

BSc in Multimedia and Computer Graphics Taught in Bulgarian

Brief summary of the program:

Training in the first two years of the program consists of general education; training in the main academic areas of the major in two-semester courses: Fundamentals of Informatics, General History of Fine Arts, Composition in Visual Arts, Introduction to Economics, Mathematics; practical courses: Graphical User Interface, Computer Structures, Drawing, Color Science in Computer-Aided Design, Structures in Programming and Information Technologies, Raster Graphics, Graphic Documenting, etc. Throughout the third and fourth years, training is organized in specialized courses part of the program, as well as extracurricular modes of instruction such as practicums and internships. During the fourth year, students are offered the opportunity to choose between two concentrations leading up to professional qualifications.

Major and professional qualification:

Concentration: **Multimedia, Computer Graphics and Animation**

Major: Multimedia and Computer Animation

Qualification: Technologist in Multimedia, Computer Graphics and Animation

Concentration: **Computer-Aided Creative Design**

Major: Multimedia, Computer Graphics and Animation

Qualification: Technologist in Computer-Aided Creative Design

First year, first semester

Basic courses

GENB005 Fundamentals of Informatics, 30 hours, 1/2, 3 credits

GENB017 Introduction to Economics, 30 hours, 1/2, 3 credits

GENB035 The Language of Formality, 30 hours, 1/2, 3 credits

Practical credit courses

CSTB001 Graphical User Interface, 30 hours, 3 credits

CSTB006 Computer Structures, 30 hours, 3 credits

CSTB116 Drawing, 30 hours, 3 credits

Practical non-credit courses

CSTB002 Seminars and project in Graphical User Interface, 30 hours

First year, second semester

Basic courses

GENB005 Fundamentals of Informatics, 30 hours, 2/2, 3 credits

GENB017 Introduction to Economics, 30 hours, 2/2, 3 credits

GENB035 The Language of Formality, 30 hours, 2/2, 3 credits

Practical credit courses

CSTB003 Structures in Programming and Information Technologies, 30 hours, 3 credits

CSTB117 Drawing, 30 hours, 3 credits

CSTB409 Color Science in Computer-Aided Design, 30 hours, 3 credits

Practical non-credit courses

CSTB004 Seminars and project in Structures in Programming and Information Technologies, 30 hours

Second year, third semester

Basic courses

GENB030B General History of Fine Arts, 30 hours, 1/2, 3 credits

GENB001B Mathematics, 30 hours, 1/2, 3 credits

GENB029 Aesthetics and Theory of Art, 30 hours, 1/2, 3 credits

GENB031 Composition in Visual Arts, 30 hours, 1/2, 3 credits

Practical credit courses

CSTB019 Raster Graphics, 30 hours, 3 credits

CSTB020 Project in Raster Graphics, 30 hours, 3 credits

CSTB021 Graphic Documenting, 30 hours, 3 credits

CSTB023 Mathematical and Simulation Modeling, 30 hours, 3 credits

CSTB024 Practical Building of Spatial Forms, 30 hours, 3 credits

CSTB506 Functions and Services of Operating Environments, 30 hours, 3 credits

Practical non-credit courses

CSTB022 Seminars and project in Graphic Documenting, 30 hours

Second year, fourth semester

Basic courses

GENB030B General History of Fine Arts, 30 hours, 2/2, 3 credits

GENB001B Mathematics, 30 hours, 2/2, 3 credits

GENB029 Aesthetics and Theory of Art, 30 hours, 2/2, 3 credits

GENB031 Composition in Visual Arts, 30 hours, 2/2, 3 credits

Practical credit courses

CSTB013 Project in Computer Networks, 30 hours, 3 credits

CSTB025 Vector Graphics, 30 hours, 3 credits

CSTB026 Computer Communications and Networks, 30 hours, 3 credits

CSTB127 Composition of Spatial Forms, 30 hours, 3 credits

CSTB400 Object-Oriented Programming of User Interface, 30 hours, 3 credits

CSTB711 Decision-Making Methods, 30 hours, 3 credits

Practical non-credit courses

CSTB111 Designing with Vector Graphics, 30 hours

Third year, fifth semester

Classroom-based lecture courses (credit-bearing)

CSTB502 Computer Graphics, 30 hours, 3 credits

CSTB503 Labs in Computer Graphics, 30 hours, 3 credits

CSTB504 Computer Peripherals, 30 hours, 3 credits

CSTB526 Descriptive Geometry in Computer Graphics, 30 hours, 3 credits

CSTB527 Software Technologies with C#, 30 hours, 3 credits

CSTB546 Programming and Graphics in a FLASH Environment, 30 hours, 3 credits

CSTB547 Discrete Structures, 30 hours, 3 credits

CSTB617 Principles of Digital Photography, 30 hours

Practical non-credit courses

CSTB529 Labs in Computer Peripherals, 30 hours

Extracurricular credit courses

CSTB528 Independent study in Software Technologies with C#, 30 hours, 3 credits

CSTB566 Practicum in Programming, Computer Modeling of Three-Dimensional Objects and Computer Peripherals, 90 hours, 9 credits

