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

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

### Specialization/ diploma path
- **Study profile**: academic

### Course name
- **Linear Control Theory**

### Course code
- **FCS-00069**

### Course type
- obligatory

### 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>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>30</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

| Semester | 3 |
| No. of ECTS credits | 6 |

### Entry requirements
- Linear Algebra (FCS-00030), Linear Algebra and Analytic Geometry 2 (FCS-00060), Differential and Difference Equations (FCS-00064),

### Course objectives
- Providing the knowledge of mathematical foundations of linear control theory. Gaining ability of analysis and synthesis of linear control systems. Gaining ability of using mathematical tools in problems of linear control theory.

### Course content

### Teaching methods
- Informative lecture, lecture problem, discussion related to the lecture, subject exercises,

### Assessment method
- Lectures: oral test; Classes: 6-8 tests.

### Symbol of learning outcome
- **LO1**: knows basic theorems from known areas of linear control theory
- **LO2**: knows elements of linear algebra and knows how to use them in linear control theory
- **LO3**: is able to apply theorems and methods of differential calculus of one variable in control theory
- **LO4**: is able to analyze and design linear control systems

### Methods of assessing the learning outcomes
- **Type of tuition during which the outcome is assessed**
  - **LO1**: oral test - L
  - **LO2**: oral test - L
  - **LO3**: test - C
  - **LO4**: test - C

### Student workload (in hours)

<table>
<thead>
<tr>
<th>Calculation</th>
<th>No. of hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - Attendance at lectures -</td>
<td>30</td>
</tr>
<tr>
<td>2 - Attendance at classes -</td>
<td>30</td>
</tr>
<tr>
<td>3 - Doing homework -</td>
<td>33</td>
</tr>
<tr>
<td>4 - Attendance at consultations -</td>
<td>15</td>
</tr>
<tr>
<td>5 - Preparation to tests -</td>
<td>20</td>
</tr>
<tr>
<td>6 - Preparation to exam -</td>
<td>20</td>
</tr>
<tr>
<td>7 - Attendance at exam -</td>
<td>2</td>
</tr>
</tbody>
</table>

| TOTAL: | 150 |

### Quantitative indicators

<table>
<thead>
<tr>
<th>Student workload - activities that require direct teacher participation</th>
<th>HOURS</th>
<th>No. of ECTS credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>77 (2x+1x+7x+4)</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td>83 (2x+3x+3)</td>
<td>3.3</td>
<td></td>
</tr>
</tbody>
</table>

### Basic references

### Supplementary references

### Organisational unit conducting the course
- Department of Mathematics

### Author of the programme
- prof. dr hab. inż. Zbigniew Bartosiewicz

### Date of issuing the programme
- Feb. 17, 2022

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