UNIVERSITÄT OSNABRÜCK





Guide to the Study Regulations (PO2024)
Cognitive Science & Cognitive Computing
Examination Regulations - Oct. 2024





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Guide to the Study Regulations for Cognitive Science (BSc.), Cognitive Science (MSc.) and Cognitive Computing (MSc.) starting in the winter term 2024/25 (PO2024)

Version: Jan 30, 2025

Note:

The study regulations are so far only available in German, but will be translated into English later. The most important information is provided in English in this guide.

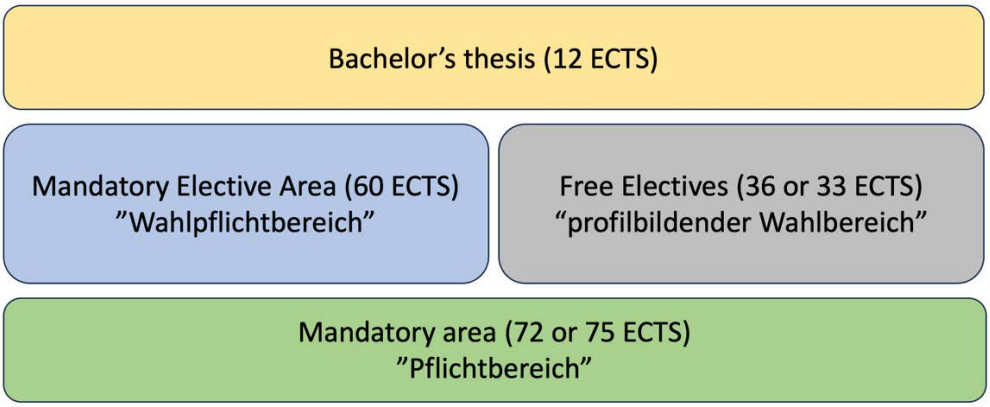
Important: Only the officially published German versions of the regulations and the official module descriptions are legally binding. English versions, as well as the guide at hand, are only for your orientation, and the guide sometimes contains simplifications of rules that only roughly reflect the official regulations but are easier to understand. If you are unsure, please contact the student mentoring team or the program coordinators, see the IKW webpage for details.

Students who have already started their studies before the winter term 2024/25 can keep studying under the previous regulations from 2019/2020 until the end of September 2027 (Bachelor) / end of September 2026 (Master). Students who want to switch to the new regulations can do so by handing in an application form to switch at the examinations office.

The Master's program in Cognitive Computing is an *in-service program* for students who already work for a company in the area of artificial intelligence and machine learning. The *tuition fee of €5000 per semester* is suggested to be paid by the company employing the student in question. The main benefit for the company is that the student can do an individual study project and thesis (almost 50% of the ECTS of the program) in collaboration with the company, supervised by the experts of the Institute of Cognitive Science. Those interested in pursuing Master's studies at the Institute of Cognitive Science to who do not work for a relevant company are advised to apply to the Cognitive Science program instead.

Brief overview – Cognitive Science (BSc. program)

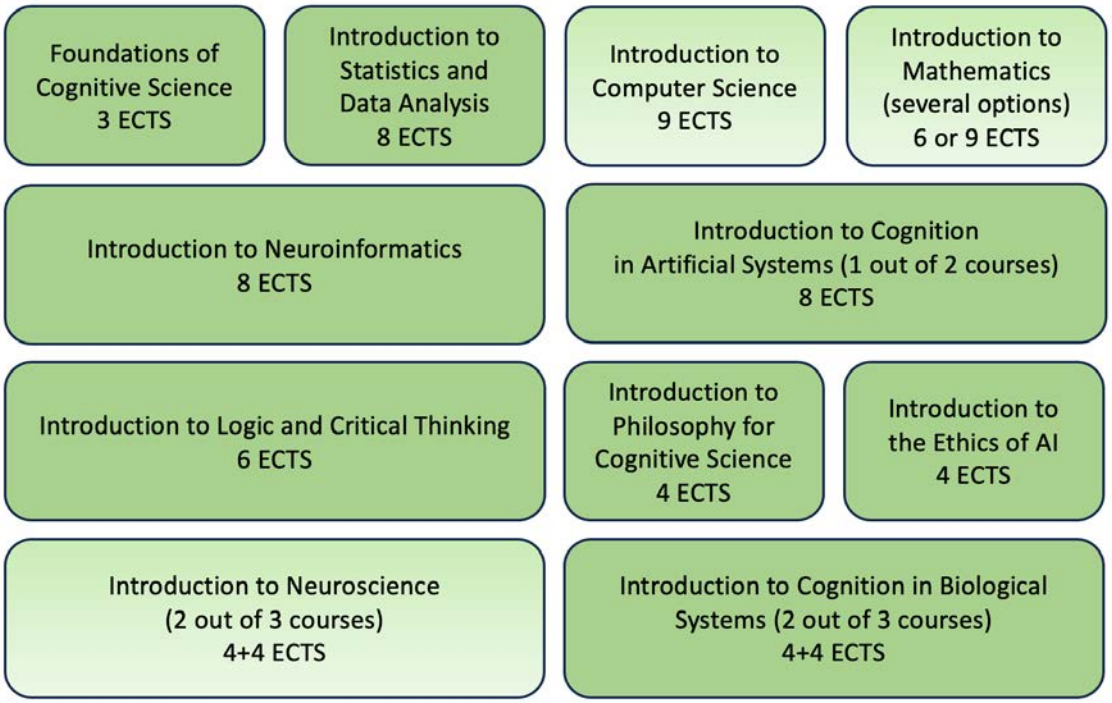
General Structure



Note: Each *area* comprises multiple *modules*, and each *module* comprises one or multiple *courses*. Sometimes, there are several courses assigned to a single module. In some cases, multiple courses jointly fill a module, and sometimes, there are alternative courses students can select from. Details can be found in the module descriptions and on the website of the Institute of Cognitive Science. Note: The "areas" here are not to be confused with the so-called "focus areas" discussed below, which all mainly belong to the mandatory elective area.

