Course Description Form	
Course Code and Name	MM103COMPUTER AIDED TECHNICAL DRAWING I
Course Semester	1
Catalog Content	Introduction to technical drawing, AutoCAD basic commands and applications, Principles of dimensioning, three dimensional drawing techniques, Principles of sectioning, Introduction to 3D solid modeling, AutoCAD applications
Textbook	Giesecke, Frederick E., et. al., Technical Drawing with Engineering Graphics (14th Edition), Prentice-Hall, 2010.
Supplementary Textbooks	
Credit	5
Prerequisites of the Course (Attendance Requirements)	-
Type of the Course	Compulsory
Instruction Language	Turkish
Course Objectives	To learn the fundamental technical drawing and make drawings by using CAD software.
Course Learning Outcomes	1. Makes the basic geometric drawings. 2. Identify the objects from the pictorial drawings and draws the principal views. 3. Comprehends the conventional drawings for the features such as holes, counterbores, fillets-rounds / their intersections, etc. and applies them. 4. Identify the parts from the given principal view(s) and draws the other view(s). 5. Makes dimensioning of the views of the objects. 6. Makes the isometric and oblique drawings of the objects. 7. Knows the sectioning methods and applies them. 8. Knows CAD software and makes drawings by using it.
Instruction Methods	Lecture, Question & Answer, Drill - Practice
Weekly Schedule	1. Week :Introduction to technical drawing: Basic concepts. 2. Week :Geometric constructions. AutoCAD basic commands and applications. 3. Week :Principles of orthographic projection: Basic projections of parts, selection of views. Freehand drawing practices. 4. Week :Drawing of six principal views of objects whose pictorial drawings are given. AutoCAD basic commands and applications. 5. Week :Drawing of six principal views of objects whose pictorial drawings are given. AutoCAD applications. 6. Week :Conventional drawings of the features such as holes, counterbores, fillets-rounds / their intersections, etc. AutoCAD applications. 7. Week :Drawing the missing view(s) of the parts by making use of the given principal view(s). AutoCAD applications. 8. Week :Principles of dimensioning. AutoCAD applications. 9. Week :Three dimensional drawing techniques: Isometric drawing. AutoCAD applications. 10. Week :Three dimensional drawing techniques: Oblique drawing. AutoCAD applications. 11. Week :Principles of sectioning: Full, offset and half sections. AutoCAD applications. 12. Week :Principles of sectioning: Aligned sections, revolved/ removed sections, broken-out sections and related conventions. AutoCAD applications.

13. Week : Principles of sectioning: Aligned sections, revolved/ removed sections, broken-out sections and related conventions. AutoCAD applications.
14. Week : Introduction to 3D solid modeling.

Teaching and Learning Methods

(These are examples. Please fill which activities you use in the course)

Weekly theoretical course hours: 2
Weekly applied course hours: 1
Reading Activities: 2
Internet browsing, library work: 0
Designing and implementing materials:4
Report preparing: 0
Preparing a Presentation: 0
Presentations: 0
Preparation of Midterm and Midterm Exam: 5
Final Exam and Preparation for Final Exam: 5

Assessment Criteria

	Quantity	Percentage
Midterm Exams	1	35
Assignment	9	25
Exercises	0	0
Projects	0	0
Practice	0	0
Quiz	0	0
Contribution of In-term Studies to Overall Grade	-	60
Contribution of Final Examination to Overall Grade	-	40

Workload

Activity	Total Number of Weeks	Duration(weekly hour)	Total Period Work Load
Theoretical Study Hours of Course Per Week	14	2	28
Practising Hours of Course Per Week	14	1	14
Reading	14	2	28
Searching in Internet and Library			0
Designing and Applying Materials	11	4	44
Preparing Reports			0
Preparing Presentation			0
Presentation			0
Mid-Term and Studying for Mid-Term	1	5	5
Final and Studying for Final	1	5	5
Other (should be emphasized)			0
Total Workload			124
Total Workload / 25			4,96
Course Credit (ECTS)			5

Contribution Level Between Course Learning Outcomes and Program Outcomes

NO	PROGRAM LEARNING OUTCOMES	1	2	3	4	5
1	Adequate knowledge in mathematics, science and engineering subjects pertaining to the relevant discipline; ability to use theoretical and applied knowledge in these areas in				x	

	complex engineering problems.					
2	Ability to identify, formulate, and solve complex engineering problems; ability to select and apply proper analysis and modeling methods for this purpose.			X		
3	Ability to design a complex system, process, device or product under realistic constraints and conditions, in such a way as to meet the desired result; ability to apply modern design methods for this purpose.			X		
4	Ability to devise, select, and use modern techniques and tools needed for analyzing and solving complex problems encountered in engineering practice; ability to employ information technologies effectively.				X	
5	Ability to design and conduct experiments, gather data, analyze and interpret results for investigating complex engineering problems or discipline specific research questions.					
6	Ability to work efficiently in intra-disciplinary and multi-disciplinary teams; ability to work individually.			X		
7	Ability to communicate effectively in Turkish, both orally and in writing; knowledge of a minimum of one foreign language; ability to write effective reports and comprehend written reports, prepare design and production reports, make effective presentations, and give and receive clear and intelligible instructions.		X			
8	Recognition of the need for lifelong learning; ability to access information, to follow developments in science and technology, and to continue to educate him/herself.			X		
9	Consciousness to behave according to ethical principles and professional and ethical responsibility; knowledge on standards used in engineering practice.		X			
10	Knowledge about business life practices such as project management, risk management, and change management; awareness in entrepreneurship, innovation; knowledge about sustainable development.					
11	Knowledge about the global and social effects of engineering					

		practices on health, environment, and safety, and contemporary issues of the century reflected into the field of engineering; awareness of the legal consequences of engineering solutions.					
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