# Master's Programme in Manufacturing

**Orientation meeting** 

27 August 2024

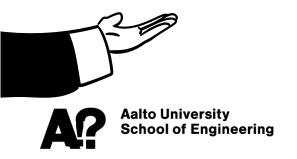






# Agenda

- Introductions
- Your studies and how to plan them
- Double degree specialities in study administration
  - Double degree specialities in student life
    - What's up next?
    - Questions or concerns?



#### Introductions



#### Aalto culture in brief

- Focus on students and learning
- Low hierarchy in and outside the classroom (e.g. communication)
- (Academic) freedom vs. responsibility (transparency of information)
  - Read the instructions first, then contact us if something is unclear ©
- Student community & synergy with the university
- Check also
  - Finland Studies MOOC
  - Finland Works MOOC
  - Beat the Blues event series for international students (about culture, culture shock, wellbeing etc) – follow our newsletters!
  - Guide for International Students
  - Code of Conduct



### Your support team



# Coordinator Stefano De Luca





#### How about you?



#### Your studies and how to plan them



### Programme Structure

Total	Major (AM / ZD)*	I&E Minor **	Master's Thesis
120	60	30	30
ECTS	ECTS	ECTS	ECTS

<sup>\*)</sup> including entry year studies (45 ECTS) and exit year studies (15 ECTS) at two universities \*\*) including entry year studies (15 ECTS) and exit year studies (10 ECTS) at two universities, and a centrally organized EITM Summer School (5 ECTS), possibly at a 3rd location.

#### **Student Guide -> Curriculum**

https://www.aalto.fi/en/programmes/masters-programme-in-manufacturing/curriculum-2024-2026



# Learning Objectives (AM)

- methodological knowledge in the area of manufacturing challenges
- specialised knowledge of multidisciplinary decision support systems for manufacturing
- critically, independently and creatively participate in strategic work to meet manufacturing-related problems and to be able to relate these measures to sustainable social development
- implement the gained engineering expertise in AM to create new or improved methods, techniques, products, and services in the field
- think beyond traditional disciplinary boundaries to find innovative solutions to real-world problems and to come up with new ideas;
- draw up plans and to make decisions foreseeing future consequences from a scientific, ethical, and societal perspective;
- turn innovations in the area into feasible and successful business solutions;
- profitably work in small size teams and contexts by taking into account all relevant elements and showing effective decision-making and leadership abilities





# Learning Objectives (ZD)

- Apply their acquired engineering knowledge in Zero Defect to develop novel or enhanced methods, techniques, products, and services within their field.
- Demonstrate creativity in problem-solving, thinking innovatively to address real-world challenges and generating fresh ideas.
- Formulate comprehensive plans and make decisions while considering future consequences from scientific, ethical, and societal perspectives.
- Translate innovations within the field into viable and successful business solutions, fostering entrepreneurial thinking.
- Collaborate effectively within small team settings, taking into account all pertinent factors and showcasing strong decision-making and leadership skills.





# Entry year, AM (period I courses)

Course code and name	ECTS credits	Period	Course code and name	ECTS credits	Period
Compulsory courses (20 ECTS)			Compulsory courses (13 ECTS)		
MEC-E1003 Machine Design Project		1-11	TU-E4101 Entrepreneurship Lab	10	III-IV
MEC-E7006 Advanced Manufacturing	5	IV	10-L4101 Entroproficulating Eab	10	111 1 V
MEC-E7009 Design for Additive Manufacturing L	5	V	LC-1317 Integrated Project Communication for MSc Students (o,w)	3	III-IV
MEC-E1075 Selection of Materials and Manufacturing Processes	5	1			
Optional major courses (choose 25 ECTS)			Optional courses (choose 2 ECTS)		
MEC-E1061 Computer-Aided Engineering	5	I TU-C2080 Entrepreneurship Essentials *		1	l or II
ELEC-E8113 Information systems in industry	5	1	TO OLOGO Emilopromodromp Eddomidae		1 01 11
MEC-E1090 Quality Management and Metrology	5	II	TU-C2090 Starting Up *	1	l or II
MEC-E7012 Manufacturing Operations	5	Ш	MEC-E3900 Prototyping Tools at the Design Factory*	1	1-11
MEC-E7011 Machining Processes	5	IV-V	IOIN E2010 Design Thinking for Innovation*	1-2	1-11
MEC-E7013 Casting and Forming Technologies	5	IV	JOIN-E3910 Design Thinking for Innovation*	1-2	1-11
MEC-E6002 Welding Technology and Design D		V	Total minor	15	
Total Major	45				



<sup>\*)</sup> Online self-study courses that can be completed in any period / term, but we recommend these in the autumn term to secure sufficient background knowledge for Entrepreneurship Lab in the spring.

