

# Study Regulations Governing the Master's Degree Programme 'Language Science and Technology'

**30 April 2020**

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Please note: This translation is provided for information purposes only. In the event of any discrepancies between the translation and the original German version, the latter shall take precedence.

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Pursuant to Section 60 of the Saarland Higher Education Institutions Act of 30 November 2016 (Official Gazette of Saarland, p. 1080), most recently amended in law on 10 April 2019 (Official Gazette, p. 412), and further pursuant to the Examination Regulations Governing the Bachelor's Degree Programme 'Computational Linguistics' and the Master's Degree Programme 'Language Science and Technology' of 28 April 2016 (Official Bulletin No. 58, p. 486) and with the consent of the University Senate at Saarland University, the Faculty of Humanities hereby issues the following Study Regulations Governing the Master's Degree Programme 'Language Science and Technology'.

## Section 1 Scope

These study regulations, which govern the contents and structure of the Master's degree programme *Language Science and Technology* are based on the Examination Regulations Governing the Bachelor's Degree Programme 'Computational Linguistics' and the Master's Degree Programme 'Language Science and Technology' of 28 April 2016 (Official Bulletin, p. 486).

## Section 2 Objectives of the degree programme and career relevance

The objective of this consecutive, research-focused Master's degree programme is to expand on and deepen the knowledge acquired in the preceding Bachelor's degree programme 'Computational Linguistics' and prepare graduates for challenging national and international research and development work in the specific field.

## Section 3 Start and duration of programme

- (1) Students can begin the programme at the beginning of the winter semester of each year.
- (2) The curriculum is organized such that the programme can be completed in four semesters (standard period of study).

## Section 4 Types of academic instruction

The curriculum content is taught using the following types of academic instruction:

1. Lectures ('L', standard class size = 100): Lectures serve to introduce a particular subject area and also provide an overview of the relevant theoretical concepts and principles, methodologies and skills, technologies and practical implementations that are common to the subject. Lecture courses provide suggestions for further reading on a topic

and open the way to acquiring a deeper understanding of an area through subsequent exercise classes, practical assignments and self-directed study.

2. Exercise and problem-solving classes ('E', standard class size = 20): Exercise and problem-solving classes are small-group sessions used primarily to supplement and reinforce what was learned in the lectures. Students work on representative problems as this provides an opportunity for them to apply and deepen the knowledge they acquired in the lectures, to assess their personal understanding of a specific area and to clarify any questions that they may have.

3. Seminars ('S', standard class size = 15): Seminars provide an opportunity for students to broaden the knowledge and skills that they have already acquired and to gain a deeper understanding of a particular field of research by participating in discussions, giving presentations or completing seminar assignments based on their study of the specialist literature and relevant academic sources. They also help students acquire the skills necessary for the effective oral and visual presentation of scientific and academic content and encourage students to engage in critical analysis and discussion of research results. A seminar may also include project-related work in areas of current scientific interest or debate. The deeper understanding of a particular field that students acquire through project-related work in the Master's seminar may provide the basis for their final-year Master's thesis.

4. Software projects ('SP', standard class size = 10) Working in supervised groups, students undertake an extensive practical programming project that addresses and seeks to solve a problem in computational linguistics from the initial design concept through to the final practical implementation and the presentation of the results. The skills acquired by students include:

planning and execution of a larger project; group work; working to deadlines; software engineering knowledge and skills; a deeper understanding of programming; reporting on their work in the form of a written paper and an oral presentation. Participation in a particular practical assignment or project may be dependent on a student having first successfully completed a required course of lectures and exercise classes.

## **Section 5**

### **Structure and content of the programme**

(1) To graduate from the programme, students shall earn a total of 120 credits (often referred to in Germany as 'credit points' or 'CPs') as defined by the European Credit Transfer System (ECTS). As a rule, students are required to earn 30 credits per semester.

(2) The degree programme covers modules associated with the different sections listed below. Appendix A provides details of the modules and module elements offered in the different sections of the programme, the type of academic instruction used, the number of credit hours per week and the ECTS credits earned, the module frequency, the type of academic assessment and whether the module is graded.

