

## COURSE DESCRIPTION CARD – SPECIMEN

| Faculty of Civil Engineering and Environmental Sciences |                                                                                                                                                                                                                                                                                                                 |   |    |   |    |    |                                 |                                                           |    |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|----|---|----|----|---------------------------------|-----------------------------------------------------------|----|
| Field of study                                          | Environmental Engineering                                                                                                                                                                                                                                                                                       |   |    |   |    |    | Degree level and programme type | Bachelor's degree                                         |    |
| Specialization/ diploma path                            | International School of Engineering                                                                                                                                                                                                                                                                             |   |    |   |    |    | Study profile                   | Academic profile                                          |    |
| Course name                                             | Sanitary installations                                                                                                                                                                                                                                                                                          |   |    |   |    |    | Course code                     | 19284218H                                                 |    |
|                                                         |                                                                                                                                                                                                                                                                                                                 |   |    |   |    |    | Course type                     | Obligatory                                                |    |
| Forms and number of hours of tuition                    | L                                                                                                                                                                                                                                                                                                               | C | LC | P | SW | FW | S                               | Semester                                                  | VI |
|                                                         | 2                                                                                                                                                                                                                                                                                                               | - | -  | 2 | -  | -  | -                               | No. of ECTS credits                                       | 4  |
| Entry requirements                                      | Water supply systems, hydraulics                                                                                                                                                                                                                                                                                |   |    |   |    |    |                                 |                                                           |    |
| Course objectives                                       | Developing knowledge about the components and design of water and sanitary installations in buildings. Developing knowledge about the solutions in material used in building installations. Developing skills for determining type of installation in buildings, depending on the size and use of the building. |   |    |   |    |    |                                 |                                                           |    |
| Course content                                          | Design, construction, operating of water, sanitary. Legal regulations related to design of building installations.                                                                                                                                                                                              |   |    |   |    |    |                                 |                                                           |    |
| Teaching methods                                        | informative lecture, conversational lecture, discussing the problem, project                                                                                                                                                                                                                                    |   |    |   |    |    |                                 |                                                           |    |
| Assessment method                                       | lecture – written test<br>project - project execution                                                                                                                                                                                                                                                           |   |    |   |    |    |                                 |                                                           |    |
| Symbol of learning outcome                              | Learning outcomes                                                                                                                                                                                                                                                                                               |   |    |   |    |    |                                 | Reference to the learning outcomes for the field of study |    |
| L01                                                     | Student defines the types of installations in buildings                                                                                                                                                                                                                                                         |   |    |   |    |    |                                 | K_W14                                                     |    |
| L02                                                     | Student describes the elements of the installations in buildings                                                                                                                                                                                                                                                |   |    |   |    |    |                                 | K_W14                                                     |    |
| L03                                                     | Student classifies the materials in building installations                                                                                                                                                                                                                                                      |   |    |   |    |    |                                 | K_U07                                                     |    |
| L04                                                     | Student manages the procedures for construction of building installations                                                                                                                                                                                                                                       |   |    |   |    |    |                                 | K_U18                                                     |    |
| L05                                                     | Student notes the problems operation of building installations                                                                                                                                                                                                                                                  |   |    |   |    |    |                                 | K_U19                                                     |    |
| L06                                                     | Student assesses the impact of improper functioning of the installation                                                                                                                                                                                                                                         |   |    |   |    |    |                                 | K_K02                                                     |    |
| Symbol of learning outcome                              | Methods of assessing the learning outcomes                                                                                                                                                                                                                                                                      |   |    |   |    |    |                                 | Type of tuition during which the outcome is assessed      |    |
| L01                                                     | written test                                                                                                                                                                                                                                                                                                    |   |    |   |    |    |                                 | L                                                         |    |
| L02                                                     | written test                                                                                                                                                                                                                                                                                                    |   |    |   |    |    |                                 | L                                                         |    |

|                                                                                |                                                                                                                                                                                                                                                           |                                      |                            |
|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------------------|
| <b>LO3</b>                                                                     | written test, project execution                                                                                                                                                                                                                           | <b>L, P</b>                          |                            |
| <b>LO4</b>                                                                     | written test, project execution                                                                                                                                                                                                                           | <b>L, P</b>                          |                            |
| <b>LO5</b>                                                                     | written test                                                                                                                                                                                                                                              | <b>L</b>                             |                            |
| <b>LO6</b>                                                                     | written test                                                                                                                                                                                                                                              | <b>L</b>                             |                            |
| <b>Student workload (in hours)</b>                                             |                                                                                                                                                                                                                                                           | <b>No. of hours</b>                  |                            |
| <b>Calculation</b>                                                             | lecture attendance                                                                                                                                                                                                                                        | <b>32</b>                            |                            |
|                                                                                | participation in classes, laboratory classes, etc.                                                                                                                                                                                                        | <b>32</b>                            |                            |
|                                                                                | preparation for classes, laboratory classes, projects, seminars, etc.                                                                                                                                                                                     | <b>16</b>                            |                            |
|                                                                                | working on projects, reports, etc.                                                                                                                                                                                                                        | <b>16</b>                            |                            |
|                                                                                | participation in student-teacher sessions related to the classes/seminar/project                                                                                                                                                                          | <b>5</b>                             |                            |
|                                                                                | implementation of project tasks                                                                                                                                                                                                                           | <b>8</b>                             |                            |
|                                                                                | preparation for and participation in exams/tests                                                                                                                                                                                                          | <b>8</b>                             |                            |
|                                                                                | <b>TOTAL:</b>                                                                                                                                                                                                                                             | <b>117</b>                           |                            |
| <b>Quantitative indicators</b>                                                 |                                                                                                                                                                                                                                                           | <b>HOURS</b>                         | <b>No. of ECTS credits</b> |
| <b>Student workload – activities that require direct teacher participation</b> |                                                                                                                                                                                                                                                           | <b>69</b>                            | <b>2,8</b>                 |
| <b>Student workload – practical activities</b>                                 |                                                                                                                                                                                                                                                           | <b>48</b>                            | <b>1,9</b>                 |
| <b>Basic references</b>                                                        | 1. Wise A.F.E., Swaffield J., Water, Sanitary and Waste Services for Buildings, Routledge, 2012;<br>2. Panchdhari A.C., Water Supply And Sanitary Installations, New Age International, 2005;<br>3. Garrett R.H., Hot and Cold Water Supply, Wiley, 2000. |                                      |                            |
| <b>Supplementary references</b>                                                | 1. Bartram J., Legionella and the Prevention of Legionellosis, World Health Organization, 2007                                                                                                                                                            |                                      |                            |
| <b>Organisational unit conducting the course</b>                               | <b>Department of Water Supply and Sewerage</b>                                                                                                                                                                                                            | <b>Date of issuing the programme</b> |                            |
| <b>Author of the programme</b>                                                 | <b>Jacek Dawidowicz, PhD DSc Eng.</b>                                                                                                                                                                                                                     | <b>10.05.2022</b>                    |                            |

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