Georg-August-Universität Göttingen
Module M.Inf.1155: Seminar: Advanced Topics in Software Engineering

### Learning outcome, core skills:
The students
- learn to become acquainted with an advanced topic in software engineering by studying up-to-date research papers.
- gain knowledge about advanced topics in software engineering. The advanced topic may be related to areas such as software development processes, software quality assurance, and software evolution.
- learn to present and discuss up-to-date research on advanced topics in software engineering.
- learn to assess up-to-date research on advanced topics in software engineering.

### Course: Seminar on Advanced Topics in Software-Engineering (Seminar)

**Contents:**
Topics which will be covered by this seminar can include
- Usability and Usability-Engineering
- User-oriented Usability Testing
- Expert-oriented Usability Evaluation
- Web-analytics
- Information Architecture
- SOA – Service-oriented Architecture
- UML-Tools and Code Generation
- Details of Specific Process Models
- Model-driven Architecture
- Usage-based Testing
- Defect Prediction
- Design Patterns
- Agent-based Simulation
- Reliability-Engineering for Cloud Systems

### Examination:
Presentation (approx. 45 minutes) and written report (max. 20 pages)

**Examination prerequisites:**
Attendance in 80% of the seminar presentations

**Examination requirements:**
The students shall show that
- they are able to become acquainted with an advanced topic in software engineering by investigating up-to-date research publications.
- they are able to present up-to-date research on an advanced topic in software engineering.
- they are able to assess up-to-date research on an advanced topic in software engineering.

### Workload:
- Attendance time: 28 h
- Self-study time: 122 h
• they are able to write a scientific report on an advanced topic in software engineering according to good scientific practice.

Presentation of an advanced topic in software engineering and written report.

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<th>Admission requirements:</th>
<th>Recommended previous knowledge:</th>
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<tbody>
<tr>
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<td>Foundations of software engineering.</td>
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<tr>
<th>Language:</th>
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<tbody>
<tr>
<td>English</td>
<td>Prof. Dr. Jens Grabowski</td>
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