



# *Master Thesis Project – Methodology Seminars*

1. Procedures and planning a thesis project: The thesis proposal, grading, *(by Ben Slimane)*
2. Scientific method, Previous work, Literature study, Plagiarism, *(by G. Q. Maguire Jr.)*
3. Writing a thesis, *(by Jens Zander)*
4. Oral presentation and reviewing/opposition, *(by Jens Zander)*



# *Procedures & Planning of a Thesis Project*

- ▼ The thesis project course
- ▼ Procedures and planning of a master thesis project
- ▼ Grading of a master thesis project
- ▼ Master thesis project proposal

*S. Ben Slimane*

# *Course Objectives*

## ▼ The student should:

- ✦ be able to apply the relevant knowledge and skills, which are acquired within the technical/main area, to a given problem
- ✦ within given constraints, even with limited information, be able to independently analyze and discuss complex inquiries/problems and handle larger problems on the advanced level within the technical/main area
- ✦ be able to reflect on, evaluate, and critically assess one's own and others' scientific results
- ✦ be able to document and present one's own work, for a given target group, with strict requirements on structure, format, and language usage.
- ✦ be able to identify one's need for further knowledge and continuously develop one's own competencies

# *Main Content*

- ▼ The degree project should deal with an interesting problem within the area
  - ↘ There has to be interesting problems within the subject area to investigate
- ▼ The work should rest on scientific methodology and should encompass elements of investigations and analysis
  - ↘ Should bring some novelty (possible to publish!)
- ▼ Elements of implementation, if included, should be of subordinate importance and its aim should be to verify developed models and theories and be an application of chosen methodology
- ▼ The project work should correspond to 20 weeks of full-time studies.
- ▼ A time plan and literature study should be included in the pre-study.
- ▼ Written report and a public oral presentation

# *Prerequisites*

- ▼ The project is normally done in the area in which the student has chosen for specialization
  - ↘ This is not an absolute requirement
  - ↘ The examiner has the final decision whether the student can carry out the project work
- ▼ At least 210hp for MSc of Engineering (Civilingenjör)
- ▼ At least 60hp for Masters Programs

# *Requirements*

- ▼ Thesis proposal report (pre-study)
- ▼ Written thesis report
- ▼ Oral presentation
- ▼ Opposition
  - ↘ Opposition report
  - ↘ Public discussion with the thesis presenter
- ▼ Attendance of two master thesis presentations



# *Examination*

- ▼ The course can be reported as one element of 30hp or as a sequence of elements
  - ↘ Pre-study, 6hp
  - ↘ Accomplishment, 15hp
  - ↘ Written report, 7hp
  - ↘ Presentation and Opposition, 2hp
- ▼ The final grade is set after an overall impression of the thesis work by the examiner

# *Grading of the Thesis*

2E1015  
Radio Communication

IK251X  
Communication Systems

1F1521  
Computer Communication

IS250X  
Electronics & Computer Systems

**Degree Projects with grade A-F**

**Degree Projects with grade P/F (if admitted before 2007)**



# *A-F Graded Thesis Projects*

Elements of the evaluation:

## ▼ *Process*

- ↘ Plan and carry out the project
- ↘ Opposition
- ↘ Acquire knowledge

## ▼ *Engineering-related and scientific content*

- ↘ Problem formulation
- ↘ Modeling, analysis, development, and analysis

## ▼ *Presentation*

- ↘ Oral presentation
- ↘ Written presentation

# *A-F Graded Thesis Projects*

- ▼ The grading model is based on giving an appraisal to each of the three assessment criteria

<b>Assessment Criteria</b>	<b>Process</b>	<b>Engineering-related and Scientific Contest</b>	<b>Presentation</b>
<b>Excellent</b>	3p	3p	3p
<b>Good</b>	2p	2p	2p
<b>Sufficient</b>	1p	1p	1p
<b>Failed</b>	0p	0p	0p

- ▼ The sum of points of the assessment criteria makes up the basis for the grades A\_F

<b>Point</b>	8-9p	7p	6p	5p	3-4p	0-2p
<b>Grade</b>	A	B	C	D	E	F

- ▼ The examiner may, after an overall impression, lower or raise the grade from this table one step (1p).

