

# INF5180: Software Product- and Process Improvement in Systems Development

**Part 00:**  
**Oral Exam**



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INF5180 – Spring 2010

Part 00: Oral Exam

## Oral Exam

- Place? – Ifl Building, Room 2G (same floor as administration)
- Date? – May 27
- Who? – All INF5180 enrolled students who submitted the Final Project Report (in due time)
- Time? – From 9:00 till 17:00 (maximum)
  - Each Student gets a 20 min time slot (examination time = 15 min)
  - The exact schedule will be announced shortly after May 13
- Examiners: Dietmar Pfahl & Stein Grimstad



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## Topics

### Introduction into Process Improvement

- Important concepts: process, product, structure and quality.
- The SPO-model will be introduced as analysis instrument.
- Process improvement history (i.e., “Scientific management”).

### Processes and Process Modeling

- Types of processes
- Descriptive and prescriptive process modeling
- Criteria that help select an appropriate process

### Research Methods

- Classification and description of frequently used research methods within studies of system development along the axes of “generality”, “objectivity” and “philosophical viewpoint”.
- Use of statistics in process improvement work. Argumentation.



## Topics (cont'd)

### Problem Solving and Improvement – by Individuals

- System development can be regarded as problem solving. Models for problem solving and how the problem solving process is supported by models, methods, processes.
- Learning. Personality and value in a system development organization in relation to process improvement.

### Problem Solving and Improvement – by Groups

- Reasons for existence of groups. Group evolution.
- Teamwork. Role of culture and trust. Productivity in groups.

### Measurement-based Improvement

- Why Measurement?
- Measurement-based improvement: definitions, basics and pre-requisites



## Topics (cont'd)

### Goal-Oriented Measurement

- Why having a clear goal?
- The Goal/Question/Metric (GQM) model.

### Learning from Experience

- The role of experience in continuous improvement work.
- Experience Factory (EF), Quality Improvement Paradigm (QIP).

### Process Assessment

- The Capability Maturity Model Integration (SEI-CMMI).

### Process Improvement Frameworks

- ISO-standards, CMM-families, TQM, EFQM, etc.



## Oral Exam – Evaluation Criteria and Marking

- Maximum of 4 marks (20% of the grade) for your answers
- Evaluation criteria:
  - Clarity and conciseness [1 mark]
  - Relevance (→ is the answer to the point?) [1 mark]
  - Correctness and completeness [2 marks]
- Note: The following slide relates to the sum of project report AND oral exam!



## Mapping of Total Marks to Grades (Tentative!)

Grade	Description	General, qualitative description of evaluation criteria	
A	Excellent	<i>An excellent performance, clearly outstanding. The candidate demonstrates excellent judgement and a high degree of independent thinking.</i>	≥18
B	Very good	<i>A very good performance. The candidate demonstrates sound judgement and a very good degree of independent thinking.</i>	≥16
C	Good	<i>A good performance in most areas. The candidate demonstrates a reasonable degree of judgement and independent thinking in the most important areas.</i>	≥14
D	Satisfactory	<i>A satisfactory performance, but with significant shortcomings. The candidate demonstrates a limited degree of judgement and independent thinking.</i>	≥12
E	Sufficient	<i>A performance that meets the minimum criteria, but no more. The candidate demonstrates a very limited degree of judgement and independent thinking.</i>	≥10
F	Fail	<i>A performance that does not meet the minimum academic criteria. The candidate demonstrates an absence of both judgement and independent thinking.</i>	

