



## Subject card

|                                             |                                                                                                                                                                                                                                                     |                                                          |                                                                                                                                                                                               |                                     |                                                                                                                              |            |     |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------|-----|
| Subject name and code                       | CAD Introduction, PG_00072037                                                                                                                                                                                                                       |                                                          |                                                                                                                                                                                               |                                     |                                                                                                                              |            |     |
| Field of study                              | Architecture                                                                                                                                                                                                                                        |                                                          |                                                                                                                                                                                               |                                     |                                                                                                                              |            |     |
| Date of commencement of studies             | October 2026                                                                                                                                                                                                                                        |                                                          | Academic year of realisation of subject                                                                                                                                                       |                                     | 2026/2027                                                                                                                    |            |     |
| Education level                             | first-cycle studies                                                                                                                                                                                                                                 |                                                          | Subject group                                                                                                                                                                                 |                                     | Obligatory subject group 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                           | 1                                                                                                                                                                                                                                                   |                                                          | ECTS credits                                                                                                                                                                                  |                                     | 2.0                                                                                                                          |            |     |
| Learning profile                            | general academic profile                                                                                                                                                                                                                            |                                                          | Assessment form                                                                                                                                                                               |                                     | assessment                                                                                                                   |            |     |
| Conducting unit                             | Department of Visual Arts -> Faculty of Architecture -> Faculties of Gdańsk University of Technology                                                                                                                                                |                                                          |                                                                                                                                                                                               |                                     |                                                                                                                              |            |     |
| Name and surname of lecturer (lecturers)    | Subject supervisor                                                                                                                                                                                                                                  |                                                          | dr inż. arch. Małgorzata Rogińska-Niesłuchowska                                                                                                                                               |                                     |                                                                                                                              |            |     |
|                                             | Teachers                                                                                                                                                                                                                                            |                                                          | dr hab. inż. arch. Maria Helenowska-Peschke                                                                                                                                                   |                                     |                                                                                                                              |            |     |
|                                             |                                                                                                                                                                                                                                                     |                                                          | dr inż. arch. Małgorzata Rogińska-Niesłuchowska                                                                                                                                               |                                     |                                                                                                                              |            |     |
| Lesson types                                | Lesson type                                                                                                                                                                                                                                         | Lecture                                                  | Tutorial                                                                                                                                                                                      | Laboratory                          | Project                                                                                                                      | Seminar    | SUM |
|                                             | Number of study hours                                                                                                                                                                                                                               | 0.0                                                      | 0.0                                                                                                                                                                                           | 30.0                                | 0.0                                                                                                                          | 0.0        | 30  |
|                                             | 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                                                                                                                                                                                                                               | 30                                                       |                                                                                                                                                                                               | 2.0                                 |                                                                                                                              | 18.0       | 50  |
| Subject objectives                          | The aim of the course is to acquire knowledge about the possibilities of using computer software in the creation of architectural object models, project documentation, and graphic presentations, as well as to develop basic skills in this area. |                                                          |                                                                                                                                                                                               |                                     |                                                                                                                              |            |     |
| Learning outcomes                           | Course outcome                                                                                                                                                                                                                                      |                                                          | Subject outcome                                                                                                                                                                               |                                     | Method of verification                                                                                                       |            |     |
|                                             | [K6_U03] is able to prepare a graphic, written and oral presentation of your own design concepts in the field of architecture and urban planning, meeting the requirements of a professional record appropriate for architectural and urban design  |                                                          | Uses graphic software to create models and flat representations of three-dimensional objects for the purpose of presenting the results of the design process.                                 |                                     | [SU1] Assessment of task fulfilment<br>[SU5] Assessment of ability to present the results of task                            |            |     |
|                                             | [K6_U01] is able to use the experience gained during studies to critically analyze the conditions and formulate conclusions for design in an interdisciplinary context                                                                              |                                                          | Has practical skills in creating and editing vector graphics and raster images. Is able to appropriately select and use information technologies that support architectural and urban design. |                                     | [SU3] Assessment of ability to use knowledge gained from the subject<br>[SU4] Assessment of ability to use methods and tools |            |     |

|                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |
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| Subject contents                                               | Course content – laboratory<br><br>Use of computer graphics in architectural design:<br><br>1.<br>Creating digital 3D models in SketchUp<br><br><ul style="list-style-type: none"><li>• building, modifying, and transforming geometric objects</li><li>• navigating virtual space; defining parallel and perspective views</li></ul><br>2.<br>Visualizing architectural objects based on digital models<br><br><ul style="list-style-type: none"><li>• using material and component libraries</li><li>• setting up scenes, lighting, and perspective</li></ul><br>3.<br>Creating and editing raster images in GIMP<br><br><ul style="list-style-type: none"><li>• basic image processing, color correction, cropping</li><li>• post-processing visualizations (e.g. collage, background, textures)</li></ul><br>4.<br>Creating technical drawings in AutoCAD<br><br><ul style="list-style-type: none"><li>• managing digital drawings: object properties, styles, layers, blocks, groups</li><li>• preparing scaled printouts</li></ul><br>5.<br>Creating complex graphic documents<br><br><ul style="list-style-type: none"><li>• combining vector graphics, raster images, and text</li><li>• preparing project boards and presentation materials</li></ul> |                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |
| Prerequisites and co-requisites                                | IT knowledge at the secondary school level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |
| Assessment methods and criteria                                | Subject passing criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Passing threshold                                                                                                                                                                                                                                                                                                                                                                                                 | Percentage of the final grade |
|                                                                | substantive and graphical correctness of practical exercises                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                            | 100.0%                        |
| Recommended reading                                            | Basic literature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1. Teaching materials prepared by the instructor, available on the e-learning platform (e-nauczanie) as part of the course.<br>2. Official manuals, tutorials, and documentation accessible within SketchUp, GIMP, and AutoCAD software (including contextual help and online resources provided by the software developers).                                                                                     |                               |
|                                                                | Supplementary literature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1. Tomaszewska, Aleksandra. <i>Google SketchUp. Practical Exercises</i> . Helion, 2023. <i>(in Polish)</i><br>2. Komorowski, Władysław. <i>AutoCAD 2023 PL. First Steps</i> . Helion, 2023. <i>(in Polish)</i><br>3. Poncyłjusz, Zbigniew. <i>GIMP. Practical Exercises</i> . Helion, 2022. <i>(in Polish)</i><br><br><i>Note: The recommended literature is in Polish, as the course is conducted in Polish.</i> |                               |
|                                                                | eResources addresses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |
| Example issues/<br>example questions/<br>tasks being completed | <ul style="list-style-type: none"><li>• Architectural object modeling:<br/>designing and modeling a viewing platform, pergola, summer house, single-family house</li><li>• Vector drawing:<br/>creating conceptual building plans, elevations, architectural details, and site development plans</li><li>• Raster graphics:<br/>preparing architectural visualizations in the form of a collage</li><li>• Presentation graphics:<br/>developing project boards and graphic materials for presenting architectural concepts</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |
| Practical activities within the subject                        | Not applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |

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