Mandatory Area ("Pflichtbereich", 72 or 75 ECTS)

The mandatory area comprises modules with a total of 72 or 75 ECTS, all of which need to be taken by every student.



Some of the modules are associated with one of the three focus areas into which the modules of the mandatory elective area are divided:

Focus area "Cognition: Artificial Intelligence and Machine Learning":

- Introduction to Neuroinformatics (8 ECTS)
- Introduction to Cognition in Artificial Systems (8 ECTS)

For the "Introduction to Cognition in Artificial Systems" module, either the course "Introduction to Artificial Intelligence" (8 ECTS) or the course "Introduction to Computational Linguistics" (8 ECTS) can be taken.

Focus area "Cognition: Mind, Ethics, and Society":

- Introduction to Logic and Critical Thinking (6 ECTS)
- Introduction to Philosophy for Cognitive Science (4 ECTS)
- Introduction to the Ethics of Artificial Intelligence (4 ECTS)

Focus area "Cognition: Psychology, Communication, Neuroscience, and Behavior":

- Introduction to Neuroscience (8 ECTS)
- Introduction to Cognition in Biological Systems (8 ECTS)

For the "Introduction to Neuroscience" module, any two of the three courses "Introduction to Neurobiology", "Sensory Physiology" and "Functional Neuroanatomy" (4 ECTS each) can be taken.

For the "Introduction to Cognition in Biological Systems" module, any two of the three courses "Introduction to Cognitive (Neuro-) Psychology", "Introduction to Theoretical and Experimental Linguistics", and "Introduction to Animal Cognition and Communication" (4 ECTS each) can be taken.

The remaining four modules are not associated with any of the three focus areas:

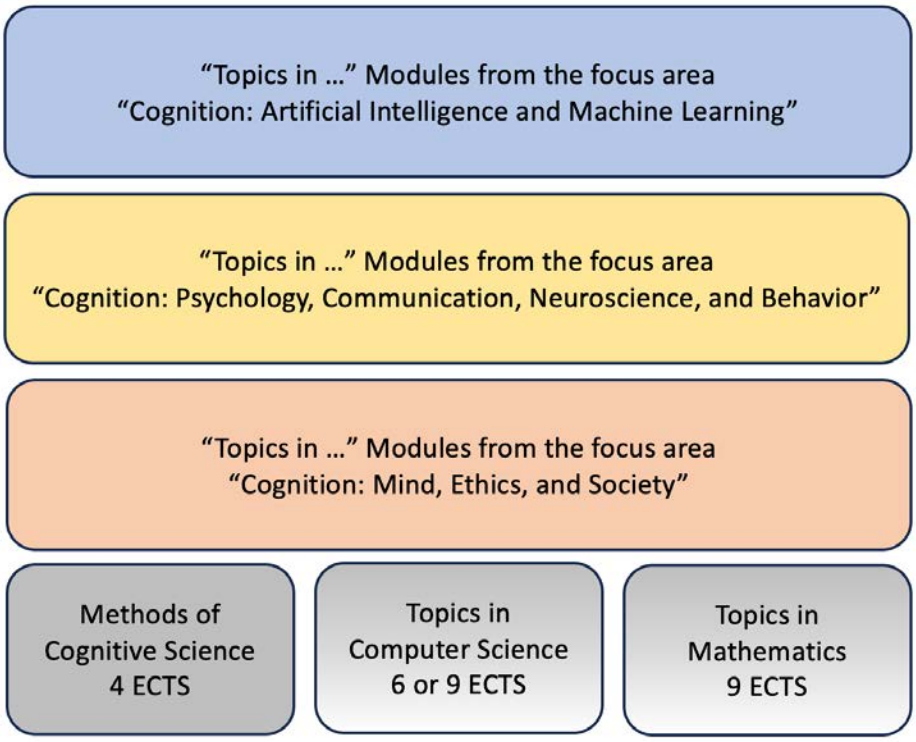
- Foundations of Cognitive Science (3 ECTS)
- Introduction to Statistics and Data Analysis (8 ECTS)
- Introduction to Computer Science (9 ECTS)
- Introduction to Mathematics (6 or 9 ECTS)

For the "Introduction to Computer Science" module, the course "Informatik für Anwendende I" (winter term) is the course which is usually to be taken.

For the "Introduction to Mathematics" module, there are several courses that can be taken. For international students who prefer courses in English, the recommended option is to take "Mathematics for Cognitive Science" (6 ECTS, summer term).

Mandatory Elective Area ("Wahlpflichtbereich", 60 ECTS)

The mandatory elective area comprises of a set of "Topics in …" modules and a few "Complementary lecture: …" modules, each of which is associated with one (and only one) of the three focus areas. In addition, there is one "Methods of Cognitive Science" module (4 ECTS), one module "Topics in Computer Science" (6 or 9 ECTS) and one module "Topics in Mathematics" (9 ECTS). All courses of the mandatory elective area have to be graded with a number grade (no "passed"-only courses).



Students have to freely select modules with 60 ECTS in total from the modules that belong to the mandatory elective area, with the following constraint: No more than 48 ECTS in total from a single focus area, and at least one module each from two of the focus areas.

