

## Assessment criteria and grading rubrics

### **Criterion 1: Independent work**

#### ***Professional planning, accomplishment and follow-up***

Grading rubrics: Planning, Accomplishment, Follow-up, Independence

- *The student plans her/his work professional by*
  - writing a clear and reasonable project plan,
    - Is the problem/commission clearly formulated?
    - Are the sub problems reasonable and on sufficiently detailed level?
    - Has an appropriate in-depth study been chosen?
  - being open for different views and think about different ways to solve some sub problems.
  
- *The student accomplishes her/his work on a professional way by*
  - carrying out projects/working duties within given frameworks,
  - revising the planning/project plan adapting to time and sub problems,
  - appearing for scheduled meetings on time and well prepared,
  - adapting to regulations at the company where the thesis work is done,
  - carrying out projects/work according to ACM/IEEE Code of Ethics and Professional Practice (se <http://www.acm.org/about/se-code>). For example,
    - Act to the benefit of the general public's and mandator's best
    - Strive for the completed product/system/software to meet the highest standards available
    - ...
  
- *The student follows up her/his work on a professional way by*
  - updating the supervisors on the progress of the work
    - Delivers regular and worthwhile status reports
    - Pursue a project diary/blog
  
- *The student shows independence by*
  - taking initiatives to meetings, reviews and discussions,
  - drifting the work ahead and coming up with ideas of her/his own,
  - proving ability for creativity and innovation.

## **Criterion 2: Scientific and Engineering work**

### ***Scientific and Engineering contents and results***

Grading Rubrics: Objective wording and surrounding world analysis, Methodical conditions, Scientific/engineering sustainable results, Discussion results, Progression in the subject

- *The student formulates clear objectives and gives a reasonable analysis of the current situation by*
  - clearly formulating the problem, the issues, the research questions and/or the hypotheses/assumptions,
  - clearly re-engaging to related research/development.
- *The student creates appropriate methodical conditions by*
  - choosing adequate methods,
  - clearly justifying and describing the ways of working and the methodology.
- *The student reaches scientific/engineering sustainable results by*
  - using the methods correctly,
  - integrating knowledge from different parts of the education,
  - carrying out experiments, implementations and/or theoretical tasks carefully and showing good familiarity with the subject.
- *The student discusses the results on an objective way by*
  - drawing reasonable conclusions,
  - elucidating restrictions and problems and the good of the results,
  - indicating possibilities for future works.
- *Progression in the subject*
  - There are no requirements that the work should lead to progression in the subject, but if this is the case it is considered distinguished positive.

### **Criterion 3: Presentation and opposition**

#### ***Written report (layout)***

Grading Rubrics: Presentation/layout, Scientific writing

- *The student presents the material on an understandable way by*
  - organizing the contents in a good way,
  - treating the language well and having a balanced terminology in the subject,
  - presenting figures and tables on a clear way making them understandable without other information than the legends of the figures/tables,
  - writing the report with good coherence and cohesion.
  
- *The student uses a scientific/engineering way of argumentation by*
  - presenting well-founded assertions,
  - formulating the problem/issue on a clear way,
    - Is the problem well-founded and motivated in the introduction?
    - The introduction should put the issue into a larger context
  - relating the problem to earlier research,
  - defining those central concepts that are included in the report,
  - putting the results into a larger context, and evaluating the possible weaknesses of the work.

#### ***Oral presentation***

Grading Rubrics: Presentation of the material, Describe/clarify initiatives of her/his own

- *The student presents the material on a professional way by*
  - outlining the contents well,
  - keeping up with time,
  - expressing the material in an understandable way tailored for the target group.
  
- *The student describes and clarifies the initiatives of her/his own in the work*



- *The student implements the discussion with the opponent and the audience in a professional way*

### ***Planning and implementing of opposition***

Grading Rubrics: Written basis of the opposition, Constructive implementation of the opposition

- *Before the opposition takes place the student produces a written basis that mirrors the strengths and weakness of the work*
- *The student implements a constructive opposition by*
  - discussing, for example, choices of methods and results in the work and not focusing on spelling errors and layout,
  - balancing the mix of comments on strengths and weaknesses,
  - referring, in the oral opposition, to the recent oral presentation

