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Aalto University
School of Chemical
Engineering

Welcome to study at Aalto University!

Master's Programme in Chemical, Biochemical and Materials Engineering

Sustainable Metals Processing



Photo: Anja Hänninen

31.8.2022 Michael Gasik and Anja Hänninen

Agenda

1. **Who are we? Getting to know each other**
2. **Personnel of the major**
3. **Degree and major structure**
4. **Student guidance and coaching**
5. **Practical study matters**
6. **Meeting the academic advisors**

Who are we?

A short presentation of everyone present

Please tell briefly something about yourself to others, for example:

- Your name
- The country you are from
- Will you be present on campus or remote?
- What do you expect from the forthcoming academic year 2022-2023?



Personnel of the major

Professors:

- Michael Gasik (*in charge of major*)
michael.gasik@aalto.fi
- Daniel Lindberg
daniel.k.lindberg@aalto.fi
- Rodrigo Serna
rodrigo.serna@aalto.fi
- Ari Jokilaakso
ari.jokilaakso@aalto.fi
- Mari Lundström
mari.lundstrom@aalto.fi
- Ville Alopaeus
ville.alopaeus@aalto.fi

University Lecturers:

Academic advisors

- Marko Kekkonen
marko.kekkonen@aalto.fi
- Jari Aromaa
jari.aromaa@aalto.fi
- Anna Klemettinen
anna.klemettinen@aalto.fi

Learning services



Photo: Unto Rautio

Student advisor: N.N.
msc-advisors-chem@aalto.fi

Study secretary: Kati Sumu
studies-chem@aalto.fi

Planning officer: Anja Hänninen
anja.hanninen@aalto.fi

Additional information:
<https://into.aalto.fi/display/encbme/Contact>

Degree structure and planning your studies

Degree structure

120 ECTS credits:

- **Academic Learning Community (3-5 cr)**
 - *common to all students in Master's Programme in Chemical, Biochemical and Materials Engineering regardless of the major*
- **60 cr major studies**
 - *Compulsory studies*
 - *Specialization studies*
- **30 cr master's thesis** (approx. 5 months active work)
- **25 - 27 cr elective studies**
 - *Can include a minor*

→ Master of Science (Tech.)

Academic Learning Community (3 - 5)

Major studies (60 cr)

Master's thesis (30 cr)

Electives (25 - 27 cr)



Major structure

1st year	Fall	Academic Learning Community (3-5 cr)	Fundamentals of Chemical Thermodynamics (5 cr)	Metal Recycling Technologies (5 cr)	Fundamentals of Minerals Engineering and Recycling (5 cr)
			Fundamentals of Pyrometallurgy (5 cr)	Fundamentals of Hydrometallurgy (5 cr)	Process Modeling (5 cr)
	Spring		Specialisation studies (15-20 cr)		Elective studies (5-10 cr)
2nd year	Fall		Technical Innovation Project D (10 cr)	Specialisation studies (0-5 cr)	Elective studies (15-20 cr)
	Spring		Thesis (30 cr)		

<https://into.aalto.fi/display/encbme/Sustainable+Metals+Processing+2022-2024>

CHEM-E0105 Academic Learning Community

Please note: MATLAB module (1 ECTS) starts on ??

What?

- **Course for master's students in CHEM**
- **3-5 cr, depending on completed tasks**

When?

- **Periods I-V**
- **Starting on September ??,**

Why?

- **Learning** *general skills and knowledge*
- **Helping you** *succeed in your studies*

For more information: [MyCourses](#)



Specialisation studies (20 cr)

