



**Akademia
Humanistyczno
Ekonomiczna
w Łodzi**

2026-2027

ACADEMIC OFFER

GRAPHICS



GRAPHICS

Language: **English**

Winter **2026-2027**

Graphics Bachelor

1ST YEAR / 1ST SEMESTER

Storyboard & Concept Art	project
Digital Painting I	project
Painting I	project
3D Graphics & Animation I	project
Computer Workshop I	workshops
Photography I	workshops
Visual Structures I	workshops
Fundamentals of Graphic Design I	workshops
Art History I	lecture
Information Technologies	exercises
ZDW: Basics of Philosophy/History of Philosophy	lecture
ZDW: Basics of Philosophy/History of Philosophy	project
Digital Painting AR I	workshops
Fundamentals of Programming I	workshops
Print and Graphic Production	workshops

Storyboard & Concept Art

project

3 ECTS

Teaching methods

didactic discussion / workshop method / individual and group assignments

Method of verifying education

project / assignments / activity during classes

OBJECTIVES

The aim of the course is theoretical and practical preparation of the student for independent implementation of storyboard and concept art tasks, taking into account the basic knowledge of classical drawing and painting. Concept art: The curriculum focuses on familiarizing the student with the basic 3 issues of character design and the environment for the production of computer games and film. Storyboard: The curriculum familiarizes the student with the basic knowledge in the field of film staging, editing and the role of the camera in the production of films and cinematics. It creates the ability to efficiently apply this knowledge in creating storyboards that meet the requirements of the market.

COURSE CONTENT

- Converging perspective with one, two, and three vanishing points.
- Techniques for creating spatial illusions in visual arts.
- Sketching with the principle of "from general to specific."
- Creating engaging visual works in the context of pure form theory.
- Studies of still life and the human figures, drawing on their observations and experiences.

DESCRIPTION OF THE EXPECTED LEARNING RESULTS

In terms of knowledge:

- Has knowledge of human anatomy and the main principles of character design.
- Knows the principles of using Photoshop and related programs (Clip Studio Paint, Krita, Procreate, etc.).
- Understands concepts like layers, blending modes, and clipping masks.
- Understands the principles of visual communication of character traits and attributes of inanimate objects.

In terms of abilities:

- Can design a character to be anatomically accurate and coherent, with visual features that reflect its attributes and character.
- Can design a set of utilitarian objects so that their appearance conveys their purpose and reveals the characteristics of their owner.

In terms of social competencies

- Communicates in a polite and clear manner, precisely expressing ideas and formulating questions. Demonstrates engagement and a desire to improve skills. Actively participates in discussions.
- Continuously seeks new solutions and innovative ideas, particularly in the field of design.

Digital Painting I

project

2 ECTS

Teaching methods

discussion / workshop method / brainstorming / assignments, project implementation

Method of verifying education

project / assignments / activity during classes

OBJECTIVES

Theoretical and practical preparation of students for independently completing tasks in digital graphics, with an emphasis on knowledge of classical drawing and painting. The course focuses on teaching students techniques for creating and processing digital images, particularly in the context of preproduction for video games, films, and illustrations.

COURSE CONTENT

- Converging perspective with one, two, and three vanishing points.
- Techniques for creating spatial illusions in visual arts.
- Sketching with the principle of "from general to specific."
- Creating engaging visual works in the context of pure form theory.
- Studies of still life and the human figuredents, drawing on their observations and experiences.

DESCRIPTION OF THE EXPECTED LEARNING RESULTS

In terms of knowledge:

- Has knowledge of converging perspective and methods of its representation.
- Knows and understands concepts such as the horizon line and vanishing point.
- Understands the concept of pure form.

In terms of abilities:

- Creates correct abstract visual compositions according to given guidelines.
- Can paint from imagination on various themes: figure study, portrait, still life, landscape.
- Can quickly sketch a figure, considering major forms, proportions, and movement, applying the principle of "from general to specific."
- Can draw converging perspective with one and two vanishing points.

In terms of social competencies

- Independently expands knowledge and skills by engaging with artworks, seeking inspiration and additional information about techniques of interest.
- Engages in dialogue with other students.