Example: Chris selects courses with 48 ECTS in total from modules assigned to the focus area "Cognition: Artificial Intelligence and Machine Learning". Chris cannot fill up the remaining 12 ECTS with courses assigned to the "Methods of Cognitive Science" and the "Topics in Mathematics" module, but has to pick at least one 4 ECTS course assigned to a module from one of the other focus areas.

Note: There is no need to select one primary focus area. Students can also do courses with roughly the same number of ECTS credits from two or even all three of the focus areas and thus develop a broader and more interdisciplinary background rather than a narrower and highly specialized one. We strongly recommend that even those students who want to highly specialize in one of the areas nonetheless select some courses from each of the three focus areas to strengthen their interdisciplinary background.

Each of the “Topics in …” modules (except for “Topics in Computer Science” and “Topics in Mathematics”) is associated with one (and only one) of the three focus areas, as can be seen in the list below. The “x” indicates that there are usually multiple “Topics in …” modules to which courses with relevant topics are assigned, and the “x” is replaced by “A”, “B”, “C”, and so on.

Example: There are multiple “Topics in …” modules in Artificial Intelligence, labelled “Topics in Artificial Intelligence A”, “Topics in Artificial Intelligence B”, etc., with courses with various course names such as “Methods of Artificial Intelligence”, “Cognitive Human-Computer Interaction”, etc. assigned to them.

In addition to the “Topics in …” modules, there are modules called “Complementary Lecture: …”, which also belong to a focus area and can be filled with additional introductory courses that have not already been used to fill the corresponding module of the mandatory area.

Modules that belong to the focus area “Cognition: Mind, Ethics, and Society“:

- Topics in the Ethics of Artificial Intelligence *x* 4 / 6 / 8 / 12 LP
- Topics in Philosophy of Mind and Cognition *x* 4 / 6 / 8 / 12 LP

  $x \in$ {“A”, “B”, “C”, …}

Modules that belong to the focus area “Cognition: Artificial Intelligence and Machine Learning”:

- Topics in Neuroinformatics *x* 4 / 6 / 8 / 12 LP
- Topics in Artificial Intelligence *x* 4 / 6 / 8 / 12 LP
- Topics in NeuroAI *x* 4 / 6 / 8 / 12 LP
- Topics in Computational Linguistics *x* 4 / 6 / 8 / 12 LP
- Topics in Computer Vision x 4 / 6 / 8 / 12 LP

  $x \in$ {“A”, “B”, “C”, …}

- Complementary Lecture: Cognition in Artificial Systems 8 LP

Modules that belong to the focus area “Cognition: Psychology, Communication, Neuroscience, and Behavior”:

- Topics in (Computational) Neuroscience *x* 4 / 6 / 8 / 12 LP
- Topics in Theoretical and Experimental Linguistics *x* 4 / 6 / 8 / 12 LP
- Topics in Cognitive Modeling and Psychology *x* 4 / 6 / 8 / 12 LP
- Topics in Comparative Bio-Cognition *x* 4 / 6 / 8 / 12 LP

  $x \in$ {“A”, “B”, “C”, …}

- Complementary Lecture: Cognition in Biological Systems 4 LP

- Complementary Lecture: Introduction to Neuroscience 4 LP

Additional mandatory elective modules that do not belong to any of the three focus areas:

- Topics in Computer Science 6 oder 9 LP
- Topics in Mathematics 9 LP
- Methods of Cognitive Science 4 LP

Each of the additional mandatory elective modules exists only once. Even if multiple courses are assigned to them, only one of these courses can be taken for the module in question. Additional such courses may be taken for the *free electives*, though.

Before taking "Topics in …" courses from mandatory elective area, it is usually sensible to take the corresponding introductory course from the mandatory area that introduces the basics, even if the mandatory modules are already filled (see also examination regulations §4)

Example: Charlie takes the courses "Introduction to Animal Cognition and Communication" and "Introduction to Theoretical and Experimental Linguistics" for the mandatory module "Introduction to Cognition in Biological Systems". Before taking courses assigned to the module "Topics in Cognitive Modelling and Psychology x", it is usually sensible for Charlie to take the "Introduction to Cognitive (Neuro-)Psychology" course to fill the "Complementary Lecture: Cognition in Biological Systems" module.

Free Electives ("profilbildender Wahlbereich", 36 or 33 ECTS)

For the free electives, students can take further courses depending on their interests, including further courses from Cognitive Science and related disciplines, language courses, or other courses, e.g. from their semester abroad.

The number of credits in the free electives (36 or 33 ECTS) depends on which course has been selected for the "Introduction to Mathematics" module in the mandatory area. Students who have selected the 6 ECTS option there have to do 36 ECTS, whereas students who have selected the 9 ECTS option there have to do only 33 ECTS in the free electives.

Free electives can be either graded or ungraded ("passed" only), but are usually (see §14 of the examination regulation) not considered for the final grade of the Bachelors' program.

Semester abroad / Internship abroad

The fifth semester is usually reserved for the semester or internship abroad, which is a mandatory element of the Bachelor's program. Students who have obtained their qualification for university entrance abroad, or have already studied abroad for at least one semester previously, can apply for being exempted from the semester/internship abroad at the examinations office.

Subject hours ("Versuchspersonen-Stunden"/"VP-Stunden")

In addition to the coursework, Bachelor students have to participate in experiments as subjects to collect a total of 10 subject hours.

