

MIDDLE EAST TECHNICAL UNIVERSITY NORTHERN CYPRUS CAMPUS

**Syllabus for MECH-114 (2-2)3 Computer Aided Engineering Drawing II
2008-09 Academic Year Spring Semester**

Instructor:

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Course Schedule:

	MECH 114 (01)			MECH 114 (02)	
I - 104	MONDAY	9:40-11:30	I - 104	TUESDAY	10:40-12:30
I - 104	WEDNESDAY	13:40-15:30	I - 104	WEDNESDAY	15:40-17:30

Reference Books:

- *Engineering Drawing and Design” by Jensen/ Hesel/ Short, 7th Edition, 2008, Mc Graw- Hill.
- *Engineering Design and Graphics with Autodesk Inventor 6”, by Bethune, J.,2004,Pearson Prentice Hall
- *Şen, İ.Z., ve Özçilingir, N., “Makina Resmi”, Deha Yayıncılık, İstanbul, 2004.
- *Bağcı, M., Teknik Resim, Cilt I, Cilt II, Birsen Yayınevi, İstanbul, 2000.
- *Pare, E.G., at al., “Descriptive Geometry”, MacMillan Pub. Co.
- *Autodesk Inventor 2009 Getting Started”, Autodesk Inc., USA.
- *Autodesk Inventor Routed Systems 2009, Getting Started”, Autodesk Inc., USA.
- *Autodesk Inventor Simulation 2009, Getting Started”, Autodesk Inc., USA.
- *Autodesk Data Management Server 2009, Implementation Guide”, Autodesk Inc., USA.
- *AutoCad Mechanical 2009, Getting Started”, Autodesk Inc., USA

Grading:

Midterm Exam.	: 40%
Pop Quizzes	: 20%
Final	: 40%

Important Note for Attendance: 80% attendance is mandatory. If your attendance is below 80% at the end of the course and your Midterm Exam Grade is very low you will not be allowed to take final exam.

Course Content

Geometric Tolerances; Feature control frame, tolerance zones, Symbols, Flatness, Straightness, Circularity, Concentricity, Position Control, Profile Tolerancing, Run-out Control, Datums and datum features, Applications in AutoCAD and AutoDesk Inventor environments, Surface Texture; Characteristics, symbols and annotation methods, Threaded Fasteners; Simplified Thread Representation, Common Threaded Fasteners, Applications in AutoCAD and AutoDesk Inventor environments, Keys, Splines, Pins, Retaining Rings, Rivets, Springs, Simplified Representations, CAD applications, Common Loci; Sicloid, Involutes, Gears; Gear Terminology, Spur Gears, Helical Gears, Bevel Gears, Racks, Worm Gears, Chain Drives, Working Drawings of gears, CAD Applications, Bearings; Plain Bearings, Roller Bearings, Cams; Follower-Cam mechanism, Displacement Diagram, Detail (Working) Drawing and Assembly Drawings; Assembly Modeling in AutoDesk Inventor Environment, Animation, Welding Drawings; Welding Symbols, Introduction to Descriptive Geometry; Intersections and Developments, Sheet Metal Drawing.

Course Outline:

Week	Topics
1-2	Geometric Tolerances; Feature control frame, tolerance zones, Symbols, Flatness, Straightness, Circularity, Concentricity, Position Control, Profile Tolerancing, Run-out Control, Datums and datum features, Applications in AutoCAD and AutoDesk Inventor environments
3	Surface Texture; Characteristics, symbols and annotation methods
4-5	Threaded Fasteners; Simplified Thread Representation, Common Threaded Fasteners, Applications in AutoCAD and AutoDesk Inventor environments
6-7	Keys, Splines, Pins, Retaining Rings, Rivets, Springs, Simplified Representations, CAD applications
8-9	Shaft Generator, Common Loci; Sicloid, Involutes, Gears; Gear Terminology, Spur Gears, Helical Gears, Bevel Gears, Racks, Worm Gears, Chain Drives, Working Drawings of gears, CAD Applications
10	Bearings; Plain Bearings, Roller Bearings,
11	Cams; Follower-Cam mechanism, Displacement Diagram
12-13	Detail (Working) Drawing and Assembly Drawings; Assembly Modeling in AutoDesk Inventor Environment, Animation, Welding Drawings; Welding Symbols
14-15	Introduction to Descriptive Geometry; Intersections and Developments, Sheet Metal Drawing