

Form number

1

Form name

CSE Program of Examinations

Enrollment year

2022-2023 or later

Fill in moment

At least 6 weeks before start preparation phase

Name:

Intended graduation cluster*:

ID-Number:

Month and year of enrollment:

Name representative research cluster*:

*This form needs approval (within SCOP/e - 2IMR10) from the representative of the research cluster where you intend to graduate.

Instructions

Please try to fill in the form via 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 credits of specialization electives, which can come from the green column or from the list of specialization electives on page 3.
4. Additionally, on the third page 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 the fourth page you can fill in your homologation courses if applicable and choose the seminar you wish to follow.
6. If you need to make changes to a previously approved program please indicate the changes made in the textbox on page five 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"/> | <input type="checkbox"/> |
| 2IMF25 | Automated Reasoning | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2IMF10 | Process Algebra | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2IMA20 | Algorithms for Geographic Data | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2IMA15 | Geometric Algorithms | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2IMA35 | Massively Parallel Algorithms | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2IMA25 | Exact Algorithms for NP-hard Problems | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2IMF15 | Proving with Computer Assistance | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2IMA30 | Topological Data Analysis | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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

* Only students that started their Program before the academic year 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 | | |

CSE Individual Program of Examinations

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 | |
|----------------------|--|--------------------------|
| 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 (Not given in AY 21-22, but in AY 22-23) | 10 |
| 2IMC00 | Master Project | 30 |
| Subtotal ECTS | | 40 |

Total number of credits (at least 120 credits)

| |
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| |
|--|

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 section to be filled in by the examination committee

Approval Examinations Committee:

Date: