

| COURSE SYLLABUS        |                                              |
|------------------------|----------------------------------------------|
| Course code            | 1080-BU200-ISA-0163                          |
| Course name            | Informatics I - Basics of Programming Python |
| Course version         | 2026L                                        |
| Level of education     | first cycle programme                        |
| Form and mode of study | full-time study                              |
| Study profile          | general academic profile                     |
| Field of study         | Civil Engineering                            |
| Specialisation         | -                                            |
| Organizational unit    | The Faculty of Civil Engineering             |
| Implementing unit      | The Faculty of Civil Engineering             |
| Course unit            | n/a                                          |
| Course groups          | -                                            |
| Course status          | Selected                                     |
| Language of the course | English                                      |
| Study stage code       | BU000-S2-ISA-1080                            |
| Number of ECTS credits | 2                                            |

## Part I

### 01. Learning outcomes and the method of conducting classes

|                                                          |                               |
|----------------------------------------------------------|-------------------------------|
| Learning outcomes                                        | see table "Learning outcomes" |
| Forms of classes and the number of hours in the semester |                               |
| classes in a computer lab                                | 25,00 h                       |

### 02. ECTS balance

| Number of ECTS credits                                                                 | 2     |      |
|----------------------------------------------------------------------------------------|-------|------|
| Course workload                                                                        | Hours | ECTS |
| Total number of hours and ECTS credits for the course:                                 |       |      |
| Hours and ECTS credits for courses involving direct participation of academic teachers | 28    | 1,12 |
| Hours and ECTS credits involving student's independent work                            | 22    | 0,88 |
| Total                                                                                  | 50    | 2,00 |
| Number of hours involving direct participation of academic teachers:                   |       |      |
| Hours connected with class participation                                               | 25    |      |
| Other synchronous hours                                                                | 3     |      |
| Total                                                                                  | 28    |      |
| Number of hours involving student's independent work:                                  |       |      |
| Hours for student's independent work                                                   | 22    |      |

### 03. Course content

|                           |                                                                                                                                                        |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| classes in a computer lab | Fundamentals of structured programming. Learning the graphical user interface of the programming environment - editing, compiling and running programs |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|

### Table: Learning outcomes

|                                          |                                                                                                                            |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Knowledge                                |                                                                                                                            |
| <b>Outcomes code</b>                     | W1                                                                                                                         |
| Description                              | The graduate has basic knowledge of writing simple structured programs in Python using their own and ready-made functions. |
| Related field-of-study learning outcomes | K1_W33                                                                                                                     |
| Skills                                   |                                                                                                                            |
| <b>Outcomes code</b>                     | U1                                                                                                                         |

| Part I                                            |                                                                                                                                                                                                               |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description                                       | The graduate is able to independently write simple structured programs in Python using own and ready-made functions.                                                                                          |
| Related field-of-study learning outcomes          | K1_U26                                                                                                                                                                                                        |
| Social competence                                 |                                                                                                                                                                                                               |
| <b>Outcomes code</b>                              | K1                                                                                                                                                                                                            |
| Description                                       | The graduate is aware of the need to develop their skills in implementing various types of algorithms in the programming languages they choose.                                                               |
| Related field-of-study learning outcomes          | K1_K02                                                                                                                                                                                                        |
| Part II                                           |                                                                                                                                                                                                               |
| <b>04. Year and semester of studies</b>           |                                                                                                                                                                                                               |
| Year                                              | 2026L                                                                                                                                                                                                         |
| Semester                                          | 2                                                                                                                                                                                                             |
| <b>05. Course leader and course teachers</b>      |                                                                                                                                                                                                               |
| Course leader                                     | Sławomir Czarnecki                                                                                                                                                                                            |
| classes in a computer lab                         | Sławomir Czarnecki                                                                                                                                                                                            |
| <b>06. Course objective</b>                       |                                                                                                                                                                                                               |
| Course objective                                  | The goal of this course is to develop the ability to independently write simple structured programs in Python, using pre-built functions from available packages and using functions implemented by yourself. |
| <b>07. Teaching methods and techniques</b>        |                                                                                                                                                                                                               |
| classes in a computer lab                         | exercise method, computer classes, individual work, programming techniques                                                                                                                                    |
| <b>08. Methods of verifying learning outcomes</b> |                                                                                                                                                                                                               |
| Knowledge                                         |                                                                                                                                                                                                               |
| <b>Outcomes code</b>                              | W1                                                                                                                                                                                                            |
| Description                                       | The graduate has basic knowledge of writing simple structured programs in Python using their own and ready-made functions.                                                                                    |
| Verification methods                              | classes in a computer lab: written test:written test                                                                                                                                                          |
| Skills                                            |                                                                                                                                                                                                               |
| <b>Outcomes code</b>                              | U1                                                                                                                                                                                                            |
| Description                                       | The graduate is able to independently write simple structured programs in Python using own and ready-made functions.                                                                                          |
| Verification methods                              | classes in a computer lab: written test:written test                                                                                                                                                          |
| Social competence                                 |                                                                                                                                                                                                               |
| <b>Outcomes code</b>                              | K1                                                                                                                                                                                                            |
| Description                                       | The graduate is aware of the need to develop their skills in implementing various types of algorithms in the programming languages they choose.                                                               |
| Verification methods                              | classes in a computer lab: written test:written test                                                                                                                                                          |
| <b>09. Required and recommended reading list</b>  |                                                                                                                                                                                                               |
| Required reading                                  | Original exercise materials prepared by the computer science instructor in *.pdf format, and Python code files available to students on the faculty network.                                                  |
| Recommended reading                               | Original exercise materials prepared by the computer science instructor in *.pdf format, and Python code files available to students on the faculty network.                                                  |
| <b>10. Other information</b>                      |                                                                                                                                                                                                               |
| Other information                                 | In accordance with the Course Regulations.                                                                                                                                                                    |