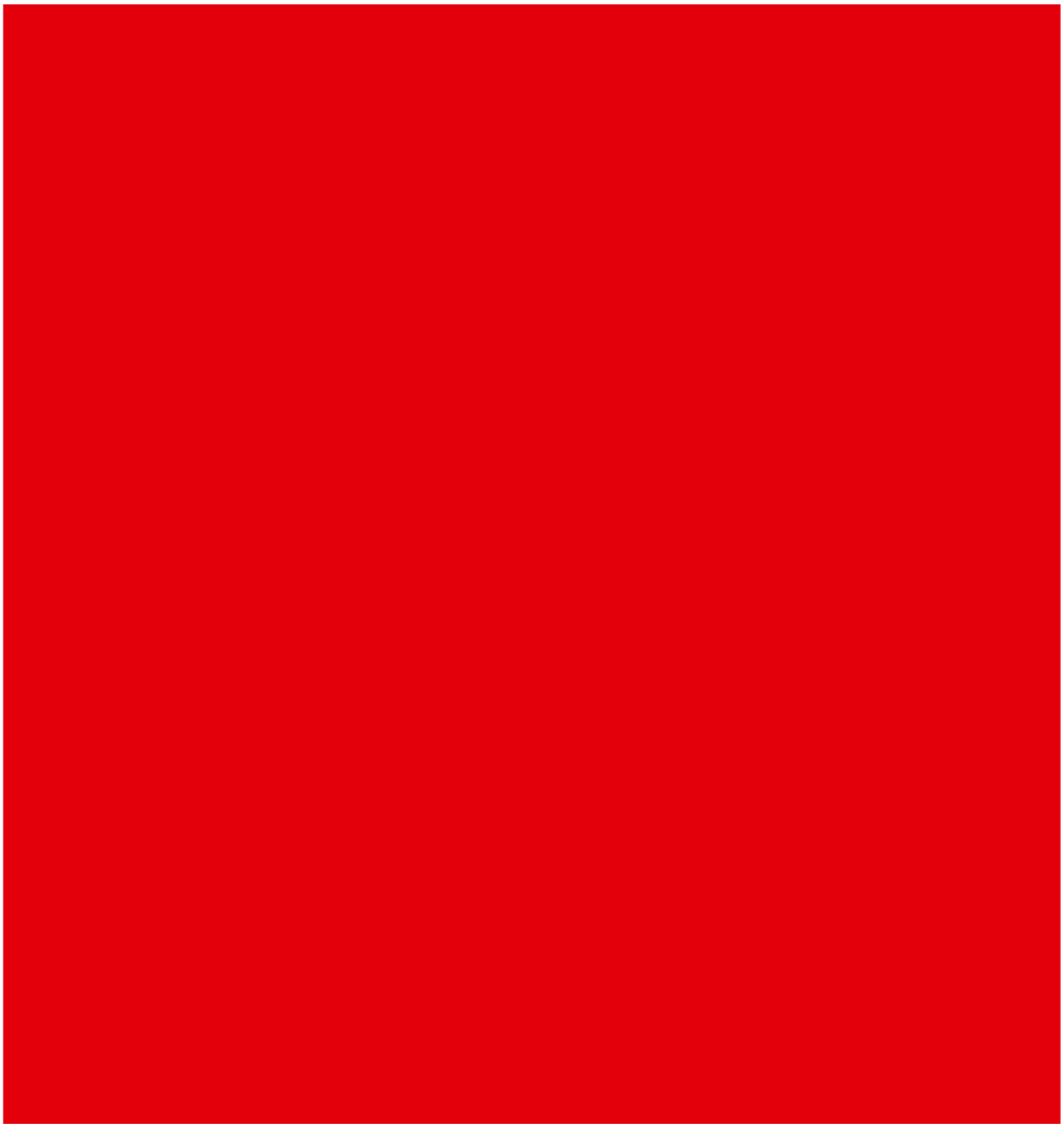
Radboud Universiteit

**Master**

# Artificial Intelligence

**FSW**

## Education and Examination Regulations 2024-2025



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# Part 1 General Provisions

## *Paragraph 1 General Provisions*

### Article 1.1 Aim and Applicability

1. These Education and Examination Regulations (EER) (hereinafter, regulations) apply to the Master's degree programme in **Artificial Intelligence**, CROHO 66981, (hereinafter, the programme). The programme is set up by the Executive Board of Radboud University (hereinafter RU) and is offered by the Faculty of Social Sciences (hereinafter, the faculty). Part 2 of these regulations lists the provisions applicable to all Master's degree programmes of the faculty. Part 3 specifies the additional provisions applicable to this particular programme.
2. The present regulations apply to all students enrolled in the programme in 2024-2025.
3. In order to prevent students from being disadvantaged by changes to these regulations, a programme may decide to make appropriate transitional arrangements. Such transitional arrangements specify the students to whom they are applicable. Transitional regulations are valid for one academic year. If no transitional arrangements are made or if transitional arrangements are terminated, students may apply the hardship clause (Article 11.1).

### Article 1.2 Guidelines Executive Board

1. With a view to the organization and coordination of the provisions in these regulations, the executive board has adopted the following guidelines:

   Guidelines Distinctions Regulation

2. The provisions in these education and examination regulations apply respecting the provisions of the guideline referred to in paragraph 1 of the present article.

### Article 1.3 Definitions

1. The terms used in these regulations, which are also used in the Higher Education and Research Act (Wet op het hoger onderwijs en wetenschappelijk onderzoek, hereinafter, the Act) will have the same meaning as these terms have in the Act.
2. Apart from the terms referred to in paragraph 1, is understood by;
   - contact hour: an education hour in which the lecturer is either physically or virtually present, where face-to-face or virtual interaction is possible;
   - EC (European Credit): the course load entity in accordance with the European Credit Transfer System (ECTS), in which 1 EC is equivalent to 28 hours of study;
   - education week: week in which education is provided, as laid down in the RU's annual time table;
   - examination: the entirety of interim examinations, resulting in a Master's degree certificate;
   - examiner: a person appointed by the Examination Board to administer examinations and determine the results;
   - extra-curricular elective unit of study: component to be determined by the student, which is not part of regular curriculum;
   - fraud: any act or omission by a student which, in its nature, is intended to have as an effect that proper assessment of the knowledge, understanding and skills of that student or another student, is made fully or partially impossible (Appendix 1);
   - free elective unit of study: component entirely to be determined by the student, which is part of the free elective room of the regular curriculum;
   - final assignment: final paper for the programme, also known as dissertation or thesis;
   - interim examination: umbrella term for all common assessment methods, as referred to in article 7.10 paragraph 1 of the Act and as described in article 4.1.1;

- interim examination date: the date on which the interim examination is administered by or on behalf of the examiner;
- module examination: an examination with respect to the knowledge, understanding and the skills of the examinee, as well as the assessment of the outcomes of that examination, which in coherence with one or more other examinations referred to here, constitute the interim examination as referred to in article 7.10 paragraph 1 of the Act. Where these regulations refer to interim examination, this term also includes module examination unless stipulated otherwise;
- pre-master: a programme as referred to in article 7.30e of the Act to support students who do not meet the admission requirements of the Master's programme;
- prospective student: a student who has registered in Studielink, but has not yet enrolled;
- resit: the re-examination of an examination as referred to in in article 7.10 paragraph 1 of the Act. Where these regulations refer to interim examination, this term also include resits, unless stipulated otherwise;
- unit of study: part of the degree programme (component) as referred to in article 7.3 of the Act;
- working day: Monday to Friday, with the exception of public holidays as specified in the CAO for Dutch Universities *and* the collective free days designated by the Executive Board;

3. Where these regulations refer to 'the student', the prospective student is included, wherever relevant.

# Part 2 General Part

## Paragraph 2 Admission to the programme and education

### Article 2.1 Admission requirements and procedures

1. Decisions on admission to the programme are taken, on behalf of the dean, by the Admission Board.
2. The admission requirements are laid down in article 8.1 of the programme-specific part of these regulations.

### Article 2.2 Pre-master

1. In the event that not all admission criteria have been met but the Admission Board is of the opinion that the deficiencies can be remedied within a reasonable period of time, the scope and the content of a pre-master programme will be determined upon request.
2. If applicable, the pre-master programme is attached as an appendix.
3. The student will only be admitted to the master degree programme if the pre-master programme has been completed and all admission requirements have been met.

### Article 2.3 Admission to tuition and examinations

1. Students who are enrolled in the programme may attend all units of study in that programme and may sit the corresponding interim examinations.
2. In derogation of the provision in paragraph 1 specific (non) content-related admission requirements may be requested for a unit of study. These are laid down in article 8.2 of the programme specific part of these regulations.
3. In special circumstances, the Examination Board may exempt the student from the entry requirements, with or without imposing alternative requirements.
4. Registration for tuition and examinations is not made dependent on other financial contributions than tuition fees, unless costs should be involved, to be determined by the dean in a separate decision, in relation to participation in any practical exercises, educational excursions or workshops in the degree programme that follow from the special nature of the degree programme. If any costs referred to in this paragraph should be involved, these costs are listed in the Education catalogue. The dean offers an alternative, free of charge, unless the educational facility cannot be replaced.
5. In order to take an elective unit of study from another degree programme, students must meet the applicable admission requirements of that programme.

