Course unit title:	Engineering Drawing		
Course unit code:	AMEG 103		
Type of course unit:	Compulsory		
Level of course unit:	Bachelor (1st Cycle)		
Year of study:	1		
Semester when the unit is delivered:	1 (Fall)		
Number of ECTS credits allocated :	4		
Name of lecturer(s):	Dr. Rossides Stamatis		
Learning outcomes of the course unit:	1. Explain the importance of engineering drawing as a communication tool between engineers, and recognize the details of an engineering drawing. 2. Recognize the sketching elevations and plans in first and third angle orthographic projection, and identify the role of each line type (visible, hidden, center axis, dimension, section) in engineering drawings. 3. Apply the basics of descriptive geometry to produce orthographic and isometric engineering drawings, and create drawings with different views (orthographic views and cross sectional views). 4. Apply the rules for dimensioning and tolerancing, understand the description of surface roughness and represent these on engineering drawings. 5. Describe all related ISO and DIN standards. 6. Create drawings of machine elements such as screws, bolts, nuts, springs, cams and bearings. 7. Determine the differential equations of the deflection curve and the slope by the double-Integration method. 8. Interpret and generate advanced mechanical drawings, as well as technical drawings of components and assembled mechanical parts.		
Mode of delivery:	Face-to-face		
Prerequisites:	None	Co-requisites:	None
Recommended optional program components:	None		
Course contents:	• **Linework and Lettering:** Visible, Hidden, Center axis, dimension and section lines, and the appropriate lettering size and style. • **Orthographic and Isometric projections:** Drawing of views in orthographic projection using first and third angle projections, as well as isometric drawings. • **Dimensioning Principles:** Appropriate dimensions in engineering drawings. • **Sections and Sectional Views:** Include appropriate sectional views in engineering drawings. • **Limits, Fits and Geometrical Tolerances** to be calculated and included in engineering drawings. • **Drawing of machine components,** such as screws, bolts, nuts springs, gears, cams, bearings etc. • **Technical drawings of components:** Drawing mechanical parts in assembled and exploded view drawings. • **Welding and Welding Symbols:** Include the appropriate welding symbols were necessary in engineering drawings. • **Introduction to Computer Aided Design (CAD):** learning the basic steps in a CAD environment, under a 2D sketcher.		

Recommended and/or required reading:	
Textbooks:	**Engineering Drawing & Design by David A. Madsen**, Delmar Learning, 3rd edition, 2001
References:	Design Dimensioning and Tolerancing, Bruce A. Wilson, Goodheart-Willox, 2001 Engineering Graphics, F. Giesecke et. al., Prentice Hall, 8th edition, 2004 Technical Drawing, F. Giesecke et. al., Prentice Hall, 12th edition, 2003 Engineering Design Graphics, James H. Earle, Prentice Hall, 11th edition, 2004
Planned learning activities and teaching methods:	The taught part of course is delivered to the students by means of lectures, whereas the students practise the principles learned with exercises in the Drawing Room, under the supervision of the instructor. Lecture notes and presentations are available through the web for students to use in combination with the textbooks.
Assessment methods and criteria:	• Assignments: 70% • Tests: 30%
Language of instruction:	English
Work placement(s):	No