

# COMPUTER AIDED DRAWING

|      |   |   |  |
|------|---|---|--|
| 1    | Course Title:   | COMPUTER AIDED DRAWING  |  |
| 2    | Course Code:  | MKRZ108   |  |
| 3    | Type of Course:   | Compulsory  |  |
| 4    | Level of Course:  | Short Cycle   |  |
| 5    | Year of Study:  | 1   |  |
| 6    | Semester:   | 2   |  |
| 7    | ECTS Credits Allocated:                                 | 5.00  |  |
| 8    | Theoretical (hour/week):                                | 3.00  |  |
| 9    | Practice (hour/week):                                   | 0.00  |  |
| 10   | Laboratory (hour/week):                                 | 1   |  |
| 11   | Prerequisites:  |   |  |
| 12   | Language:   | Turkish   |  |
| 13   | Mode of Delivery:                                       | Face to face  |  |
| 14   | Course Coordinator:                                     | Öğr.Gör. ÖMER NURİ ÇAM  |  |
| 15   | Course Lecturers:                                       | ÖĞR. GÖR. ÖMER NURİ ÇAM   |  |
| 16   | Contact information of the Course Coordinator:          | onc@uludag.edu.tr   |  |
| 17   | Website:  |   |  |
| 18   | Objective of the Course:                                | Basic CAD and AutoCAD'a Introduction, 2 and 3 dimensional drawings done with the basic AutoCAD commands |  |
| 19   | Contribution of the Course to Professional Development: |   |  |
| 20   | Learning Outcomes:                                      |   |  |
|      |   | 1   | To have basic knowledge of Cad-Cam   |
|      |   | 2   | Be able to draw using theoretical and experimental methods.                            |
|      |   | 3   | Drawing be able to produce solutions for the problems of producers and industrialists. |
|      |   | 4   | Two-dimensional skills to be able to draw all kinds of                                 |
|      |   | 5   | Three-dimensional skills to be able to draw all kinds of                               |
|      |   | 6   | To have knowledge of basic AutoCAD.  |
|      |   | 7   | Modern and contemporary issues and gain the ability to learn.                          |
|      |   | 8   |  |
|      |   | 9   |  |
|      |   | 10  |  |
| 21   | Course Content:   |   |  |
|      |   | <b>Course Content:</b>  |  |
| Week | Theoretical   | Practice  |  |

|   |   |  |                 |                        |
|---|---|--|-----------------|------------------------|
| 1   | The concept and the advantages of CAD, The introduction and use of CAD program screen and interface, saving of CAD files.               | The use of CAD program   |                 |                        |
| 2   | Settings of screen, linetype, layer, toolbox, coordinate systems on CAD-CAM.  | Creating a layer, making measured drawing  |                 |                        |
| 3   | Draw commands (line, multiline, spline, pline, rectangle, polygon, ellipse, circle, arc, divide, measure, donut, region, hatch).        | Measured drawing applications using draw commands.   |                 |                        |
| 4   | Text, Text style, text edit commands.   | Measured drawing applications using draw commands.   |                 |                        |
| 5   | Dimension commands and dimensioning on the drawing, 2D( two-dimensional) drawing applications.  | Measured drawing applications using draw- modify-dimension commands.   |                 |                        |
| 6   | Print-plot commands and plotting, be able to use blocks, creating blocks and to insert blocks on the drawing.                           | Drawing machine parts, dimensioning, inserting surface finish –shape and position tolerance and print –plotting applications |                 |                        |
| 7   | Repetition of the course and MidTerm Exam   | -  |                 |                        |
| 8   | The importance of 3D three-dimensional design on CAD and introduction of 3D commands.   | 3D (three-dimensional) drawing applications.   |                 |                        |
| 9   | Solid model design using modelling commands; creating, editing and making changes on solid models using 3D operation and Solid editing. | 3D (three-dimensional) drawing applications.   |                 |                        |
| 10  | Assembly file creation and commands used to build assembly  | Parts merge and association on the assembly file applications  |                 |                        |
| Activities  |   | Number   | Duration (hour) | Total Work Load (hour) |
| Theoretical part  |   | 14   | 2.00            | 28.00                  |
| 12 Ready standard parts place over the  |   | Parts merge, association, Collision detection and the  |                 |                        |
| Practicals/Labs   |   | 14   | 2.00            | 28.00                  |
| Self study and preparation simulation of tests done of assembly mechanism is made |   | 14   | 3.00            | 42.00                  |
| Homeworks   |   | 0  | 0.00            | 0.00                   |
| Projects assembly drawings of a mechanism is applications                         |   | 0  | 0.00            | 0.00                   |
| Field Studies   |   | 0  | 0.00            | 0.00                   |
| Midterm exams   |   | 1  | 17.00           | 17.00                  |
| 14 Parts modeling of a simple mechanism, Creating technical                       |   | Parts modeling of a simple mechanism, Creating technical   |                 |                        |
| Others  |   | 0  | 0.00            | 0.00                   |
| Final Exams   |   | 1  | 17.00           | 17.00                  |
| Total Work Load   |   |  |                 | 166.00                 |
| Total work load/ 30 hr  |   | 2004 De-Ha Publishing, 2005  |                 | 4.97                   |
| ECTS Credit of the Course   |   |  |                 | 5.00                   |
|   |   | Application Examples De-Ha Publishing, 2005  |                 |                        |
|   |   | Lecturer notes   |                 |                        |
|   |   | Inventor web help pages  |                 |                        |
| 23  | Assesment   |  |                 |                        |
| TERM LEARNING ACTIVITIES  |   | NUMBER   | WEIGHT          |                        |
| Midterm Exam  |   | 1  | 40.00           |                        |
| Quiz  |   | 0  | 0.00            |                        |
| Home work-project   |   | 0  | 0.00            |                        |
| Final Exam  |   | 1  | 60.00           |                        |
| Total   |   | 2  | 100.00          |                        |

