

# Product Design

## Design Assignment Guidance for Higher

For use in National Qualifications Higher Courses in and after 2005

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# Introduction

This document details the assessment criteria, marking schedule and assessment conditions for the Higher Design Assignment.

This document must be used in conjunction with the *Product Design, Higher* (first edition, 2004) Arrangements document. Reference should also be made to the *Course Assessment Specification*, the annually published *Conditions and Arrangements and Estimates, Absentees and External Assessment Appeals: guidance on evidence requirements* (BA0992/3, April 2004) documents.

## Higher Product Design Course

The Higher Product Design Course has been designed to articulate with and provide progression from Standard Grade Craft and Design and Intermediate 2 Product Design. The Course is set in the context of products for the marketplace which are produced by commercial design and manufacture.

In the Course, candidates look at the design process and the strategic decisions that have to be made, as well as considering the materials that may be used and manufacturing processes undertaken. The knowledge and understanding acquired is consolidated by undertaking practical design activities. The external assessment of the Higher Product Design Course consists of:

- ◆ An examination paper testing candidates' knowledge and understanding of the content of the Course. The examination is two hours in duration and is allocated 70 marks out of the total 140 marks available for external assessment.
- ◆ A Design Assignment folio produced in response to a task set annually by SQA. The Design Assignment is allocated 70 marks out of the total 140 marks available for external assessment.

Further information on the specifications, content and context can be obtained in the Higher Product Design Course Arrangements document.

## The Design Assignment task

The Design Assignment task will be set by SQA. It is conducted internally (ie by the centre), and is externally marked (by SQA). SQA will issue details of the Design Assignment task in January and will require submission of the completed assignments by a specified date in the year of presentation. A different Design Assignment task will be issued each year by SQA.

## Relationship with Units

As the Design Assignment is a response to a discrete task, it is not possible for Unit work to be used. Similarly the Design Assignment evidence may not be used to overcome Unit assessments.

## Conduct of Assessment

The responsibility for setting annual ‘tasks’ lies with SQA. Completion of Design Assignments must be carried out under supervised conditions within centres. This must be adhered to for two reasons:

- ◆ candidate work must be authenticated
- ◆ as an external assessment, the integrity of the Design Assignment must be guaranteed

As a component of the external assessment, work produced for the Design Assignment must be produced by candidates working independently. The work must be original material produced by candidates, ie photocopies are not allowed and group work is not permitted. While appropriate advice and guidance may be given by the teacher/lecturer, candidates are solely responsible for producing their own Design Assignments.

No annotations should be made on a Design Assignment by anyone other than the candidate preparing the folio. Design Assignments must remain in centres prior to being sent to SQA for assessment purposes — candidates must not be allowed to remove their Design Assignments from centres prior to assessment. Throughout the production of Design Assignments, candidates must store their work securely within the centre in a manner which ensures that material is not allowed to deteriorate or be damaged in any way.

## Structure of the Design Assignment

**A maximum of eight single-sided sheets of A3 paper is allowed. Any additional sheets submitted over the eight allowed will not be marked.** The original work (ie, not photocopied or scanned versions) must be submitted.

A separate flyleaf, which must be used to authenticate the candidate’s work, will be made available to centres.

## Allocation of Marks

| Section                                   | Marks available |
|---|-----------------|
| 1 — Initial Ideas                         | 15 marks        |
| 2 — Development towards a Design Proposal | 30 marks        |
| 3 — Communication                         | 25 marks        |
| <b>Total</b>                              | <b>70 marks</b> |

## Guidance to Candidates

Candidates should be familiar with the assessment criteria and guidance offered for each section of the Design Assignment. **There is no restriction on copying this document for candidates.**

# Section 1: Initial Ideas

The marks in this section are awarded for the quality, diversity and relevance of ideas.

The table below gives an indication of characteristics that a folio would display in order to achieve marks in particular bandings.