1. At least 24 graded credits from the basic lecture courses (electives) and the core lecture courses (mandatory electives), of which at least 18 credits must be earned from core lecture courses.

a. Basic lecture courses:

- i. Foundations of Empirical Methods (2 hrs/wk / 3 CP)
- ii. Foundations of Mathematics (4 hrs/wk / 6 CP)
- iii. Foundations of Linguistics (4 hrs/wk / 6 CP)

- b. Core lecture courses (4 hrs/wk, 6 CP)
    - i. Computational Linguistics
    - ii. Computational Psycholinguistics
    - iii. Machine Translation
    - iv. Semantic Theory
    - v. Speech Science
    - vi. Statistical Natural Language Processing
    - vii. Syntactic Theory
- 2. 14 graded credits from the seminars offered (each worth 7 CP; mandatory elective)
- 3. A minimum of 6 and a maximum of 18 graded credits from courses offered by the Department of Computer Science or Cognitive Psychology
- 4. A minimum of 19 and a maximum of 31 credits from mandatory elective courses:
  - a. Core lecture courses (each worth 6 CP, graded)
  - b. Advanced lectures (variable number of credits, graded)
  - c. Software projects (each worth 8 CP, graded)
  - d. Seminars (each worth 4 or 7 CP, graded)
  - e. Tutoring and supervising undergraduate students in problem-solving classes (usually 4 CP, ungraded). Tutoring several groups of students is not permitted.
  - f. A work placement of at least 6 weeks that has been approved by the Examination Board (8 CP, ungraded)
  - g. Modules for which an application has been submitted to and approved by the Examination Board. For example, students have the option of submitting an application to the Examination Board requesting recognition of certain student activities (particularly university-related administrative activities) or of attendance at courses teaching key skills (maximum of 3 credits in each case).
- 5. 42 graded credits from the final module
  - a. 12 ungraded credits from the Master's seminar (12 CP)
  - b. 30 graded credits from the Master's thesis (30 CP)

(3) Students can select either entire modules or individual module elements from the mandatory electives offered. Academic credits that were used to obtain the preceding Bachelor's degree cannot also be used to meet the degree requirements in the Master's programme. However, if academic credits were earned during the Bachelor's degree for subject matter that can be assigned to a module in the Master's programme *Language Science and Technology* and if these credits were not used to meet the total credit requirements of the Bachelor's programme, they can be transferred to the Master's programme provided that they do not exceed a total of 30 ECTS credits.

(4) Students shall accumulate a total of 42 CP in the mandatory part of the curriculum (of which 30 CP are from the 'Master's thesis' module and 12 CP are from the 'Master's seminar' module) and at least 78 CP from the electives and mandatory electives offered.

(5) The number of places available on practical assignments and seminars and in the mandatory elective module 'Tutoring' are limited. Admission to these modules will be managed by the module coordinator.

(6) With the exception of the Master's seminar (see Sec. 5(2), item 6a), the 'Tutoring' module (see Sec. 5(2), item 5e) and the work placement / internship phase (see Sec. 5(2), item 5f) all of the ECTS credits from the mandatory and mandatory elective parts of the programme shall be earned from graded academic assessments/examinations. Academic credits from modules or courses in the areas

'computer science' or 'cognitive psychology' (see Sec. 5(2), item 4) may be ungraded if only an ungraded assessment/examination is offered.

(7) A student who received academic credits for successfully completing a core lecture course is permitted to retake the assessment or examination on one further occasion within the same examination period and during the standard period of study in order to improve the mark awarded (cf. Sec. 13(4) of the Examination Regulations). A student who has received academic credits for successfully completing an advanced lecture course is permitted to retake the assessment or examination on one further occasion within the same examination period in order to improve the mark awarded, provided that the lecturer gave notice at the beginning of the course that the final examination or assessment may be repeated for this purpose. The student will receive the higher of the two grades. In all other cases, students will not be permitted to repeat an assessment or examination for which they have already achieved at least the minimum pass mark.