Painting I

project

2 ECTS

Teaching methods

individual assignments / discussion in class / workshop method / project-based method

Method of verifying education

assignments / activity during classes

OBJECTIVES

The aim of the course is preparing students to work with form in painting so that it can be applied to graphic design tasks. Developing the ability for symbolic thinking. Conscious artistic creation based on creative invention and new sources of inspiration.

COURSE CONTENT

- Introduction to the watercolor technique on paper using the example of an autumn landscape. Observing color in relation to aerial perspective, discovering one's own painterly language.
- Learning the properties and painting techniques of acrylic paints.
- Monochromatic still life, water-based paint on paper. Painterly gesture in the glazing/wash technique. Value, chiaroscuro, and material differentiation.
- Introduction to the collage technique based on its history and the most important works; expanding the range of artistic means of expression and materials, stimulating creativity and abstract thinking.
- Developing one's own creative practice.

DESCRIPTION OF THE EXPECTED LEARNING RESULTS

In terms of knowledge:

- Knows and understands selected issues of form, such as framing and composition, colour, value and chiaroscuro, spatial relationships, as well as the history of artistic approaches in this area.

In terms of abilities:

- The student is able to combine various techniques and technologies within a single visual artwork. Develops skills in the field of painting. Can create a visual work using different means of artistic expression. Is able to present an artistic problem through painterly means. Can present his/her own creative work with reference to the techniques and styles studied.

In terms of social competencies

- Is prepared to work on the organization of exhibitions, including collaboration with other specialists, as well as to archive and promote his/her own artistic work.

Graphics and 3D Animation

workshops

3 ECTS

Teaching methods

lecture / project-based method / self-directed semester projects.

Method of verifying education

project / assignments / activity during class

OBJECTIVES

The aim of the course is to prepare the students to use in the field of computer workshop, graphic programs for editing extensive multimedia three-dimensional space; learning how to create three-dimensional elements, basic space modeling techniques, digital lighting and texturing of objects, use of scanline rendering.

COURSE CONTENT

- Definition and properties of 3D space.
- 3D modeling tools.
- Basics of object texturing.
- Lighting creation in 3D space.
- Rendering methods

DESCRIPTION OF THE EXPECTED LEARNING RESULTS

In terms of knowledge:

- Mastery of 3D graphics tools.
- Recognizes the need to be familiar with the latest 3D modeling software and is aware of the technological and practical limitations posed by the computational power of contemporary hardware.

In terms of abilities:

- Independently selects spatial modeling methods and realizes personal artistic concepts. Utilizes 3D modeling, rendering, and scene lighting tools.
- Capable of independently seeking new technological solutions in the field of 3D modeling.
- Independently designs spatial compositions.

In terms of social competencies

- Recognizes the need for continuous professional development in the field of 3D space creation.

Computer Workshop I

workshops

3 ECTS

Teaching methods

lecture / project-based method / case study

Method of verifying education

project / assignments / activity during class

OBJECTIVES

Acquisition of skills for developing graphic projects using vector and bitmap graphic software, deepening theoretical knowledge related to computer graphics (e.g., color models, vector graphics, bitmap maps, graphic file formats, compression methods, etc.), and gaining skills in preparing lengthy documents and projects for use in various media, as well as enhancing skills in working with vector and bitmap graphic programs.

COURSE CONTENT

- Vector graphics / working with Bézier curves (joining, trimming, path filters, etc.), bitmap graphics, working with layers, using textures, brushes, and lighting effects. Animating vector and bitmap graphics.
- Creating multi-page documents, columns, gutters, margins, bleeds, creating master pages, automating pagination, styles, style anchoring.
- Transferring projects between programs and platforms (packages with links, fonts). Placing illustrations in columns, anchoring illustrations.
- Introductory knowledge of typographic measurements, the construction of graphic signs – letter, word, sentence, paragraph, character height versus column width, line spacing.

DESCRIPTION OF THE EXPECTED LEARNING RESULTS

In terms of knowledge:

- Has organized knowledge in the theory and practice of artistic and design graphics, as well as contemporary media, including appropriate terminology and methodology. Possesses interdisciplinary knowledge in art history and aesthetics. Knows terminology related to typography and graphic design. Has learned the functions of programs such as iD, Ai, Ps, and Ae.

