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>Event</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>2.September</td>
<td>Blockchain and Cryptocurrency</td>
<td>Workshop 1</td>
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<td>3</td>
<td>16.September</td>
<td>Blockchain Use Cases</td>
<td>Workshop 2</td>
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<td>Blockchain-based System Design</td>
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<td>5</td>
<td>30.September</td>
<td><strong>Guest lecture (Dr. Sabah Suhail)</strong></td>
<td>Test 1</td>
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<td>7</td>
<td>14.October</td>
<td>Hyperledger Fabric (HLF) and Chaincode</td>
<td>Workshop 3</td>
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<td>Ethereum and Smart contract</td>
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<td>11</td>
<td>11.November</td>
<td>Blockchain Components and Security Method</td>
<td>Test 2</td>
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<td>13</td>
<td>25.November</td>
<td>Security Risk Analysis</td>
<td>Workshop 4</td>
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<tr>
<td>15</td>
<td>09.December</td>
<td><strong>Guest lecture</strong></td>
<td>Oral Exam</td>
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*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

- **2 Tests** – 15 points each
- **4 Workshops** – 10 points each
- **Final Report** – 20 points
- **Oral Exam** – 10 points
Modalities and Assessment

- **2 Tests** – *15 points* each
- **4 Workshops** – *10 points* each
- Final Report – *20 points*
- Oral Exam – *10 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