LTAT.05.021

Introduction to Blockchain Technology

Mubashar Iqbal
(contact: mubashar.iqbal@ut.ee)

University of Tartu
On successful completion of this course, students will be able to:

- Explain the essential and fundamental characteristics of blockchain technology
- Bitcoin and other cryptocurrencies
- Select appropriate technical options for blockchain-based application design and implementation
- Examine existing blockchain-based use cases in industries such as finance, public services, supply chains etc
- Identification and analysis of blockchain-based applications security risks and controls to mitigate them
About the Course

• Course Website
  – Lectures
    • Presented during lectures - uploaded to before the lecture
  – Reading
    • Self-study material
    • Selected books and articles
  – Submit
    • Place where you will be able to upload workshops solutions
# Course Outline

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Topic</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3. September</td>
<td>Blockchain and cryptocurrency</td>
<td>Workshop 1</td>
</tr>
<tr>
<td>3</td>
<td>17. September</td>
<td>Presentation 1</td>
<td>Blockchain use cases</td>
</tr>
<tr>
<td>5</td>
<td>1. October</td>
<td>Guest lecture (Dr. Fredrik Milani)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>15. October</td>
<td>Test 1</td>
<td>Security design</td>
</tr>
<tr>
<td>9</td>
<td>29. October</td>
<td>Cryptographic methods</td>
<td>Workshop 2</td>
</tr>
<tr>
<td>11</td>
<td>12. November</td>
<td>Test 2</td>
<td>Blockchain components</td>
</tr>
<tr>
<td>15</td>
<td>10. December</td>
<td>Presentation 2 &amp; Course summary</td>
<td>Guest lecture</td>
</tr>
</tbody>
</table>

*Changes are possible!*
Workload

3 ECTS = 78 hours of study
(1 ECTS = 26 hours of study)

• Lectures – 32 hours
• Independent work – 46 hours
  – Self-study
  – Preparation for presentation and two tests
  – Perform workshop assignments
Modalities and Assessment

- Tests – 10 points each
- Presentation 1 - 10 points
- Workshops – 15 points each
- Presentation 2 – 25 points
Modalities and Assessment

- Tests – 10 points each
- Presentation 1 - 10 points
- Workshops – 15 points each
- Presentation 2 – 25 points

To pass the course, you need at least 51 points collectively. You should acquire at least 50% points from each above mentioned assessment item.
Any Questions