<sup>\*\*)</sup> Integrated with Entrepreneurship Lab; cannot be completed as a stand-alone course. This course is not mandatory for students who have completed a bachelor degree in Finland. The course fulfills the requirements of compulsory foreign language course in the degree. If you don't take this course, pick another eligible language course either in the autumn or in the spring term. Registration is required separately to both Entrepreneurship Lab and Integrated Project Communication course.

# Entry year, ZD (period I courses)

Course code and name	ECTS credits	Period	Course code and name	ECTS credits	Period
Compulsory courses (20 ECTS)			Compulsory courses (13 ECTS)		
MEC-E1003 Machine Design Project	5	1-11	TU-E4101 Entrepreneurship Lab	10	III-IV
MEC-E1090 Quality Management and Metrology	5	II	10 E4101 Entropronotionip Edb	10	111 1 V
MEC-E1075 Selection of Materials and Manufacturing Processes	5	1	LC-1317 Integrated Project Communication for MSc Students (o,w)	3	III-IV
MEC-E1061 Computer-Aided Engineering	5	1			
Optional major courses (choose 25 ECTS)			Optional courses (choose 2 ECTS)		
MEC-E7012 Manufacturing Operations	5	III	TU-C2080 Entrepreneurship Essentials *	1	l or II
MEC-E6002 Welding Technology and Design D	5	V	TU-C2090 Starting Up *	1	l or II
MEC-E7011 Machining processes	5	IV-V	MEC-E3900 Prototyping Tools at the Design	1	I-II
MEC-E7013 Casting and Forming Technologies	5	IV	Factory*		
MEC-E7006 Advanced Manufacturing D	5	IV	JOIN-E3910 Design Thinking for Innovation*	1-2	1-11
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#### Compulsory foreign language course

- Compulsory degree requirement: 3 ECTS of foreign language (i.e. other than Finnish or Swedish), oral and written requirements
- The language course is integrated in your curriculum
  - Entry students: LC-1317 Integrated Project Communication for MSc Students (o,w) = mandatory I&E course in the spring term, connected to TU-E4101 Entrepreneurship Lab
  - Exit students: LC-1310 Academic Communication for MSc students (o,w), groups H03 or H05 (priority for double degree exit students; other groups ok too!
- Studying Finnish?
  - Strongly recommended, but as extra (not included in the degree due to recognition issues with partner universities)





## Planning your studies – how?

- Curriculum & degree structure = what you have to and can include in your degree
  - Follow the curriculum!
- Personal Study Plan (PSP; HOPS in Finnish) = how you plan to do this
  - Sisu (sisu.aalto.fi)
  - Registration to courses is done via PSP
  - "Your best plan to graduate for the time being"
     can be modified at any time
  - Play with the PSP to plan your workload per teaching period / semester
  - Also a tool used to apply for graduation at a later stage
- Help with personal study plan?
  - Book an individual appointment with Stefano or Aino in MyStudies





#### Model schedules

- Find them at https://www.aalto.fi/en/programmes/mastersprogramme-in-manufacturing/planning-your-studies
- Purpose: to help you get an overview of your weekly schedule, but to be used only as supplement to the curriculum / Sisu personal study plan.
- Don't forget the scheduling tool in Sisu ©
- Entry students:
  - Please note that TU-E4101 **Entrepreneurship** Lab is intended to be taken in the spring term (connected to Integrated Project Communication). If you have already registered for the autumn term, please cancel it.
  - Note that you only have one course in the 5<sup>th</sup> period → consider **a summer job** as of mid-April until the start of your exit year (e.g. TU Wien: beginning of October), excluding the summer school!



