2022

MTAT.03.295

Agile Software Development

LO0 – Teachers, goals, and info

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Teachers

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Learning goals

✔ To introduce basic concepts of Agile Software Development and current practices

✔ The course allows students to implement agile practices during the development of a web application
Rationale of the course

Strong connection with

[MTAT.03.094] or [LTAT.05.003] Software Engineering
[MTAT.03.229] Enterprise System Integration

Great opportunity to introduce/recall some concepts:

• Software development practices
• Development of web-based applications
• Use of cloud-based tools
Our Approach

Students will...

• learn the concepts of agile practices (lectures)
• learn a technology stack (practice sessions)
• apply practices and technology in a project (teamwork)

  from conception to deployment
2022
MTAT.03.295
Agile Software Development
L00 – Course organization

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Course Organization

• **Lectures**
  • Tuesdays 10:15–12:00 on-site, room 1019
    • Lectures 1,3–7: Mariana
    • Lecture 2: Guest Lecturers
    • Lectures 8: Orlenys

• **Practical sessions**
  • Group 1: Tuesdays 12:15–14:00 Delta room 1022 (Orlenys)
  • Group 2: Tuesdays 16:15–18:00 Delta room 1008 (David)
Platforms & Comms

Website

Moodle

Slack
## Schedule of Lectures

<table>
<thead>
<tr>
<th>Date</th>
<th>Lecture</th>
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<tbody>
<tr>
<td>30.08</td>
<td>No lecture</td>
</tr>
<tr>
<td>06.09</td>
<td>Course organization + Introduction ✔</td>
</tr>
<tr>
<td>13.09</td>
<td>Guest Lecture by Tankut Senturk and Mikk Kard from Heathmont Group</td>
</tr>
<tr>
<td>20.09</td>
<td>Intro to Test-Driven Development (TDD)</td>
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<tr>
<td>27.09</td>
<td>Requirements management in Agile Software Development</td>
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<tr>
<td>04.10</td>
<td>XP and code refactoring</td>
</tr>
<tr>
<td>11.10</td>
<td>Agile Software Development with Scrum</td>
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<tr>
<td>18.10</td>
<td>Agile at scale</td>
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<tr>
<td>25.10</td>
<td>Phoenix: database associations and queries and Project Introduction</td>
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</tbody>
</table>

*work in progress*
## Schedule of Practice Sessions

<table>
<thead>
<tr>
<th>#</th>
<th>Date</th>
<th>Activity</th>
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<tbody>
<tr>
<td>1</td>
<td>06.09</td>
<td>No practice session (independent work) [✓]</td>
</tr>
<tr>
<td>2</td>
<td>13.09</td>
<td>Introduction to Elixir and TDD</td>
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<tr>
<td>3</td>
<td>20.09</td>
<td>Elixir: TDD and Iterative Development [HW1]</td>
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<tr>
<td>4</td>
<td>27.09</td>
<td>Elixir: TDD with legacy code</td>
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<tr>
<td>5</td>
<td>04.10</td>
<td>Elixir-based web applications: Phoenix [HW2]</td>
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<tr>
<td>6</td>
<td>11.10</td>
<td>Web application development using Phoenix I. Behavior Driven Development</td>
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<tr>
<td></td>
<td></td>
<td>(BDD)/Test-Driven Development (TDD) [HW3]</td>
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<tr>
<td>7</td>
<td>18.10</td>
<td>Web application development using Phoenix II. Phoenix app's architecture, a deep dive</td>
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<tr>
<td>8</td>
<td>25.10</td>
<td>No practice session (Project Independent Work)</td>
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<tr>
<td>9</td>
<td>01.11</td>
<td>Project checkpoint 1</td>
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<tr>
<td>10</td>
<td>08.11</td>
<td>Project checkpoint 2</td>
</tr>
<tr>
<td>11</td>
<td>15.11</td>
<td>Project checkpoint 3</td>
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<tr>
<td>12</td>
<td>22.11</td>
<td>Project checkpoint 4</td>
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<tr>
<td>13</td>
<td>29.11</td>
<td>Project checkpoint 5</td>
</tr>
<tr>
<td>14</td>
<td>06.12</td>
<td>Project checkpoint 6 + live demo</td>
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Assessment

**Homework assignments**
max: 10 points

- submitted in pairs
- HW1, HW2, HW3

**Project**
max: 40 points

- team-based, 4 members
- software process design, agile practices
- assessment of code + tests
- 5 checkpoints
- demos

**Final exam**
max: 50 points

- you need a mark of, at least, 20 out of 50 points
- structure: theory and practice
Assessment

• All members in a team receive equal grades in labs

• **BUT**: Exceptions from equal grade rule will be made, if individuals in a team don’t participate actively
  
  • **Homework assignments**: team penalties apply for late delivery
    
    • 24h  - 25%
    • 48h  - 50%
    • >48h  - 100%

  • **Sprint Reviews**: Individual penalties apply for not attending the reviews

• Don’t plagiarize!