The impact of CAD/CAM on industry

- Changes in production methods.
- Global manufacturing.
- Employment issues.

The trend from manual CNC programming to the use of software programs that generate CNC codes from drawings. (Students are not required to generate ISO programs.)

The use of software applications that process production data and control a network of different machines from a central system.

Computer-aided design

Commonly-used computer-aided design techniques, including the use of graphics and specialist software to aid the design process, eg:
- to create and modify designs and layouts, eg printed circuit board layout
- for 2D/3D) modelling and prototyping
- to construct accurate drawings
- to create complex products
- to create virtual products
- to create total design concepts, including use of multi-media.

Common input devices such as the mouse, stylus, tracker-ball, graphics tablet, digital camera, scanner, 3D scanner, etc.

Common output devices such as printers, XY plotters, plotter-cutters and CNC machines.

Computer-aided manufacture

The use of commonly-used CNC machines including, for example, lathes, milling machines, punches, drilling machines, knitting machines and looms, cutting machines, printing, sewing and embroidery machines, pressing equipment, printers, plotter-cutters, engravers, etc.

The use of CAM when producing products for short or long runs in varying quantities, eg one-off, batch production, high-volume/continuous production.

Advantages/disadvantages of CAM relating to time, costs, waste management, standardisation and reliability.