### Course Name

**Internet of Things**

<table>
<thead>
<tr>
<th>Forms and number of hours of tuition</th>
<th>No. of ECTS credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>L 15 C 30 LC 30 P 15 SW 5 FW 5 S</td>
<td>3</td>
</tr>
</tbody>
</table>

### Entry Requirements

The aim of the course is to introduce students to the issues of the 'Internet of Things' - the Internet of Things. Students will learn and use the possibilities of IoT, applied systems, standards, and everything will be tested in real conditions.

### Course Content

**Lecture:**
- The concept of the "Internet of Things". IoT platforms and environments used. Standards. Testing and self-testing. Wired interfaces. Low power design.

**Laboratory:**

### Assessment Method

- Lecture - written assessment.
- Laboratory - evaluation of reports and evaluation of the final project.

### Teaching Methods

- Informative lecture, lecture problem, programming, demonstration, laboratory exercises, project method, simulation,

### Learning Outcomes

<table>
<thead>
<tr>
<th>Symbol of learning outcome</th>
<th>Learning outcomes</th>
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<tbody>
<tr>
<td>LO1</td>
<td>knows and understands the key issues of the Internet of Things and its applications</td>
</tr>
<tr>
<td>LO2</td>
<td>knows and can use IoT design platforms, environments and standards</td>
</tr>
<tr>
<td>LO3</td>
<td>knows, uses and appropriately selects communication interfaces</td>
</tr>
<tr>
<td>LO4</td>
<td>takes into account the need to reduce energy consumption during design and programming</td>
</tr>
</tbody>
</table>

### Methods of assessing the learning outcomes

<table>
<thead>
<tr>
<th>Symbol of learning outcome</th>
<th>Methods of assessing the learning outcomes</th>
<th>Type of tuition during which the outcome is assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO1</td>
<td>written test</td>
<td>L, Lab</td>
</tr>
<tr>
<td>LO2</td>
<td>written test, reports evaluation, final project evaluation</td>
<td>L, Lab</td>
</tr>
<tr>
<td>LO3</td>
<td>reports evaluation, final project evaluation</td>
<td>Lab</td>
</tr>
<tr>
<td>LO4</td>
<td>reports evaluation, final project evaluation</td>
<td>Lab</td>
</tr>
</tbody>
</table>

### Calculation

- 1 - Attendance at lectures - 15x1h
- 2 - Attendance at classes - 15x2h
- 3 - Participation in student-teacher sessions -
- 4 - Preparation for laboratories and preparation of reports -
- 5 - Preparation for the test -
- 6 - Final project preparation -

**Total:** 150

### Basic References

5. Standards and norms indicated by the instructor.

### Supplementary References

2. Webpage of Arduino project: https://www.arduino.cc/

### Organisational Unit Conducting the Course

Department of Information Systems and Computer Networks

### Author of the Programme

dr inż. Tomasz Grześ

### Date of Issuing the Programme

Feb. 18, 2022

L - lecture, C - classes, LC - laboratory classes, P - project, SW - specialization workshop, FW - field work, S - seminar