(8) The core lecture courses (mandatory electives) are offered at least once every two years. Seminars, software projects and advanced lecture courses will not necessarily be repeated. The Dean of Studies will ensure that a sufficient number of courses and modules are offered each year.

(9) The language of instruction is usually English and will be announced at the beginning of each course or module.

(10) Detailed information about the content of the individual modules and module elements is provided in the module catalogue that will be made available in suitable form. Any changes or amendments to the information in the module catalogue not covered in these regulations shall be reported to the Dean of Studies and documented in the appropriate form.

(11) Attendance may be compulsory for certain seminars, exercise classes and software projects. Students will be notified of this by the course or module coordinator at the beginning of the course or module. The mandatory attendance requirement is normally deemed to have been met if a student was present for at least 85% of the course sessions. If there are reasonable grounds for a student's absence, the student may be offered the option of completing an alternative assignment.

## **Section 6 Study plan**

The Dean of Studies will compile a study plan based on these study regulations that includes details of the types and scope of the module elements offered (Appendix A) with recommendations on how students can organize and structure their studies efficiently (Appendix B). The study plan will be made available in suitable form. The range of modules offered in a particular semester will be published in the Saarland University course catalogue for that semester.

## **Section 7 Study counselling**

(1) The Central Student Advisory Service (*Zentrale Studienberatung*) at Saarland University provides counselling and guidance to prospective students and enrolled students concerning the content, structure and requirements of academic study at Saarland University. It also can advise and assist students with respect to their study options as well as with planning and organizing their studies.

(2) Questions concerning curricular demands, learning objectives, admission

requirements and study planning and organization can be addressed to the departmental academic adviser for *Language Science and Technology*.

(3) Questions relating to individual modules can be addressed to the respective module coordinators.

## **Section 8** **Studying abroad**

Students have the opportunity to spend part of the programme studying abroad. Students interested in studying abroad should obtain information and advice from a relevant source, take preparatory language courses as needed and should clarify credit transfer arrangements in accordance with the relevant examination regulations by completing a study abroad learning agreement. Information on study abroad opportunities, exchange programmes, scholarships and administrative formalities is available from Saarland University International Office or from the relevant departmental representative. As foreign host universities and scholarship-awarding bodies often have early application deadlines and long application processing times, study abroad applications should generally be submitted to the Examinations Office one year before the planned start date.

## **Section 9** **Master's thesis and Master's seminar**

(1) By completing a Master's thesis, students can demonstrate that they are able to work independently on tackling problems in computer linguistics or related fields. The completion period for the Master's thesis is six months. Students are awarded 30 CP for completing their Master's thesis. Before finishing their Master's thesis, each student shall have successfully completed a Master's seminar in an area with direct relevance to the topic being addressed in the thesis. Students attending a Master's seminar shall give an oral presentation on the problem they propose to tackle in their thesis and submit a written description of the issues to be addressed in the Master's thesis.

(2) Students shall register their thesis project with the Examinations Office no later than one semester after successfully completing the Master's seminar. Students who fail to meet this deadline will be required to successfully complete another Master's seminar.

## **Section 10** **Commencement, regulations for the transitional phase**

(1) These regulations shall come into force on the day after they are announced in the Official Bulletin of the Institutions of Higher Education in Saarland (*Dienstblatt der Hochschulen des Saarlandes*).

(2) Students who began studying for the Master's programme in *Language Science and Technology* at the Faculty of Humanities before these regulations entered into force may continue to study under the study regulations applicable at the time they began the Master's programme but are required to complete their studies including the final academic assessment and examination phase by the end of summer semester 2022.