## Paragraph 3 Structure and form of the programme

### Article 3.1 Master's final examination, degree and distinction

1. The programme will be concluded by the Master's final examination.
2. The student who has passed the final examination of the Master's degree programme will be awarded the Master of Science (MSc) degree.
3. The Examination Board may award a distinction to a student who has successfully passed the Master's final examination. The rules for awarding a distinction have been laid down in the Guideline for Distinctions.

### Article 3.2 Learning outcomes and curriculum

1. The programme comprises the total units of study as described in article 9.5 and 9.6 of the programme-specific part of these regulations, aimed at the realisation of well-defined objectives in the areas of the knowledge, understanding and skills that those completing the course are deemed to possess.
2. The learning outcomes of the programme are laid down in article 9.1 of the programme-specific part of these regulations.

3. In the context of the programme the student is required to write a final assignment as an individual proof of competence. The Examination Board may decide this requirement is to be replaced by participation in a research project or by an internship which is subject to an individual report in accordance with applicable academic standards.

**Article 3.3 Adding units of study (extra-curricular)**

1. Adding elective units of study outside the programma, obtained during registration of the programme, is permitted. These units of study may be either at bachelor level or at master's level.
2. No permission of the Examination Board is needed for adding units of study at the Radboud University, Dutch and partner universities abroad. However, permission is required for the incorporation of extra-curricular components from institutions other than those mentioned in this paragraph.
3. In the event that workload and study results of the units of study to be incorporated differ from those provided for in these regulations, achieved results will be registered as 'sufficient' (voldoende) or 'fail' (onvoldoende).
4. Added units of study will be listed on the diploma.

**Article 3.4 Exemptions**

1. Granting exemptions from units of study is permitted, unless provided otherwise in the programme-specific part of these regulations.
2. At the request of a student and having heard the examiner involved, the Examination Board may exempt the student from a unit of study, if this student:
    a. has either completed a relevant unit of study of a university or higher professional programme that is similar both regarding contents and level; or
    b. demonstrates - after successfully passing an assessment as requested by the examiner - having adequate knowledge and skills regarding the unit of study in question as a result of relevant work experience or professional experience
3. For units of study in the first period of the first year exemptions may be granted up to two weeks after the start of the unit of study. For all other units of study exemptions must be granted before the start of the unit of study.
4. The percentage of exemptions will never be more than 50 percent of the programme’s credits.
5. No exemption will be granted for the final assignment.
6. In the case of a Double Degree Programme, the student can address a request to the Examination Boards of both Degree Programmes to perform only one graduation project that meets the final requirements of both Degree Programmes. Such a request will only be honoured if both Examination Boards agree.
7. The Examination Board does not grant exemptions on the basis of results obtained in the period in which the student was banned from sitting interim examinations as referred to in the Regulations on fraud Radboud University (Appendix 1).

**Article 3.5 Elective programme**

1. The programme’s Examination Board decides on a request for permission to attend an elective programme as meant in article 7.3d of the Act. The Examination Board will verify whether the programme fits within the degree programme’s domain which the Examination Board is accountable to, if it is sufficiently coherent and if the level is adequate in the context of the programme’s learning outcomes.
2. The request in question will have to be submitted at least two months prior to the start of the programme.

**Article 3.6 Teaching periods and examinations**

1. The programme will be offered in an annual schedule consisting of two semesters, set by the Executive Board.
2. A semester is divided in two periods.
3. At the end of each period interim examinations are scheduled.
4. The programme-specific part at least arranges in which semester the opportunity is provided to attend courses and to sit the interim examinations of the units of study.
5. In derogation of the provision in paragraph 1 and 2 of this article, the Master’s programmes can adjust the

semester schedule to fit educational needs.

**Article 3.7 Language**

Article 9.4 of the programme-specific part of these regulations stipulates the language/languages in which the units of study are taught.

**Article 3.8 Participation in education**

1. Participation in education is optional, unless this has been otherwise specified in the course manual of the relevant unit of study;
2. The exact specifications of the participation requirement and any sanctions related to not satisfying this requirement must also be indicated in the course manual of the relevant unit of study.

## *Paragraph 4 Examinations*

**Article 4.1 Structure and requirements of the examinations**

More detailed provisions regarding the assessment of the units of study are outlined in the Rules and Regulations of the Examination Board.

1. Each unit of study of the programme will be completed by an interim examination. Interim examinations may comprise more than one module examination. Examples are written or oral (interim) examinations and can be taken either physically of digitally. Apart from written or oral examinations, tests with multiple choice and/or open questions, papers, theses, assignments, take-home examinations, reports, presentations or a combination of any of these is possible.
2. In addition to the provisions set forth in paragraph 1 for units of study that also comprise a practical and/or work group, attendance levels and the degree of active participation may be included in final grading.
3. In principle, oral interim examinations are administered in public and these examinations consist of an individual test in which, normally no more than one person is tested at the same time.
4. Oral interim examinations are administered in the presence of at least a second examiner or an observer appointed by the Examination Board. Otherwise the interim examination is to be recorded. In the case that a presentation is part of the final examination, the same rules apply. The same applies to presentations that count for 40% or more of the final grade. This provision does not refer to practical assignments.
5. At the request of the student the Examination Board may, on behalf of the dean, decide that students with an impairment, by way of special examination facilities, sit the interim examinations in a form adapted to that impairment. Prior to making a decision on this matter, the Examination Board may seek expert advice. In so far as facilities in the context of a 'digital test' are concerned, the Examination Board, when formatting the facility, may seek advice from the faculty's digital testing coordinator.
6. In the Education catalogue information will be provided for each individual unit of study on the way in which the interim examinations will be administered.
7. Representative sample questions will be made available to the students at least one week prior to the examination. The student is given the opportunity to check their answers to the sample examination (e.g. via a question & answer lecture or answer model). The sample questions are representative of the format and content of the upcoming interim examination. More sample questions will be available for interim exams with a substantial amount of content. For examination forms such as papers, theses/theses, assignments, reports and presentations, the assessment criteria should be available to students when the assignment is given.
8. The course manual must be published at least one week before the start of the unit of study on the online learning environment. The course manual includes topics for the interim examination preparation, compulsory literature, a table outlining the workload for students, examination methods and weighting of various interim examination parts in the determination of the final grade.
9. Interim examination dates must be announced no later than one month before the start of a semester.
10. If a unit of study starts on the first day of an academic period set by the Executive Board, no requirements may be

imposed on students regarding literature having been studied or assignments having been completed for that unit of study on that day. Necessary preparatory actions - such as reading course manuals or looking for an internship - are permitted.

11. If there are legitimate grounds for it, the Examination Board may decide in special cases to use an assessment method other than that which is specified in the course manual.

**Article 4.2 Rules when administering examinations**

For the proper course of events during examinations that are administered in the examination rooms of the Radboud University, the dean has adopted the Regulations on Examination Rooms Radboud University in a separate decision. In order to provide the student with proper and clear information these rules have been attached to these regulations as Appendix 2.

**Article 4.3 Frequency of examinations**

1. For each unit of study opportunity is given for one interim examination and one resit each academic year, on the dates set by the programme director unless provided otherwise in the programme-specific part of these regulations.
2. If the examination referred to in paragraph 1 consists of module examinations, the resit also consists of module examinations, unless stated otherwise in the programme specific part.
3. Contrary to the stipulation in paragraph 1, there will be only one opportunity to take an interim examination for a unit of study that was not taught in that particular academic year. The Examination Board may decide otherwise.

**Article 4.4 Language of the examinations**

The interim examinations are offered in the programme's language of instruction, unless provided otherwise in the programme specific part of these regulations.

**Article 4.5 Registration and application for examinations**

1. Students register through OSIRIS for a unit of study of the programme.
2. If students are registered for a unit of study they are also registered for the first interim examination in the corresponding academic year.

**Article 4.6 Resit of examinations**

1. Interim examinations may be retaken once within the same academic year, even when the result is a pass.
2. In derogation of the provision in paragraph 1 of this article, a paper (report, essay, assignment) that receives a passing grade cannot be resubmitted unless otherwise indicated in the course manual.
3. If a student wants to resit an interim examination, they have to register themselves.
4. Registering for a resit is possible until 11.59 pm on the day before a period of five working days preceding the date of the resit meaning there must always be five full working days between the registration deadline for a particular resit and the date of that resit. The day on which the resit takes place is never included in this period of five working days. After this date registration no longer is possible. The Examination Board, on behalf of the dean, may in special cases decide otherwise as long as this is logistically possible.
5. If a student resits an interim examination, in all cases the most recent grade will determine the final result.
6. The course manual contains provisions on retaking module examinations.
7. If a student does not pass the interim examination within the academic year the student must retake the entire unit of study a following academic year, unless the examiner decides otherwise.

**Article 4.7 Determination of results**

1. The final grade of a unit of study will be rounded to the nearest whole and half grade points, as follows: 1; 1.5; 2; 2.5; 3; 3.5; 4; 4.5; 5; 6; 6.5; 7; 7.5; 8; 8.5; 9; 9.5; 10, unless the grade is not expressed as a number, see 4.8.
2. As determined in paragraph 1, the results of a unit of study cannot be set at 5.5. For arithmetical scores between 5 and 6, a score lower than 5.50 will be rounded to 5 and a score equal to or higher than 5.50 will be rounded to 6.

The degree programme's course manual contains provisions on rounding scores of modular examinations for the different units of study.

3. If the result of a unit of study equals or is greater than 6.0 points, the unit of study is passed. If the result of the unit of study equals or is less than 5.0 points, the student has failed the unit of study.

**Article 4.8 Alphanumeric results**

Without prejudice to the provisions of article 4.7, the following alphanumeric results are established and registered in Osiris in the following cases:

a. 'P' (pass, voldaan), if the student has met the requirements for completing the unit of study;
b. 'NA' (not accomplished, niet voldaan), if the student does not meet the requirements for completing the unit of study (for example: this is the case when a student has not participated in a compulsory educational activity);
c. 'EX' (exemption, vrijstelling), if the Examination Board has granted an exemption, with due consideration for the provisions in these regulations, for a unit of study of the examination programme;
d. 'SU' (sufficient, voldoende), if the student passed the unit of study;
e. 'F' (fail, onvoldoende), if the student has failed the unit of study;
f. 'FR': fraud (fraud, 'fraude'): if the Examination Board has established that fraud was committed when the examination was administered and the Examination Board has declared the result of the interim examination in question invalid, with due consideration of the provisions of the Regulations on Fraud attached to these regulations as Appendix 1.

**Article 4.9 Publication of results**

1. The examiner will determine the results of an examination and is ultimately responsible for the correct registration of results in OSIRIS.
2. Grading period:
    1. In case of an oral examination, the examiner will determine the result immediately or within five days after the interim examination was administered.
    2. In case of written or digital interim examinations, the grading period is no longer than fifteen working days after the day the interim examination was administered. This also applies to written and digital module examinations and to assignments/papers. If there are more than one hundred participants, a grading period of twenty working days applies to assignments/papers and examinations containing open questions.
3. By way of exception the Examination Board may - in consultation with the examiner- extend the period referred to in paragraph 2 or reduce this period. Students must be informed before the expiry of the deadline.
4. The grading period is mentioned on the examination form or the digital learning environment.
5. A minimum period of ten working days must be maintained between the date of the announcement of the result and the date of the resit, except for units of study in the fourth period with both the interim examination and the resit in the same period, where this minimum period is five working days.
6. In derogation of paragraph 5, for module examinations the period between the announcement of the result and the date of the resit may be shorter than ten working days.
7. When the results are published, the student will be informed about the right to inspect their marked work as referred to in article 4.8 and about the possibility of appealing at the Examinations Appeals Board.
8. During completion of the programme's final project an independent second reader will be consulted as well as a thesis supervisor.
9. In the case of suspected fraud or plagiarism, the provisions contained in the Regulations on Fraud during examinations and examinations must be followed (Appendix 1).

**Article 4.10 The right to inspect the examinations**

1. Within a period of a maximum of twenty working days following the publication of the results of a examination, module examination or resit the student in all cases has the right to inspect the questions and the work marked, as well as receive an explanation of the formal assessment criteria.
2. If deemed necessary, the Examination Board can, after consultation with the examiner, extend or shorten the

period of twenty working days as mentioned in paragraph 1 of this article.
3. The inspection will take place under supervision of at least an examiner and/or another person with substantive knowledge regarding the course.
4. The examiner may decide that inspection will take place for all students at the same time, on a date and at a time and place set prior to the date of inspection.
5. Time, date and - preferably - place of the inspection will be announced at least five working days in advance.
6. If a student is unable to attend the inspection due to demonstrable circumstances beyond his or her control a separate inspection can be arranged upon his or her request, preferably within the period of time referred to in paragraph 1 of the present article.
7. In all events, inspection will take place no later than five working days before the resit of the examination in question is administered.
8. The provision in paragraph 7 does not apply to units of study in the fourth period with both the examination and the resit in the same period, where this minimum period is two working days.
9. If there is an assessment method that cannot be inspected and reviewed in accordance with the procedure described in paragraph 1, the course manual will describe how it can be inspected in that instance.

**Article 4.11 Validity term of examinations**

1. The validity term of any examination that has been passed is indefinite, unless provided otherwise in the programme specific part of these regulations, with due observance of the stipulations on this matter laid down in the Act.
2. In case of a restricted validity term, the Examination Board, in special circumstances and in individual cases, may extend the validity term. In the event a student has been granted financial support under the Profiling Fund, as referred to in the Act, because of an impairment or chronical illness, the Examination Board extends the period, at any time, at least by the number of months that the financial support has been granted by the Executive Board.
3. The student is notified, at least 16 weeks prior, of the expiry of the validity term applicable for an examination that was passed. This notification, by or on behalf of the dean, states that the relevant knowledge, understanding and/or skills are outdated and explains the reasons why.
4. The provisions in paragraph 1 of the present article do not apply for modular examinations. The validity term of modular examinations is always limited to the end of the relevant unit of study, unless this has been otherwise specified in the course manual of the relevant unit of study.

**Article 4.12 Determination of final Master's examination results**

1. When students have completed all examinations successfully, they must apply for the final Master's examination themselves.
2. The Examination Board will determine the results of the examination as soon as the student has passed the examinations forming part of the units of study of the programme in question and has submitted proof thereof. An examination shall be dated on the date of the last successfully passed interim examination, as long as the Master's examination is requested within four weeks after the last interim examination at the latest. If four weeks or more have passed, the examination date will be the day of the month on which the Master's examination was requested.
3. Prior to determining the results of the final Master's examination, the Examination Board itself may conduct an inquiry into the student's knowledge with respect to one or more units of study or aspects of the degree programme. If this is the case, this will be elaborated upon in the programme-specific part of these regulations.

## *Paragraph 5 Study progress, student counselling and course advice*

**Article 5.1 Study progress and student counselling**

1. The dean is responsible for the registration of the study results in such a way that every student can obtain an updated overview of the results registered in the system OSIRIS at that moment.
2. The dean is responsible for providing adequate student counselling.

## Paragraph 6 Teaching evaluation

### Article 6.1 Teaching evaluation method

With due observance of the quality assurance system of the university, as laid down in the Handbook Quality Assurance System Degree Programmes Radboud University (Handboek Kwaliteitszorg Onderwijs Radboud Universiteit), the dean sees to it that the units of study taught in the programmes will be systematically evaluated.

## Paragraph 7 Miscellaneous stipulations

### Article 7.1 Code of conduct

The faculty has instituted a Code of conduct that both students and employees are expected to follow. This Code of conduct is attached in Appendix 3 of these regulations.

### Article 7.2 Scientific integrity

Regarding research and education within the faculty, regulations about scientific integrity are in place as elaborated by the Universities of the Netherlands (UN).

# Part 3 Programme Specific Regulations

## *Paragraph 8 Access to the degree programme and education*

### Article 8.1 Registration and admission

1. The annual programme entry date is September 1.
2. Admission to a specialisation of the programme can be granted to those who have obtained a bachelor's degree in Artificial Intelligence from a research university, or a bachelor's degree from a related programme with a comparable content that sufficiently prepares for a Master's programme in advanced AI.
3. Admission to a specialisation of the programme will also be granted to students who have demonstrated, in the opinion of the Admissions Board, their suitability to take that specialisation of the programme and who have provided proof that they have an adequate command of the English language, as stipulated in article 8.3.
4. For the Master specialisation Cognitive Computing, students who meet the admission requirements will be included in a selection process, as stipulated in article 8.2.

### Article 8.2 Selection requirements

For the Master specialisation Cognitive Computing, students who meet the admission requirements will be included in a selection process. During this selection process, the Admissions Board determines which of the admissible candidates can be offered a place to study in the Master's programme based on motivation, academic performance and background knowledge.

### Article 8.3 Language requirements

1. To be admissible to the programme, a prospective student should be sufficiently proficient in English, to be proven by one of the following examinations:
    a. a bachelor diploma from a Dutch research university;
    b. a bachelor diploma from a country with English as a first language (see the Registration Regulations for a specification of countries);
    c. TOEFL iBT: ≥ 90 & subscores ≥ 22;
    d. IELTS Academic: ≥ 6,5 overall. Subscores ≥ 6,0, writing subscore ≥ 6,5;
    e. Cambridge C1 Advanced: Overall minimum score 176, minimum component score 169, minimum writing component score: 176;
    f. C2 Proficiency: Overall minimum score 180, minimum component score 169, minimum writing component score: 176

### Article 8.4 Entry requirements

In accordance with to the provisions in article 2.3.1 of these regulations, students can only participate in the Internship, the Research Project and the Extended Research Project if they have completed at least 48 EC of the Master's programme.

## *Paragraph 9 Programme structure and design*

### Article 9.1 Specific learning outcomes

1. The aim of the programme upon completion of the Master's degree programme in Artificial Intelligence is that:
    a. the student possesses advanced knowledge, skills and understanding in the domain of artificial intelligence;
    b. the student has acquired what is described in paragraph 9.1 sub. a, at a level that is attuned to the Master's degree programme Artificial Intelligence;

c. the student is able to conduct independent research in the domain of artificial intelligence.

2. These objectives are specified further in appendix 4.
3. Specific objectives for each unit of study are included in the course descriptions in the most recent course guide of the programme.

**Article 9.2 Study load of the programme**

The programme will have a study load of 120 EC. The programme's study load has been set by the Executive Board in a separate decision.

**Article 9.3 Structure of the programme**

The programme will be offered exclusively as a full-time programme. The programme's form is determined by the Executive Board in a separate decision.

**Article 9.4 Language of instruction**

The programme will be conducted in the English language.

**Article 9.5 Composition of the programme of the first year**

1. In accordance with the relevant provisions in the general part of these regulations the first year of the Master's degree programme comprises the following units of study with reference to the corresponding semester (x) and corresponding study load (in EC; 60 in total):

Note: Course name details may be subject to change.

Expansion of knowledge in one of the two specialisations of the Master Programme:

*1. Specialisation Cognitive Computing*

| **Course Code** | **Name** | **Semester** | **EC** |
|---|---|---|---|
| a | *Compulsory courses Cognitive Computing* | | *21* |
| SOW-MKI66 | Advanced Academic and Professional Skills | 1 | 6 |
| SOW-MKI67 | Ethics for AI | 1 | 6 |
| SOW-MKI71 | AI Research Colloquium | 2 | 3 |
| | *Choose 6 EC from:* | | |
| SOW-MKI75 | Applied Machine Learning | 2 | 6 |
| NWI-IMC056 | Statistical Machine learning | 1 | 6 |
| NWI-IMC030 | Machine learning in practice | 2 | 6 |
| SOW-MKI69 | Probabilistic Deep learning | 2 | 6 |
| b. | *Specialisation Courses Cognitive Computing* | | 18 |
| | *Choose three units of study from:* | | |
| SOW-MKI196 | Neuromorphic Computing | 1 | 6 |
| SOW-MKI49 | Complex Adaptive systems | 1 | 6 |
| SOW-MKI68 | Cognitive Robotics | 1 | 6 |

| | | | |
|---|---|---|---|
| SOW-MKI40 | Cognition and Complexity | 2 | 6 |
| SOW-DGCN03 | Neurophilosophy | 2 | 6 |
| c. | *Specialisation Electives Cognitive Computing* | | 18 |
| d. | Free Elective Courses | | 3 |
| | | | |

*2. Specialisation Intelligent Technology*

| **Course Code** | **Name** | **Semester** | **EC** |
|---|---|---|---|
| a. | *Compulsory courses Intelligent Technology* | | 21 |
| SOW-MKI66 | Advanced Academic and Professional Skills | 1 | 6 |
| SOW-MKI67 | Ethics for AI | 2 | 6 |
| SOW-MKI76 | AI in the Professional Workfield | 2 | 3 |
| | *Choose 6 EC from:* | | |
| SOW-MKI75 | Applied Machine Learning | 2 | 6 |
| NWI-IMC056 | Statistical Machine learning | 1 | 6 |
| NWI-IMC030 | Machine learning in practice | 2 | 6 |
| SOW-MKI69 | Probabilistic Deep learning | 2 | 6 |
| | | | |
| b | *Courses for Track Intelligent Technology* | | |
| | *Courses for Track Neurotechnology and Healthcare* | | 18 |
| | *Choose 18 EC from:* | | |
| SOW-DGCN02 | Neuroimaging 1 | 1 | 6 |
| SOW-MKI72 | AI for Healthcare | 1 | 6 |
| SOW-MKI73 | AI for Neurotechnology | 2 | 6 |
| NWI-IMC037 | Intelligent Systems in Medical Imaging | 2 | 6 |
| SOW-MKI74 | Advanced Brain-Computer Interfacing | 2 | 6 |
| SOW-MKI79 | Sensorimotor Neurotechnology | 2 | 6 |

| | | | |
|---|---|---|---|
| | *Courses for Track Interactive agents* | | 18 |
| | *Choose 18 EC from:* | | |
| SOW-MKI70 | Human-Robot Interaction | 1 | 6 |
| LET-LCEX-06 | Text and Multimedia Mining | 1 | 6 |
| SOW-MKI95 | Computer Graphics and Computer Vision | 2 | 6 |
| SOW-MKI52 | New Media Lab | 2 | 6 |
| SOW-MKI79 | Sensorimotor Neuroscience & Technology | 2 | 6 |

| | | | |
|---|---|---|---|
| | *Courses for Track Societal Impact* | | 18 |
| | *Choose 18 EC from:* | | |
| SOW-MKI72 | AI for Healthcare | 1 | 6 |
| SOW-MKI70 | Human-Robot Interaction | 1 | 6 |
| LET-LCEX-06 | Text and Multimedia Mining | 1 | 6 |
| SOW-MKI73 | AI for Neurotechnology | 2 | 6 |

| | | | |
|---|---|---|---|
| SOW-MKI74 | Advanced Brain Computer Interfacing | 2 | 6 |
| SOW-MKI95 | Computer Graphics and Computer Vision | 2 | 6 |
| SOW-MKI52 | New Media Lab | 2 | 6 |
| c. | *Specialisation Electives* | | 18 |
| d. | *Free Elective Courses* | | 3 |

2. A detailed description of the units of study outlined in paragraph 1, a (summary of) learning objectives and instructional and examination methods included, is provided in the programme's course guide.
3. The specialisation electives within the graduation specialisations Cognitive Computing and Intelligent Technology should be chosen from the list of limited elective units of study included in the degree programme's course guide.
4. The free elective units of study mentioned in paragraph 1 sub c can be chosen freely, on the condition that the chos en unit of study has an adequate level, is sufficiently relevant to the content of the programme, and has little or no overlap with other units of study. Assessments of level, relevance and overlap are made at the discretion of the Examination Board.
5. No units of study that form part of a required Bachelor's final examination may be included in the Master's final examination. Should such a unit of study be compulsory
within the student’s Master's programme, the Examination Board will appoint a substitute unit of study. This also applies to units of study of a required Bachelor's final examination that, in the opinion of the Examination Board,

shows too much overlap with prospective units of study of the Master's final examination. Requests for inclusion can be submitted to the Examination Board and will be assessed.

**Article 9.6 Composition of the programme of the second year**

1. In accordance with the relevant provisions in the general part of these regulations, the second year of the Master's degree programme comprises the following units of study with reference to the corresponding semester (x) and corresponding study load (in EC; 60 in total):

Note: Course name details may be subject to change.

1. *Specialisation Cognitive Computing*

| Course Code | Name | Semester | EC |
|---|---|---|---|
| a. | *Choice of either* | | 45 |
| SOW-MKI83 | Internship | 1 and/or 2 | 15 |
| | *plus* | | |
| SOW-MKI92 | Master Research Project | 1 and/or 2 | 30 |
| | *or* | | |
| SOW-MKI94 | Extended Research Project | 1 and/or 2 | 45 |
| b. | *Free elective courses* | | 15 |

2. *Specialisation Intelligent technology*

| **Course Code** | **Name** | **Semester** | **EC** |
|---|---|---|---|
| a. | *All tracks: Neurotechnology and Healthcare, Interactive Agents and Societal Impact* | | 45 |
| | *Choice of either:* | | |
| SOW-MKI83 | Internship | 1 and/or 2 | 15 |
| | *plus:* | | |
| SOW-MKI92 | Master Research Project | 1 and/or 2 | 30 |
| | *or:* | | |
| SOW-MKI94 | Extended Master Research Project | 1 and/or 2 | 45 |
| | *plus* | | |
| b. | Free elective courses | | 15 |

2. A detailed description of the units of study outlined in paragraph 1, a (summary of) learning objectives and instructional and examination methods included, is provided in the programme's course guide.

3. The specialisation electives mentioned in paragraph 1 sub c can be chosen freely, on the condition that the chosen unit of study has an adequate level, is sufficiently relevant to the content of the programme, and has little or no overlap with other units of study. Assessments of level, relevance and overlap are made at the discretion of the Examination Board.
4. The free elective units of study mentioned in paragraph 1 sub c can be chosen freely, on the condition that the chos en unit of study has an adequate level, is sufficiently relevant to the content of the programme, and has little or no overlap with other units of study. Assessments of level, relevance and overlap are made at the discretion of the Examination Board.

No units of study that form part of a required Bachelor's final examination may be included in the Master's final examination. Should such a unit of study be compulsatory within the student's Master Programme, the Examination Board will appoint a substitute undoeit of study. This also applies to units of study of a required Bachelor's final examination that, in the opinion of the Examination Board, shows too much overlap with prospective units of study of the Master's final examination. Requests for inclusion can be submitted to the Examination Board and will be assessed

**Article 9.7 Programme-specific interpretations of the general part**

Does not apply for this programme.

**Article 9.8 Double Master's Programme**

1. In collaboration with other Master's degree programmes an opportunity to obtain two Master's degrees in 180 EC can be made possible.
2. To qualify students must be uninterruptedly enrolled for at least one of the Master's programmes.
3. To qualify for the combination of two Master's programmes, the student must furthermore:
    - be admitted to both Master's programmes in accordance with the regular admission requirements;
    - submit a proposal to the Examination Boards of both study programmes for a joint study programme of at least 180 EC.
4. Permission for the combination of the Master's programme is granted if the Examination Boards of both relevant Master's degree programmes approve the proposal as referred to in paragraph 3. To this end, the proposal must meet the following criteria:
    - it has an extent of at least 180 EC;
    - it meets the full requirements of both Master’s degree programmes (at the discretion of the relevant Examination Boards);
    - it contains a separate graduation project for each of the two Master's degree programmes that meets the regulations of that Master's degree Programme, unless both relevant Examination Boards decide otherwise;
    - for each of the Master's degree programmes, it contains at least 60 EC of non-overlapping components;
    - each of the Master's degree certificates contains at least 50% of the overlapping courses (expressed in ECs) as a regular course, and the other overlapping courses as an exemption.
5. The Examination Board of one or both Master's degree programmes can decide otherwise than what would follow from the criteria mentioned in paragraph 4, on the basis of case specific argumentation.

**Article 9.9 Dual Degree**

In cooperation with the University of Glasgow, Radboud University offers the Dual Masters programme in *AI and the Digital Society*. Upon completion of this programme, the student is entitled to a Master’s diploma of both Radboud University and the University of Glasgow. These regulations apply to all units of study that are followed at the Faculty of Social Sciences at Radboud University.

1. The dual degree programme comprises the following units of study and study load in EC:

| ***Year 1: Radboud University, MSc Intelligent technology*** | ***Semester*** | ***45*** |
|---|---|---|

| | | |
|---|---|---|
| ***Compulsory courses*** | ***1 and 2*** | ***21*** |
| SOW-MKI66: Advanced Academic and Professional Skills (6 EC) | 1 | |
| SOW-MKI67: Ethics for AI (6 EC) | 1 | |
| SOW-MKI76: AI in theProfessional Workfield (3 EC) | 2 | |
| *Choice of one Machine Learning course* | | |
| NWI-IMC056: Statistical Machine Learning (6 EC) | 1 | |
| NWI-IMC030: Machine Learning in Practice (6EC) | 2 | |
| SOW-MKI75: Applied Machine Learning (6 EC) | 2 | |
| SOW-MKI69: Probabilistic Machine Learning (6EC) | 2 | |

| | | |
|---|---|---|
| ***Specialisation Courses*** | Semester | ***24*** |
| *Choose 24 EC of:* | | |
| SOW-MKI70: Human-Robot Interaction (6 EC) | 1 | |
| LET-LCEX-06: Text& Multimedia Mining (6 EC) | 1 | |
| SOW-MKI72: AI for Healthcare (6 EC) | 1 | |
| SOW-MKI73: AI for Neurotechnology (6 EC) | 2 | |
| SOW-MKI95: Computer Graphics &Computer Vision (6 EC) | 2 | |
| SOW-MKI52: New media lab (6 EC) | 2 | |
| SOW-MKI74: Advanced Brain-Computer Interfacing (6 EC) | 2 | |
| NWI-IMC037: Intelligent Systems in Medical Imaging (6 EC) | 2 | |
| | | |
| **Year 2 – Glasgow University, MSc Digital Society** | ***1 and 2*** | ***80*** |
| | | |
| Courses at MSc Digital Society | 1 and 2 | 50 |
| Master thesis Project | 2 | 30 |

1. The following entry requirements apply:
    a. Holding an equivalent of a 2.1 Undergraduate degree for entry into Year 2 at University of Glasgow.

   b. Completion of Year 1 (45 ECTS) at Radboud University at Master level for entry into Year 2 at Glasgow University.
2. A detailed description of all units of study in Year 1, including study load calculation, instructional methods, form of interim examinations, and learning objectives, is provided for in the programme's course guide.
3. Regulations concerning the submission, supervision and assessment of the Master's thesis are provided for in the Memorandum of Agreement between Radboud University and the University of Glasgow. In case of conflict with the regulations pertaining to the Master's thesis as stipulated in the Artificial Intelligence programme, the Memorandu m of Agreement takes precedence.
4. Students choose whether they graduate at Radboud University or the University of Glasgow at the end of Year 2.

# Part 4 Transitional and final provisions

## *Paragraph 10 Transitional provisions*

### Article 10.1 Transitional provisions for the programme

Curriculum Changes & Transitional Regulations 2024- 2025 Master of Science, Artificial Intelligence

The Artificial Intelligence department continuously reviews and refines the MSc curriculum to ensure that it is at the forefront of AI education, meets the highest learning outcomes and standards, and is responsive to the needs of our students. Changes are made with due consideration to minimize negative impact, safeguard academic standards and maintain or improve the quality of the learning experience.

A transitional regulation applies when curriculum requirements change, and the regulation ensures that the consequences of changes to the curriculum are minimal. A transitional regulation can be helpful if a course that you have not yet passed is no longer offered, has changed in significant ways, or has shifted to another curriculum year of the programme. Transitional regulations contain information about when resits are scheduled, when courses are (re)scheduled, and/or which academic requirements students have to fulfil instead of, or in addition to, diversified, renewed, or expired courses.

The Education and Examination Regulations (EER) contains rules applicable to teaching and exams, as well as explanations of transitional regulations: https://www.ru.nl/socialsciences/stip/faculty-study- information/arrangements/education-examination-regulations/.

Please review the current curriculum in the AI Course Guide: https://www.ru.nl/prospectus/socsci/.

The transitional regulations in this document apply to students:

- who started the AI master's degree in academic year 2020-2021 or later
- and have complied with the official curriculum requirements since academic year 2020-2021
- and have not yet completed one or more curriculum requirements

Basis of these transitional regulations:

1. Each student has the opportunity to continue studying the programme in which they started (cohort), provided that he/she studies nominally
2. For courses that are offered for the last time, an examination opportunity will be offered once in the next academic year.

If you are experiencing delays to your academic progress, you are strongly advised to contact Student Advisor Johanna Glimmerveen (johanna.glimmerveen@ru.nl) to discuss your academic progress and plan for the remainder of your studies. In case you wish to apply for a change in your curriculum, contact excieai@ai.ru.nl.

**Questions**

If you have questions about the transitional regulations, please contact the Student Advisor, Johanna Glimmerveen (johanna.glimmerveen@ru.nl).

**Disclaimer**

The information contained in this document is for guidance purposes only. It has been compiled with the utmost care and is, to the best of our knowledge, true and accurate at the time of publication. Information covered by this document is subject to change due to a continuous process of review, and to unanticipated circumstances. No rights or liabilities may be derived from its content or as a result of use or reliance on this guide, or on the information therein, or in relation to information accessed via any links from or to any webpages. Where necessary, the AI Examining Board decides on course-specific or student-specific transitional regulations that differ from the arrangements in this document.

**CURRICULUM CHANGES MSc ARTIFICIAL INTELLIGENCE, 2024-2025**

**1. New courses** (see course descriptions in prospectus for more information)

| Course | Specialisation | Compulsary/Elective | Instructions/Remarks |
|---|---|---|---|
| SOW-CWM180 Theory and Modelling of Information Diffusion | CC | Specialisation elective | |

**2. Courses no longer offered**

| Course | Specialisation | Compulsory/elective | Instructions/Remarks |
|---|---|---|---|
| NWI_FMT003E Innovation Management | IT- Societal Impact | Specialisation elective | Not available for AI students |

**3. Changes in scheduling/curriculum**

| Course | Specialisation | Compulsory/Elective | Instructions/Remarks |
|---|---|---|---|
| SO-MKI85 Machine Hearing | CC and IT | Specialisation elective | Moved from period 2 to Period 3 |

4. **Name Changes**
None

**5. Other Changes**

| Course | Specialisation | Compulsory/Elective | Instructions/Remarks |
|---|---|---|---|
| SO-MKI87 Agent-based Cognitive Modelling | CC | Specialisation elective | Taught again in 2024-2025 |

## *Paragraph 11 Final provisions*

**Article 11.1 Safety net scheme and hardship clause**

1. The dean will make decisions in individual cases not covered or insufficiently covered by these regulations.
2. In individual cases of extreme unfairness, the Examination Board or the dean is authorised to make an exception to the provisions of these regulations in favour of a student.

**Article 11.2 Adoption, co-participation and amendments**

1. Notwithstanding the provisions in article 7 of the Structure Regulations of Radboud University, these regulations are drawn up or amended by the dean after receiving advice from the programme committee and after having obtained the approval of the faculties' general assembly (Facultaire Gezamenlijke Vergadering, FGV).
2. In special cases, an amendment made to these regulations can take effect in the present academic year, only if this does not disproportionally compromise the interests of the students.

**Article 11.3 Publication**

1. The dean will be responsible for suitable publication of these regulations and of possible amendments to these.
2. Any interested party may consult the EER on the faculty's website.

**Article 11.4 Coming into effect**

These regulations will come into effect on **2 September 2024**.
Any Education and Examination Regulations laid down previously for the degree programme will cease to apply from that date onwards.

As established by the dean on 13 June 2024.

Appendix 1

# Regulations on Fraud Radboud University

## Paragraph 1 Introductory provisions

*Article 1 Purpose and scope of these regulations*

To prevent fraud during interim examinations and bachelor/master examinations as referred to in article 7.12b WHW, relating to the education and examination in the degree programme mentioned in article 1.1 of this EER, the dean of the faculty of Social Sciences of Radboud University (hereinafter: RU), adopts the following regulations.

*Article 2 Definitions*

The terms that are used in these regulations - in so far as these terms are also used in the Higher Education and Research Act (Wet op het Hoger onderwijs en Wetenschappelijk onderzoek, hereinafter: WHW) - have the same meaning that is given to these terms in the WHW or the EER.

## Paragraph 2 Definition fraud, procedure and sanctions

*Article 3 Definition of fraud*

1. At RU, fraud is understood to mean any act or omission by a student which, in its nature, is intended to have as an effect that proper assessment of the knowledge, understanding and skills of that student or another student, is made fully or partially impossible.
2. Fraud is in any case understood to mean:
    a. fraud when taking written interim examinations, including
        - having materials available which are not permitted under the House Rules Examinations Rooms RU Regulations (Regeling Huisregels Tentamenruimten RU);
        - copying or exchanging information;
        - passing oneself off as someone else, or being represented by someone else during interim examinations;
    b. fraud when producing theses and other papers, including
        - plagiarism in the sense of using or copying someone else' s texts, data or ideas without complete and correct source references, plagiarism in the sense of copying the work of another student and presenting this as one' s own work and other specifically academic forms of plagiarism; insofar as it leads to the description in paragraph 1.
        - fabricating (making up) and/or falsifying (distorting) research data;
        - submitting a thesis or another paper that was written by someone else.
    c. other fraud in the context of interim examinations or examinations, including
        - taking possession of assignments, answer keys and the like, prior to the time the interim examination or examination is to take place;

- changing answers to assignments in an interim examination or examination after it has been handed in for assessment;
- providing incorrect information when applying for an exemption, extension of validity period, and the like, of an interim examination or an examination.

3. An attempt to commit fraud will also be seen as fraud for the purpose of these regulations.

*Article 4 Procedure for establishing fraud*

1. When fraud is suspected, the examination board or the examiner immediately informs the student of this suspicion. If the suspicion of fraud is established when the interim examination or the examination is administered, the examination board or the examiner will allow the student to complete the interim examination or the examination.
2. The examination board or the examiner may order the student to make any material related to the suspicion of fraud available to them.
3. For the purposes of the provisions in paragraphs 1 and 2 of the present article, examiner is also understood to mean the invigilator or any other RU member of staff.
4. The examination board or the examiner drafts a report of the suspicion of fraud. lf the examiner drafts the report, he will send this report to the examination board without delay.
5. The examination board makes the report referred to in article 5 available to the student without delay and then starts an investigation into the matter. The examination board of provides the student with the opportunity to respond to the report in writing. The examination board of hears both the examiner and the student.
6. Within four weeks following the date the report was made available to the student, the board of examiners decides whether fraud was actually committed. The examination board informs both the student and the examiner of their decision in writing. The four-week period may be extended by two weeks.

*Article 5 Remedial action*

If the examination board has established fraud:

a. the examination board declares the relevant interim examination or examination invalid, and
b. the examination board includes a statement in the student's student file that it has established fraud and, if applicable, which sanctions have been imposed.

*Article 6 Sanctions*

1. If the examination board has established fraud has been committed, the board may:
    a. determine that the student may not sit one or more interim examinations or examinations during a period to be set by the examination board, which period will be a maximum of one year;
    b. determine that no distinction will be awarded on the degree certificate;
    c. make a recommendation to the Dean of the Honours Academy that the student should not be admitted to the honours programme of the university or the faculty or recommend that the student's participation in the honours programme of the university or the faculty should be ended.

2. If the examination board has established that serious fraud has been committed, the board may also
    a. make a recommendation to the executive board that the student's registration for a programme should be terminated with definitive effect.
3. After the examination board has established that serious fraud has been committed, the executive board - upon examination boards' recommendation - may terminate the student's registration for a programme with definitive effect.
4. The sanctions as referred to in this article are imposed as from the day following the date the student is notified of the decision that sanctions are imposed.

## Paragraph 3 Transitional provisions

Does not apply.

## Paragraph 4 Final provisions

*Article 7 Decisions and legal protection*

1. Decisions pursuant to these regulations may be sent to the student digitally and/or by email.
2. The student can appeal against any decision made under these regulations, within six weeks following the date on the relevant decision, by lodging a notice of appeal at the Examinations Appeals Board (College voor Beroep van de Examens [CBE]).

*Article 8 Adoption, medezeggenschap and amendment*

1. These regulations are adopted by dean.
2. In so far as the content of these regulations relates to the duties and powers of the degree programme' s examination board, the content must also be confirmed by that examination board.

*Article 9 Effect*

These regulations take effect on 1 September 2019. These regulations will then replace any previous regulations.

*Article 10 Publication*

1. The dean ensures the appropriate publication and possible amendments of these regulations.
2. For the purpose of appropriate and clear provision of information to students and prospect students, the dean includes these regulations, every year, as an appendix to the Education and Examination Regulations (Onderwijs- en Examenregeling, OER) and as an appendix to the Rules and Guidelines (Regels en Richtlijnen, RR) of the programme.

Appendix 2

# Regulations on Examination Rooms Radboud University

## Paragraph 1 Introductory provisions

*Article 1 Purpose and scope of the regulations*

For the proper course of events during interim examinations and bachelor/master examinations relating to the education and examination of the degree programme mentioned in article 1.1 of this EER that are administered in examination rooms at the Radboud University (hereinafter: RU), the dean of the faculty of Social Sciences of the RU adopts the following regulations.

*Article 2 Definitions*

The terms that are used in these regulations - in so far as these terms are also used in the Higher Education and Research Act (Wet op het Hoger onderwijs en Wetenschappelijk onderzoek, hereinafter: the Act) or the Education and Examination Regulations of the degree programme (hereinafter: the EER) - have the same meaning that is given to these terms in the Act and the EER.

*Article 3 Examiners and invigilators*

For the administration of examinations, the examination board of the degree programme as mentioned in article 1 (above) has appointed one or more examiners.

The examiners appointed as referred to in paragraph 1 are responsible for the supervision and execution of the provisions in these regulations. On behalf of the examiner(s) appointed, one or more invigilators may be present in the examination rooms, assigned by or on behalf of the executive board. When invigilators have been assigned, at least one appointed examiner is also present in the examination room or, as appropriate, available on call.

*Article 4 Instructions by the executive board*

1. These regulations include instructions in the sense of article 7.57h of the Act. In view of the executive board's mandating decision dated 15 May 2019, the dean is authorised to adopt these instructions on behalf of the executive board. The student is obliged to comply with the instructions laid down in these regulations.
2. A student who fails to comply with any instructions under these regulations may be denied access to the examination room by or on behalf of the examiner. Non-compliance with the instructions may also lead to a suspicion of fraud in the sense of the Regulations on Fraud (*Regeling Fraude*).

*Article 5 Guidelines for examiners*

These regulations include instructions in the sense of Article 7.12b of the Act. The examiner is obliged to comply with the instructions laid down in these regulations.

*Article 6 Instructions by examiners for students*

1. The examiner may give instructions, in the context of the instructions described in these regulations, to a student in the RU examination room if a concrete situation should be cause for this. The student is obliged to comply with these instructions.
2. The student who fails to comply with the instructions referred to in paragraph 1 may be denied access to the examination room by or on behalf of the examiner. Non-compliance with the instructions may also lead to a suspicion of fraud in the sense of the Regulations on Fraud (*Regeling Fraude*).

## Paragraph 2 House Rules

*Article 7 Admission to the examination room and leaving it*

1. With respect to entering and leaving the examination rooms, the following applies:
   a. the examination room is accessible for the student at least 15 minutes before the examination starts;
   b. except in the circumstances described in paragraphs c and d of the present article, the student is no longer admitted into the examination room after the examination has started;
   c. the student who arrives too late at the examination room is given the opportunity, 15 minutes following the start of the examination, to be as yet admitted into the examination room;
   d. the student is permitted to use the toilet during the examination;
   e. the student is not allowed to leave the examination room within the first 30 minutes following the start of the examination.
2. In special circumstances the examiner may act contrary to the provisions in paragraph 1. If the provisions in paragraph 1 are departed from, the student will be informed of this in due time.

*Article 8 Student ID*

1. In the examination room the student must be able to furnish proof of identity, at any time, by producing a valid identity document.
2. The student who cannot furnish proof of identity as laid down in the first paragraph of the present article will not be admitted into the examination room or can as yet be denied access to that room.

*Article 9 Start and duration of the examination*

The examiner starts the examination at the time scheduled. If the examination starts at a later moment in time because of relevant circumstances, the examiner ensures that de scheduled duration of the examination can be fully used by the student.

*Article 10 Materials permitted in examinations*

1. When taking the interim examination, the student is not allowed to have materials available that serve or could serve as auxiliary materials for the examination paper, unless the use of that material has been explicitly permitted by the examiner before the start of the examination.

2. Materials for the purpose of these regulations include, amongst other things: textbooks and dictionaries, notes and lecture notes, and watches, laptops, tablets, telephones and other smart device's and/or wearables.

*Article 11 Handing in examination papers*

1. When the examination ends, the student is obliged to hand in the examination paper.
2. The student may also be required to hand in other examination materials, such as examination question papers and/or note paper used during the examination.

*Article 12 Peace and order, furniture and fixtures in the examination room*

1. Coats, satchels, bags, etc. must be put away in compliance with the examiner's instructions.
2. In order to prevent interference with the WIFI signal, any devices that are present in the examination room, such as watches, laptops, tablets, telephones, and any other devices or smart devices and/or wearables, must be switched off in compliance with the examiner's instructions.
3. Without prejudice to the provisions in the previous paragraphs, the examiner ensures, both during and after completion of the examination, that any measures are taken as required for adequate surveillance and for maintaining the necessary peace and order in the examination room.
4. Whenever an examination is administered, the examination room has at least one clock which is clearly visible for each student.
5. Eating and drinking is allowed during the examination, unless this should prevent appropriate surveillance and/or maintaining the necessary peace and order.

## Paragraph 3 Transitional provisions

Does not apply.

## Paragraph 4 Final provisions

*Article 13 Departure from rules and house rules*

In special circumstances the examiner may depart from the provisions in these regulations.

*Article 14 Adoption and amendment*

1. These regulations are adopted and amended by the dean.
2. In so far as the content of these regulations relates to the duties and powers of the programme's examination board, the content must also be confirmed by that examination board.

*Article 15 Effect*

These regulations take effect on 1 September 2019. These regulations then replace any previous regulations.

*Article 16 Publication*

1. The dean ensures the appropriate publication and any amendments of these regulations.
2. For the purpose of appropriate and clear provision of information to students and prospective students, the dean includes these regulations, every year, as an appendix to the Education and Examination Regulations (Onderwijs- en Examenregeling (OER). The examination board includes these regulations accordingly as an appendix to the Rules and Guidelines (Regels en Richtlijnen (RR)) of the programme that are laid down by that board.

Thus, adopted by the dean on June 26, 2019 and ratified by the examination board.

# APPENDIX 3

## Faculty of Social Sciences code of conduct

The Faculty of Social Sciences seeks to offer an inspiring learning and working environment where employees and students work and study with commitment and joy, aiming for scientific development, knowledge, insight and skill. To facilitate this, the faculty has adopted a number of rules governing conduct within the faculty. These rules of conduct are aimed at both students and staff, in addition to the Radboud University Code of Conduct (the university wide conduct applies to staff, but it is good for students to be aware of this code, too). It is our joint responsibility to ensure a pleasant and safe learning and working environment.

The faculty seeks to provide an atmosphere characterised by:

- mutual respect
- personal development;
- openness
- trust;
- cooperation; and
- responsibility.

This implies that

- we treat others with respect, without being offensive or hurtful, regardless of the role or function someone fulfills in the organization. We are an inclusive organization and do not tolerate discrimination;
- we are aware of our respective positions within the organization and the power disparities that come with that. We are extra mindful of safeguarding a socially safe environment in the case of dependencies between functions;
- respecting one another goes for all forms of all contact that occurs between staff, between staff and students and among students, and for all forms of communication, whether in real life or in digital spaces, verbal and written communication such as e-mail, Brightspace, social media such as Whatsapp, and course evaluations;
- we make sure to familiarise themselves with and act according to the rules in the various regulations (e.g. EER, student charter, regulation on research integrity) as well as agreements such as those made with respect to attendance, deadlines, review periods, completing assignments;
- we stick to the rules and agreements once made;
- students and staff are jointly responsible for the successful functioning of the educational process and both students and staff can and may appeal to each other's responsibility;
- we assume good intentions of each other;
- we do not adhere to prejudicial judgements;
- we respect each other's property and take good care of spaces and materials used;
- we try as best we can to look out for one another and check in with each other in case we feel that is necessary;
- students are aware that course material is protected by copyright and may not simply be copied or shared;
- we are aware that we all have a role and a responsibility to create a pleasant and safe learning and working environment in which we take care of one another.

In case you notice inappropriate behaviour, directed at yourself or towards others, you can contact a confidential advisor, your supervisor, a colleague, your HR advisor or the Ombudsofficer. More information can be found on the RU website.

# APPENDIX 4 FINAL QUALIFICATIONS OF THE PROGRAMME

For both BSc/MSc-programmes, the integration of knowledge and skills, as well as imparting a critical and academic stance are central goals. The intended learning outcomes reflect the Nijmegen AI profile. They can be operationalized in terms of five AI learning objectives that fully adhere to the five Dublin descriptors, which describe the level of bachelor and master's programmes.
The five AI learning objectives are implemented through ten final qualifications for the bachelor and eleven for the master. Both the learning objectives and final qualifications fit the description of the KION domain-specific frame of reference (KION-FoR), while doing justice to the AI profile in Nijmegen. The final qualifications form an excellent means to enforce the five objectives on the one hand, and to provide solid requirements for the implementation of the educational learning environment on the other hand. As illustrated in figure 1, it is through the specification, assessment and evaluation of the learning goals of each individual course that the BSc/MSc-programmes implement a high-quality educational learning environment, which adheres to academic standards as well as to the KION-FoR.

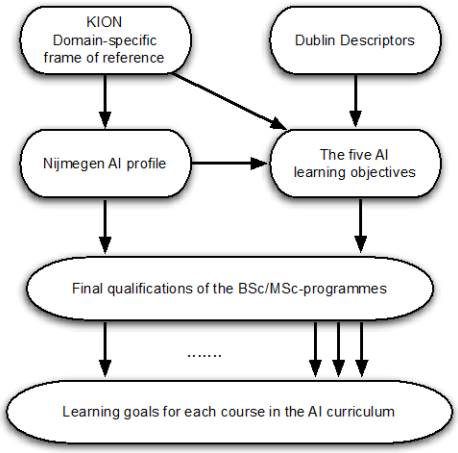


Figure 1
Implementation scheme for the intended learning
outcomes of the BSc/MSc-programmes:
profile, objectives, final qualifications and course goals.

## Objectives for the MSc-programme

MSc students are trained at a level of academic and scientific competence that extends and builds on those competences developed in an academic BSc-programme, in terms of independence, critical judgment and the ability to systematically apply their knowledge, skills, understanding, and problem solving abilities in new or unfamiliar environments within a multidisciplinary context related to their field of study. MSc-students obtain advanced competences, knowledge and understanding of the field of AI that is founded upon and extends and/or enhances that typically associated with a BSc-level training, and that provides a basis or opportunity for originality in developing and/or applying ideas in a specific subdomain of AI, e.g. Cognitive Computing and Intelligent Technology. The focus on scientific research and research methods constitutes one of the main principles in the educational programme. As such, the final qualifications of the MSc-programme reflect a decidedly scientific orientation.

Graduated MSc students are fully capable to work in professional research environments or at academic research institutes, e.g. as junior researchers pursuing their PhD.

Objective 1 Acquisition of knowledge and understanding

Students acquire up-to-date and in-depth knowledge and understanding on AI informed by current scholarship and research that covers the breadth of the field of specialisation. This involves core concepts and theories, as well as research techniques and methods in the subject area.

Objective 2 Application of knowledge and understanding

Students are able to apply acquired knowledge, skills and insight to theoretical and applied problems in AI. They are independently capable of formalising a given AI research question and producing an answer, solution or application in creative and innovative ways to the question, typically by computational means.

Objective 3 Critical judgment

Students are able to reason in a critical, academic manner enabling them to go beyond the state of the art and contribute to the forefront of their research field. This entails that students have a critical awareness of current research and advanced scholarship in the discipline. They are capable of evaluating methodologies and develop critiques of them and, where appropriate, proposing new hypotheses. Students are conscious of presuppositions and societal consequences of research and are able to reflect critically on their own professional actions.

Objective 4 Communication

Students are able to adequately express their knowledge, insights and findings, both orally and in writing. They are trained in presenting, understanding, and judging research findings, allowing them to communicate effectively to specialist and non-specialist audiences in a variety of media and for a variety of purposes (scientific publication, general public information, initiating/maintaining collaboration, acquiring funding).

Objective 5 Learning skills

Students take initiative and take responsibility for their own education and are able to steer their own learning process, enabling them to continue to learn independently and to develop professionally, including the ability to pursue further research, e.g. as a PhD student at a research or professional institute.

Final qualifications of the MSc-programme

Compared to the BSc-programme, the MSc-programme develops higher levels of self-management, independence and critical self-reflection, and allows students to specialise in advanced, state-of-the-art themes in AI. Each individual course contributes to the training of, in total, eleven final qualifications for the MSc-programme. This is the case for both the specialisations Cognitive Computing and Intelligent Technology. As illustrated in figure 1, the eleven final qualifications implement the five AI learning objectives, which operationalize the five Dublin objectives with respect to the AI profile in Nijmegen.

There are eight general qualifications that hold for the programme in general and three qualifications that diverge per specialisation.

1. Relevant level: Master's graduates (henceforth graduates) have general knowledge in the full breadth of the field, detailed knowledge with respect to either the use of AI as a means of studying natural intelligence or the application of state-of-the-art AI in technology, and specialist knowledge on the topic of the master's thesis.
2. Relevant disciplines: Graduates have obtained relevant knowledge and understanding in the fields of psychology, computer science, mathematics, logic, linguistics, philosophy and/or neuroscience, at a level at which they can actively relate AI to those fields, and are able to incorporate the contributions of scientists in different fields into AI projects.
3. Cognition: Graduates have obtained relevant knowledge and understanding of several human cognitive functions and skills, such as problem solving, perception, language processing and motor behaviour, at a level that enables an original contribution to the computational modelling of such a functionality.
4. Societal implications: Graduates have obtained knowledge and understanding of the ethical and societal implications of recent developments in AI at a level that allows them to form an independent opinion on these aspects.
5. Methodology: Graduates have obtained knowledge and understanding of the similarities and differences in AI methodology, ranging from empirical research, algorithm design and comparison, computational and formal modeling, to conceptual analysis. Graduates also have an understanding of the theoretical implications thereof, and of the relevance of different AI methods for different application domains.
6. Critical attitude: Graduates have a critical, scientific attitude towards research in general and AI in particular, and is able to form a well-founded opinion about the latest developments in several areas of AI.
7. Communication: Graduates are able to express themselves in writing according to the accepted norms for scientific AI publications and to effectively digest articles in relevant journals. In addition, graduates have obtained oral skills that enable reporting on performed research, and communicating on an equal basis with specialists in AI and the fields mentioned in the second point, as well as with non-specialists.
8. Independent learning skills: Graduates have obtained the necessary learning skills to enable further learning in an independent self-directed manner.Next to these general final qualifications, we identify the following specialisation-specific final qualifications:
   Cognitive Computing specialisation
9. Analytical skills: Graduates are able to independently translate a theory, approach, or hypothesis into a formal or computational model, identify inconsistencies or ambiguities in the theory, deduce model predictions, and test those predictions.
10. Research skills: Graduates are able to independently design, execute and analyse fundamental scientific research in a methodologically correct way.
11. Practical application: Graduates are able to both develop and apply new techniques in AI to increase understanding in natural intelligence, as well as to incorporate insights from cognitive (neuro)science and related areas into new AI techniques and models.