|  |                               |
|--|-------------------------------|
| Contribution of Term (Year) Learning Activities to Success Grade | 40.00                         |
| Contribution of Final Exam to Success Grade                      | 60.00                         |
| Total  | 100.00                        |
| Measurement and Evaluation Techniques Used in the Course         |                               |
| <b>24</b>  | <b>ECTS / WORK LOAD TABLE</b> |

| <b>25</b>  | <b>CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS</b> |     |     |              |     |     |                 |     |     |               |      |      |                    |      |      |      |
|--|--|-----|-----|--------------|-----|-----|-----------------|-----|-----|---------------|------|------|--------------------|------|------|------|
|  | PQ1  | PQ2 | PQ3 | PQ4          | PQ5 | PQ6 | PQ7             | PQ8 | PQ9 | PQ10          | PQ11 | PQ12 | PQ13               | PQ14 | PQ15 | PQ16 |
| ÖK1  | 1  | 1   | 1   | 2            | 4   | 4   | 4               | 1   | 2   | 2             | 4    | 0    | 0                  | 0    | 0    | 0    |
| ÖK2  | 1  | 1   | 1   | 2            | 4   | 4   | 4               | 1   | 2   | 2             | 4    | 0    | 0                  | 0    | 0    | 0    |
| ÖK3  | 1  | 1   | 1   | 2            | 4   | 4   | 4               | 1   | 2   | 2             | 4    | 0    | 0                  | 0    | 0    | 0    |
| ÖK4  | 1  | 1   | 1   | 2            | 4   | 4   | 4               | 2   | 2   | 2             | 4    | 0    | 0                  | 0    | 0    | 0    |
| ÖK5  | 1  | 1   | 1   | 2            | 4   | 4   | 4               | 2   | 2   | 2             | 4    | 0    | 0                  | 0    | 0    | 0    |
| ÖK6  | 2  | 1   | 2   | 2            | 3   | 4   | 4               | 2   | 1   | 2             | 3    | 0    | 0                  | 0    | 0    | 0    |
| ÖK7  | 4  | 4   | 4   | 4            | 4   | 4   | 4               | 4   | 4   | 4             | 4    | 0    | 0                  | 0    | 0    | 0    |
| <b>LO: Learning Objectives    PQ: Program Qualifications</b> |  |     |     |              |     |     |                 |     |     |               |      |      |                    |      |      |      |
| <b>Contribution Level:</b>                                   | <b>1 very low</b>  |     |     | <b>2 low</b> |     |     | <b>3 Medium</b> |     |     | <b>4 High</b> |      |      | <b>5 Very High</b> |      |      |      |