School administrators and Heads of Learning Area – Materials Design and Technology and teachers of Materials Design and Technology ATAR Year 11 are requested to note for 2024 the following minor syllabus changes. The syllabus is labelled 'For teaching from 2024'.

Materials Design and Technology | ATAR Year 11 | Summary of minor syllabus changes for 2024

The content identified by ~~strikethrough~~ has been deleted from the syllabus and the content identified in *italics* has been revised in the syllabus for teaching from 2024.

Organisation of content

Design

Design fundamentals and skills

A foundation of design knowledge is critical when developing projects. Concepts related to aesthetics, human factors and consumer markets are covered. Aesthetics include elements of line, shape, form, texture, colour and tone; and principles of unity, ~~variety,~~ proportion …

The course incorporates cognitive and creative skills that are used in generating ideas and developing solutions, such as rapid concept development, brainstorming, critical thinking and collaborative designing. It covers strategies for thinking ~~laterally,~~ innovatively and creatively …

Use of Technology

Production management

Various skills are required to successfully manage the production process. ~~Performance must be evaluated throughout.~~ Environmental factors, including management and reduction of waste and energy efficiencies must be considered. Project management of ~~time,~~ tasks and materials as well as task modification ~~and record keeping~~ are employed throughout the production process~~;~~*.* ~~t~~*T*herefore, management skills, principles of quality assurance, ongoing evaluation~~,~~ and testing are all important factors in ensuring quality outcomes. Communication skills are also important. Working collaboratively with team members~~, maintaining work schedules and time plans,~~ and producing various oral and written communications are all important aspects of the production process.

Unit 1

Common content

Design

Design fundamentals and skills

- production plans
  - materials list
  - costing for all materials components
  - ~~time line for~~ stages of production

Use of technology

Skills and techniques

- demonstrate ICT, portfolio development and communication skills
  - photography – ~~ongoing record of progress and processes used and~~ final product *and features of the final product*
  - documenting presentations and evaluations

Production management

- manage a production plan
  - ~~maintain a production plan~~

- ■ ~~maintain time management while~~ using tools, equipment and machinery to complete production
  - ○ follow instructions from plans
  - ○ maintain safety requirements
- ■ record changes to materials lists or costing
- ■ ~~record regular journal/diary entries~~
- • use ongoing evaluation techniques: ~~diary, journal or portfolio notes and use of photography to record~~ ongoing progress/decision changes made to the project

Metal context content

Materials

Nature and properties of materials

- • metal morphology and structure
  - ■ mild steel
    - ○ physical characteristics
    - ○ microscopic appearance
    - ○ ~~internal molecular structure~~

Use of technology

Skills and techniques

- • select and apply appropriate and accurate marking out tools and techniques for measuring and marking out in sheet metal, bar and tube projects, which *may* include the use of …

Textiles context content

Materials

Nature and properties of materials

- • fibre morphology and structure
  - ■ physical characteristics
  - ■ microscopic appearance
  - ■ ~~internal molecular structure – amorphous, crystalline~~

Use of technology

Skills and techniques

~~identify the parts of:~~
  - ■ ~~a sewing machine~~
  - ■ ~~an overlocker~~

Unit 2

Common content

Design

Design fundamentals and skills

- • devise
  - ■ production plans
    - ○ materials list
    - ○ estimating and actual costing for all materials and components

- production plan, including ~~time line~~ *deadlines*
- evaluate
  - design and production processes
  - ~~using a production plan/journal/diary and accompanying photographic evidence to record ongoing evaluation~~
  - product against design brief, initial design and performance criteria related to needs, values and beliefs of the end user

Use of technology

Skills and techniques

- demonstrate ICT, portfolio development and communication skills
  - client and market research techniques
  - client presentation techniques
  - photography – ~~ongoing record of progress and processes used and~~ final product *and features of the final product*
  - documenting presentations and evaluations

Production management

- manage a production plan
  - ~~maintain a production plan~~
  - ~~maintain time management while~~ using tools, equipment and machinery to complete production

    - adhere to sequential instructions
    - apply safety and risk management
  - record changes to materials lists or costing
  - ~~record regular journal/diary entries~~
- use ongoing evaluation techniques: ~~diary, journal or portfolio notes and use of photography to record~~ ongoing progress/decision changes made to the project *through client consultation*

Metal context content

Materials

Nature and properties of materials

- investigate and describe applications of *at least two of* the following metal finishes

Textiles context content

Materials

Nature and properties of materials

- morphology and structure
  - physical characteristics
  - microscopic appearance
  - ~~internal molecular structure – amorphous, crystalline~~
  - ~~monomer, polymer, polymerisation~~

- yarn structure and characteristics
  - spun staple yarns
  - filament yarns

- ~~novelty yarns – slub, boucle, core spun~~

Materials in context

- research examples of sustainability, including recycling methods for different fabric materials
- investigate at least one use of sustainable materials in textiles
    - ~~organic cotton~~
    - ~~bamboo~~
    - ~~hemp~~
    - ~~PET bottles recycled into Tencel~~

Use of technology

Skills and techniques

- investigate a range of embellishment and manipulation techniques. ~~Apply at least two techniques to a practical project from the following:~~

Wood context content

Use of technology

Skills and techniques

- identify ~~and use~~ different methods of fastening timbers

Assessment table Year 11

Design (Practical portfolio)
~~journal entries~~

Production (Practical)
~~journal entries~~