EITM Addi	tive Manu	facturing fo	or Full Flex	ibility / exi	t year / per	riod I			
compulsory	compulsoy course, lab	compulsory		optional course, lab					
AM		I&E	optional AM	option grou					
	Mon	Tue		Wed			Fri		
8									
9				9:15-12:00 TU-				9:15-12:00 TU-	
10	10:15-12:00 MEC- E1061 L01 Computer-Aided Engineering /			E4101 Entrepreneurshi p Lab / weeks 36- 41 and 43-48 / check MyCourses	10-12 <b>LC-1310 H01</b> Academic Communication for MSc Students		10-12 <b>LC-1310 H03</b> Academic Communication for MSc Students	/ check	
11	R008/213a / Jaakma (vk 36- 41)			for the space	(o,w) / R001/M23 37-		(o,w) / R001/Y308 / Mendoza (vk 37- 41)	the space	
12									
13		12:15-16:00 <b>MEC</b> - <b>E1061 A01</b> Computer-Aided			12:15-16:00 MEC- E1061 A02 Computer-Aided				
14		Engineering / R001/Y430 Y430 (Win) (vk 36-41)			Engineering / R001/Y430 Y430 (Win) (vk 36-41)	14:15-17:00 TU-		IEC-E1003 M02 Sign Project /	
15			15:15-17:30 <b>MEC</b> -			E4101 Entrepreneurshi p Lab / weeks 36 41 and 43-47 / check MyCourses		ssuyt (vk 36-38)	
16			E3007 L01 Product Sustainability / R999/VT1 / Kähkönen (vk 37- 38, 40-41)	16:15-18:00 MEC- E3007 L01 Product		for the space			
17				Sustainability / R999/VT1 / Kähkönen (vk 36)					
Notes:									
LC-1310 Aca	demic Comm	unication for	Msc students	: Choose eith	er H01 or H03	3 group.			

MEC-E3900 Prototyping Tools at the Design Factory: Check self-study material and sign-up to onsite workshop.

IOIN F2010 Design Thinking for Innoventions, online self study, secure

#### Course registration & PSP Demo (volunteers?)





# MyStudies

mystudies.aalto.fi/

#### Who to contact and when?

**Course** teacher

Course registration, assignments, exams, missing lectures

Mika

Curriculum
exceptions,
guidance in
choosing
optional
courses, thesis

jointma sterseng@a alto.fi

Study plan matters, thesis process and deadlines, graduation, progress of studies, general worries

Master School

Scholarships, insurances, Master School events

Other

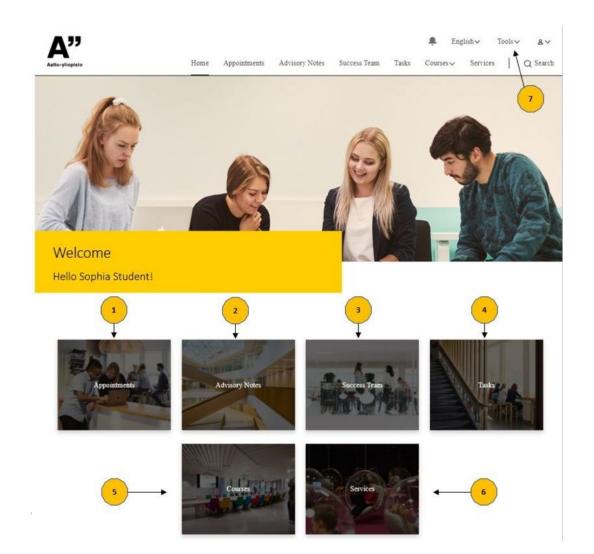
Mental health challenges <del>></del> Starting Point of Wellbeing, Aalto psychologists or FSHS

Career design and job search → Aalto Career Services



#### Modes of communication





- General study related concerns jointmasterseng@aalto.fi → Stefano (and Aino)
- Study guidance appointments via Student Success Hub > My Success Team (Stefano and Aino)
- Email → Mika
- Email → teachers & other professors



New students added ASAP ^^

#### **Master's Thesis**

- Thesis info for exit students 1 Oct at 10 am, Otakaari 4, room 101
- Cross-organizational mobility = thesis in the industry is a requirement of EIT
- The more pro-active you are, the better chances to find the thesis position of your dreams (with salary & future job prospects)
- Exit students, start searching NOW
- Only minority of available positions are published → you need networks to land the position (some tips coming up!)
- Supervisor from Aalto + possibly from entry (entry students must also have a supervisor from Aalto)



#### Double degree specialities in study administration



# Double degree student identity

- Rights and responsibilities of
  - EIT Master School (student agreement)
  - Aalto University (student status, degree regulations, code of conduct etc.)
  - Entry/exit university (local rules and regulations)
  - → Balancing!





