



B O A R D O F S T U D I E S
NEW SOUTH WALES

**HSC Industrial Technology
Marking Guidelines — Major Project**

Major Project

HSC examination overview

The HSC examination for Industrial Technology consists of a written paper worth 40 marks and a major project worth 60 marks.

Component: Design, management and communication (20 marks)

This component of the major project should be a succinct 'documentary' of the development of the project, including the original intent, research, planning, decisions, problems and their solution, and ongoing evaluation of the major project in the light of the original intent.

Assessment criteria

Documentation of the major project from concept to completion, including:

- statement of intent
- research
- sketching and idea generation
- prototyping, modelling and testing
- production and working drawings
- selection and justification of appropriate materials, processes and resources
- evidence of project management including a record of the production of the project
- timeline plan – projected order of production including estimation and evaluation of time allocation
- finance plan – projected cost and an analysis of actual costs of materials and services (if applicable)
- evidence of OHS and safe working practices
- appropriateness of design and/or design modification
- evidence of a range of presentation skills and techniques
- evidence of a range of ICT skills
- ongoing evaluation of the major project and its relationship to the statement of intent, research and planning.

Outcomes assessed: H1.2, H2.1, H3.1, H3.2, H3.3, H4.2, H4.3, H5.1, H5.2, H6.1, H6.2

MARKING GUIDELINES

Criteria	Marks
<ul style="list-style-type: none"> • Clarifies the intent of the major project by explaining clearly what is to be achieved and why • Conducts and explains a wide range of relevant research, justifying the selection of appropriate materials, processes, technologies and resources • Demonstrates very high level skills in sketching and idea generation, prototyping, modelling and testing, and in developing production and working drawings (as appropriate to the nature of the project) • Clearly describes the management of the project, including a succinct record of the production of the project • Develops, applies and evaluates comprehensive and appropriate timeline and finance plans • Demonstrates the use of a wide range of appropriate OHS and safe working practices through suitable documentation and evidence • Analyses and evaluates the relationships between design and modifications (if applicable), materials, components and processes in the development of the major project • Demonstrates a wide range of presentation skills and techniques, including ICT skills, appropriate to the development of the major project • Provides critical evaluation of the major project, including in relation to the statement of intent, research and planning 	17–20
<ul style="list-style-type: none"> • Clarifies the intent of the major project by explaining what is to be achieved and why • Conducts and describes a range of relevant research and describes the selection of appropriate materials, processes, technologies and resources • Demonstrates substantial skills in sketching and idea generation, prototyping, modelling and testing, and in developing production and working drawings (as appropriate to the nature of the project) • Describes the management of the project including a record of the production of the project • Develops and applies appropriate timeline and finance plans • Demonstrates the use of appropriate OHS and safe working practices through suitable documentation and evidence • Explains links between the design and modifications (if applicable), materials, components and processes in the development of the major project • Demonstrates a range of presentation skills and techniques, including ICT skills, most of which are appropriate to the development of the major project • Provides evaluation of the major project and discusses the major project in relation to the statement of intent, research and planning <p>Candidates may achieve 13–16 marks as indicated above OR by satisfying a combination of the criteria for other mark ranges.</p>	13–16
<ul style="list-style-type: none"> • Describes what the intent of the major project is and why • Conducts and outlines research, identifying some appropriate materials, processes, technologies and resources • Demonstrates moderate skills in sketching and idea generation, prototyping, modelling and testing, and in developing production and working drawings (as appropriate to the nature of the project) 	9–12