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Grade	<b>A</b>	B	C	D	E	F

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# *Evaluation Criteria - Process*

<b>Excellent</b>	<b>Good</b>	<b>Sufficient</b>	<b>Insufficient</b>
<ul style="list-style-type: none"><li>▼ Independently plan and carry out the project within agreed time frames, show good initiative and be open to supervision and critique</li><li>▼ Independently identify one's own need for new knowledge and acquire this knowledge</li><li>▼ Show a good ability to adopt the perspective of another's work and formulate relevant and constructive critique</li></ul>	<ul style="list-style-type: none"><li>▼ Plan and carry out the degree work within agreed time frames, show initiative and be open to supervision and critique</li><li>▼ Show the ability to acquire new knowledge</li><li>▼ Show the ability to adopt the perspective of another's work and formulate relevant critique</li></ul>	<ul style="list-style-type: none"><li>▼ Carry out the project work within agreed time frames, show certain initiative and be open to supervision and critique</li><li>▼ Show a sufficient ability to acquire new knowledge</li><li>▼ Show a sufficient ability to adopt the perspective of another's work and formulate critique</li></ul>	<ul style="list-style-type: none"><li>▼ Insufficient respect for agreements, severe lack of independence, or disregard for supervision. Lacks the ability or desire to acquire new knowledge.</li></ul>

# *Evaluation Criteria - Engineering-Related and Scientific Content*

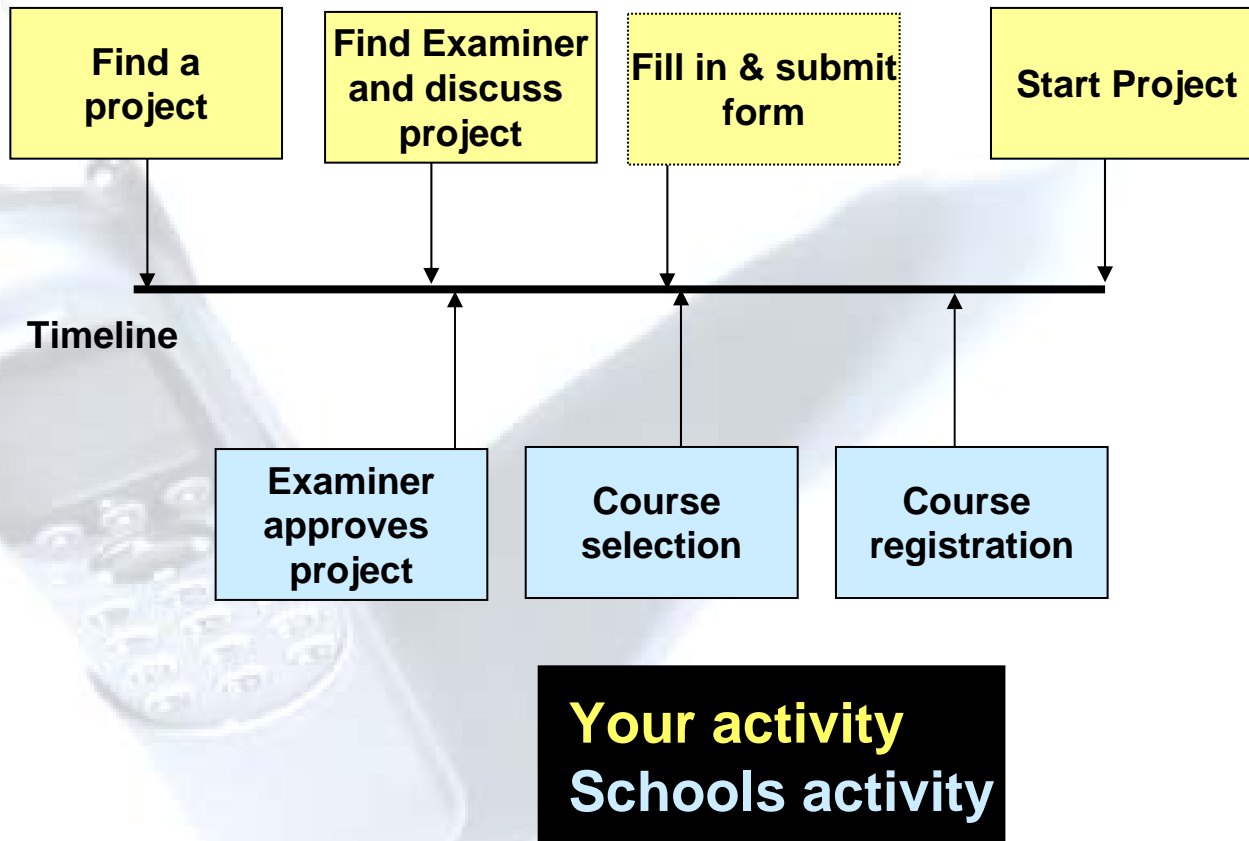
<b>Excellent</b>	<b>Good</b>	<b>Sufficient</b>	<b>Insufficient</b>
<p>▼ From problems/inquiries and methodology, show a very good ability to apply engineering-related and scientific skills like problem formulation, modeling, analysis, development and evaluation in a systematic way</p> <p>▼ Where this is relevant, show awareness of societal and ethical aspects, including economically, socially, and ecologically sustainable development</p>	<p>▼ From problems/inquiries and methodology, show a good ability to apply engineering-related and scientific skills like problem formulation, modeling, analysis, development and evaluation in a systematic way</p> <p>▼ Where this is relevant, show awareness of societal and ethical aspects, including economically, socially, and ecologically sustainable development</p>	<p>▼ From problems/inquiries and methodology, show a sufficient ability to apply engineering-related and scientific skills like modeling, analysis, development, and evaluation</p> <p>▼ Where this is relevant, show a certain awareness of societal and ethical aspects, including economically, socially, and ecologically sustainable development</p>	<p>▼ Significant lack of engineering-related or scientific skills or lack of methodology despite the request.</p>