#### **Grade & Credit Transfer**

- Transcript exchange between university admins nothing for you to worry about!
- Courses transfered individually from your entry/exit university to Aalto University and grades translated to Aalto grading scale (1-5)
- All courses from both universities count towards final GPA at Aalto (if your GPA is 4.0 or above AND your thesis graded at Aalto is a 4 or 5 → "Honours" mark in degree certificate)
- Exit students: wait for credit transfer (September –
   October depending on partner university)





#### **Annual enrolment**

- At Aalto University, students must annually enroll as attending (present) or non-attending (absent)
- Only attending students can complete studies, graduate and receive mobility scholarships from Aalto!
- Payment of student union membership fee is a precondition to enroll as attending
- You may enroll as non-attending for the autumn semester of your exit year under certain circumstances
- Enrolment is connected to permissible duration of studies
- Specific enrolment instructions for double degree students at <u>Annual enrolment | Aalto University</u>

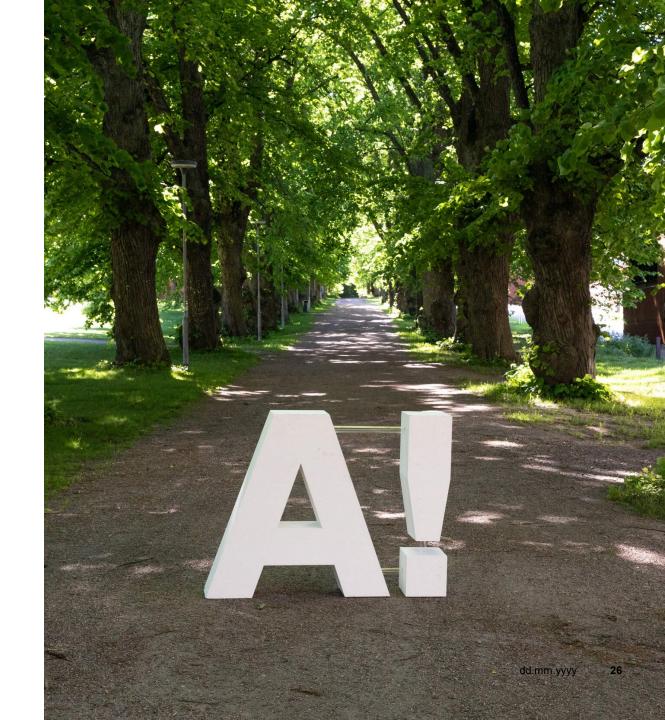




# Scholarships and fees

- Scholarships granted by EITM are administered by EITM Master School Office
- EITM Student Agreement valid for two academic years = all local tuition fees are included in EITM programme fee
- Paid programme fee is a condition to annual enrolment
- If you take longer than 2 years to graduate, you will be transferred to the local tuition fee & scholarship scheme of the universities (excl. 'grace period')
  - Aalto: academic year 1 Aug 31 July
  - Local tuition fee scheme will apply as of 1 Aug
  - Tuition fee 7 500 EUR/year for non-EU/EEA students (0 EUR for EU/EEA)
  - Scholarships for one additional term (= grace period at Aalto): application instructions sent during spring term of your 2<sup>nd</sup> year; 100% tuition fee waiver to finish your studies before 31 Dec





#### Double degree specialities in student life



### Finnish ID (number)

- Required e.g. for student healthcare, public transportation, bank account, employment (taxation)...
- How to get it?
  - With residence permit (non-EU/EEA students)
  - By application to DVV (non-EU/EEA student who did not get it with residence permit)
  - By registration of right of residence (EU/EEA students) to Migri
- Once you get it, send it to us (jointmasterseng@aalto.fi) and we will add it to your Sisu profile.





#### **Bank accounts**

- Aalto does not have a bank partner or recommendation – other (international) students and tutors know the best tips
- Book an appointment at the bank where you want to open account in advance
- Finnish personal ID code is required
- Online banking codes strongly recommended if only you can get them
- More information at <u>Registering with the</u> <u>authorities and opening a bank account | Aalto</u> <u>University</u>

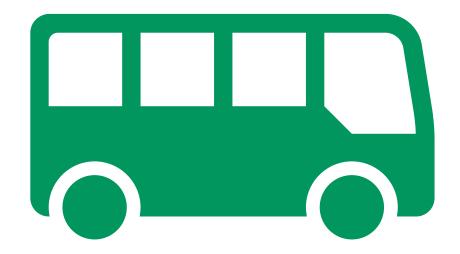




#### **HSL** card & student discount

- App. 40% discount in public transportation
- In order to get the discount, you should
  - Get the student discount form for EXCHANGE STUDENTS with an official university stamp and signature from the Starting Point (Otakaari 1)
  - Visit a the HSL pop-up desk at the Welcome Fair or HSL service point
- The discount can be granted for the period that you have currently enrolled as attending for, i.e. the whole academic year 1 August 2024 to 31 July 2025







