Area of Experience:
Technical Graphics

Tec.Graphics

At Junior Certificate level the student can:

4 3D objects ☐ ☐ ☐
Apply the knowledge and skills of drawing needed to understand the design and construction of 3D objects

5 CAD programs ☐ ☐ ☐
Apply the skills, knowledge and understanding needed to produce a graphic image using Autocad (or other suitable CAD program)

10 Drawing:2D shapes ☐ ☐ ☐
Use basic drawing instruments to demonstrate the skills of
drawing and the knowledge of basic 2D shapes

11 Drawing: Complex 2D and 3D shapes ☐ ☐ ☐
Use basic drawing instruments to demonstrate the skills of
drawing and the knowledge of more complex2Dshapes and basic 3D shapes

12 Scale drawings ☐ ☐ ☐
Use the full range of drawing instruments to produce scale drawings

Work begun ☐ ☐ ☐ | Work in progress ☐ ☐ ☐ | Work completed ☐ ☐ ☐

3D objects

Tec.Graphics

Statement Code no: 4

Student: | Class:

At Junior Certificate level the student can:

Apply the knowledge and skills of drawing needed to understand the design and construction of 3D objects

Date Commenced: ☐☐/☐☐/☐☐ **Date Awarded:** ☐☐/☐☐/☐☐

Learning Targets - This has been demonstrated by your ability to:

1   Recognise the following 3D shapes from your environment: sphere, cube, cuboid, cone   ☐ ☐ ☐

2   Give examples of the above 3D shapes from the environment   ☐ ☐ ☐

3   Recognise the following 3D shapes: square-based, triangular-based and polygonal pyramids and prisms   ☐ ☐ ☐

4   Recognise and copy simple isometric objects made up of cubes and cuboids under direct teacher guidance   ☐ ☐ ☐

5   Estimate and measure a small 3D object with rectangular sides and record measurements on a given 3D drawing   ☐ ☐ ☐

6   Dismantle a cardboard container to show the shape of its construction   ☐ ☐ ☐

7   Understand an exploded view of a container   ☐ ☐ ☐

8   Draw and construct a simple 3D container from a given development drawing containing dimensions, using paper or card   ☐ ☐ ☐

9   Understand plan and front elevation of a simple object by reference to a 3D solid   ☐ ☐ ☐

10   Demonstrate an understanding of plan and front elevation of a simple object by colouring surfaces on given isometric drawings   ☐ ☐ ☐

11   Draw a plan and front elevation of a simple everyday solid and insert dimensions   ☐ ☐ ☐

12   Understand the following terms: elevation, isometric, development, envelopment   ☐ ☐ ☐

13   Follow a simple design brief to draw and construct a simple container from card, plastic, metal, or wood   ☐ ☐ ☐

Work begun ☐ ☐ ☐ | Work in progress ☐ ☐ ☐ | Work completed ☐ ☐ ☐

CAD programs

Tec.Graphics

Statement Code no: 5

Student:

Class:

At Junior Certificate level the student can:

Apply the skills, knowledge and understanding needed to produce a graphic image using Autocad (or other suitable CAD program)

Date Commenced: ⬜⬜/⬜⬜/⬜⬜ **Date Awarded:** ⬜⬜/⬜⬜/⬜⬜

Learning Targets - This has been demonstrated by your ability to:

1 Identify and name computer hardware materials: monitor, mouse, mouse pad, keyboard, printer, plotter, floppy disk ⬜⬜⬜

2 Identify software terms using 'Autocad' through MS DOS/Windows ⬜⬜⬜

3 Understanding the following commands: draw, line, circle, polygon, modify, erase, open, exit, save, properties etc. ⬜⬜⬜

4 Use the 'assist' menu ⬜⬜⬜

5 Draw objects to given dimensions ⬜⬜⬜

6 Save and retrieve drawings on different drives ⬜⬜⬜

7 Print a hard copy using a printer or a plotter ⬜⬜⬜

8 Use the following commands: fillet, chamfer, rotate, mirror, rectangular array ⬜⬜⬜

9 Identify which commands have been used to create a given drawing ⬜⬜⬜

10 Use 'layers' command as a control on information ⬜⬜⬜

11 Use CAD to produce a useful graphic image that conveys information without using words ⬜⬜⬜

Work begun ⬜⬜⬜ | Work in progress ⬜⬜⬜ | Work completed ⬜⬜⬜

Drawing: 2D shapes

Tec.Graphics

Statement Code no: 10

Student: Class:

At Junior Certificate level the student can:

Use basic drawing instruments to demonstrate the skills of drawing and the knowledge of basic 2D shapes

Date Commenced: ☐☐/☐☐/☐☐   Date Awarded: ☐☐/☐☐/☐☐

Learning Targets - This has been demonstrated by your ability to:

1	Recognise and name drawing instruments: set square, T square and compass	☐ ☐ ☐
2	Measure and transfer in mm and cm to given length	☐ ☐ ☐
3	Lay out page neatly including title box	☐ ☐ ☐
4	Draw horizontal and vertical lines using T square and set squares	☐ ☐ ☐
5	Draw neat lettering in captials using guide lines	☐ ☐ ☐
6	Name basic 2D shapes in your environment	☐ ☐ ☐
7	Draw a rectangle and a square to given dimension, using a ruler and set squares	☐ ☐ ☐
8	Construct triangles to given measurements using 90º/45º and 60º/30º angles	☐ ☐ ☐
9	Draw a circle, using compass, ruler and set squares to given measurement	☐ ☐ ☐
10	Identify circle, radius, diameter, arc and centre (and abbreviations or symbols where appropriate)	☐ ☐ ☐
11	Recognise dimensions in a given drawing and apply set standards for dimensioning basic 2D shapes	☐ ☐ ☐
12	Construct geometrical patterns within 2D images using drawing equipment	☐ ☐ ☐

Refer also to: All subjects except Physical Education

Work begun ☐ ☐ ☐ | Work in progress ☐ ☐ ☐ | Work completed ☐ ☐ ☐

Tec.Graphics

Statement Code no: 11

Student: | Class:

At Junior Certificate level the student can:

Use basic drawing instruments to demonstrate the skills of drawing and the knowledge of more complex 2D shapes and basic 3D shapes

Date Commenced: □□/□□/□□ **Date Awarded:** □□/□□/□□

Learning Targets - This has been demonstrated by your ability to:

1 Copy to given dimensions, a drawing containing rectangles, squares and circles from printed materials □ □ □

2 Recognise and understand the line types, centre line, hidden detail and construction lines □ □ □

3 Draw octagons and hexagons in a circle using compass, T square and set square only □ □ □

4 Measure given angles using a protractor □ □ □

5 Construct and explain a variety of acute and obtuse angles using set squares □ □ □

6 Use drawing instruments to construct pictorial views of basic 3D shapes □ □ □

7 Draw triangles using ruler, compass and protrator □ □ □

8 Draw octagon, hexagon, and pentagon of given dimension using ruler, compass and protractor □ □ □

9 Construct basic geometrical 3D shapes (e.g. cube, rectanglar prism and cylinder) to given measurments in oblique projection □ □ □

10 Construct basic 3D geometrical shapes (e.g. cube, rectanglar prism) to given measurements in isometric projection □ □ □

11 Draw a cube using a 2 point perspective drawing □ □ □

12 Enhace 3D images through the use of colour and shade □ □ □

Refer also to: All subjects except Physical Education

Work begun □ □ □ | Work in progress □ □ □ | Work completed □ □ □

Scale Drawings

Tec.Graphics

Statement Code no: 12

Student:

Class:

At Junior Certificate level the student can:

Use the full range of drawing instruments to produce scale drawings

Date Commenced: ☐☐/☐☐/☐☐   Date Awarded: ☐☐/☐☐/☐☐

Learning Targets - This has been demonstrated by your ability to:

1   Bisect a line using a compass   ○ ○ ○

2   Draw parallel lines using set squares and a T square   ○ ○ ○

3   Draw parallel lines using 2 set squares   ○ ○ ○

4   Divide a line into 3 equal parts   ○ ○ ○

5   Estimate and measure in meters   ○ ○ ○

6   Draw a plan of a room outline and insert dimensions in meters
    (in sketch form only)   ○ ○ ○

7   Understand scale drawings and identify symbols on simple house plans   ○ ○ ○

8   Draw a simple scale in meters and use it to draw a plan of
    familiar rooms or buildings   ○ ○ ○

9   Enlarge drawings using grid method   ○ ○ ○

10   Enlarge a basic shape by projection   ○ ○ ○

Refer also to: All subjects except Physical Education

Work begun ○ ○ ○ | Work in progress ○ ○ ○ | Work completed ○ ○ ○