

## National Unit Specification: general information

<b>UNIT</b>	Technological Studies: Case Study Report (Higher)
<b>NUMBER</b>	D191 12
<b>COURSE</b>	Technological Studies (Higher)

### SUMMARY

This unit is designed to give the candidate the opportunity to analyse and evaluate an existing product or process, selected from an industrial or commercial context. The unit should provide a logical conclusion to the course and offer opportunity to review and consolidate knowledge and understanding gained earlier.

### OUTCOMES

- 1 Analyse the development of an existing solution to a given problem.
- 2 Produce a report.

### RECOMMENDED ENTRY

While entry is at the discretion of the centre, candidates will normally be expected to have completed the other units of Higher Technological Studies.

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### Administrative Information

<b>Superclass:</b>	XA
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## **National Unit Specification: general information (cont)**

**UNIT**      Technological Studies: Case Study Report (Higher)

### **CREDIT VALUE**

0.5 credit at Higher.

### **CORE SKILLS**

There is no automatic certification of core skills or core skills components in this unit.

Information on the automatic certification of any core skills in this unit is published in *Automatic Certification of Core Skills in National Qualifications* (SQA, 1999).

## **National Unit Specification: statement of standards**

### **UNIT      Technological Studies: Case Study Report (Higher)**

#### **OUTCOME 1**

Analyse the development of an existing solution to a given problem.

##### **Performance criteria**

- (a) Systems analysis is applied correctly to the problem.
- (b) The integration of technology used in the solution is identified clearly.
- (c) The textual and/or graphical description of sub-systems is appropriate.
- (d) The solution to the problem is evaluated correctly.

##### **Evidence requirements**

Written and graphical evidence of the candidate's ability to analyse the solution to a technological problem and investigate the operation of each sub-system. The candidate will be expected to include an account of the problems encountered by the original team/engineer in developing a solution.

#### **OUTCOME 2**

Produce a report.

##### **Performance criteria**

- (a) The sequence of the report is correct.
- (b) A brief introduction to the report describes clearly the background to the case study.
- (c) The product/process is clearly analysed and described.
- (d) Social, environmental and economic effects are stated clearly.
- (e) The conclusion to the report is stated clearly.

##### **Evidence requirements**

Word processed/written and graphical evidence of the candidate's ability to produce a report of approximately 2000 words in length.

## **National Unit Specification: support notes**

### **UNIT      Technological Studies: Case Study Report (Higher)**

This part of the unit specification is offered as guidance. The support notes are not mandatory.

While the time allocated to this unit is at the discretion of the centre, the notional design length is 20 hours.

This unit will develop abilities to analyse a project set in an industrial or commercial context, and to produce a technological report.

#### **GUIDANCE ON THE CONTENT AND THE CONTEXT FOR THIS UNIT**

The Case Study Report should provide a logical conclusion to the course and offer the opportunity to consolidate (and possibly extend) knowledge and understanding gained in the other units.

It is envisaged that candidates will be provided with an existing solution to a stated problem set in an industrial or commercial context. The problem will require candidates to carry out research and investigation into how the solution was developed. A report will be produced by the candidate on an individual basis as evidence of the investigative work undertaken.

For this unit, the depth of treatment and range of content should reflect those of the other units in the course.

A typical case study would involve each candidate in interpreting a given specification, to analyse a problem in systems terms. Sub-systems could be electronic, programmable, mechanical or structural. The candidates would be expected to research ideas developed for solutions to each sub-system. Methods of testing and results achieved could be recorded in the Case Study Report. In addition to this, candidates would be expected to examine the social, economic and environmental effects. A critical evaluation should be produced on the effectiveness of the solution in meeting the needs of the problem.

#### **GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT**

The instrument of assessment for this unit is the candidate's Case Study Report containing evidence of the work undertaken.

The teacher/lecturer would be expected to keep a record of investigation/research undertaken by the candidate as the report develops. Each performance criterion is assessed on an achieved/not achieved basis.

#### **GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT**

This unit will require candidates to carry out research and investigation into a given case study, set in an industrial or commercial context. This could be introduced with the use of CD-ROM, Internet, videos or direct industrial contact. The problem identified will require candidates to carry out research and investigation into the development of the solution. An individual report must be produced by each candidate. The report should be approximately 2000 words in length.

## **National Unit Specification: support notes (cont)**

### **UNIT      Technological Studies: Case Study Report (Higher)**

#### **SPECIAL NEEDS**

This unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative outcomes for units. For information on these, please refer to the SQA document *Guidance on Special Assessment and Certification Arrangements for Candidates with Special Needs/Candidates whose First Language is not English* (SQA, 1998).