

<b>Identification</b>	<b>Department</b>	School of Engineering and Applied Sciences	
	<b>Program</b>	Bachelor	
	<b>Subject</b>	Descriptive geometry and engineering drawing. (AutoCAD)	
	<b>Term</b>	Spring, 2017	
	<b>Instructor</b>	Zumrud Bayramova	
	<b>E-mail</b>	zumrudvaqif@gmail.com	
	<b>Phone:</b>	051-704-85-88	
<b>Prerequisites</b>			
<b>Language</b>	English		
<b>Compulsory/Elective</b>	Compulsory		
<b>Text books and course materials</b>	<p>Course materials are prepared by the teacher.</p> <p>1. Engineering drawing, Zumrud Vaqifqizi, Baku.</p> <p>2. <a href="http://www.arch.virginia.edu/computing/training/online/pdf/CAD%20Tutorial-Fangfang-110227.pdf">http://www.arch.virginia.edu/computing/training/online/pdf/CAD%20Tutorial-Fangfang-110227.pdf</a></p> <p>3. AutoCad 2014, Zumrud Vaqifqizi, Baku.</p>		
<b>Teaching methods</b>	<b>Case analysis</b>		X
	<b>Group discussion</b>		
	<b>Lab</b>		X
	<b>Lecture</b>		X
	<b>Course paper</b>		X
	<b>Others</b>		
<b>Evaluation Criteria</b>	<b>Methods</b>	<b>Date/deadlines</b>	<b>Percentage (%)</b>
	<b>Midterm Exam</b>		30
	<b>Case studies</b>		
	<b>Class Participation</b>		10
	<b>Quizzes</b>		20
	<b>Project</b>		
	<b>Presentation</b>		
	<b>Laboratory Work (Assignments)</b>		
	<b>Final Exam</b>		40
	<b>Other</b>		
	<b>Total</b>		100%
<b>Course objectives</b>	<ul style="list-style-type: none"> <li>✓ Learning architecture drawing</li> <li>✓ To read and work construction drawings</li> <li>✓ Sheet Planning and Dimensioning</li> <li>✓ Assembly Drawing and standard Part Drawing</li> <li>✓ Drawing instruments and usage</li> </ul>		
<b>Learning outcomes</b>	<p>At the end of the course, students will be able to:</p> <ul style="list-style-type: none"> <li>❖ Build a good base and work architecture drawing</li> <li>❖ Be familiar with the construction drawings</li> <li>❖ Understand the importance of Engineering Drawing</li> <li>❖ Demonstrate the use of different drawing instrument</li> <li>❖ Make free hand lettering and numbering</li> <li>❖ Practice of dimensioning of drawing</li> <li>❖ Undertake different geometric constructions: projections of straight line, planes and solids.</li> <li>❖ Take up different orthographic projections.</li> <li>❖ Draw sectional views, development of surface of different solids.</li> <li>❖ Develop the concept of building drawing.</li> <li>❖ Prepare 2D engineering drawing using AutoCAD software</li> </ul>		
<b>Course outline</b>	<p>This lesson aims to teach main architectural structures</p> <ul style="list-style-type: none"> <li>• Drawing is the language of engineers, by studying this course engineering and technology students will eventually be able to prepare drawings of various objects being used in technology</li> <li>• Descriptive Geometry: Spatial Visualization, Orthographic Projection, Auxiliary Views</li> </ul>		

	<ul style="list-style-type: none"> <li>• Engineering Drawing</li> <li>• Knowledge of engineering drawing instruments</li> <li>• Understanding and interpretation of technical drawings</li> </ul>
<b>Policy</b>	<ul style="list-style-type: none"> <li>➤ The lessons are based on quite interactive methods.</li> <li>➤ Each student should take the certain notes within their capabilities. The activity of the student is noted especially.</li> <li>➤ Teacher's notes will be introduced to the students after classes.</li> </ul> <p>Lessons are conducted in English that's why questions and their answers must be in English.</p>

**Tentative Schedule**

Week	Date	Topics	Textbook/Assignments
1	15.02.2016	Introduction to AutoCAD, Introduction to Engineering Drawing and Descriptive geometry	
2	22.02.2016	AutoCAD Interface, Workspace AutoCAD, The importance of descriptive geometry for engineers. Projection methods. The square system and epure.	
3	01.03.2016	Draw Toolbar. The projection of a point. The description of a straight line in space and epure. The division, size and traces of a straight line. The reciprocal position of double lines. The Plane. Traces of the plane.	
4	15.03.2016	Properties Toolbar. Practical Assignments. The point and a straight line on the plane. The main lines of a plane. The reciprocal position of the double planes. Perpendicular geometric elements. Transformation methods of projections. Polyhedrons.	
5	29.03.2016	Modify Toolbar. Practical Assignments. The intersection of polyhedrons with a plane and a straight line. Curved surfaces. The orthogonal projection of the curved surfaces which consist of straight lines.	
6	05.04.2016	Annotate. Text. Formats. The intersection of conical and cylindrical surfaces with a plane and a straight line. The opening of the rotation figures. Digital projections.	
7	12.04.2016	Dimensions Toolbar. Practical Assignments. Shadows in the orthogonal projections. Shadows of the spatial figures. The Perspective. The Linear Perspective.	
8	19.04.2016	Midterm exam	
9	19.04.2016	Leaders Toolbar. Annotation Toolbar. Case Analysis. The perspective of the geometric elements. The perspective of spatial figures. Shades in the linear perspective.	
10	26.04.2016	Layers Toolbar. Practical Assignments. The role of engineering graphics in the development of science. Constructor documents. Drawing tools and means.	
11	03.05.2016	Block . Groups. The design of drawings. Formats. Scales, lines, fonts. The main articles. Measurement. Basic geometric constructions.	
12	10.05.2016	Utilities. Clipboard. Simple and complex connections. Rachel curves and the rules of their establishment. Projection methods.	
13	17.05.2016	Tables. Practical Assignments. Simple and complex cutting. Local cutting. Types of axonometric projections. Axonometric projections of details.	
14	24.05.2016	Fixing and unfixing compounds. The description of standard details. The collection, fixing and sequences of implementation of the drawing.	

15	31.05.2016	General information on the construction drawing. Layout of a building plan and writing measures. Reading the architectural-construction drawing.	
		<b>Final exam</b>	