

# Computer Aided Design (10-assignment)



This is an integrated instructional module designed specifically to operate within a Modular Program environment. It is ideal for use with our Scantek Technology program. The module includes a 10-assignment exploratory curriculum that is split into two parts. Each part includes a pre-test and post test. The module includes hardware, software and curriculum materials sufficient to provide a complete learning experience.

The curriculum incorporates continuous assessment through questions. When used in conjunction with a ClassAct networked management system, this provides instant feedback of student performance. The assessments begin with a comprehensive pre-test. This quiz includes questions for each subsequent assignment, together with questions that will specifically test math and reading ability.

Every assignment starts with a series of questions designed to track inventory. These ensure that any missing items are located before they are needed.

Each assignment is divided into a series of tasks. Hands-on tasks form the core of the student work. Where appropriate, these are accompanied by research tasks based upon software applications. Assessment questions are incorporated into each task.

**Typical 10-assignment topic areas include:**

- Introduction to AutoCAD
- Absolute and relative co-ordinates
- Kitchen plan design
- Drawing in orthographic projection
- Z axis and three-dimensional graphics
- Redesigning a component part
- Architectural and mechanical drawings
- Manufacturing and production
- Scale and grids in CAD
- Snap to grid
- Line, Offset, Trim, Fillet and Mirror commands
- Printing drawings
- Circle, Arc, Zoom and Copy commands
- Line conventions
- Polyline and Array commands.

**Typical 10-assignment activities include:**

- Recognize how CAD can replace traditional drafting methods.
- Examine sample CAD files.
- Extract information from a CAD Tutorial.
- Investigate absolute and relative co-ordinates.
- Recognize how 2-dimensional co-ordinate systems are used in CAD.
- Describe the role of CAD in a design and production process.
- Determine how CAD packages are used in the field of architecture.
- Recognize how to set up the design area for CAD drawings.
- Draw a kitchen plan.
- Investigate basic line conventions used in drafting.
- Discover the standard way that objects are drawn for manufacturing purposes.
- Examine the principles of orthographic projection.
- Draw the top and front view of a component part.

**Typical 10-assignment activities include (continued):**

- Draw an orthographic projection.
- Investigate 3-dimensional co-ordinate systems.
- Draw a 3D mechanical component.
- Follow a design brief to design a component part.

Each assignment is designed around a list of performance objectives. These lists include academic, technical and occupational objectives. The assignments are written in such a way as to enable a student to attain the performance objectives, with the assessment questions linked to these in order to provide a measure of true competency.

The performance objectives are used by the ClassAct management system to generate a comprehensive portfolio of student competency reports. Default reports supplied with this module include:

- Entry report
- Technical/Occupational Exit report
- Basic Skills report based upon the federal SCAN's report.

**The items supplied with this instructional module include:**

- 10-assignment On-Screen Student Assignment Guide CD
- 10-assignment Student Assignment Guide
- 10-assignment Student Workbook
- 10-assignment Instructor's Guide
- Computer Aided Instruction software
- Symbols Reference Sheet
- AutoCAD
- Glossary of Commands
- Printer
- Design Block Kit
- Accessory kit

**Additional items required:**

- Computer

**Module Facts**

For Technology Program, order as: ST130/10 Computer Aided Design

	No.	Average time
Assignments	10	45 minutes
Extension Activities	2	45 minutes
<b>Total</b>		<b>9 hours</b>



**LJ Technical Systems**  
 Web site: [www.ljgroup.com](http://www.ljgroup.com)