Thesis

The Bachelor thesis is worth 12 ECTS. Each student needs a supervisor (first examiner) and a second examiner, both of whom write a report and grade the thesis. The thesis needs to be registered beforehand, and all mandatory modules and at least 40 ECTS of mandatory electives need to be passed before the registration. The regular time from the registration of the thesis to handing it in is 3 months. At least one of the examiners typically has to be a professor or senior researcher (German "Habilitation"). If one of the examiners does not meet this requirement, the examination board needs to decide whether the examiner is suitable. Postdoctoral teaching staff and doctoral students of the IKW working on closely related topics can typically be considered. At least one has to be from the University of Osnabrück, any external examiner needs to be a professor or senior researcher (German "Habilitation").

Students are not supposed to start working on the thesis before they have found the two examiners and discussed their topic with them, especially if they plan to do a thesis in collaboration with a company or another University. Once the topic is fixed, the thesis has to be registered at the examination office.

In general, the thesis is to be handed in no less than 3 weeks before the deadline, and extensions are only possible due to sickness or other unforeseen and unavoidable circumstances. Applications for extensions need to be handed in at the examinations office before the deadline, and need to be approved by the examination board. The maximum total period for extensions is two extra months.

Final grade

The final grade is calculated as follows:

$$\text{Final grade} = 1/3 * \text{thesis grade} + 2/3 * \text{coursework grade}$$

The thesis grade is the average of the grades given by the examiners. The coursework grade is the average of the ECTS-weighted grades of the following modules:

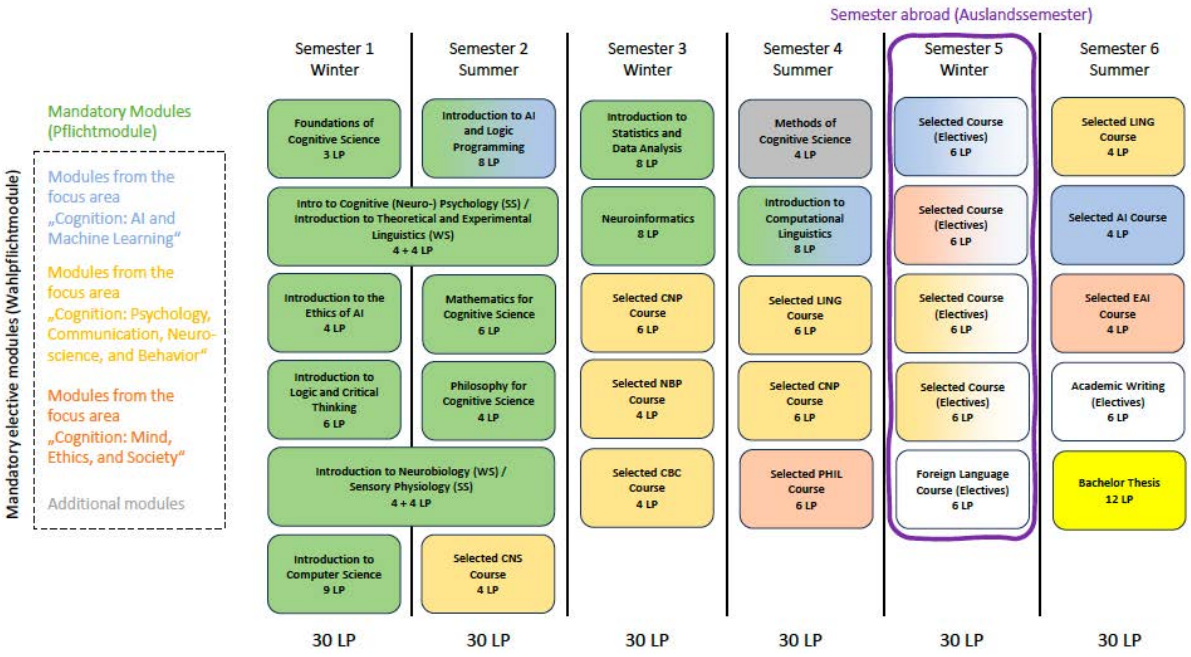
- All mandatory elective modules taken
- Introduction to Statistics and Data Analysis
- Those mandatory courses that are associated with the two focus areas in which the most ECTS credits have been obtained for the mandatory electives. Courses from the focus areas assigned to the free electives do not count!
- "Introduction to Computer Science" / "Introduction to Mathematics" if and only if the corresponding "Topics in Computer Science" / "Topics in Mathematics" module in the mandatory electives is taken.

Grades of courses from the focus areas taken for the free electives may replace grades from the mandatory area in certain cases, see §14 (2) of the examination regulations. In all other cases, course grades of courses taken for the free electives do not count towards the final grade.

Important notes

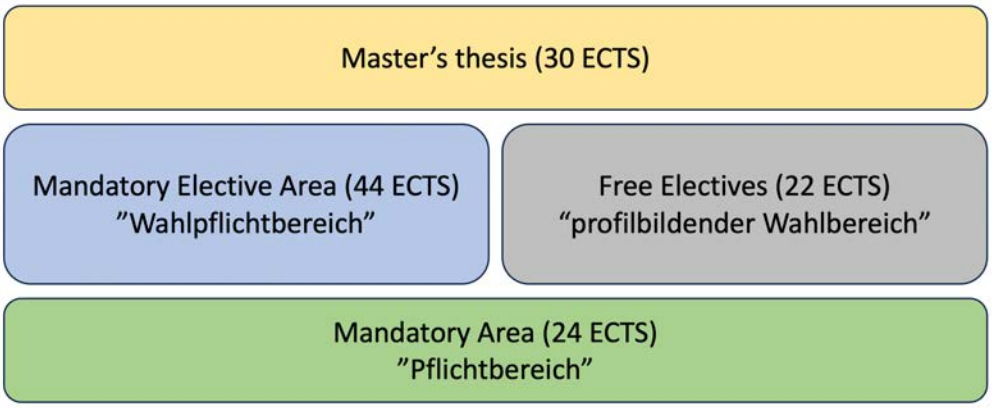
- **Exam registration:** All exams have to be registered in EXA at least one week in advance in order to be eligible to take the exam. This includes courses without a written exam, but a homework, oral exam, or other form of examination. You will find exams for each course in EXA.
- **Re-taking exams:** Exams can usually be re-taken as long as the previous exam has been failed, but re-taking a passed course (module) to improve the grade is not possible. A failed thesis can only be re-taken once.
- **Study projects:** Bachelor students can typically not take any study projects unless they are already in transition to the Master's program. Study projects cannot be accredited in the free electives of the Bachelor's program.

Typical study plan



Brief overview – Cognitive Science (MSc. program)

General Structure



Note: Each *area* comprises one or multiple *modules*, and each *module* comprises one or multiple *courses*. Sometimes, there are several courses assigned to a single module. In some cases, multiple courses jointly fill a module, and sometimes, there are alternative courses students can select from. Details can be found in the module descriptions and on the website of the Institute for Cognitive Science. Note: The "areas" here are not to be confused with the so-called "focus areas" discussed below, which all mainly belong to the mandatory elective area.

Conditional acceptance and additional requirements

Students who apply with a Bachelor's degree in a discipline other than Cognitive Science may be conditionally accepted for the Master's program with additional requirements from our Bachelor's program up to 30 ECTS that complement their previous background and have to be passed within the first year. These additional requirements do not count towards the 120 ECTS of the Master's program. Students can find information on whether they have been accepted only conditionally on their letter of admission, with details about courses indicated in the German version of the letter of admission.

Mandatory Area ("Pflichtbereich", 24 ECTS)

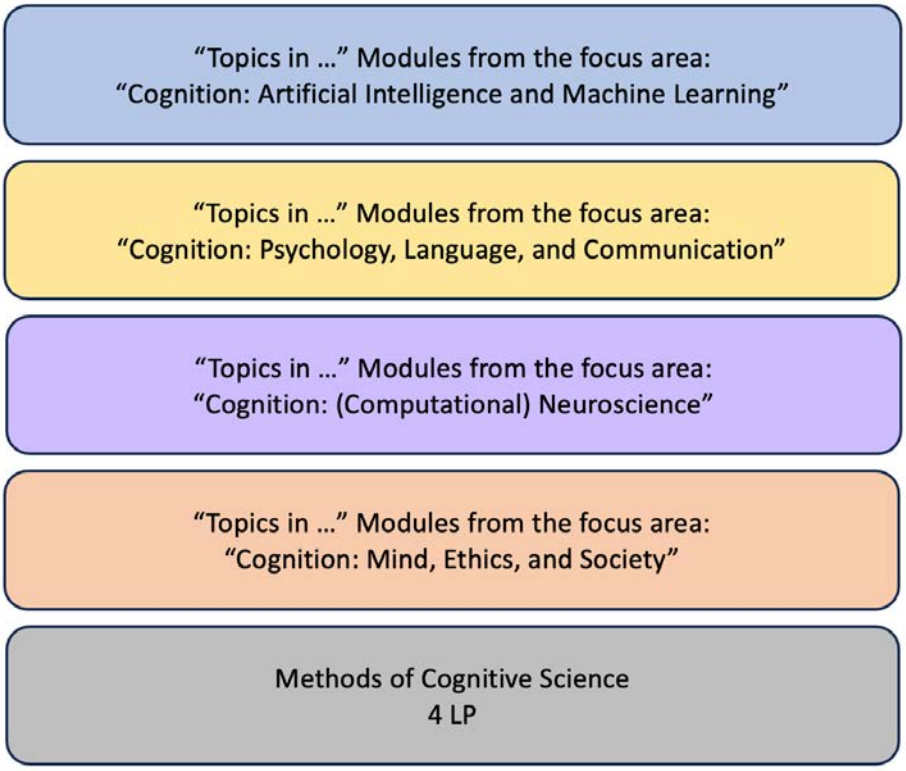
The mandatory area comprises of one two-semester module with 12+12=24 ECTS: the *study project*. We usually recommend to start with the study project in the second semester of the Master's program, and to start with the Master's thesis only once the study project has been completed.

There are usually several study projects offered each semester. Note, however, that not all study projects allow for new students every semester. Study projects which are listed as "Part 1" take up new students, for study projects listed as "Part 2" or higher, please refer to the course description or ask the lecturer(s) of the study project whether new students are taken up.

Note that participating in two different study projects for one semester each instead of a single study project for two consecutive semesters is *not possible*.

Mandatory Elective Area ("Wahlpflichtbereich, 44 ECTS)

The mandatory elective area comprises of a set of "Topics in …" modules, each of which is associated with one (and only one) of the four focus areas. In addition, there is one "Methods of Cognitive Science" module (4 ECTS). All courses of the mandatory elective area have to be graded with a number grade (no "passed"-only courses).



Students have to freely select modules with 44 ECTS in total from the modules that belong to the mandatory elective area, with the following constraint: At least 20 ECTS and no more than 32 ECTS in total from a single focus area. Each area in which courses with at least 20 ECTS are taken and assigned to the mandatory electives is considered an area of specialization of the student in question. Since the mandatory electives comprise 44 ECTS, at most two areas of specialization with 20 ECTS each can be selected. Courses taken for the free electives do not count for this constraint, even if they are in principle assigned to one of the focus areas.

Example 1: Sam is most interested in cognition in artificial systems, both from a technology perspective and a philosophical perspective. Sam thus selects courses with a total of 20 ECTS assigned to "Topics in …" modules from "Cognition: Artificial Intelligence and Machine Learning", and courses with a total of 20 ECTS assigned to "Topics in …" modules from "Cognition: Mind, Ethics, and Society". For the remaining 4 ECTS, Sam takes a course assigned to the "Methods of Cognitive Science" module. Sam thus has two specialization areas:

“Cognition: Artificial Intelligence and Machine Learning” and “Cognition: Mind, Ethics, and Society”.

Example 2: Alex is mainly interested in cognition in biological systems, and thus selects courses with a total of 28 ECTS assigned to “Topics in …” modules from “Cognition: Psychology, Language, and Communication”. Alex splits the remaining 16 ECTS between courses from the focus areas “Cognition: (Computational) Neuroscience” (8 ECTS), “Cognition: Artificial Intelligence and Machine Learning” (4 ECTS), and “Cognition: Mind, Ethics, and Society” (4 ECTS). Alex thus has one specialization area: “Cognition: Psychology, Language, and Communication”, while still maintaining a strongly interdisciplinary background.

Each of the “Topics in …” modules is associated with one (and only one) of the four focus areas, as can be seen in the list below. The “x” indicates that there are usually multiple “Topics in …” modules to which courses with relevant topics are assigned, and the “x” is replaced by “A”, “B”, “C”, and so on.

Example: There are multiple “Topics in …” modules in Artificial Intelligence, labelled “Topics in Artificial Intelligence A”, “Topics in Artificial Intelligence B”, etc., with courses with various course names such as “Methods of Artificial Intelligence”, “Cognitive Human-Computer Interaction”, etc. assigned to them.

Modules that belong to the focus area “Cognition: Mind, Ethics, and Society“:

- Topics in the Ethics of Artificial Intelligence *x* 4 / 6 / 8 / 12 LP
- Topics in Philosophy of Mind and Cognition *x* 4 / 6 / 8 / 12 LP

  x ∈ {“A”, “B”, “C”, …}

Modules that belong to the focus area “Cognition: Artificial Intelligence and Machine Learning”:

- Topics in Neuroinformatics *x* 4 / 6 / 8 / 12 LP
- Topics in Artificial Intelligence *x* 4 / 6 / 8 / 12 LP
- Topics in NeuroAI *x* 4 / 6 / 8 / 12 LP
- Topics in Computational Linguistics *x* 4 / 6 / 8 / 12 LP
- Topics in Computer Vision *x* 4 / 6 / 8 / 12 LP

  x ∈ {“A”, “B”, “C”, …}

Modules that belong to the focus area “Cognition: (Computational) Neuroscience”:

- Topics in (Computational) Neuroscience *x* 4 / 6 / 8 / 12 LP

  x ∈ {“A”, “B”, “C”, …}

Modules that belong to the focus area "Cognition: Psychology, Language, and Communication":

- Topics in Theoretical and Experimental Linguistics *x* 4 / 6 / 8 / 12 LP
- Topics in Cognitive Modeling and Psychology *x* 4 / 6 / 8 / 12 LP
- Topics in Comparative Bio-Cognition *x* 4 / 6 / 8 / 12 LP

  $x \in$ {"A", "B", "C", …}

Additional mandatory elective module that does not belong to any of the three focus areas:

- Methods of Cognitive Science (Master) 4 LP

Free Electives ("profilbildender Wahlbereich", 22 ECTS)

For the free electives, students can take further courses depending on their interests, including further courses from Cognitive Science and related disciplines, language courses, or other courses, e.g. from a optional semester abroad. Courses from the mandatory modules of the Bachelor's program can only be taken for the free electives by students of the Master's program, not for the mandatory elective area.

Free electives can be either graded or ungraded ("passed" only), but are not considered for the final grade of the Master's program.

Thesis

The Masters' thesis is worth 30 ECTS. Each student needs a supervisor (first examiner) and a second examiner, both of whom write a report and grade the thesis. The thesis needs to be registered beforehand, and 72 ECTS of creditable coursework needs to be passed before the registration. The regular time from the registration of the thesis to handing it in is 6 months. At least one of the examiners typically has to be a professor or senior researcher (German "Habilitation"). If one of the examiners does not meet this requirement, the examination board needs to decide whether the examiner is suitable. Postdoctoral teaching staff and doctoral students of the IKW working on closely related topics can typically be considered. At least one has to be from the University of Osnabrück, any external examiner needs to be a professor or senior researcher (German "Habilitation").

Students are not supposed to start working on the thesis before they have found the two examiners and discussed their topic with them, especially if they plan to do a thesis in collaboration with a company or another University. Once the topic is fixed, the thesis has to be registered at the examination office.

In general, the thesis is to be handed in no less than 3 weeks before the deadline, and extensions are only possible due to sickness or other unforeseen and unavoidable circumstances. Applications for extensions need to be handed in at the examinations office before the deadline, and need to be approved by the examination board. The maximum total period for extensions is three extra months.