Intelligent Technology specialisation

12. Analytical skills: Graduates are able to make an independent analysis of an abstract problem that is complex and underspecified, in such a way that a solution can be sought or implications can be evaluated by means of a working application, computational model, guideline design, or artifact, and, if relevant, a theoretical generalisation can be made.
13. Research skills: Graduates are able to use state-of-the-art AI methods and techniques in applied research and development.
14. Practical application: Graduates are able to translate complex and/or extensive practical requirements into a work plan for developing, improving or extending a computer program, design or artifact.

Appendix 5

**PRE-MASTER PROGRAMMES**
Students with a bachelor's degree in a related field that does not give direct access to the master's programme can apply for admission to the pre-master's programme at the Admissions Board. Each master's specialisation has its own pre-master's programme. The size of the programme depends on the admission bachelor's degree.

**Entry Requirements Pre-Masterprogramme Cognitive Computing**
In order to be admitted to the pre-master programme Cognitive Computing a student needs to have obtained a bachelor's degree from:

- a research university in a Life/Social Sciences-related field with sufficient emphasis on neuroscience (particularly Psychology, Biology, Biomedical Sciences and Medicine)
- a research university in a STEM-related field; STEM stands for Science, Technology, Engineering, and Mathematics.

Also, proficiency in both written and spoken English is required. Students with a Bachelor's degree obtained in Australia, Canada (excluding Quebec), Ireland, New-Zealand, United Kingdom or the United States are exempted from the language requirements. Other candidates need to have obtained one of the certificates below:

- TOEFL iBT ≥ 80 overall, subscores ≥ 20
- IELTS Academic: ≥ 6.0 overall, subscores ≥ 6.0
- Cambridge C1 Advanced or C2 proficiency: C or higher

**Selection Requirements**
The Pre-master programme Cognitive Computing is a selective programme. Participation in the placement process is therefore required. Completion of the pre-Master's programme means guaranteed access to the Master's programme Cognitive Computing. During the placement process, the Admissions Board determines which of the admissible candidates can be offered a place to study in the pre-Master's programme based on:

- A Motivation letter;
- Academic performance;
- Resume;
- Interview (optional).

**Pre-master programme Cognitive Computing**

| **Pre-master programme** | **Background Life Sciences (Psychology, Bio Medical Sciences e.d.)** | **EC** |
|---|---|---|
| SOW-BKI104 | Calculus I | 3 |
| SOW-BKI131 | Programming 1 | 3 |
| SOW-BKI132 | Programming 2 | 3 |
| SOW-BKI259 | Artificial Intelligence: principles and Techniques | 6 |
| SOW-BKI334 | Theoretical Modelling for Cognitive Science | 6 |
| NWI-IPK001 | Introduction to Formal Reasoning | 6 |
| SOW-BKI124 | Lineair Algebra | 3 |
| SOW-BKI258 | Reinforcement Learning | 3 |
| SOW-BKI122A | Artificial Intelligence: Lab Skills | 3 |
| SOW-BKI230A | Deep Learning | 6 |
| SOW-BKI145 | Human Centered Design | 3 |
| SOW-BKI144 | Intro to Digital Signal Processing | 3 |
| SOW-BKI203 | Bayesian Statistics | 6 |
| SOW-BKI255 | Cognitive Computational Neuroscience | 3 |
| SOW-BKI257 | Knowledge Representation | 3 |
| | **Total** | **60** |
| | | |
| **Pre-master programme** | **Background STEM-Programmes (Science, Engineering, Technical & Mathematics)** | **EC** |
| SOW-BKI259 | Artificial Intelligence: principles and Techniques | 6 |

| | | |
|---|---|---|
| SOW-BKI258 | Reinforcement Learning | 3 |
| SOW-BKI230A | Deep Learning | 6 |
| SOW-BKI257 | Knowledge Representation | 3 |
| *Choose 12 EC from*: | | 12 |
| SOW-BKI334 | Theoretical Modelling for Cognitive Science (6 EC) | |
| SOW-BKI134 | Cognitive Psychology. (3 EC) | |
| SOW-BKI136 | Brain (3 EC) | |
| SOW-BKI203 | Bayesian Statistics (6 EC) | |
| | **Total** | **30** |

**Pre-master certificate Cognitive Computing**
After passing all courses of the pre-master's exam programme Cognitive Computing, the student can apply for a pre-master's certificate. This pre-master's certificate has no legal value other than has no legal value other than allowing the student admission to the master's programme of Cognitive Computing without further requirements.

**Entry Requirements Pre-Masterprogramme Intelligent Technology**
In order to be admitted to the pre-master programme Intelligent Technology a student needs to have obtained a bachelor's degree from:

- a university of Applied Sciences (in Dutch: HBO) in a Computing Science related field
- a research university in a Life/Social Sciences-related field with sufficient emphasis on neuroscience (particularly Psychology, Biology, Biomedical Sciences and Medicine)
- a research university in a STEM-related field; STEM stands for Science, Technology, Engineering, and Mathematics.

Also, proficiency in both written and spoken English is required. Students with a Bachelor's degree obtained in Australia, Canada (excluding Quebec), Ireland, New-Zealand, United Kingdom or the United States are exempted from the language requirements. Other candidates need to have obtained one of the certificates below:

- TOEFL iBT ≥ 80 overall, subscores ≥ 20
- IELTS Academic: ≥ 6.0 overall, subscores ≥ 6.0
- Cambridge C1 Advanced or C2 proficiency: C or higher

**Selection Requirements**
The Pre-master programme Intelligent Technology is **not** a selective programme. Students who meet the entry requirements can get access to the pre-masterprogramme without further assessment.

**Pre-master programmes Intelligent Technology**

| **Pre-master programme** | **Background Applied Sciences (HBO-ICT, Bio informatica e.d.)** | **EC** |
|---|---|---|
| SOW-BKI140 | Academic Reading and writing Test | 1 |
| SOW-BKI104 | Calculus I | 3 |
| SOW-BKI316 | Applied Mathematics | 6 |
| SOW-BKI259 | Artificial Intelligence: principles and Techniques | 6 |
| NWI-IPK001 | Introduction to Formal Reasoning | 6 |
| SOW-BKI248 | Societal Impact of AI | 6 |
| SOW-BKI124 | Lineair Algebra | 3 |
| SOW-BKI230A | Deep Learning | 6 |
| SOW-BKI141 | Research Design and Scientific Method | 2 |
| SOW-BKI258 | Reinforcement Learning | 3 |
| SOW-BKI257 | Knowledge Representation | 3 |
| SOW-BKI261 | Philosophy of Science | 3 |
| *Choose 12 EC from:* | | 12 |
| SOW-BKI333 | AI in the connected World (3 EC) | |
| SOW-BKI203 | Bayesian Statistics (6 EC) | 6 |

| | | |
|---|---|---|
| SOW-BKI145 | Human Centered Design (3 EC) | 3 |
| SOW-BKI144 | Intro to Digital Signal Processing (3 EC) | 3 |
| SOW-BKI115a | Introduction Robotics (6 EC) | 6 |
| SOW-BKI331 | Multi-Agent Systems (3 EC) | 3 |
| | **Total** | **60** |
| | | |
| **Pre-master programme** | **Background Life Sciences (Psychology, Bio Medical Sciences e.d.)** | **EC** |
| SOW-BKI259 | Artificial Intelligence: principles and Techniques | 6 |
| NWI-IPK001 | Introduction to Formal Reasoning | 6 |
| SOW-BKI104 | Calculus I | 3 |
| SOW-BKI131 | Programming 1 | 3 |
| SOW-BKI132 | Programming 2 | 3 |
| SOW-BKI124 | Lineair Algebra | 3 |
| SOW-BKI258 | Reinforcement Learning | 3 |
| SOW-BKI230A | Deep Learning | 6 |
| SOW-BKI145 | Human Centered Design | 3 |
| SOW-BKI144 | Intro to Digital Signal Processing | 3 |
| SOW-BKI257 | Knowledge Representation | 3 |
| SOW-BKI122A | Artificial Intelligence: Lab Skills | 3 |
| SOW-BKI255 | Cognitive Computational Neuroscience | 3 |
| *Choose 12 EC from:* | | 12 |
| SOW-BKI323 | Brain-Computer Interfacing (6 EC) | |
| SOW-BKI248 | Societal Impact of AI (6 EC) | |
| SOW-BKI324 | Modern Software development Techniques (6 EC) | |
| | **Total** | **60** |
| | | |
| **Pre-master programme** | **Background STEM-Programmes (Science, Engineering, Technical & Mathematics)** | **EC** |
| SOW-BKI259 | Artificial Intelligence: principles and Techniques | 6 |
| SOW-BKI258 | Reinforcement Learning | 3 |
| SOW-BKI257 | Knowledge Representation | 3 |
| SOW-BKI115a | Introduction Robotics | 6 |
| Choose 12 from: | | 12 |
| SOW-BKI230A | Deep Learning (6 EC) | |
| SOW-BKI323 | Brain-Computer Interfacing (6 EC) | |
| SOW-BKI334 | Theoretical Modelling for Cognitive Science (6 EC) | |
| SOW-BKI145 | Human Centered Design (3 EC) | |
| SOW-BKI144 | Intro to Digital Signal Processing (3 EC) | |
| | **Total** | **30** |

**Pre-master certificate**

After passing all courses of the pre-master's exam programme Intelligent Technology, the student can apply for a pre-master's certificate. This pre-master's certificate has no legal value other than allowing the student admission to the master's programme of Intelligent Technology without further requirements.