**It must be noted that a folio does not need to display all of the features listed within a banding to achieve marks in that banding.**

For example, a candidate may achieve marks in the top banding (11-15) where they have less than five ideas but have generated a significant range of diverse ideas for features or components.

| Level of response   | Marks available |
|---|-----------------|
| <p><b>A range of limited ideas.</b></p> <ul style="list-style-type: none"> <li>◆ Ideas are vague and/or similar to each other.</li> <li>◆ Ideas demonstrate little creativity.</li> <li>◆ Ideas with limited relevance to the specification are produced.</li> <li>◆ There are few initial ideas and/or a number of ideas which show little variety.</li> <li>◆ Alternatively, one concept has been poorly explored.</li> </ul>   | 0-5             |
| <p><b>A range of varied ideas.</b></p> <ul style="list-style-type: none"> <li>◆ Ideas have some differences between them.</li> <li>◆ Ideas demonstrate some creativity.</li> <li>◆ Ideas relevant to the specification are produced.</li> <li>◆ Typically, around three alternative ideas are produced.</li> <li>◆ Alternatively, one concept has been explored by producing a limited range of diverse ideas for major features or components.</li> </ul>                            | 6-10            |
| <p><b>A wide range of diverse ideas.</b></p> <ul style="list-style-type: none"> <li>◆ Ideas are diverse and have significant differences between them.</li> <li>◆ Ideas demonstrate creativity.</li> <li>◆ Ideas relevant to the specification are produced.</li> <li>◆ Typically, around five alternative ideas are produced.</li> <li>◆ Alternatively, one concept has been explored by producing a significant range of diverse ideas for major features or components.</li> </ul> | 11-15           |

## Section 2: Development towards a Design Proposal

The marks in this section are awarded for the detailed development of ideas through the application of design knowledge. The marks are awarded for the accuracy, relevance and detail of the content of the work. The communication and presentation of the work is assessed in Section 3.

The table below gives an indication of characteristics that a folio would display in order to achieve marks in particular bandings.

**It must be noted that a folio does not need to display all of the features listed within a banding to achieve marks in that banding.**

For example, a candidate may achieve marks in the top banding (25-30) where there is limited overt reference to the specification but it can be inferred from the folio that the specification has been considered.

| Level of response   | Marks available |
|---|-----------------|
| <p><b>Minimal development of ideas towards a design proposal.</b></p> <ul style="list-style-type: none"> <li>◆ The design proposal shows token links to the initial idea(s) and/or concept(s).</li> <li>◆ There is evidence of minimal diversity in the exploration of potential solutions.</li> <li>◆ There is minimal reference to the specification.</li> <li>◆ There is minimal reference to materials and manufacturing processes for the design proposal.</li> <li>◆ Little understanding of design issues is evident.</li> <li>◆ The design proposal is evaluated by token reference to the specification.</li> </ul>  | 0-6             |
| <p><b>Limited development of ideas towards a design proposal.</b></p> <ul style="list-style-type: none"> <li>◆ The design proposal shows few links to the initial idea(s) and/or concept(s).</li> <li>◆ Idea(s) and/or concept(s) are explored to form a design proposal.</li> <li>◆ There is evidence of little diversity in the exploration of potential solutions.</li> <li>◆ There is some reference to the specification.</li> <li>◆ There is some reference to materials and manufacturing processes for the design proposal.</li> <li>◆ Limited understanding of design issues is evident.</li> <li>◆ The design proposal is evaluated by limited reference to the specification.</li> </ul> | 7-12            |

