

**-SQA- SCOTTISH QUALIFICATIONS AUTHORITY**

**Hanover House  
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GLASGOW G2 7NQ**

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**NATIONAL CERTIFICATE MODULE DESCRIPTOR**

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<b>-Module Number-</b>	<b>2330012</b>	<b>-Session-</b>	<b>1992-93</b>
<b>-Superclass-</b>	<b>XA</b>		

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<b>-Title-</b>	<b>APPLIED TECHNOLOGY 1</b>
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**-DESCRIPTION-**

Purpose	This module will enable the candidate to integrate a range of competences and apply them to the solution of a technological problem.
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Preferred Entry Level	No formal entry qualifications are required. However, the programme of modules being supported should include technological competences, communication, numeracy and IT at a level consistent with a named award in technology.
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Outcomes	The candidate should:  <ol style="list-style-type: none"><li>1. prepare a brief for the solution of a technological problem relating to the programme of modules being undertaken;</li><li>2. prepare in outline alternative strategies for a solution to the problem;</li><li>3. utilise one strategy to implement the solution;</li><li>4. evaluate the solution.</li></ol>
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Assessment Procedures	Acceptable performance in this module will be satisfactory achievement of all the Performance Criteria specified for each Outcome.
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The following abbreviations are used below:

PC	Performance Criteria
IA	Instrument of Assessment

**Note:** The Outcomes and PCs are mandatory and cannot be altered. The IA may be altered by arrangement with SQA. (Where a range of performance is indicated, this should be regarded as an extension of the PCs and is therefore mandatory.)

**OUTCOME 1            PREPARE A BRIEF FOR THE SOLUTION OF A TECHNOLOGICAL PROBLEM RELATING TO THE PROGRAMME OF MODULES BEING UNDERTAKEN**

- PCs
- (a) The brief includes:
    - (i) a clear and correct statement of the problem to be solved;
    - (ii) valid identification of the objectives to be achieved and the parameters to be considered.
  - (b) The brief integrates significant elements of the programme of modules being undertaken.

IA    Project Brief

The candidate will be required to prepare a project brief which complies with the Performance Criteria (a) and (b).

Satisfactory achievement of the Outcome will be based on both Performance Criteria being met.

**OUTCOME 2            PREPARE IN OUTLINE ALTERNATIVE STRATEGIES FOR A SOLUTION TO THE PROBLEM**

- PCs
- (a) Alternative strategies for the solution of the problem are concisely outlined.
  - (b) Two of the strategies are critically analysed.
  - (c) The strategy selected is appropriate in terms of time, cost and resource constraints.

IA    Report

The candidate will be required to prepare a report which meets the Performance Criteria (a) to (c).

Satisfactory achievement of the Outcome will be based on all Performance Criteria being met.

**OUTCOME 3                    UTILISE ONE STRATEGY TO IMPLEMENT THE SOLUTION**

- PCs
- (a) Planning documentation is clear in terms of utilisation of resources, methodology and monitoring arrangements.
  - (b) Progress is clearly reported at agreed intervals and/or completion of sub-tasks.
  - (c) Effective action is taken on feedback from project supervisor.
  - (d) The solution is satisfactory in terms of the project brief.

IA    Project

The candidate will be required to plan and undertake a project in accordance with the agreed strategy and the project brief.

Satisfactory achievement of the Outcome will be based on all Performance Criteria being met.

**OUTCOME 4                    EVALUATE THE SOLUTION**

- PCs
- (a) Achievement of the solution is evaluated in terms of the objectives set out in the project brief.
  - (b) Appraisal of achievement is valid and objective.
  - (c) Conclusions are presented clearly and concisely.

IA    Project Report

The candidate will be required to prepare a project report which includes:

- (i)        the project brief;
- (ii)       strategy;
- (iii)      methodology;
- (iv)      an evaluation of the solution;
- (v)      conclusions.

Satisfactory achievement of the Outcome will be based on all Performance Criteria being met.

**The following sections of the descriptor are offered as guidance.  
They are not mandatory.**

### CONTENT/CONTEXT

Corresponding to the Outcomes 1-4:

1. General guidelines, including: relevance to the programme of modules being undertaken; scope and complexity of project; purpose of project briefs; and standard of presentation.
2. Analysis of strategies and selection factors such as: available resources, materials, function, utility, time and costs.
3. Planning procedures; use of gantt charts; attitude and conduct; safe working practices.
4. Analysis of effectiveness of implementation in terms of function, quality, and accuracy in relation to the declared objectives.

Report content, format and standards of presentation.

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### SUGGESTED LEARNING AND TEACHING APPROACHES

Formal lecturing and constant supervision should not be a feature of this module. The candidate should be provided with broad guidelines which allow a reasonable choice of problem and scope to reach a personal solution.

There should be easy access to reference materials, computing facilities, laboratory/workshop equipment, and basic materials.

The project supervisor should adopt an advisory role except in aspects of safety and other areas/situations outwith the general guidelines.

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09/02/98 JH/BM