Saarbrücken, 9 February 2021

President of Saarland University  
(Univ.-Prof. Dr. Manfred Schmitt)

## Appendix A - Modules, assessments and examinations Master's degree programme 'Language Science and Technology'

**Master's degree programme 'Language Science and Technology'**[illegible]

| <b>Core lecture courses</b>                                                                                                 | <b>Type of assessment</b>                   | <b>Grading</b> | <b>ECTS credits (CP)</b> |
|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|----------------|--------------------------|
| Foundations of Empirical Methods                                                                                            | Written examination                         | b              | 3                        |
| Foundations of Mathematics                                                                                                  | Written examination, preliminary assessment | b              | 6                        |
| Foundations of Linguistics                                                                                                  | Written examination, preliminary assessment | b              | 6                        |
| Computational Linguistics                                                                                                   | Project, preliminary assessment             | g              | 6                        |
| Statistical Natural Language Processing                                                                                     | Written examination, preliminary assessment | b              | 6                        |
| Machine Translation                                                                                                         | Written examination, preliminary assessment | b              | 6                        |
| Syntactic Theory                                                                                                            | Written examination, preliminary assessment | b              | 6                        |
| Semantic Theory                                                                                                             | Written examination, preliminary assessment | b              | 6                        |
| Computational Psycholinguistics                                                                                             | Written examination, preliminary assessment | b              | 6                        |
| Speech Science                                                                                                              | Written examination, preliminary assessment | b              | 6                        |
|                                                                                                                             |                                             |                |                          |
| <b>Advanced lecture courses</b>                                                                                             | <b>Type of assessment</b>                   | <b>Grading</b> | <b>ECTS Credits (CP)</b> |
| Experimental Methods in Psycholinguistic Research                                                                           | Projects                                    | g              | 6                        |
| Mathematical Logic                                                                                                          | Written examination                         | b              | 6                        |
| Digital Signal Processing                                                                                                   | Written examination                         | b              | 6                        |
| Fundamentals of Signal Processing                                                                                           | Written examination                         | b              | 6                        |
| Text to Speech Synthesis                                                                                                    | Written examination                         | b              | 3                        |
| Information Theory                                                                                                          | Written examination                         | b              | 3                        |
| Connectionist Language Processing                                                                                           | Written examination                         | b              | 6                        |
| Range of advanced lectures offered changes every semester The Examination Board may add other module elements to this list. |                                             |                |                          |

## Appendix B: Sample study plan

|                          | Module                                                | Examples                                          | credit hrs/wk | ECTS credits (CP) |
|--------------------------|-------------------------------------------------------|---------------------------------------------------|---------------|-------------------|
| 1 <sup>st</sup> semester |                                                       |                                                   |               |                   |
|                          | Basic course lecture                                  | Foundations of Linguistics                        | 4             | 6                 |
|                          | Core lecture course                                   | Computational Linguistics                         | 4             | 6                 |
|                          | Core lecture course                                   | Computational Psycholinguistics                   | 4             | 6                 |
|                          | Courses offered by the department of Computer Science | Machine Learning                                  | 6             | 9                 |
| 2 <sup>nd</sup> semester |                                                       |                                                   |               | 32                |
|                          | Core lecture course                                   | Semantic Theory                                   | 4             | 6                 |
|                          | Mandatory electives                                   | Experimental Methods in Psycholinguistic Research | 4             | 6                 |
|                          | Mandatory electives                                   | Laboratory Phonology                              | 4             | 6                 |
|                          | Mandatory electives                                   | Text-to-speech synthesis                          | 2             | 3                 |
|                          | Mandatory electives                                   | Seminar                                           | 2             | 4                 |
|                          | Seminar                                               | Seminar                                           | 2             | 7                 |
| 3 <sup>rd</sup> semester |                                                       |                                                   |               | 31                |
|                          | Mandatory electives                                   | Speech Science                                    | 4             | 6                 |
|                          | Mandatory electives                                   | Neural Networks: Implementation and Application   | 4             | 6                 |
|                          | Seminar                                               | Seminar                                           | 2             | 7                 |
|                          | Master's Seminar                                      |                                                   | 2             | 12                |
| 4 <sup>th</sup> semester |                                                       |                                                   |               | 30                |
|                          | Master's Thesis                                       |                                                   | 2             | 30                |
|                          |                                                       |                                                   |               | <b>120</b>        |