**COURSE DESCRIPTION CARD – SPECIMEN**

<table>
<tr><td colspan="10">Faculty of Civil Engineering and Environmental Sciences</td></tr>
<tr><td>Field of study</td><td colspan="6">Civil Engineering</td><td colspan="2">Degree level and programme type</td><td>Master's degree Full-time study</td></tr>
<tr><td>Specialization/ diploma path</td><td colspan="6">-</td><td colspan="2">Study profile</td><td>academic</td></tr>
<tr><td rowspan="2">Course name</td><td colspan="6" rowspan="2">Road infrastructure</td><td colspan="2">Course code</td><td>19282156H</td></tr>
<tr><td colspan="2">Course type</td><td>obligatory</td></tr>
<tr><td rowspan="2">Forms and number of hours of tuition</td><td>L</td><td>C</td><td>LC</td><td>P</td><td>SW</td><td>FW</td><td>S</td><td>Semester</td><td>1</td></tr>
<tr><td>1</td><td></td><td></td><td>1</td><td></td><td></td><td></td><td>No. of ECTS credits</td><td>2</td></tr>
<tr><td>Entry requirements</td><td colspan="9">Basis of road engineering</td></tr>
<tr><td>Course objectives</td><td colspan="9">To familiarize students with road infrastructure, including such elements as: roads, streets, squares, parking lots, junctions, etc. Presentation of devices located in the road lane related to drainage, traffic safety and environmental protection.</td></tr>
<tr><td>Course content</td><td colspan="9"><u>Lecture:</u><br>Road infrastructure as an element of transport infrastructure. The road in its cross-section versus the guidance and security of traffic. Rail communication. Crossings, junctions, passages, squares and parking lots. Engineering structures along road routes. Devices related to traffic safety and environmental protection..<br><u>Project:</u><br>Assessment of the technical class of a street section based on in-situ tests.</td></tr>
<tr><td>Teaching methods</td><td colspan="9">Lecture - informative lecture, problem lecture</td></tr>
<tr><td>Assessment method</td><td colspan="9">Lecture - written exam<br>Project classes – evaluation of student's projects and preparation for the classes, written test</td></tr>
<tr><td>Symbol of learning outcome</td><td colspan="7">Learning outcomes</td><td colspan="2">Reference to the learning outcomes for the field of study</td></tr>
<tr><td>LO1</td><td colspan="7">Student identifies elements of a road infrastructure</td><td colspan="2">K_B1_W04, K_B1_W07, K_B1_U06 K_B1_U23</td></tr>
<tr><td>LO2</td><td colspan="7">Student understands the meaning and role of elements and devices located in road route</td><td colspan="2">K_B2_W10, K_B2_W12</td></tr>
<tr><td>LO3</td><td colspan="7">Student assess the condition and indicate shortcomings in functioning devices related to road infrastructure</td><td colspan="2">K_B2_U13, K_B2_U21</td></tr>
<tr><td>LO4</td><td colspan="7">Student identifies basic road related safety problems</td><td colspan="2">K_B1_U007, K_B1_U17</td></tr>
<tr><td>LO5</td><td colspan="7">Student cooperates in teams</td><td colspan="2">K_B1_U14</td></tr>
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| Symbol of learning outcome | Methods of assessing the learning outcomes | Type of tuition during which the outcome is assessed |
|---|---|---|
| LO1 | written test | L |
| LO2 | evaluating student's projects and preparation for the classes , tests on the lecture content | L, P |
| LO3 | evaluating student's projects and performance in classes | P |
| LO4 | written test | L |
| LO5 | evaluating student's performance in classes | P |
| LO6 | | |

| Student workload (in hours) | | No. of hours |
|---|---|---|
| Calculation | participation in lectures | 15 |
| | participation in classes, laboratory classes, etc. | 15 |
| | implementation of project tasks | 5 |
| | working on projects, reports, etc. | 10 |
| | participation in student-teacher sessions related to the classes | 5 |
| | preparation for and participation in exams/tests | 10 |
| | TOTAL: | 60 |

| Quantitative indicators | HOURS | No. of ECTS credits |
|---|---|---|
| Student workload – activities that require direct teacher participation | 37 | 1,5 |
| Student workload – practical activities | 35 | 1,5 |

| | | |
|---|---|---|
| Basic references | Principle of transportation engineering, Partha Chakroborty, 2003<br>Handbook of transportation engineering, Myer Kutz, 2001<br>Wright P.H., Dixon K.: Highway Engineering, John Wiley&Sons, Inc. 2004 | |
| Supplementary references | Traffic and highway engineering, N.J. Garber, L.A. Hoel, 2009<br>Rozporządzenie MTiGW z dnia 2 marca 1999. Dz.U. Nr 43, poz. 430<br>Gaca S., Suchorzewski W., Tracz M.: Inżynieria ruchu drogowego. Teoria i praktyka, WKiŁ 2009 | |
| Organisational unit conducting the course | Department of Construction and Road Engineering | Date of issuing the programme |
| Author of the programme | Robert Ziółkowski, PhD. Eng. | 30.06.2018 |

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