



Subject card

| | | | | | | | |
|---|--|---|----------|-------------------------------------|--|------------|-----|
| Subject name and code | Object-Oriented Programming, PG_00047644 | | | | | | |
| Field of study | Informatics | | | | | | |
| Date of commencement of studies | October 2024 | Academic year of realisation of subject | | | 2024/2025 | | |
| Education level | first-cycle studies | Subject group | | | Obligatory subject group in the field of study Subject group related to scientific research in the field of study | | |
| Mode of study | Full-time studies | Mode of delivery | | | at the university | | |
| Year of study | 1 | Language of instruction | | | Polish | | |
| Semester of study | 2 | ECTS credits | | | 4.0 | | |
| Learning profile | general academic profile | Assessment form | | | assessment | | |
| Conducting unit | Department Of Geoinformatics -> Faculty Of Electronics Telecommunications And Informatics -> Wydział Politechniki Gdańskiej | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | dr hab. inż. Marek Moszyński | | | | | |
| | Teachers | dr hab. inż. Marek Moszyński mgr inż. Tomasz Bieliński dr inż. Andrzej Chybicki dr hab. Marcin Ciecholewski | | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 15.0 | 0.0 | 10.0 | 30.0 | 0.0 | 55 |
| | E-learning hours included: 0.0 | | | | | | |
| Learning activity and number of study hours | Learning activity | Participation in didactic classes included in study plan | | Participation in consultation hours | | Self-study | SUM |
| | Number of study hours | 55 | | 10.0 | | 35.0 | 100 |
| Subject objectives | Theory and practice on object oriented programming | | | | | | |
| Learning outcomes | Course outcome | Subject outcome | | | Method of verification | | |
| | [K6_U04] can apply knowledge of programming methods and techniques as well as select and apply appropriate programming methods and tools in computer software development or programming devices or controllers using microprocessors or programmable elements or systems specific to the field of study | The student acquires practical skills by performing laboratory tasks in specific object-oriented programming languages | | | [SU1] Assessment of task fulfilment | | |
| | [K6_W04] knows and understands, to an advanced extent, the principles, methods and techniques of programming and the principles of computer software development or programming devices or controllers using microprocessors or programmable elements or systems specific to the field of study, and organisation of systems using computers or such devices | The student gets acquainted with the basics of object-oriented programming on the example of four object-oriented programming languages | | | [SW1] Assessment of factual knowledge | | |

| Subject contents | 1. Software programming paradigms including object oriented approach 2. Encapsulation, inheritance, abstraction and polymorphism in C++ language 3. Specific features of C++ object-orientation 4. Java language and its comparison to C++ language 5. C# language as sucesor of C++ and Java languages 6. Python as a scripting object oriented language | | | | | | | | | | | | | | |
|--|--|--|--|--------------------------|-------------------|-------------------------------|---------|-------|-------|---------|-------|-------|------------|-------|-------|
| Prerequisites and co-requisites | Knowledge on non-object oriented language i.e. C language. | | | | | | | | | | | | | | |
| Assessment methods and criteria | <table border="1" data-bbox="448 618 1477 757"> <thead> <tr> <th data-bbox="448 618 794 651">Subject passing criteria</th> <th data-bbox="794 618 1141 651">Passing threshold</th> <th data-bbox="1141 618 1477 651">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="448 651 794 685">lecture</td> <td data-bbox="794 651 1141 685">60.0%</td> <td data-bbox="1141 651 1477 685">34.0%</td> </tr> <tr> <td data-bbox="448 685 794 719">project</td> <td data-bbox="794 685 1141 719">60.0%</td> <td data-bbox="1141 685 1477 719">33.0%</td> </tr> <tr> <td data-bbox="448 719 794 757">laboratory</td> <td data-bbox="794 719 1141 757">60.0%</td> <td data-bbox="1141 719 1477 757">33.0%</td> </tr> </tbody> </table> | | | Subject passing criteria | Passing threshold | Percentage of the final grade | lecture | 60.0% | 34.0% | project | 60.0% | 33.0% | laboratory | 60.0% | 33.0% |
| Subject passing criteria | Passing threshold | Percentage of the final grade | | | | | | | | | | | | | |
| lecture | 60.0% | 34.0% | | | | | | | | | | | | | |
| project | 60.0% | 33.0% | | | | | | | | | | | | | |
| laboratory | 60.0% | 33.0% | | | | | | | | | | | | | |
| Recommended reading | Basic literature | Bjarne Stroustrup - The C++ programming language Bruce Eckel - Thinking in Java Andy Harris - Microsoft C# for absolute beginner Mark Lutz - Programming Python | | | | | | | | | | | | | |
| | Supplementary literature | John Hunt - Smalltalk and Object Orientation | | | | | | | | | | | | | |
| | eResources addresses | Adresy na platformie eNauczanie: Programowanie Obiektowe - 2025 - Moodle ID: 44714 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=44714 | | | | | | | | | | | | | |
| Example issues/ example questions/ tasks being completed | Sample question: What are the trends of C++ evolution? Sample task: implementation of simple object oriented software module using object oriented paradigms in different languages | | | | | | | | | | | | | | |
| Work placement | Not applicable | | | | | | | | | | | | | | |

Document generated electronically. Does not require a seal or signature.