CSTB582 Independent study: Computer Graphics, 30 hours, 3 credits

CSTB584 Independent study: Computer Peripherals, 30 hours, 3 credits

Third year, sixth semester

Classroom-based lecture courses (credit-bearing)

CSTB016 Synthesis and Analysis of Applied Algorithms, 30 hours, 3 credits

CSTB510 Structural Combinatorics in Computer-Aided Design, 30 hours, 3 credits

CSTB603 Realistic Image Synthesis, 30 hours, 3 credits

CSTB604 Labs in Realistic Image Synthesis, 30 hours, 3 credits

CSTB610 Visual Programming and Database Management, 30 hours, 3 credits

CSTB624 Classical Animation Techniques, 30 hours, 3 credits

CSTB628 Animation and Multimedia in a FLASH Environment, 30 hours, 3 credits

CSTB806 WEB Server Management, 30 hours, 3 credits

Practical non-credit courses

CSTB609 Digital Photography for Multimedia Applications, 30 hours

Extracurricular credit courses

CSTB589 Independent study: Structural Combinatorics in Computer-Aided Design, 30 hours, 3 credits

CSTB666 Practicum in Realistic Image Synthesis and Applied Algorithms, 90 hours, 9 credits

CSTB683 Independent study: Realistic Image Synthesis, 30 hours, 3 credits

CSTB782 Independent study: Digital Photography for Multimedia Applications, 30 hours, 3 credits

Concentrations

1. Computer-Aided Creative Design

Fourth year, seventh semester

Classroom-based lecture courses (credit-bearing)

CSTB611 Computer-Aided Graphic Design, 30 hours, 3 credits

CSTB612 Labs in Computer-Aided Graphic Design, 30 hours, 3 credits

CSTB718 Creative Web Design, 30 hours, 3 credits

CSTB719 Corporate Design, 30 hours, 3 credits

CSTB787 Integrated Environments for WEB Applications, 30 hours, 3 credits

CSTB790 Processing of Graphic and Video Formats, 30 hours, 3 credits

CSTB801 Geometric Modeling, 30 hours, 3 credits
CSTB802 Font in Computer-Aided Design, 30 hours, 3 credits

Practical non-credit courses

CSTB336 Drawing, 30 hours

Extracurricular credit courses

CSTB770 Internship in Graphic Design, 120 hours, 12 credits

Fourth year, eighth semester

Classroom-based lecture courses (credit-bearing)

CSTB722 Package Graphic Design, 30 hours, 3 credits

CSTB808 Realistic Texturing of Three-Dimensional Objects, 30 hours, 3 credits

CSTB817 Printed Computer Graphics, 30 hours, 3 credits

CSTB818 Labs in Printed Computer Graphics, 30 hours, 3 credits

CSTB827 Labs in Geometric Modeling, 30 hours, 3 credits

CSTB828 Post-Processing of Images in Photography, 30 hours, 3 credits

Practical non-credit courses

CSTB436 Drawing, 30 hours

Extracurricular credit courses

CSTB898 Internship in Creative Web Design and Printed Computer Graphics, 180 hours, 18 credits

1. Multimedia, Computer Graphics and Animation

Fourth year, seventh semester

Classroom-based lecture courses (credit-bearing)

CSTB611 Computer-Aided Graphic Design, 30 hours, 3 credits

CSTB612 Labs in Computer-Aided Graphic Design, 30 hours, 3 credits

CSTB705 Computer Animation, 30 hours, 3 credits

CSTB706 Labs in Computer Animation, 30 hours, 3 credits

CSTB718 Creative Web Design, 30 hours, 3 credits

CSTB723 Sound Processing, 30 hours, 3 credits

CSTB728 Visualization and Global Illumination with Mental Ray, 30 hours, 3 credits

CSTB801 Geometric Modeling, 30 hours, 3 credits

Practical non-credit courses

CSTB709 Digital Video Formats, 30 hours

Extracurricular credit courses

CSTB799 Internship in Computer Animation, 120 hours, 12 credits

Fourth year, eighth semester

Classroom-based lecture courses (credit-bearing)

CSTB613 Creating Computer Games, 30 hours, 3 credits

CSTB642 Animation Techniques, 30 hours, 3 credits

CSTB803 Multimedia Technologies, 30 hours, 3 credits

CSTB804 Labs in Multimedia Technologies, 30 hours, 3 credits

CSTB808 Realistic Texturing of Three-Dimensional Objects, 30 hours, 3 credits

CSTB827 Labs in Geometric Modeling, 30 hours, 3 credits

Practical non-credit courses

CSTB814 Project in Creating Computer Games, 30 hours

Extracurricular credit courses

CSTB880 Internship in Multimedia and Creating Computer Games, 180 hours, 18 credits