| Level of response   | Marks available |
|---|-----------------|
| <p><b>Adequate development of ideas towards a design proposal.</b></p> <ul style="list-style-type: none"> <li>◆ The design proposal will be derived from initial idea(s) and/or concept(s).</li> <li>◆ The most promising idea(s) and/or concept(s) are explored to form a design proposal.</li> <li>◆ There is evidence of some diversity in the exploration of potential solutions.</li> <li>◆ There is some reference to the specification at appropriate points.</li> <li>◆ Materials and manufacturing processes for the design proposal are clear.</li> <li>◆ Understanding of design issues is evident.</li> <li>◆ The design proposal is evaluated by some reference to the specification.</li> </ul>   | 13-18           |
| <p><b>Significant development of ideas towards a design proposal.</b></p> <ul style="list-style-type: none"> <li>◆ The design proposal will be derived from initial idea(s) and/or concept(s).</li> <li>◆ The most promising idea(s) and/or concept(s) are explored and evolve into a design proposal.</li> <li>◆ There is evidence of diversity in the exploration of potential solutions.</li> <li>◆ There is reference to the specification at appropriate points.</li> <li>◆ Materials and manufacturing processes for the design proposal are clear and justified.</li> <li>◆ Understanding of design issues is evident.</li> <li>◆ The design proposal is evaluated by reference to the specification.</li> </ul>   | 19-24           |
| <p><b>Extensive development of ideas towards a design proposal.</b></p> <ul style="list-style-type: none"> <li>◆ The design proposal will clearly be derived from initial idea(s) and/or concept(s).</li> <li>◆ The most promising idea(s) and/or concept(s) are explored and evolve into a detailed design proposal.</li> <li>◆ There is clear evidence of diversity in the exploration of potential solutions.</li> <li>◆ There is meaningful reference to the specification at appropriate points.</li> <li>◆ Materials and manufacturing processes for the design proposal are clear and justified.</li> <li>◆ Clear understanding of design issues is evident.</li> <li>◆ The design proposal is clearly evaluated by extensive reference to the specification.</li> </ul> | 25-30           |

## Section 3: Communication

The marks in this section are awarded for the communication throughout the folio. The marks are awarded in three categories:

- ◆ Communication of ideas and development (10 marks)
- ◆ Recording and justification of decisions taken (10 marks)
- ◆ Communication of design proposal (5 marks)

The table on the next page gives an indication of characteristics that a folio would display in order to achieve marks in particular bandings.

**It must be noted that a folio does not need to display all of the features listed within a banding to achieve marks in that banding.**

For example, a candidate may achieve marks in the top banding for communication of ideas and development (6-10) with very limited evidence of graphics provided there is evidence of high quality modelling.

| Level of response  | Marks available |
|--|-----------------|
| <b>Communication of ideas and development</b>  |                 |
| <p><b>The ideas and development are communicated.</b></p> <ul style="list-style-type: none"> <li>◆ There is a range of graphics and/or models.</li> <li>◆ During the early stages the sketches/models have been generated quickly and may be rough in nature.</li> <li>◆ Meaningful annotations have been used to record candidate's thoughts, questions, justifications and explanations.</li> <li>◆ The communication of the development progressively shows more detail in sketches and/or models.</li> <li>◆ A number of the graphics/models include features such as dimensions, materials, textures and finishes, special features.</li> <li>◆ Modelling is used to explore, evaluate and refine ideas.</li> <li>◆ Written content is clear and concise.</li> <li>◆ Flow of ideas/thoughts/judgements is evident.</li> </ul>     | 0-5             |
| <p><b>The ideas and development are communicated effectively.</b></p> <ul style="list-style-type: none"> <li>◆ There is a wide range of graphics and/or models.</li> <li>◆ During the early stages the sketches/models have been generated quickly and may be rough in nature.</li> <li>◆ Meaningful annotations have been used to record links and pathways.</li> <li>◆ The communication of the development progressively shows more detail in sketches and/or models.</li> <li>◆ Most of the graphics/models include features such as dimensions, materials, textures and finishes, special features.</li> <li>◆ Modelling or graphics is used effectively to explore, evaluate and refine ideas.</li> <li>◆ Written content is very clear and concise.</li> <li>◆ Flow of ideas/thoughts/judgements is clearly evident.</li> </ul> | 6-10            |
| <b>Recording and justification of decisions taken</b>  |                 |
| <p><b>There are clear reasons for decisions taken.</b></p> <ul style="list-style-type: none"> <li>◆ Decisions taken are recorded in the folio.</li> <li>◆ Reasons for some of the decisions are communicated.</li> </ul>   | 0-5             |
| <p><b>At all stages in the folio there are clear reasons for decisions taken.</b></p> <ul style="list-style-type: none"> <li>◆ Decisions taken are clearly recorded at all stages in the folio.</li> <li>◆ Reasons for the decisions are communicated.</li> </ul>  | 6-10            |
| <b>Communication of design proposal</b>  |                 |
| <p><b>The design proposal is communicated effectively.</b></p> <ul style="list-style-type: none"> <li>◆ This may take the form of a rendered graphic (manual or computer generated) <b>and/or</b> photographic evidence of a model.</li> </ul>   | 0-5             |