In terms of skills:

- Prepares effective visual communication for companies, products, and socio[1]cultural and commercial ventures using contemporary media. Has basic skills in using functions of iD, Ai, Ps, Ae, and Bridge. Can create a multi-page document with pagination, live pagination, anchoring illustrations, and working with master pages. Can work with styles, create bitmap graphics using collage with brushes, textures, and lighting effects, and perform basic animation of the created graphics. Can design a publication, such as a dictionary or a catalog of fonts available on the computer. Can create a table of contents and footnotes in the text. Designs virtual spaces and 3D graphic elements for advertising, spatial visualizations, and practical graphic applications.

In terms of social competencies

- Establishes relationships with people involved in their project, maintains autonomy in thinking and acting, and understands others' actions in the context of their emotional states. Can appropriately set priorities for completing tasks, understands the significance of knowledge in solving cognitive and practical problems in the field of graphics.

Photography I

workshops

3 ECTS

Teaching methods

lecture / project-based method / case study

Method of verifying education

project / assignments / activity during class

OBJECTIVES

The aim of the course is: getting to know the development and history of photography (in short) and the basic elements of the photographic workshop including work in an atelier and in a darkroom; acquiring the ability to consciously organize the shooting plan and to control the selection of technical parameters for image recording consistent with the program assumptions, both in traditional cameras with silver media and on digital media. The didactic process, apart from mastering the workshop skills, is designed to stimulate the imagination, deepen artistic sensitivity and the ability to observe combined with making quick decisions about actions. Improving the ability to use computer programs (Photoshop and related). In line with technical and creative needs; striving to use the value of the creative and meaning potential of photography; developing teamwork skills.

COURSE CONTENT

- The history of world photography within the context of global art history. The history of philosophical and aesthetic thought in relation to changing trends in photography.
- The history of Polish photography. Major Polish photographers and the themes they have addressed.
- Technical aspects of photography. Types of composition in photography and their translation into the fine arts. The significance of black and white, color, light, and perspective in photographic framing.
- Working with an analog camera. Building a photographic frame. Practicing correct framing of a given subject. Correlating theoretical knowledge of composition with technical knowledge. Working in an analog darkroom in relation to working with digital cameras and digital darkroom techniques.
- Using photographic images in graphic design, animation, painting, film, performance art, etc. In both historical and contemporary contexts. Expressing philosophical thoughts and self-expression based on key creators who use photography in art.
- Using Adobe programs and others to process photographic images for graphic purposes.
- Finding subjects and personal forms of photographic expression.

DESCRIPTION OF THE EXPECTED LEARNING RESULTS

In terms of knowledge:

- Has theoretical knowledge in the history of art and photography.
- Applies organized knowledge of photography theory and the history of art, philosophy, and aesthetics to analyze photographic images.
- Creates analog or digital photographic images based on interdisciplinary knowledge.
- Utilizes theoretical and technical knowledge in photography and correlates it with theoretical and technical knowledge from other fields to create their own photographic work.
- Uses photographic knowledge acquired through education for artistic and scientific development.

In terms of skills:

- Operates analog and digital cameras and studio equipment.
- Uses traditional photographic processes based on silver halide media and masters digital darkroom work to expand creative possibilities in photography.
- Adjusts the settings of analog and digital cameras as well as lighting equipment according to the needs of a photo session and captures images with proper exposure.
- Applies photography skills for interdisciplinary purposes.
- Develops independent thinking while working on a personal set of photographs, integrating skills from other disciplines.

In terms of social competencies

- Collaborates in a team and expresses opinions constructively.
- Shares knowledge in an interdisciplinary environment.
- Prepares and presents their own projects and artistic achievements both directly and online

Visual Structures I

workshops

3 ECTS

Teaching methods

project-based method / case study analysis
workshop method / didactic discussion

Method of verifying education

project / assignments / activity during class

OBJECTIVES

The aim of the study is: equipping students with knowledge gained directly from their own experience; providing students with the ability to relate in practice to some of the basic concepts and problems related to the construction of a visual work; individualization of creative attitudes in formulating visual statements by referring to the posed problems, and not on the basis of existing schemas; equipping with knowledge acquired indirectly - by learning about solutions other than your own regarding the issues related to the construction of visual works; stimulation of the creation process - self-discovery and presentation of visual problems, formulating them, carrying out a visual analysis and synthesis ending with a conclusion that gives a starting point for further research and solutions. equipping with knowledge acquired indirectly by learning about solutions other than your own regarding the issues related to the construction of visual works.

COURSE CONTENT

- Perception versus knowledge. Differentiating between what we see and what we know about the subject of compositional considerations.
- Relativity in the perception of size.
- Relativity in the perception of color.
- Relativity in the perception of value.
- Relativity in the perception of weight.
- Relativity in the perception of minimal, maximal, and boundary effects.

DESCRIPTION OF THE EXPECTED LEARNING RESULTS

In terms of knowledge:

- Defines some concepts related to composition and aspects concerning the construction of visual works.
- Understands that this is part of interdisciplinary knowledge that they are beginning to acquire. Is aware of the impact of techniques and technologies on the form of visual expressions.
- Recognizes the technological and practical possibilities and limitations.
- Has knowledge in the fine and applied arts (both theoretical and practical) and translates it into something useful for their own purposes.

In terms of skills:

- Independently defines the visual form in response to given problems. Identifies problems related to given issues and goes beyond them.
- Completes their own work and oversees the realization of projects that significantly exceed the technical and technological capabilities of the institutional or home workshop.
- Has mastered the workshop skills necessary for completing exercises. Independently decides on the medium used in visual creation and can independently find the necessary tools and information.
- Possesses the ability to present their work.

In terms of social competencies

- Sees the need to enhance their skills in visual structures.
- Can analyze and interpret source materials and present their own projects.
- Critiques their own work and is open to feedback.
- Communicates with others and is open to collaboration.

Fundamentals of Graphic Design I

workshops

3 ECTS

Teaching methods

Project-based method / Individual work

Method of verifying education

project / assignments / activity during class

OBJECTIVES

The aim of the study is to gain knowledge about the basic terms, terms and concepts in the field of artistic activities and graphic design; working on the student's visual sensitivity and developing the ability to communicate information through artistic and design activities, creating a message that carries form and content, maintaining the clarity of the visual message conveyed by the graphic design; shaping a creative attitude, open to cooperation, self-education and personal development. The aim of the study is to gain knowledge about the basic terms, terms and concepts in the field of artistic activities and graphic design; working on the student's visual sensitivity and developing the ability to communicate information through artistic and design activities, creating a message that carries form and content, maintaining the clarity of the visual message conveyed by the graphic design; shaping a creative attitude, open to cooperation, self-education and personal development.

COURSE CONTENT

- Elements of graphic design – terms, definitions, and concepts related to
- visual arts, techniques, technologies, and methods of implementation.
- Building visual messages, composition, narration.
- Lettering – font (history, structure, contemporary fonts), use of lettering in graphic design.
- Readability and fluidity of text, layout, composition.
- Image and text as components of graphic composition.
- Shaping graphic interpretations of concepts, visualization.
- Project realization for a selected client – objectives that a graphic design project should meet

DESCRIPTION OF THE EXPECTED LEARNING RESULTS

In terms of knowledge:

- The student knows the terms, definitions, and concepts related to visual arts and graphic design. Can identify formal elements of a graphic design project, apply them in practice, and maintain the clarity of the visual message conveyed by the design.

In terms of skills:

- The student defines and combines formal elements of a design, understands their impact, and graphically interprets concepts and meanings. Classifies differences in typefaces and basic paper formats, integrates text and images, and visualizes concepts. Executes a graphic design project in a chosen technique, using digital technology.

In terms of social competencies

- The student shows initiative in activity in seeking artistic connections and inspirations.

Art History I

lecture

2 ECTS

Teaching methods

Project-based method / Individual work

Method of verifying education

project / assignments / activity during class

OBJECTIVES

The aim of the course is presentation of artistic trends and styles after the fall of the Roman Empire to the 19th century and acquainting students with changes in the field of 20th-century art, including modernism, anti-art and classical avant-garde. The student is able to distinguish between the specificity of such directions as, for example, expressionism, cubism, surrealism, be able to deal effectively with something suggested by the style. Classes focus not only on the history of painting, but also on the history of photography and experimental film. The aim of presenting the history of art in the problematic history of modernist thought as opposed to traditional art and tradition.

COURSE CONTENT

- The concept of art and its transformations throughout history.
- Historical styles from the 5th century BC to the 21st century.
- Art in the Paleolithic, Neolithic, and ancient periods (Egypt, Mesopotamia).
- Early Christian, Carolingian, Romanesque, and Gothic art.
- The Renaissance, the Mannerist crisis, Baroque synthesis, Classicism, and Romanticism.
- Modernist art in the 19th century – from Realism to Post-Impressionism.
- Classical avant-garde art (1905-1930) – Cubism, Futurism, Abstraction, Dada, Surrealism, and Constructivism.
- The concept of anti-art in the 20th century – Marcel Duchamp.
- Variants of abstract art in the interwar period and its transformations up to the early 21st century.
- Defining artistic modernism after World War II – Action Painting, Minimal, Art, Pop Art, Conceptualism.
- Major achievements of Polish art in the 20th century (W. Strzemiński, K. Kobro, A. Wróblewski, M. Abakanowicz, A. Szapocznikow).
- Postmodernism in architecture, painting, and photography.

DESCRIPTION OF THE EXPECTED LEARNING RESULTS

In terms of knowledge:

- Has a structured understanding of the theory and practice of artistic and design graphics, as well as contemporary media, and is familiar with the appropriate terminology and methodology. Possesses interdisciplinary knowledge of the entire history of art and aesthetics and is able to interpret styles across historical periods. Has knowledge of philosophy and is familiar with the views of major philosophers. Possesses knowledge enabling the acquisition, iconographic analysis, and general interpretation of necessary information.

In terms of skills:

- Recognizes artists and their works from specific historical periods. Compares works of art from different periods, identifying common features and differences. Analyzes and interprets both historical and contemporary works of art.

In terms of social competencies

- Understands the need for lifelong learning, independently expands and updates knowledge in modern processes and technologies, and is able to inspire and organize the learning process for others.

Information Technologies

tutorials

1 ECTS

Teaching methods

demonstrations / tutorials / practical exercises / individual work

Method of verifying education

colloquium / assignments / activity during classes

OBJECTIVES

The aim of the course is to equip students with fundamental knowledge and practical skills in the effective use of office applications (word processor, spreadsheet, and presentation software), as well as to develop an understanding of the role of information technologies and multimedia in everyday life and professional work.

COURSE CONTENT

- Using IT tools and applications in education. Editing text documents in MS Word: typing, editing, proofreading, autocorrect, formatting, inserting objects into text, creating lists and tables, working with headers, sections, and page numbering, print preview. Working with multi-page documents: footnotes, bookmarks, hyperlinks, tables of contents, bibliographies, indexes, etc.
- Using IT tools and applications in education – creating multimedia presentations (PowerPoint and Prezi): principles of presentation design; using graphics, audio, and animations; adding hyperlinks and charts; slide masters and templates; organizing and running a slideshow; setting up automatic presentations; saving presentations in various formats.
- Using IT tools and applications in education – creating spreadsheets: data types, operators, arithmetic, logical and text expressions, function arguments and function values, extracting parameters in task solutions, referencing methods (including cross-sheet referencing), formulas, built-in functions, autofill, formatting cells and ranges, XY charts. Spreadsheets as simple databases: forms, searching, filtering, and multi-level sorting.
- Protection of intellectual property in IT in education: creating, sharing, and using source materials; types of licenses.

DESCRIPTION OF THE EXPECTED LEARNING RESULTS

In terms of knowledge:

- Has advanced knowledge and understanding of selected functionalities of office tools (word processor, spreadsheet, presentation software) and their applications in data analysis and document preparation.
- Has advanced knowledge and understanding of selected concepts and issues related to information technologies, multimedia, and media convergence, as well as the role of IT in work organization. Possesses basic knowledge of different types of licenses and the principles of intellectual property protection in the creation and use of materials in the context of IT.

In terms of skills:

- Is able to independently use advanced features of a word processor to create complex documents (e.g., engineering reports), applying styles, tables of contents, footnotes, and embedded objects.
- Is able to effectively design multimedia presentations, applying principles of visual design, graphics, audio, animations, and hyperlinks, as well as adapting presentations to different formats.
- Is able to consciously select and apply advanced spreadsheet functions (formulas, built-in functions, referencing methods, charts, filtering, sorting) for data analysis, data processing, and problem-solving.
- Is able to independently search for information and expand their knowledge using various sources, including academic publications, online resources (netography), tutorials, and other professional materials.

In terms of social competencies:

- Is ready to critically evaluate their own knowledge and continuously expand it.
- Is prepared to uphold high ethical standards and respects the principles of intellectual property protection when using source materials and applying licenses in work with IT applications.
- Ensures a professional standard in the preparation of digital materials and takes responsibility for the accuracy and quality of their content.

ZDW: Basics of Philosophy / History of Philosophy

lecture

1 ECTS

Teaching methods

conversational lecture / didactic discussion /
project-based method

Method of verifying education

exam

OBJECTIVES

Introduction to key concepts and issues in philosophy. Equipping students with knowledge of the history of European philosophy. Enhancing skills related to resolving moral dilemmas encountered in daily life. Fostering a dialogical attitude – developing skills in discussion and teamwork.

COURSE CONTENT

- Fundamentals of Philosophy – Concepts and Major Schools of Thought.
- Key Issues from Various Periods and Branches of Philosophy: Metaphysics, Epistemology, Axiology.
- Discussion of the Most Representative Philosophical Concepts in the History of European Philosophy.
- Preparation for a Philosophical Project using Project-Based Methodology.
- Addressing the Problem of "How to Engage Children, Youth, and Elderly People in Philosophy" – Implementation and Evaluation of a Philosophical Project.

DESCRIPTION OF THE EXPECTED LEARNING RESULTS

In terms of knowledge:

- Knows and understands the nature of philosophy and the differences between philosophy and other disciplines and fields of culture. Knows and understands selected concepts and problems of philosophy. Knows and understands major ethical theories.

In terms of skills:

- Critically analyzes both their own beliefs, arguments, and actions as well as those of others. Argues their position in a coherent and logical manner. Recognizes ethical dilemmas and resolves them independently and responsibly.

In terms of social competencies

- Shows respect for others' opinions. Collaborates within a team, completes assigned tasks, and manages their time effectively. Demonstrates openness to new ideas, facts, and challenges.

ZDW: Basics of Philosophy / History of Philosophy

project

2 ECTS

Teaching methods

conversational lecture / didactic discussion /
project-based method

Method of verifying education

project

OBJECTIVES

Introduction to key concepts and issues in philosophy. Equipping students with knowledge of the history of European philosophy. Enhancing skills related to resolving moral dilemmas encountered in daily life. Fostering a dialogical attitude – developing skills in discussion and teamwork.

COURSE CONTENT

- Fundamentals of Philosophy – Concepts and Major Schools of Thought.
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- Preparation for a Philosophical Project using Project-Based Methodology.
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DESCRIPTION OF THE EXPECTED LEARNING RESULTS

In terms of knowledge:

- Knows and understands the nature of philosophy and the differences between philosophy and other disciplines and fields of culture. Knows and understands selected concepts and problems of philosophy. Knows and understands major ethical theories.

In terms of skills:

- Critically analyzes both their own beliefs, arguments, and actions as well as those of others. Argues their position in a coherent and logical manner. Recognizes ethical dilemmas and resolves them independently and responsibly.

In terms of social competencies

- Shows respect for others' opinions. Collaborates within a team, completes assigned tasks, and manages their time effectively. Demonstrates openness to new ideas, facts, and challenges.

Digital Painting AR I

workshops

3 ECTS

Teaching methods

discussion / workshops / brainstorming / assignments / project implementation

Method of verifying education

project

OBJECTIVES

Theoretical and practical preparation of students for independently completing tasks in digital graphics, with an emphasis on knowledge of classical drawing and painting. The course focuses on teaching students techniques for creating and processing digital images, particularly in the context of preproduction for video games, films, and illustrations.

COURSE CONTENT

- Converging perspective with one, two, and three vanishing points.
- Techniques for creating spatial illusions in visual arts.
- Sketching with the principle of "from general to specific."
- Creating engaging visual works in the context of pure form theory.
- Studies of still life and the human figuredents, drawing on their observations and experiences.