<ul style="list-style-type: none"> • Outlines the management of the project including some records of the project production • Proposes timeline and finance plans • Demonstrates the use of some OHS or safe working practices • Lists some details of the design and modifications (if applicable), materials, components and processes in the development of the major project • Demonstrates some presentation skills and techniques, including ICT skills, most of which are appropriate to the development of the major project • Provides ongoing documentation of the major project, including some reference to the statement of intent, research and planning <p>Candidates may achieve 9–12 marks as indicated above OR by satisfying a combination of the criteria for other mark ranges.</p>	
<ul style="list-style-type: none"> • Provides an outline of what is to be achieved • Minimal reference to research conducted, with some appropriate materials, processes and resources listed and little reference to consideration of technologies • Demonstrates basic skills in limited areas of sketching and idea generation, prototyping, modelling and testing, and in developing production and working drawings (as appropriate to the nature of the project) • Outlines the management of the project including some records of the project production • Timeline and finance plans are without sufficient detail • Refers to the use of basic OHS or safe working practices • Provides basic details of the design, materials, components and processes in the development of the major project • Demonstrates limited presentation skills and techniques appropriate to the development of the major project • Provides minimal ongoing documentation of the major project, with basic reference to the statement of intent, research and planning <p>Candidates may achieve 5–8 marks as indicated above OR by satisfying a combination of the criteria for other mark ranges.</p>	5–8
<ul style="list-style-type: none"> • Identifies what is to be achieved • Appropriate research not evident, with minimal reference to materials, processes, technologies and resources • Sketching, idea generation, prototyping, modelling and testing, production and working drawings either not present or in elementary form • Provides an elementary or incomplete record of the production of the major project • Timelines and finance plans are either not appropriate or not evident • Minimal or no reference to OHS or safe working practices • Little detail of the design, materials, components or processes in the development of the major project • Little evidence of presentation skills and techniques appropriate to the development of the major project • Provides little or no ongoing documentation of the major project, no reference to the statement of intent, research or planning <p>Candidates may achieve 1–4 marks as indicated above OR by satisfying a subset of the criteria for other mark ranges.</p>	1–4

Component: Production (40 marks)

The major project product provides practical evidence of the student's level of achievement in their chosen focus area. Of particular relevance will be the range and depth of skills and knowledge evident in choosing materials and technologies, executing processes and solving problems.

Assessment criteria

- quality of the product
- evidence of a range of skills
- degree of difficulty
- links between planning and production
- use of appropriate materials, components, processes and technologies
- evidence of solutions to problems in production

Outcomes assessed: H1.2, H2.1, H3.1, H3.2, H3.3, H4.1, H4.2, H4.3, H6.1, H6.2

MARKING GUIDELINES

Criteria	Marks
<ul style="list-style-type: none">• Demonstrates very high quality in all aspects of the major project production• A highly demanding project, with evidence of high quality in the application of a wide range of skills and techniques in the planning and production of the major project• Completed project relates closely to what was intended. Close links between actual construction processes, management and thorough research and planning are evident and clearly articulated• Competently applies and uses a wide range of appropriate materials, components, processes and technologies in the production of the major project• Demonstrates and critically evaluates how solutions to problems in major project production were addressed	33–40
<ul style="list-style-type: none">• Demonstrates high quality in most aspects of the major project production• A project of substantial difficulty, with evidence of high quality in the application of a range of skills and techniques in the planning and production of the major project• Completed project relates to what was intended. Links between actual construction processes, management and thorough research and planning are evident• Competently applies and uses a range of appropriate materials, components, processes and technologies in the production of the major project• Demonstrates and explains how solutions to problems in major project production were addressed <p>Candidates may achieve 25–32 marks as indicated above OR by satisfying a combination of the criteria for other mark ranges.</p>	25–32
<ul style="list-style-type: none">• Demonstrates substantial quality in most aspects of the major project production• A project of moderate difficulty, with evidence of high but inconsistent quality in the application of skills and techniques in the planning and production of the major project• There is some relationship between the completed work and what was intended. Some links between actual construction processes, management and thorough research and planning are evident	17–24

<ul style="list-style-type: none"> • Applies and uses some processes and technologies and a moderate range of materials and components in the production of the major project • Demonstrates solutions to some problems in major project production <p>Candidates may achieve 17–24 marks as indicated above OR by satisfying a combination of the criteria for other mark ranges</p>	
<ul style="list-style-type: none"> • Demonstrates basic quality in most aspects of the major project production • A project of minimal difficulty, with evidence of basic quality in the application of skills and techniques in the planning and production of the major project • Minimal links between planning and production, which are not clear • Applies and uses limited appropriate processes, technologies and materials and components in the production of the major project • Demonstrates limited solutions to basic problems in major project production <p>Candidates may achieve 9–16 marks as indicated above OR by satisfying a combination of the criteria for other mark ranges</p>	9–16
<ul style="list-style-type: none"> • Demonstrates poor quality in most aspects of the major project production • A project of limited difficulty, with little or no evidence of quality in the application of skills and techniques in the planning and development of the major project • Links between planning and production are inappropriate, unclear or not evident • Applies elementary processes and technologies and makes inappropriate use of materials and/or components in the production of the major project • Demonstrates inappropriate solutions to some simple problems in major project production <p>Candidates may achieve 1–8 marks as indicated above OR by satisfying a subset of the criteria for other mark ranges.</p>	1–8