Final grade

The final grade is calculated as follows:

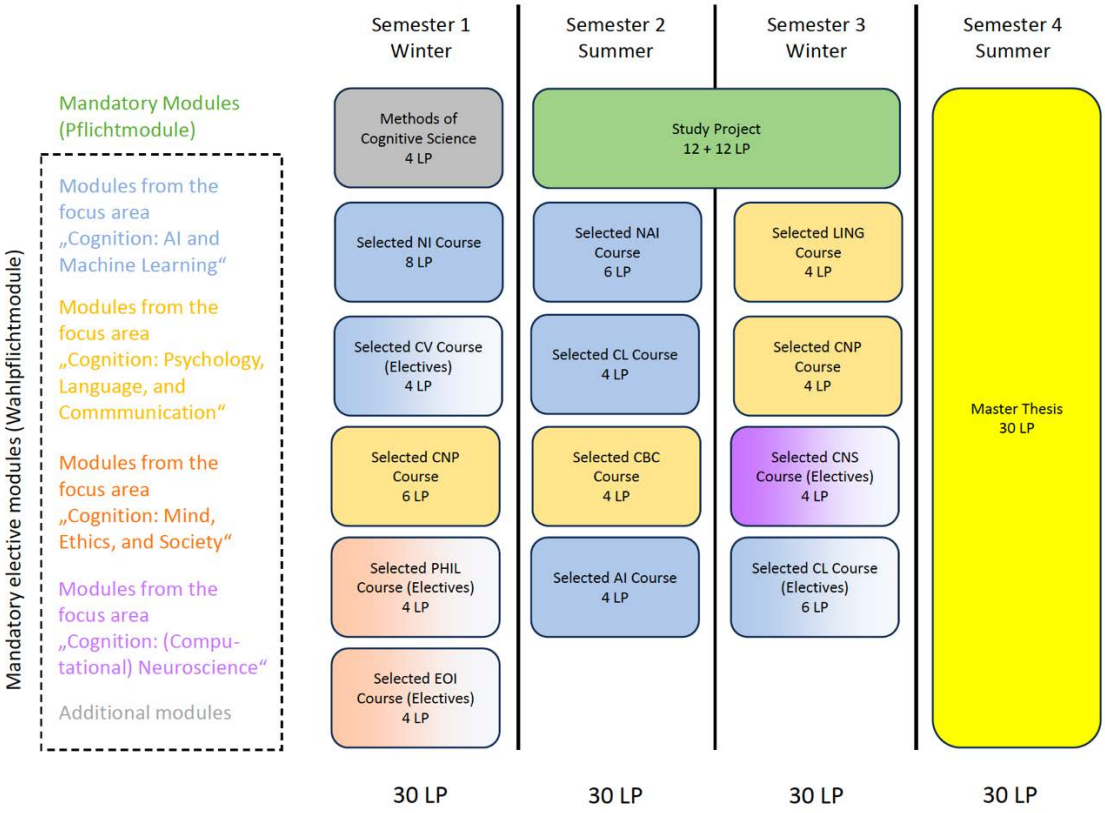
$$\text{Final grade} = 2/5 * \text{thesis grade} + 3/5 * \text{coursework grade}$$

The thesis grade is the average of the grades given by the examiners. The coursework grade is the average of the ECTS-weighted grades of mandatory and mandatory elective modules taken.

Important notes

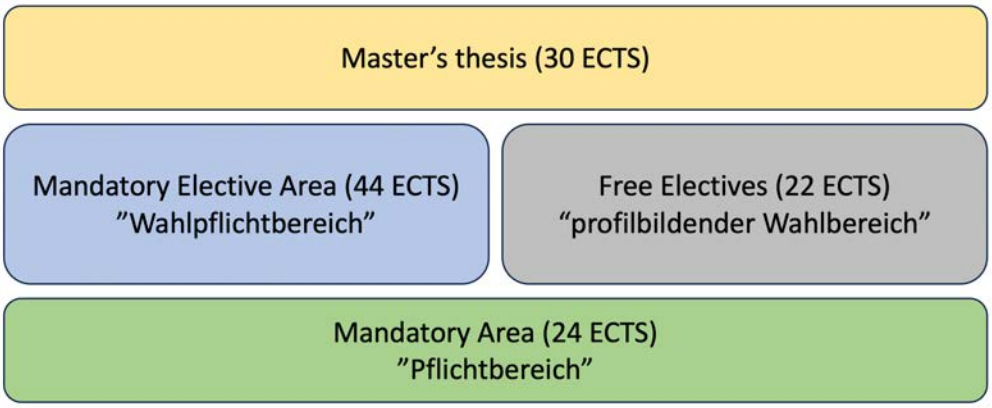
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- **Re-taking exams:** Exams can usually be re-taken as long as the previous exam has been failed, but re-taking a passed course (module) to improve the grade is not possible. A failed thesis can only be re-taken once.
- **Study projects:** Master students cannot take two different study projects. Study projects cannot be accredited in the mandatory or free electives.

Typical study plan



Brief overview – Cognitive Computing (MSc. program)

General Structure



Note: Each *area* comprises one or multiple *modules*, and each *module* comprises one or multiple *courses*. Sometimes, there are several courses assigned to a single module. In some cases, multiple courses jointly fill a module, and sometimes, there are alternative courses students can select from. Details can be found in the module descriptions and on the website of the Institute for Cognitive Science. Note: The "areas" here are not to be confused with the so-called "focus areas" discussed below, which all mainly belong to the mandatory elective area.

Conditional acceptance and additional requirements

Students who apply with a Bachelor's degree in a discipline other than Cognitive Science may be conditionally accepted for the Master's program with additional requirements from our Bachelor's program up to 30 ECTS that complement their previous background and have to be passed within the first year. These additional requirements do not count towards the 120 ECTS of the Master's program. Students can find information on whether they have been accepted only conditionally on their letter of admission, with details about courses indicated in the German version of the letter of admission.