DESCRIPTION OF THE EXPECTED LEARNING RESULTS

In terms of knowledge:

- Has knowledge of converging perspective and methods of its representation.
- Knows and understands concepts such as the horizon line and vanishing point.
- Understands the concept of pure form.

In terms of skills:

- Creates correct abstract visual compositions according to given guidelines.
- Can paint from imagination on various themes: figure study, portrait, still life, landscape.
- Can quickly sketch a figure, considering major forms, proportions, and movement, applying the principle of "from general to specific."
- Can draw converging perspective with one and two vanishing points.

In terms of social competencies

- Independently expands knowledge and skills by engaging with artworks, seeking inspiration and additional information about techniques of interest.
- Engages in dialogue with other students.

Fundamentals of Programming I

workshops

2 ECTS

Teaching methods

lectures / project methods /
auditory/laboratory exercises

Method of verifying education

exam / activity during classes

OBJECTIVES

The aim of the course is to gain knowledge in the field of the subject. The students will learn to design, design computer programs and create the correct source code, as well as run the created program code using the selected translator.

COURSE CONTENT

- Definition, elements, and examples of programming languages. Language reports. High-level programming languages. Programming techniques – structured vs. object-oriented.
- General structure of a computer program. Source and executable code. Translation methods. Compilation vs. interpretation of code.
- Program construction. Data types. Constants, variables, arrays. Arithmetic and logical operators. Assignment instructions, conditional instructions: single and multiple selection.
- Organizing repetition operations – iteration. Loop iteration counters. Increment vs. decrement. Variations of iterative instructions.

DESCRIPTION OF THE EXPECTED LEARNING RESULTS

In terms of knowledge:

- Achieves knowledge in the subject area, including building and developing computer programs. Knows and understands methods for analyzing the given problem. Knows and understands complex relationships between analyzed data.

In terms of skills:

- Achieves the ability to design correct source code for computer programs. Possesses skills in using selected compilers and tools for program development. Can design and program uncomplicated IT issues. Can use available literature to formulate and solve IT problems.

In terms of social competencies

- Understands the need and knows the possibilities for continuous improvement of professional, personal, and social qualifications. Understands the need and knows the possibilities for continuously enhancing their own competences. Is aware of the importance and understands non-technical aspects and consequences of the work of a computer engineer.

Print and Graphic Production

workshops

3 ECTS

Teaching methods

workshop method / project-based method / didactic discussion

Method of verifying education

assignments / activity during classes

OBJECTIVES

The aim of the course is broadening the knowledge and skills in the field of workshop graphics; practical use of gravure and relief printing techniques; experimenting with materials in the preparation of the matrix and substrate for the graphic print; developing the skill of free artistic expression through small and large graphic forms; shaping an attitude open to: personal development, cooperation and self-education; achievement by students of specialist artistic qualifications and skills; workshop and intellectual in the field of various graphic techniques; free choice of issues and their workshop implementation as an opportunity for development, effective presentation of a creative attitude and real artistic achievements.

COURSE CONTENT

- History of printmaking, intaglio, and relief printing illustrated by examples of outstanding artists' graphics – lecture and presentation.
- Traditional and experimental methods in developing printing forms – graphic matrices.
- Use of digital design as a contemporary graphic matrix.
- Color linocut as a project element – realization of the matrix in the lost-wax technique.
- Reprints, graphics made using preprint techniques.
- Methods of exhibiting graphics, principles of signing, framing, and planning editions.
- Preparation of a graphic exhibition.

DESCRIPTION OF THE EXPECTED LEARNING RESULTS

In terms of knowledge:

- Has knowledge of the history of art and philosophy in the field of artistic graphics. Has organized knowledge of the theory and practice of artistic graphics. Has knowledge of techniques in printmaking.

In terms of skills:

- Prepares graphic designs, uses traditional and contemporary artistic means of expression freely, and decides on the process of realizing the chosen project. Produces the required number of graphic prints in the selected technique, considering the aesthetics of execution. Prepares presentations and discusses the artistic and technological assumptions of their own graphic works

In terms of social competencies

- Can effectively use intuition, imagination, individual creative potential, and acquired knowledge and experience to solve creative problems and in professional activity. Makes artistic decisions, performs self-assessment, and provides constructive criticism of the work of others.