

## Course Levels and Requirements

Within GSLT, courses are divided into three levels as follows:

- Level 1 courses carry 5 credit points and offer an introduction to research in one of the school's various areas. Examples of level 1 courses are Natural Language Processing, Speech Technology, Linguistics, Phonetics.
- Level 2 courses carry 5 credit points and focus on a particular subarea of one of the school's areas which is of current research interest in language technology. Level 2 courses normally have one or more level 1 courses as a prerequisite. Examples of level 2 courses are Dialogue Systems, Machine Translation, Lexical Semantics, Information Access.
- Level 3 courses carry 10 credit points and offer a detailed examination of a current open research problem. Usually the instructor presents some research of her own which she develops during the course and course projects contribute to this research or present alternative solutions. Level 3 courses often have a specific level 2 course as a prerequisite, but they may also be more problem or application oriented and build on several previous courses. Level 3 courses may involve a shorter or longer stay at a research institution other than the home institution. Examples of level 3 courses are Dialogue Systems 2, Machine Translation 2.

All decisions regarding examination and credits are ultimately taken by each student's home institution. However, every student's course program must also meet the following requirements from GSLT:

- Alternative A:  
At least 30 credit points on level 2 and at least 10 credit points on level 3.  
Four compulsory level 1 courses:
  1. Natural Language Processing
  2. Speech Technology
  3. Programming
  4. Research Methods and Theory of Science
- Alternative B:  
At least 10 credit points on level 2.  
No compulsory courses.

Alternative A can be said to correspond to a major specialization in language technology within the subject area of the home institution, while alternative B is a minor specialization. In both cases, however, the thesis must be in the area of language technology.

## External Courses

In addition to courses offered by GSLT, students may take courses at their home institution or at another institution. If students want to count such courses as fulfilling part of the requirements stated above, this should be clearly indicated in the student's individual study plan. The decision as to whether an external course can be counted as the equivalent of a GSLT course ultimately rests with the steering committee, and the following general guidelines should be adopted:

- In order to count as one of the compulsory courses Natural Language Processing and Speech Technology, the content of the external course must overlap to at least 75% with the corresponding course offered by GSLT.
- In order to count as the compulsory course Programming, the external course should give students basic programming skills (in any programming language) and a basic grasp of data structures and algorithms.
- In order to count as the compulsory course Research Methods and Theory of Science, the external course should be a PhD course giving an introduction to research methods and/or theory or philosophy of science.

- In order to count as a level 2 course, the external course should focus on a specific subarea (or application area) of a field of immediate relevance for language technology and should preferably have as prerequisite a PhD course in the field. Examples of subareas and fields are:
  - Syntactic parsing (subarea of Natural Language Processing).
  - Speech recognition (subarea of Speech Technology).
  - Dialogue systems (application area of NLP and Speech Technology)
  - Lexical semantics (subarea of Linguistics)
  - Intonation (subarea of Phonetics)
  - Machine learning (subarea of Computer Science)
  - Bayesian modeling (subarea of Statistical Methods)
  - Type theory (subarea of Formal Methods)
  
- In order to count as a level 3 course, the external course should be equivalent to 10 credit points, should require students to do a substantial amount of independent research, and should preferably have as requirement a PhD course equivalent to a level 2 course. The work done for the course should involve interaction with a senior researcher other than the main supervisor and should preferably also involve interaction with at least one other PhD student. All or part of the work required for the course may be carried out in industrial or other projects, provided that all other conditions are satisfied.