

Form number

1

Form name

CSE Program of Examinations

Enrollment year

2021/2022 or later

Fill in momentAt least 6 weeks before
start preparation project

Name:

ID-Number:

Month and year of enrollment:

Instructions

Please fill in the form digitally. In the case you want to change your program and you require permission from the examination committee in advance (e.g. when following courses at another university), note the changes on page five. When you want to change the program for other reasons, please hand in a revised form at the start of your preparation phase together with form 2. For more information on the CSE program check [the online education guide](#).

1. In the red column you need to select three foundational courses. You can only pick one foundational course per focus area.
2. In the blue column you need to select three extra courses from your chosen focus area. These can be either foundational courses or deepening courses. Please indicate which focus area you picked by ticking the box *focus area*.
3. Next you need to select specialization electives. You need select 30 ECTS of specialization electives, which can come from the green column or from the list of specialization electives on page 3.
4. Additionally, on page 3 you need to fill in your free electives (15 ECTS). Do you wish to include courses from another university? Please provide links to the course descriptions of these courses (e.g. a link to a course catalogue).
5. On page 4 you can fill in your homologation courses if applicable and choose the seminar you wish to follow.
6. Both you and the representative of the research cluster you intend to graduate in have to sign the form on page 5.
7. If you need to make changes to a previously approved program please indicate the changes made in the text box on page 5 as well.

Code	Course title	Foundational courses	Extra courses	Specialization electives
Focus areas				
Algorithms and Theory <input type="radio"/> focus area				
2IMA10	Advanced algorithms		<input type="checkbox"/>	<input type="checkbox"/>
2IMF25	Automated Reasoning		<input type="checkbox"/>	<input type="checkbox"/>
2IMF10	Process Algebra		<input type="checkbox"/>	<input type="checkbox"/>
2IMA20	Algorithms for Geographic Data		<input type="checkbox"/>	<input type="checkbox"/>
2IMA15	Geometric Algorithms		<input type="checkbox"/>	<input type="checkbox"/>
2IMA35	Massively Parallel Algorithms		<input type="checkbox"/>	<input type="checkbox"/>
2IMA25	Exact Algorithms for NP-hard Problems		<input type="checkbox"/>	<input type="checkbox"/>
2IMF15	Proving with Computer Assistance		<input type="checkbox"/>	<input type="checkbox"/>
2IMA30	Topological Data Analysis		<input type="checkbox"/>	<input type="checkbox"/>

Architectures and Systems		○ focus area		
2IMN10	Architecture of Distributed Systems		<input type="checkbox"/>	<input type="checkbox"/>
2IMF30	System Validation		<input type="checkbox"/>	<input type="checkbox"/>
2IMD10	Engineering of Data Systems		<input type="checkbox"/>	<input type="checkbox"/>
2IMF35	Algorithms for Model Checking		<input type="checkbox"/>	<input type="checkbox"/>
2IMN15	Internet of Things		<input type="checkbox"/>	<input type="checkbox"/>
2IMN20	Real-time Systems		<input type="checkbox"/>	<input type="checkbox"/>
2IMN25	Quantitative Evaluation of ES		<input type="checkbox"/>	<input type="checkbox"/>
2IMN35	VLSI Programming		<input type="checkbox"/>	<input type="checkbox"/>
Software and Analytics		○ focus area		
2AMM10	Foudations to Process Mining		<input type="checkbox"/>	<input type="checkbox"/>
2IMP10	Program Verification Techniques		<input type="checkbox"/>	<input type="checkbox"/>
2IMP25	Software Evolution		<input type="checkbox"/>	<input type="checkbox"/>
2AMI20	Research topics in Data Mining*		<input type="checkbox"/>	<input type="checkbox"/>
2IMN30	Machine Learning for Industry		<input type="checkbox"/>	<input type="checkbox"/>
2IMP40	Applications of Data Science for Software Engineering		<input type="checkbox"/>	<input type="checkbox"/>
2AMD15	Big Data Management		<input type="checkbox"/>	<input type="checkbox"/>
2IMP30	System Design Engineering		<input type="checkbox"/>	<input type="checkbox"/>
2IMP20	Domain Specific Language Design		<input type="checkbox"/>	<input type="checkbox"/>
Subtotal ECTS		15	15	

* Only students that started their Program before AY 2023-2024 may take this course as foundational course in the Software and Analytics Focus Area

Specialization electives

Course code	Course title	
2IMS10	Physical Aspects of Digital Security	<input type="checkbox"/>
2IMS25	Principles of Data Protection	<input type="checkbox"/>
2IMV25	Interactive Virtual Environments	<input type="checkbox"/>
2DMI20	Software Security	<input type="checkbox"/>
2IMS20	Cyberattacks, Crime and Defenses	<input type="checkbox"/>
2AMM15	Machine Learning Engineering	<input type="checkbox"/>
2IMS15	Verification of Security Protocols	<input type="checkbox"/>
2IMS30	Advanced Network Security	<input type="checkbox"/>
2IMV10	Visual Computing Project	<input type="checkbox"/>
2AMM10	Deep Learning	<input type="checkbox"/>
2IMP15	Software Project Management	<input type="checkbox"/>
2IMV15	Simulation in Computer Graphics	<input type="checkbox"/>
2IMC10	Internship* (15 credits)	<input type="checkbox"/>
Subtotal ECTS		

Internship supervisor (if known):

An internship is optional. Keep in mind, when you do an external internship (e.g. at a company), your graduation project needs to be executed internally (within TU/e), when you do an internal internship you cannot graduate with the same supervisor.

Free elective courses

Course code	Course title	ECTS
Subtotal ECTS		

Homologation courses (if applicable)(homologation courses count towards the 15 ECTS in free elective courses)**

**Homologation courses are bachelor courses assigned during the admission process to make up deficiencies in previous knowledge. Please check your admission letter to see if you have homologation courses. It is also possible to pick a maximum of three bachelor courses yourself to compensate deficiencies, if you think it is necessary. If you do that, a motivation for including the self-chosen homologation courses must be attached to this form.

Course code	Course title	ECTS
Subtotal ECTS		

Seminar

Course code	Course title	ECTS
2IMD00	Seminar Data Management	<input type="checkbox"/>
2IMF00	Seminar Formal System Analysis	<input type="checkbox"/>
2IMI00	Seminar Process Analytics	<input type="checkbox"/>
2IMM00	Seminar Data Mining	<input type="checkbox"/>
2IMN00	Seminar Interconnected Resource-aware Intelligent Systems (IRIS)	<input type="checkbox"/>
2IMP00	Seminar Software Engineering and Technology	<input type="checkbox"/>
2IMU00	Seminar Uncertainty in AI	<input type="checkbox"/>
2IMV00	Seminar Visualization	<input type="checkbox"/>
2IMA00	Seminar Algorithms	<input type="checkbox"/>
2IMS00	Seminar Information Security Technology	<input type="checkbox"/>
Subtotal ECTS		

Graduation Project

Course code	Course title	ECTS
2IMC15	Preparation Graduation Project	10
2IMC00	Master Project	30
Subtotal ECTS		40

Total number of ECTS (at least 120 credits)

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Agreement student

Signature Student:

Date:

Changes to the previously approved program, links to course descriptions of courses followed at another university and/or motivation for self-chosen homologation courses (if applicable):

This form must send to the Examination Committee mcs.examination.committee@tue.nl.

If you do not agree with the decision of the Examination Committee, you may submit an appeal [via this webpage](#) within a period of six weeks after the date of this decision.

This section to be completed by the Examination Committee

Approval Examination Committee:

Date: