

**Higher National Qualifications**

**And**

**Scottish Vocational Qualifications**

**Senior Moderator Report**

**2006**

**Subject: Computer Aided Technology**

**Sector Panel: Engineering, Mathematics and Science**

The purpose of this report is to provide feedback to centres on moderation which has taken place within Higher National and Scottish Vocational Qualifications in this subject.

## **HIGHER NATIONAL UNITS**

### **FEEDBACK TO CENTRES**

#### **General comments:**

There is a continuing upward trend in moderation activity this year resulting in more moderation of HN units.

The units moderated in the areas of control and CAD were of a good standard and are still in demand within centres

Areas where an increase in candidate numbers would be encouraging to a manufacturing nation would be in the vast and interactive field of computer aided manufacture. Unfortunately the trend over the years in the uptake of units in CNC and CAM has decreased.

#### **Advice on good practice and areas for further development:**

Good practice in centres involved with projects such as a CAD or CAM should always encourage the candidates to be aware of costs. It is so easy to get in depth involvement in the discipline and ignore the practical real world requirements such as cost.

Centres should try to integrate unit assessments wherever possible. In many units in the areas of CAD and CAM there are overlaps in the learning outcomes and instruments of assessment which provide ideal opportunities for integration.

If candidates are going to progress over a term to attempting a number of units within CAD or CAM centres should be aware that in many cases the introductory or initial units can be integrated within the more advanced units, thus saving valuable time and reducing the assessment load. Time spent by centre staff looking for opportunities to integrate and developing appropriate instruments of assessment would be beneficial to both candidates and lecturers.

## **NATIONAL UNITS**

**(i.e. Freestanding units which contribute to NPAs or NCs etc.)**

## **TITLES/LEVELS OF NATIONAL UNITS MODERATED**

D985 12 Computer Aided Draughting  
E9LG 11 Computing in Engineering 1  
E8M2 11 Introduction to Computer Aided Draughting  
EB29 11 Introduction to Computer Aided Drawing  
E8LJ 11 CNC Machining 1  
EE9Y 12 CNC Part Programming

## **FEEDBACK TO CENTRES**

### **General comments:**

CAD has been encompassed by many disciplines, from engineering to art and design and more recently into the sophisticated world of 3D realization. The development of the delivery of this subject has progressed from being based on individual units, through to HNC, HND and now to degree courses.

The development of the CAD software has been immense from the original packages where it was a struggle to draw a straight line to the present day sophistication of 3D visualization. Many young candidates are gaining certification in the use of these packages and consequently are very adept in the use of the various functions available. It should be pointed out to those young keen candidates in CAD that it is only a tool and has to be married to a particular discipline to be effective.

### **Advice on good practice and areas for further development:**

There can be a wide range of disciplines and ability within classes in CAD. In delivering a unit in this subject it is good practice at the start of these classes to have the candidates' work punctuated by frequent demonstrations of the software commands. Once an acceptable standard is achieved it would be beneficial if centre staff developed projects that encompassed all the various disciplines and integrated these into satisfying and enjoyable assessments for candidates.

In a number of centres there is still a separation between CAD and CAM. This may be caused by the vast uptake in CAD by different disciplines. Development of more integration of CAD and CAM within these various disciplines would be a positive step forward.