

REPUBLIC OF UZBEKISTAN
MINISTRY OF HIGHER EDUCATION, SCIENCE AND INNOVATIONS
FERGANA STATE TECHNICAL UNIVERSITY

Application of Computers in Building Design (AutoCAD)

MODULE HANDBOOK

Field of knowledge:	700000	-	Engineering, processing and construction fields
Field of education:	730 000	-	Architecture and Construction
Education program:	60730300	- -	Civil Engineering

Module title	<i>Use of Computers in Building Design (AutoCAD)</i>
Code (if available)	<i>CBDT34</i>
Semester(s) of module teaching	<i>3</i>
Responsible for the module	<i>Nasriddinov Xasan Shavkatovich Department of Civil Engineering, Senior Lecturer</i>
Language of instruction	<i>Uzbek</i>
Connection to the curriculum	<i>Elective</i>
Teaching methods	<i>practical training, independent study.</i>
Study load (including classroom and independent study hours)	<i>Total hours: 120 hours</i> <i>Auditorium hours: 48 hours</i> <i>Lecture – 16 hours, Practical session – 32 hours, Independent study – 72 hours</i>
Credit units	4
Required and recommended prior knowledge for studying the module	<i>Use of Computers in Building Design (AutoCAD)</i>
Module objectives/intended learning outcomes	Module Objective: <i>To learn how to prepare design documentation using the new software developed by Autodesk. To acquire practical skills in creating and editing drawings in various fields using the Autodesk AutoCAD automated design system.</i> Course Tasks: <i>The task of the course is to teach students the methods of creating electronic versions of design documents, setting up drawing templates, printing finished drawings, and using both personal and existing blocks.</i> <i>The course "Application of Computers in Building Design" involves the use of computer graphics and modern information technologies. During the study of the subject, building models and mock-ups are widely used. Visual and instructional materials are delivered to students based on computer software. Students are expected to gain skills in using electronic software to study the subject independently and in depth.</i> <i>Students should develop the skills to search for topic-related information in specialized literature, prepare presentations, and deliver them effectively.</i>
Content	Module 1: Introduction to AutoCAD and Basic Functions • <i>Introduction. General information about AutoCAD. Setup and launch</i> • <i>Drawing and editing tools</i> • <i>Workspace, menu, command line, working with files</i> • <i>Introduction to computer hardware</i> • <i>Installing the AutoCAD software</i> • <i>Working with the interface and buttons</i> • <i>Using the drawing panel</i> Module 2: Geometric Drawings and Object Properties • <i>Drawing with coordinates, segments</i> • <i>Object snapping, color, and layers</i> • <i>Working with objects and text</i> • <i>Modification panel</i> • <i>Drawing geometric shapes</i> • <i>Placing dimensions on plans</i>

	- Inserting walls, doors, and windows Module 3: Building Plans, Sections, and Elevations - Dimensions and scales - Adding a title block to the drawing - Layout and printing of drawings - Drawing building sections - Hatching and coloring - Drawing and coloring facades Module 4: Drawing Finalization and Documentation - Placing drawings on layout sheets - Printing on A2, A3, A4 paper sizes - Final checking and verification of drawings
Forms of assessment	<i>presentation, practical assignments, and final exams</i>
Requirements for study and assessment	<i>To successfully complete the module, the student must attend classes and obtain the minimum required scores in current, midterm, and final assessments.</i>
Bibliography	1. T. Rixsiboyev, Kh. Rixsiboyeva, S. Tursunov. Computer Graphics. "Tafakkur Qanoti" Publishing House. Tashkent – 2018. 2. Scott Onstott. AutoCAD® 2018 and AutoCAD LT® 2018 Essentials. USA, 2018. 3. George Omura, Brian C. Benton. Mastering AutoCAD and AutoCAD LT. USA, 2018. 4. N.V. Zharkov, M.V. Finkov, R.G. Prodki. AutoCAD 2020. Complete Guide. Science and Technology, Saint Petersburg, 2020. 5. Scott J. MacKenzie, Adam Rendek. ArchiCAD 19 – The Definitive Guide. 6. T. I. Kirillova, S. A. Porotnikova, N. V. Semenova. Computer Graphics AutoCAD 2018: Textbook. Yekaterinburg – 2019. 7. A. Merkulov. Creating a Project in AutoCAD: From Idea to Print, 2018.
Reviewers	U.A. Abdurakhmonov – Senior Lecturer (PhD), Department of Civil Engineering, Fergana State Technical University; O.J. Rakhmonov – Head of the Construction Testing Laboratory and Building Structures Technical Inspection Department, Regional Inspection for Control in the Field of Construction and Housing and Communal Services of Fergana Region.