

MIDDLE EAST TECHNICAL UNIVERSITY NORTHERN CYPRUS CAMPUS

**Syllabus for MECH-114 (2-2)3 Computer Aided Engineering Drawing II
2010-11 Academic Year Spring Semester**

Instructor:

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Course Schedule:

Class Room	MECH 114 (01)		Class Room	MECH 114 (02)	
I - 104	MONDAY	10:40-12:30	I - 104	MONDAY	13:40-15:30
I - 104	THURSDAY	10:40-12:30	I - 104	WEDNESDAY	13:40-15:30

Reference Books:

- *Engineering Drawing and Design” by Jensen/ Hesel/ Short, 7th Edition, 2008, Mc Graw- Hill.
- *Engineering Design and Graphics with Autodesk Inventor 2009”, by Bethune, J.,2009, 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 2010, Getting Started”, Autodesk Inc., USA

Grading:

Midterm Exam. : 40%

Pop Quizzes & Term Project : 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 the final exam.

Course Content

Geometric Tolerance; Feature control frame, tolerance zones, Symbols, Flatness, Straightness, Circularity, Concentricity, Position Control, Profile Tolerances, Run-out Control, Datums and datum features, Applications in AutoCAD and Autodesk Inventor environments, Surface Texture; Characteristics and symbols, Threaded Fasteners; Common Threaded Fasteners, bolts, nuts, cap screws, studs, Simplified Thread Representation, Applications in AutoCAD Mechanical and Autodesk Inventor environments, Keys, Splines, Pins, Retaining Rings, Rivets, Structural Beams, Springs, Simplified Representations, CAD applications, Shafts, Inventor Shaft Generator, Common Loci; Cycloid, Involute, 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, Detail (Working) Drawings, 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	Introduction, Review on Sectioning and Dimensioning
2-3	Geometric Tolerances; Feature control frame, tolerance zones, Symbols, Flatness, Straightness, Circularity, Concentricity, Position Control, Profile Tolerance, Run-out Control, Datum and datum features, Applications in AutoCAD and Autodesk Inventor environments
4	Surface Texture; Characteristics, symbols and annotation methods
5	Detail (Working) Drawing and Assembly Drawings; Assembly Modeling in Autodesk Inventor Environment, Animation
6-7	Threaded Fasteners; Simplified Thread Representation, Common Threaded Fasteners, Applications in AutoCAD and Autodesk Inventor environments
8-9	Keys, Splines, Pins, Retaining Rings, Rivets, Springs, Simplified Representations, CAD applications
10	Shaft Design, Shaft Generator, Bearings; Plain Bearings, Roller Bearings,
11-12	Common Loci; Cycloid, Involute, Gears; Gear Terminology, Spur Gears, Helical Gears, Bevel Gears, Racks, Worm Gears, Chain Drives, Working Drawings of gears, CAD Applications
13	Welding Drawings; Welding Symbols
14	Introduction to Descriptive Geometry; Intersections and Developments, Sheet Metal Drawing