Thermodynamics of Materials	CHEM-E6105	Thermodynamics of Solutions D	III–IV
	CHEM-E6115	Thermodynamics of Modeling and Simulation D	IV–V
Sustainability of Metals	CHEM-E6215	Circular Economy Design Forum D	IV–V
	CHEM-E6235	Circular Economy for Materials Processing	2020-2021: III–IV, 2021-2022: IV-V
Ore Dressing and Recycling	CHEM-E6145	Unit Operations in Mineral Processing and Recycling	III–IV
	CHEM-E7170*	Design Project in Chemical Engineering, part A	IV–V
	CHEM-E7180*	Design Project in Chemical Engineering, part B	I–II
Pyrometallurgy	CHEM-E6165	Unit Processes in Pyrometallurgy	III–IV
	CHEM-E7170*	Design Project in Chemical Engineering, part A	IV–V
	CHEM-E7180*	Design Project in Chemical Engineering, part B	I–II
Hydrometallurgy	CHEM-E6185	Applied Electrochemistry and Corrosion	III–IV
	CHEM-E7170*	Design Project in Chemical Engineering, part A	IV–V
	CHEM-E7180*	Design Project in Chemical Engineering, part B	I–II
Chemical Engineering	CHEM-E7150	Reaction Engineering	II
	CHEM-E7120	Laboratory Project in Chemical Engineering	III–V

**students completing CHEM-E7170 Design Project in Chemical Engineering, part A also need to complete CHEM-E7180 Design project in Chemical Engineering, part B*

Elective studies / Minor

- Elective studies (25-27 cr)
- Possible to include a minor (15-25 cr) into the elective studies
- Minor not compulsory → degree without minor



Language studies

- **Mandatory in your degree** if not part of your bachelor's degree (according to degree regulations)
- **3 ECTS** credits
- Only courses with letters O (for oral) and W (for written) fulfil the requirements
- English recommended, but other languages can be taken as well
- Finnish basic courses allowed
- Students with a Finnish bachelor's degree (including AMK students): usually no obligatory language studies required



Master's Thesis

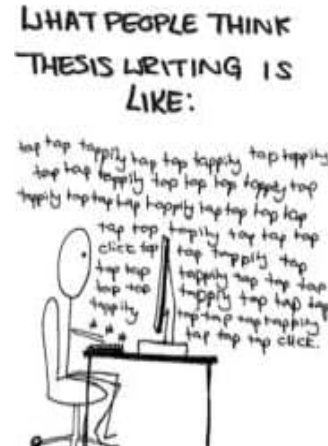
Goal: master's thesis completed by the end of the 2nd study year

Before you start your master's thesis:

- complete all compulsory studies
- complete at least 40-45 credits of major
- make sure your study plan is up-to-date

How to find a thesis position/topic:

- Start looking for a master's thesis position early (during the Spring of the 1st study year)
- Be active and open to new ideas!
- Don't wait too long for the "perfect" master's thesis offer



Practical study matters



CHEM-E0140
Laboratory
Safety
Course

There are two courses,
you need to pass only one of them:

**CHEM-A1010 Turvallinen työskentely
laboratoriossa**

(Finnish version for bachelor students)

OR

CHEM-E0140 Laboratory Safety Course

*(English version, mainly for master level
and exchange students)*

**Access to CHEM buildings
is automatically linked to
Lab Safety Courses**



What to do?

1. Add "**CHEM-E0140 Laboratory Safety Course**" to your personal study plan (HOPS) in SISU (sisu.aalto.fi)
2. Register to the course "**CHEM-E0140 Laboratory Safety Course**" in SISU (sisu.aalto.fi)
3. Go to MyCourses page of "**CHEM-E0140 Laboratory Safety Course**" (mycourses.aalto.fi)
4. Follow the link to Virtual Lab Space
5. Take the Digital Exam in the MyCourses
 - You will be notified immediately whether you passed the exam (to pass: 65 % of the points).
 - You can take the exam as many times as you like.
 - It is recommended that you have Virtual Lab open at the same time as you take the exam.

Try not to just guess but find answers from Virtual Lab
→ This is for your own safety

Make the course **this week**

– you need a Lab Pass to enter the labs

- **After** passing Lab Safety Course, you will be printed a Lab Pass



- You have to have Lab Pass visible on your lab coat when entering labs

- Pick up your Lab Pass from Study Advisors' pop-up desk (CHEM main lobby, Kemistintie 1) during its opening times

Study period when you take the Lab Safety	Passes ready in Study Advisors pop-up desk
Orientation Week September 2022 (no later than Sun 4 th Sep)	WED 7 th September onwards
PERIOD I (no later than Sun 11 th Sep)	WED 13 th September onwards
PERIOD II (no later than 30 th Oct)	WED 2 nd November onwards
Orientation Week January 2022 (no later than Sun 8 th Jan)	WED 11 th January onwards
PERIOD III (no later than 15 th Jan)	WED 18 th January onwards
PERIOD IV (no later than 5 th March)	WED 8 th March onwards
PERIOD V (no later than 30 th April)	THU 4 th April onwards

Planning your studies

All students are required to prepare a **personal study plan (HOPS)** as a part of their master's studies and always keep it up-to-date.