# *Evaluation Criteria - Presentation*

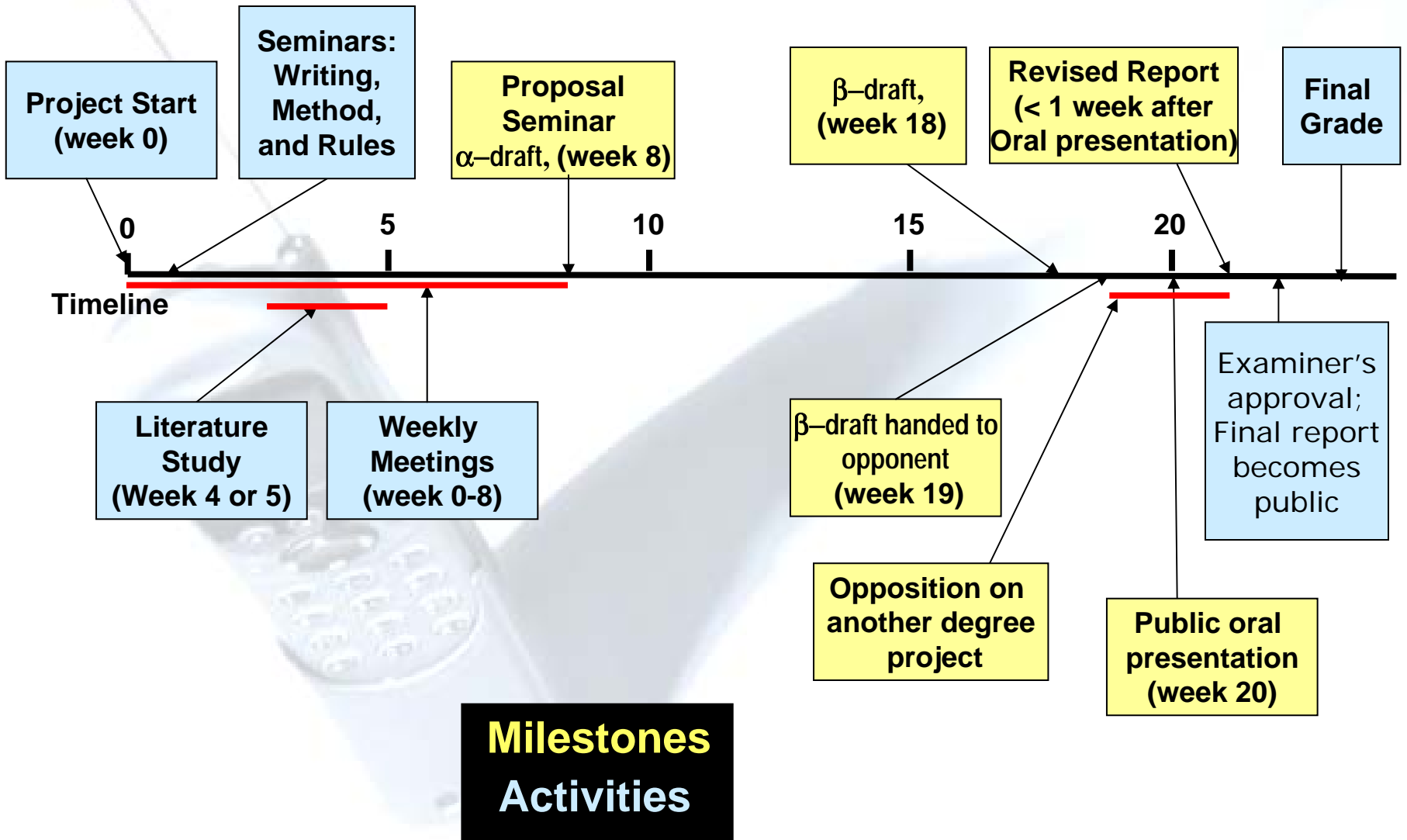
<b>Excellent</b>	<b>Good</b>	<b>Sufficient</b>	<b>Insufficient</b>
<p>▼ Show a well disposed report, with clear accounts of the project and the results, clear analysis, and well founded argumentation, as well as good language usage, format and scientific accuracy</p> <p>▼ Show a good ability to orally present with clear argumentation and analysis, and also a good ability to discuss the work</p>	<p>▼ Show a well disposed report with clear accounts of the project and the results, analysis and argumentation, as well as good language usage and format</p> <p>▼ Show a good ability to orally present and discuss the project</p>	<p>▼ Show a written report with acceptable structure, format and language usage</p> <p>▼ Show the ability to orally present the report</p>	<p>▼ Lacks important elements in the written report despite the request, or lack of the ability to orally present or discuss the project.</p>