Residence permits (non-EU/EEA)

- You need to apply for the residence permit to your exit university country through their embassy in Finland.
- Exceptions: Sweden (+ possibly other countries allowing mobility notification)
- Initiate your residence permit application to your exit university immediately as soon as you receive the admission letter <u>unless instructed</u> <u>otherwise on the letter!</u>
- Note that you need a valid (Finnish or other) residence permit during the summer school too!
- Enrolment as attending is required for RP extension to Finland





#### Healthcare

- YTHS = Finnish Student Healthcare Services (FSHS)
  - Compulsory service fee, no costs for appointments
  - Payment due 15 November, instructions at <u>How to pay the student</u> <u>healthcare fee | Our Services | Kela</u> (N.B: You must pay before you can access the services – you might need them before 15 Nov!)
  - EU students may be exempted (apply for exemption ASAP)
  - Always the first recommendation = affordable and easy
  - Office hours only
- Public healthcare (e.g. Tapiola Health Centre)
  - Only emergencies
  - Remember European Health Insurance Card!
- Private cliniques (e.g. Terveystalo, Mehiläinen...)
  - Non-emergencies outside office hours
  - Make sure you know where to go & what to do in case of emergency
  - Reimbursement claims with your insurance
  - In emergencies, call 112



### How to get started with all these?

#### Welcome Fair & pop-up service points – some picks

- HSL: Tuesday, Wednesday and Thursday from 10.00 to 16.00 at the main lobby of the Undergraduate Centre (Otakaari 1).
- <u>DVV</u>: Wed 28th August or Thu 29th August 2024 please check the instructions for pre-registration!
- FSHS: Thu 29<sup>th</sup> August, 10 am to 3 pm
- OP Uusimaa note that it's not possible to open an account at the pop-up service desk, instead <u>please check their website</u>



# Summary: Things to take care of ASAP

- ☐ Signing the attendance list today
- Registering to courses beginning in period I
- □ Getting a Finnish personal ID → inform us when you do
- ☐ Opening a bank account (scholarship holders)
- Choosing and timing optional courses
- ☐ Paying student healthcare fee or applying for exemption



Keys to success - things to

consider on longer term

- Prepare to study full-time
- Follow the curriculum and your Personal Study Plan (PSP)
- Follow the universities' regulations
- Always attend the first lecture of the course
- Don't be left alone, there are always people here to help you
- Be an active respondent to any feedback surveys sent to you
- Take care of your study ability <3</li>





#### What's up next?



# Your orientation week

- Right now: stay for a chat with us
- Orientation week programme
   https://www.aalto.fi/en/programmes/masters-programme-in-manufacturing/starting-your-studies

Tomorrow (Wednesday): Together with your fellow students Master's Programme in Mechanical Engineering, starting 10 am @Design Factory

Thursday: Welcome Fair, Better Study Life

Friday: Entrepreneurship Ecosystem Introduction for EIT students at Aalto, starting with small breakfast at 9 am @Design nFactory

 Evening programme organized by guilds (voluntary) – ask your tutor (group) and make memories for a lifetime!





Upcoming events - save the date!

- <u>FIRPA (Finnish Additive Manufacturing Association) Conference</u> in Otaniemi, 12 Sep (AM students)
- How to prepare for a Career Fair training for international students, 12 Sep,
   8:30 am (<u>please pre-register here</u>)
- Thesis info for EITM exit students 30 Sep at 2 pm OK 4 / 101
- Aalto Thesis Day, 2 Oct (exit students)
- Subcontracting Fair, Tampere, 1-3 Oct
  - Travel costs covered (bus & train)
  - Pre-registration required
  - Note: Thesis Info & Thesis Day are priority #1
- EITM Welcome Ceremony & World Manufacturing Forum in Milan, 14-15 Oct (entry students)
- ENG Student & Alumni Networking Event, 23 Oct (entry & exit)
- Aalto Talent Expo, 2 Nov <a href="https://www.aalto.fi/fi/talent-expo">https://www.aalto.fi/fi/talent-expo</a>
- SLUSH, 20-21 Nov, https://slush.org/volunteers/
  - Apply to be a volunteer, DL 8 Sep
- KIK Events & Excursions check with your tutor!







# Kiitos aalto.fi