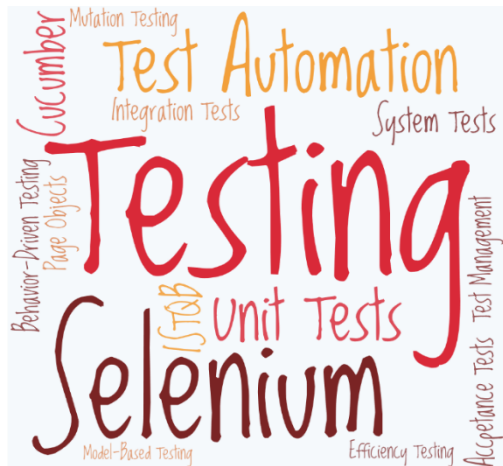


# 183.290 Software Testing



## Preliminary Talk

**WS 2020**

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**INSO - Industrial Software**

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- Understanding the role of testing as part of software quality engineering within the software development lifecycle
  - Test Levels and Test Types
  - Test Design Techniques
  - Fundamental Test Process
  - Test Management
  - Test Tools and Automation
  - Common Test Frameworks
- Practical Usage
- Best Practices

# Organisational

- Registration in TISS is mandatory (until Oct, 20<sup>th</sup>)
- Course is organized as Distance Learning
  - Materials, exercises and communication via TUWEL
  - Lectures via Zoom
- Individual Requests: [peso@inso.tuwien.ac.at](mailto:peso@inso.tuwien.ac.at)
- **Course Structure**
  - Lecture Part
  - Practical Part (Individual/Group exercises)
- **Prerequisite**
  - Experience with unit testing frameworks and principles

# Lecture

- Focus on theoretical background and best practices
- 5 Lectures
- 2 Guest Lectures
  
- Tuesday, 17:00 – 19:00
- All lectures take place in October / November via Zoom
  - Zoom links are provided via TUWEL
  
- **Exam** (participation at one exam required)
  - Exam 1: Jan, 12<sup>th</sup> 17:00 – 19:00
  - Exam 2: Jan, 26<sup>th</sup> 17:00 – 19:00
  - TUWEL Online Test

- Focus on practical usage and best practices
- Main lab part is organized as 4-week group project (23.11.2020 – 18.12.2020)
- **Individual Exercises**
  - Unit Testing/Mutation Testing
  - UI Test Automation
- **Group Exercise**
  - Working as a test team in a project
  - Accounts/Credentials will be sent to your mail configured in TUWEL

# Lab – Group Exercise

- **Working as a test team in a project**
  - 3 persons per group
  - 4 weeks duration
  - Milestones/Deliverables every week (consecutive parts to simulate the testing lifecycle)
- **Activities include:**
  - Test Planning
  - Test Specification
  - Manual Testing
  - Test Automation
  - Bug Reporting
  - Regression Testing
  - Test Reporting

# Time Table

Date and Time		Location	Description
13.10.2020	17:00 - 19:00	Zoom	Preliminary Discussion Lecture 1 - Fundamentals of Software Testing
20.10.2020	00:05	TUWEL	Start Lab "Unit Testing" (Individual Exercise)
20.10.2020	17:00 - 19:00	Zoom	Lecture 2 - Testing in the Software Development Lifecycle
27.10.2020	17:00 - 19:00	Zoom	Lecture 3 - Test Design Techniques
02.11.2020	23:55	TUWEL	Deadline Lab "Unit Testing" (Individual Exercise)
03.11.2020	00:05	TUWEL	Start Lab "UI Testing" (Individual Exercise)
03.11.2020	17:00 - 19:00	Zoom	Lecture 4 - (Web) Test Automation, Selenium/Cucumber, UI Testing Demo
10.11.2020	00:05	TUWEL	Start Group Registration
10.11.2020	17:00 - 19:00	Zoom	Lecture 5 - Test Documentation, Risk-Based Testing, Test Management, Squash TM Demo
17.11.2020	17:00 - 19:00	TBD	Guest Lecture - Christoph Hafner/Michael Wapp (Mobile Testing and Mobile Test Automation) Guest Lecture - Boris Wrubel (Mobile Testing in Practice)
17.11.2020	23:55	TUWEL	Deadline Lab "UI Testing" (Individual Exercise)
23.11.2020	00:05	TUWEL	Start Group Project Part 1
30.11.2020	00:05	TUWEL	Start Group Project Part 2
01.12.2020	17:00 - 19:00	Zoom	Guest Lecture - Klemens Loschy (Performance and Efficiency Testing)
07.01.2021	00:05	TUWEL	Start Group Project Part 3
12.01.2021	17:00 - 19:00	TUWEL	Exam 1
26.01.2021	17:00 - 19:00	TUWEL	Exam 2

# Grading

- **Exam: 30p**
- **Individual Labs: 20p**
  - Lab Unit Testing: 10p
  - Lab UI Testing: 10p
- **Group Labs: 50p**
- **Mandatory for a positive grading**
  - > 50% for each part

**N5:** 0 – 50 p

**G4:** 51 – 62 p

**B3:** 63 – 74 p

**U2:** 75 – 87 p

**S1:** 88 – 100 p



# ISTQB Certified Tester – Optional

- Optional participation at ISTQB exam
  - Not part of course grading!
- All information will be provided via TUWEL
- Currently organized as online exam (live session), you will be provided with a Voucher
- 40 questions / multiple choice
- Exam fee
  - ~120€ for Foundation Level
  - ~180€ for Advanced Level
- Most topics of Foundation Level covered in the course