# *Before Starting a Degree Project*



# *Time Line for a Master Thesis*



# *The Master Thesis Proposal*

- ▼ The master thesis proposal is a work plan aimed at guaranteeing that the project has proper scope, depth and method to be acceptable as a master thesis
- ▼ The plan should clearly show that the project can be completed in time and that the work effort is reasonable
- ▼ This plan can be seen as an early version (work document) of the final report
- ▼ The examiner can demand an oral presentation of the work plan in a master thesis proposal seminar

# *Content of a Thesis Proposal*

## ▼ **A short introduction**

- ↘ Background and the general problem area to be addressed
- ↘ Motivation (why is the problem area interesting and relevant?)

## ▼ **Previous work**

- ↘ Literature studies: What has been done, What is missing, etc...

## ▼ **Your specific problem**

- ↘ What is the precise problem definition in the thesis and what makes it different from previous work?
- ↘ What (kind of) conclusions are to be reached?
- ↘ What is the main message that your report will eventually convey?

## ▼ **Method**

- ↘ How is the problem going to be attacked (solved)?

## ▼ **Expected results**

- ↘ What kind of "evidence" is needed to reach the goals/conclusions envisaged in the problem definition

## ▼ **Time plan**

- ↘ The time plan should contain several measurable milestones with dates and concrete, well specified (partial) results achieved
- ↘ Distinguish between activities and milestones

## ▼ **A rough thesis outline.**

# *Time lines & openness*

- ▼ The time frame of the thesis work is an element in the grading of graded degree projects
  - ✦ The final grade may be lower as a result of being late
- ▼ The oral presentation will be scheduled **only** when the thesis work is judged sufficient and acceptable
  - ✦ Quality is very important
- ▼ The final oral presentation and the approved thesis report are both public documents
  - ✦ It is important to solve any confidentiality at the early stage to avoid delays
- ▼ Students are encouraged to give the department permission to place the thesis on-line to facilitate its use by others