- The study plan is a **binding agreement** on both parties: the student and the university.
- Students can, at any time of their studies, **update** their study plan. The study plan should at all times correspond to the student's current plan for his/her studies. Changes to the study plan should always be done before participating in courses.

Planning your studies

- The study plan includes:
 1. Major courses, based on curriculum
 - *Compulsory courses and specialisation courses*
 2. Elective courses
 - *Possible to include a minor in the elective studies, not compulsory*
 3. Timing of all chosen courses and the master's thesis
- Study plans are created in SISU
- Some parts require approval
 - *Approved by the planning officer, deviations from the curriculum need to be separately approved by the professor in charge of the major*
- More instructions: <https://into.aalto.fi/display/encbme/Planning+your+studies>



Why should you earn your degree within two academic years?

Requires an average of 60 credits per year

WHY?

- It shows your potential to future employers that you are able to commit to your studies and that you can acquire a wide spectrum of new knowledge while keeping to an agreed schedule
- CHEM rewards students who have completed their degree within the target time → 500€

More information: <https://into.aalto.fi/display/encbme/Planning+your+studies>



Be an active student

- Take the responsibility of your studies
- Use the curriculum and other resources → Into, MyCourses, SISU
- Read your **aalto.fi e-mails**
 - *Change the password when required*



- Can't find information or unsure -> please, ask!
- Participate actively in your courses and challenge your teacher!

Student feedback



Be active in providing your feedback regarding courses and also the major as a whole



Course feedback is collected after every course and is valuable for course development



Feedback sessions with students and teachers will be organized

Twice in an academic year.

These sessions are a part of CHEM-E0105 Academic Learning Community course.

Student guidance and coaching in Aalto CHEM

Academic advising

The academic advising at Aalto CHEM is organised in connection with the course CHEM-E0105 Academic Learning Community.

- *Two compulsory individual meetings with your academic advisor (academic advisor organizes)*

Aalto guidance and support for students:
<https://www.aalto.fi/en/services/guidance-and-support-for-students>



Academic advising

Most students felt that they benefit from the meetings (85,7%)

Many students wish for more than 2 meetings

Benefits for a student

- *help & advice & tips*
- *having a mentor, someone confidential supporting you*
- *getting feedback and ideas, other opinions*
- *a good possibility to talk, to share feelings*
- *building an academic network*

We could discuss anything related to studies and courses

I was able to reflect on my studies and see what went well and what I still need to improve upon.

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

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

The advisor answered to every question and we had altogether quite a nice meeting.

All in all, I feel like academic advising is needed and welcome!

Academic advising groups

Marko Kekkonen's group:

Robi Toivonen

Samuli Vehmas

Juha Malinen

Hau Tran Hoang Trung

Julia Alajoki

Oskar Astikainen

Jari Aromaa's group:

Ben László

Kaapo Kopra

Aleksanteri Kupi

Aki Nyberg

Arttu Saikkonen

Tessa Finnholm

Anna Klemettinen's group:

Thi Ha

Roger Peltonen

Lassi Pekkanen

Jonna Piironen

What's next?

- IT services at Aalto & course registrations **Thu 1 Sept. 9:30-11:00** *Lecture hall KE2, Kemistintie 1*
 - *Recommended to everyone!*
 - Aalto Welcome Fair **Thu 1 Sept. 10-16** *Väre/Korkeakoulunaukio*
 - 13:30 Lecture: "Better student life at Aalto" *available at lecture hall KE 1, Kemistintie 1*
 - Pop-up Q&A Session with Learning Services **Fri 2 Sept. 10:00-11:30** *Lecture hall KE3, Kemistintie 1*
 - *Come and meet us, if you have any questions*
 - Student culture - TeekkariLIFE lecture **Fri 2 Sept. 12:00-14:00** *Lecture hall Aalto, Otakaari 1*
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Welcome to begin your master's studies at Aalto University!

