### Field of study
- **Computer Science**

### Specialization/ diploma path
- **Biometry and Image Processing**

### Degree level and programme type
- **Master's degree full-time programme**

### Course name
- **Human-Machine Interaction**

### Course code
- **INF2ICM**

### Forms and number of hours of tuition

<table>
<thead>
<tr>
<th>L</th>
<th>C</th>
<th>LC</th>
<th>P</th>
<th>SW</th>
<th>FW</th>
<th>S</th>
<th>Semester</th>
<th>No. of ECTS credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td></td>
<td></td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

### Entry requirements
- The aim of the course is to present issues related to human-machine interaction and information that will allow the design of interfaces for selected ways of human-machine interaction.

### Course objectives
- Lectures:
  1. Introduction to human-machine interaction.
  2. Interfaces and methodology for the evaluation of human-machine interfaces.
  4. Selected input devices and ways of interaction.

- Practical classes:
  1. Motion detection using selected sensors.
  2. Face detection in human-machine systems.
  4. Sample topics: voice control, hand gestures etc.
  5. Implementation of human-machine interaction algorithms.

### Course content
- **Lectures:**
  - 1. Introduction to human-machine interaction.
  - 2. Interfaces and methodology for the evaluation of human-machine interfaces.
  - 4. Selected input devices and ways of interaction.

- **Practical classes:**
  - 1. Motion detection using selected sensors.
  - 2. Face detection in human-machine systems.
  - 4. Sample topics: voice control, hand gestures etc.

### Teaching methods
- Lecture problem, brainstorming, programming.

### Assessment method
- **L:** Test at the end of lectures.
- **Pc:** A prerequisite for getting credit is attendance and all exercises provided for in the program. Reports from a specialist workshop apply. Each report is subject to evaluation. Based on individual assessments, the grade from Pc.

### Symbol of learning outcome

<table>
<thead>
<tr>
<th>Learning outcomes</th>
<th>Reference to the learning outcomes for the field of study</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO1</td>
<td>knows and understands the concepts associated with human-machine interfaces and ways of interaction</td>
</tr>
<tr>
<td>LO2</td>
<td>has structured knowledge about the ways of human-machine interaction</td>
</tr>
<tr>
<td>LO3</td>
<td>can use the acquired knowledge for the practical implementation of sample human-machine interfaces</td>
</tr>
<tr>
<td>LO4</td>
<td>uses the role of interfaces and the importance of human-machine interaction in modern reality</td>
</tr>
</tbody>
</table>

### Methods of assessing the learning outcomes

<table>
<thead>
<tr>
<th>Type of tuition during which the outcome is assessed</th>
<th>L, Pc</th>
<th>L</th>
<th>Pc</th>
<th>Pc</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO1 Test and reports</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LO2 Test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LO3 Reports</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>LO4 Reports</td>
<td></td>
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</tbody>
</table>

### Student workload (in hours)

<table>
<thead>
<tr>
<th>Calculation</th>
<th>No. of hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 - Participation in lectures - 15x1h</td>
<td>15</td>
</tr>
<tr>
<td>2 - Participation in classes - 15x2h</td>
<td>30</td>
</tr>
<tr>
<td>3 - Preparation of laboratory or studio reports and / or carrying out homework (homework)</td>
<td>15</td>
</tr>
<tr>
<td>4 - Participation in teacher hours</td>
<td>5</td>
</tr>
<tr>
<td>5 - Implementation of project tasks (including preparation of presentations)</td>
<td>5</td>
</tr>
<tr>
<td>6 - Preparation for passing finale test</td>
<td>5</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>75</strong></td>
</tr>
</tbody>
</table>

### Basic references

### Extra references

### Date of issuing the programme
- **May 22, 2020**

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