Mandatory Area ("Pflichtbereich", 24 ECTS)

The mandatory area comprises of one two-semester module with 12+12=24 ECTS: the *study project*. We usually recommend to start with the study project in the second semester of the Master's program, and to start with the Master's thesis only once the study project has been completed.

Students of Cognitive Computing can pursue their study project as an individual project in collaboration with the company they work for, and will be co-supervised by experts from the Institute of Cognitive Science. Alternatively, students of Cognitive Computing can also participate in one of the regular study projects offered for students of Cognitive Science.

Note that participating in two different study projects for one semester each instead of a single study project for two consecutive semesters is *not possible*.

Mandatory Elective Area ("Wahlpflichtbereich, 44 ECTS)

The mandatory elective area comprises of a set of "Topics in …" modules. In addition, there is one "Methods of Cognitive Science" module (4 ECTS). All courses of the mandatory elective area have to be graded with a number grade (no "passed"-only courses). Students have to freely select modules with 44 ECTS in total from the modules that belong to the mandatory elective area.

The "Topics in …" modules students of Cognitive Computing can select from correspond to the modules associated with the two focus areas "Cognition: Artificial Intelligence and Machine Learning" and "Cognition: (Computational) Neuroscience" of the Master's program in Cognitive Science, but within the Cognitive Computing program, they are not separated into the two focus areas. The "x" after the module names indicates that there are usually multiple "Topics in …" modules to which courses with relevant topics are assigned, and the "x" is replaced by "A", "B", "C", and so on.

Example: There are multiple "Topics in …" modules in Artificial Intelligence, labelled "Topics in Artificial Intelligence A", "Topics in Artificial Intelligence B", etc., with courses with various course names such as "Methods of Artificial Intelligence", "Cognitive Human-Computer Interaction", etc. assigned to them.

"Topics in …" modules of the Cognitive Computing mandatory elective area:

- Topics in Neuroinformatics *x* 4 / 6 / 8 / 12 LP
- Topics in Artificial Intelligence *x* 4 / 6 / 8 / 12 LP
- Topics in NeuroAI *x* 4 / 6 / 8 / 12 LP
- Topics in Computational Linguistics *x* 4 / 6 / 8 / 12 LP
- Topics in Computer Vision *x* 4 / 6 / 8 / 12 LP
- Topics in (Computational) Neuroscience *x* 4 / 6 / 8 / 12 LP

  $x \in$ {"A", "B", "C", …}

Additional mandatory elective module:

CS24-MWP-MCS	Methods of Cognitive Science (Master)	4 LP

Free Electives ("profilbildender Wahlbereich", 22 ECTS)

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Final grade

The final grade is calculated as follows:

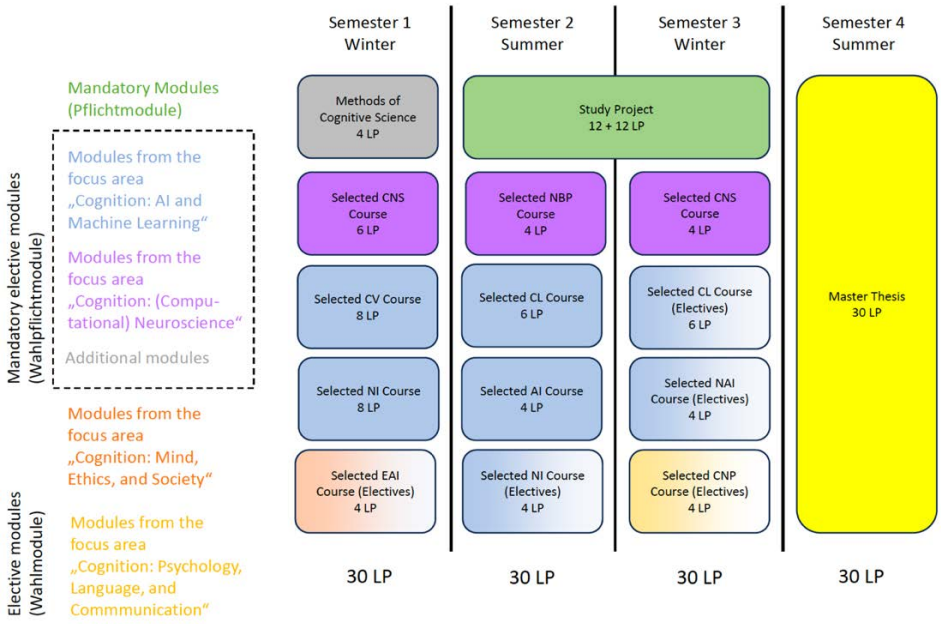
Final grade = 2/5 * thesis grade + 3/5 * coursework grade

The thesis grade is the average of the grades given by the examiners. The coursework grade is the average of the ECTS-weighted grades of mandatory and mandatory elective modules taken.

Important notes

- **Exam registration:** All exams have to be registered in EXA at least one week in advance in order to be eligible to take the exam. This includes courses without a written exam, but a homework, oral exam, or other form of examination. You will find exams for each course in EXA.
- **Re-taking exams:** Exams can usually be re-taken as long as the previous exam has been failed, but re-taking a passed course (module) to improve the grade is not possible. A failed thesis can only be re-taken once.
- **Study projects:** Master students cannot take two different study projects. Study projects cannot be accredited in the mandatory or free electives.

Typical study plan



Note: The modules are color-coded according to the focus areas of the Cognitive Science Master's program, but within the Cognitive Computing Master's program, the mandatory elective area is not separated into separate focus areas. Courses from the Cognitive Science focus areas "Cognition: Mind, Ethics, and Society" and "Cognition: Psychology, Language, and Communication can only be taken for the free electives, not the mandatory electives.