentiation and integration integrals, approximate derivatives, and solving linear systems
- can use MatLAB solver(s) for solving differential equations

Methods for achieving the objectives

- Six tutorials, two homework exercises

Career Planning Exercises

by career counselling psychologist Seija Leppänen

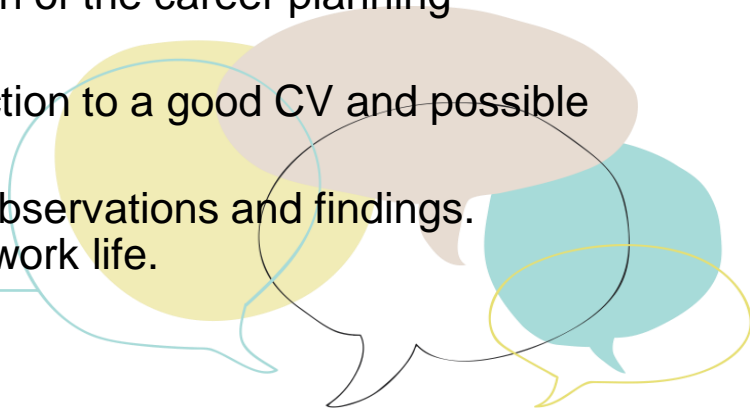
- To find words for your values, motivation, skills and achievements
- To make a good CV
- To reflect meaningful decisions to help engagement in interesting work roles
- To reflect your emerging work identity

Timetable via zoom:

Kick-off session Monday 3.10.2022: Presentation of the career planning exercises, their purpose

Half-way check-up Monday 28.11.2022: Introduction to a good CV and possible Q&A of the exercises

Wrap-up session Monday 6.2.2023: Summary, observations and findings. Guidance how to continue preparing yourself to work life.



Total Workload

Minimum workload for the course is either three or four credits

Student's background	Orientation week & Period I	Period II	Period III	Period IV	Period V	TOTAL
Aalto B.Sc.	1.0 cr (27 h)	0.3 cr (8 h)	0.5 cr (14 h)	1.1 cr (30 h)	0.4 cr (11 h)	3 cr (90 h)
Non-Aalto B.Sc.	2.0 cr (52 h)	0.3 cr (8 h)	0.5 cr (14 h)	1.1 cr (30 h)	0.4 cr (11 h)	4 cr (117 h)

Combined with the elective modules, it is possible to earn up to 5 cr

Elective modules	Period I	Period II	Period III	Period IV	Period V	TOTAL
Matlab	1 cr (27 h)	-	-	-	-	1 cr (27 h)
Career planning	1 cr (27 h)			-	-	1 cr (27 h)

Skills for academia and working life – Why?

Good communication skills are important!

The better the students can describe their skills and competences, the better their employability

- Self-efficacy beliefs also important

Multitude of students are employed by the company for which they did their thesis work

Tuononen T. *et al.* in *Higher Education Transitions*, 2017, pp. 238-253
Aalto CHEM study guide, <https://into.aalto.fi/display/encbme/Curriculum+2022-2024>
(accessed 15/9/2022)

Academic Learning Community (3 - 5)

Major studies (60 cr)

Master's thesis (30 cr)

Electives (25 - 27 cr)

*Let's make
this the
best course
ever!*



Additional material

Academic Advising: What is it?



Aalto University
School of Chemical
Engineering



Academic Advising – What Is It?

Objectives

1. Conduct discussion about studies and career options

- hear opinions and ideas from an experienced person
- discuss different possibilities

2. Give and get feedback

3. Integrate students into university community

4. Facilitate the interaction between students and academic staff

5. Increase students' motivation and study progress as well as support students at every stage of their studies

Some of the students do still want meetings even if they have graduated...

I think it is just the fact that my advisor listened to everything and she didn't make it difficult to talk to her.

Academic Advising as a Part of This Course

You all have an academic advisor, who is a faculty member

- If you do not know who your advisor is, get into contact with your major's planning officer

You are supposed to have two personal meetings with your advisor during this study year

- Autumn 2022: weeks 44-45 (October 31st – November 11th)
- Spring 2023: weeks 14-15 (April 3rd – 14th)

According to the feedback, advising is important and liked by both the students and the staff

- Interaction and openness are the key!
- The advising meetings are confidential

The meetings allowed me to understand better each student's situation.

I liked discussing future aspects and some problems faced as an international student.

Very good concept! Good to have a person assigned to you so you know who to ask when you need help with something.