

# DESIGN & TECHNOLOGY

## DESIGN & TECHNOLOGY – TEXTILES UNIT 1 (DTT111)

### UNIT DESCRIPTION

This unit focuses on the analysis, modification and improvement of a product design. It provides a structured approach towards the design process and looks at examples of design practice used by a designer, and analysis and evaluation of a design. Using this as a model the student modifies the design of a similar product.

### OUTCOMES

On completion of this unit the student should be able to:

1. Describe the methods used by a designer to design a product, and apply similar processes to document the redesigning of an existing product.
2. Use and evaluate materials, tools, equipment and processes to make the product redesigned in outcome 1, and compare the finished product with the original design.

### ASSESSMENT

Demonstration of achievement of outcomes 1 and 2 is based on the student's performance on a selection of assessment tasks:

- design folio
- production work and records of production and modification
- short written reports
- multimedia presentations

## DESIGN & TECHNOLOGY – TEXTILES UNIT 2 (DTT222)

### UNIT DESCRIPTION

In this unit each student works both individually and as a member of a small design team to develop a product range or contribute to the design and production of a group product. This provides the student with the opportunity to work with others while taking responsibility for particular aspects of the design and production.

### OUTCOMES

On completion of this unit the student should be able to:

1. Individually and as a member of a team, identify a need and collaboratively develop design options and production planning in response to a design brief for a product range based on a common theme or a group product with component parts.
2. Justify, manage and use appropriate production processes to make a product and evaluate individually, and as a member of a team, the processes and materials used, and the suitability of a product or component of a group project against the design brief.

## DESIGN & TECHNOLOGY – TEXTILES UNIT 3 (DTT331)

### UNIT DESCRIPTION

The design and development of a product that meets the needs and expectations of a client is influenced by a range of complex factors and occurs in a number of settings. Students investigate a client or end-user's needs, prepare a design brief, devise evaluation criteria, carry out research and propose a series of design options. They justify the choice of a preferred option and develop a work plan, and commence production of the product, which will be completed and evaluated in Unit 4.

### OUTCOMES

On completion of this unit the student should be able to:

1. Demonstrate the role of a designer by writing a design brief, developing evaluation criteria, and identifying and explaining areas for research and methods that would be used to develop design ideas.
2. Explain the factors that influence the design, development and manufacture of products within industrial commercial settings.

### ASSESSMENT

The student's level of achievement in Units 3 and 4 will be determined by:

- School-assessed coursework – 20%
- School-assessed task – 50%
- End-of-year examination – 30%

## DESIGN & TECHNOLOGY – TEXTILES (UNIT 4 (DTT342))

### UNIT DESCRIPTION

Evaluations are made at various stages of product design, development and production by the designer, with reference to the design brief and evaluation criteria in collaboration with a client. Students continue to design and manufacture the product designed in Unit 3. They record modifications and evaluate the effectiveness and efficiency of techniques used and the quality of their product, making judgments about possible improvements.

### OUTCOMES

On completion of this unit the student should be able to:

1. Analyse similar product types through a comparison of innovative features, function, aesthetic and visual appeal, and any economic, social and environmental benefits and cost.
2. Competently and safely apply a range of production skills and processes to implement the production plan, make the product designed in Unit 3 and made in Unit 4 and manage time and resources efficiently.

### SUBJECT LEVY TEXT & COST REQUISITES EXCURSION

The Subject Levy for 2009 was \$20.00.  
Design & Technology VCE Units 1 – 4. Livett & O'Leary (Social Science Press). ISBN 9780170130639 \$57.95  
Students will need to purchase their materials for production work (fabrics & notions)  
Unit 3 only - VCE Top Design & Technology Trip to Melbourne (approx \$300.00)

CONTACT – MAREE JONES

**DESIGN & TECHNOLOGY – WOOD  
UNIT 1 (DTW111)**

**UNIT DESCRIPTION**

This unit focuses on the analysis, modification and improvement of a product design. It provides a structured approach towards the design process and looks at examples of design practice used by a designer, and analysis and evaluation of a design. Using this as a model the student modifies the design of a similar product.

**OUTCOMES**

On completion of this unit the student should be able to:

1. Describe the methods used by a designer to design a product, and apply similar processes to document the redesigning of an existing product.
2. Use and evaluate materials, tools, equipment and processes to make the product redesigned in outcome 1, and compare the finished product with the original design.

**ASSESSMENT**

Demonstration of achievement of outcomes 1 and 2 is based on the student's performance on a selection of assessment tasks:

- design folio
- production work and records of production and modification
- short written reports
- multimedia presentations

**DESIGN & TECHNOLOGY – WOOD  
UNIT 2 (DTW222)**

**UNIT DESCRIPTION**

In this unit each student works both individually and as a member of a small design team to develop a product range or contribute to the design and production of a group product. This provides the student with the opportunity to work with others while taking responsibility for particular aspects of the design and production processes.

**OUTCOMES**

On completion of this unit the student should be able to:

1. Individually and as a member of a team, identify a need and collaboratively develop design options and production planning in response to a design brief for a product range based on a common theme or a group product with component parts.
2. Justify, manage and use appropriate production processes to make a product and evaluate individually, and as a member of a team, the processes and materials used, and the suitability of a product or component of a group project against the design brief.

**DESIGN & TECHNOLOGY – WOOD  
UNIT 3 (DTW331)**

**UNIT DESCRIPTION**

The design and development of a product that meets the needs and expectations of a client is influenced by a range of complex factors and occurs in a number of settings. Students investigate a client or end-user's needs, prepare a design brief, devise evaluation criteria, carry out research and propose a series of design options. They justify the choice of a preferred option and develop a work plan, and commence production of the product, which will be completed and evaluated in Unit 4.

**OUTCOMES**

On completion of this unit the student should be able to:

1. Demonstrate the role of a designer by writing a design brief, developing evaluation criteria, and identifying and explaining areas for research and methods that would be used to develop design ideas.
2. Explain the factors that influence the design, development and manufacture of products within industrial commercial settings.

**ASSESSMENT**

The student's level of achievement in Units 3 and 4 will be determined by:

- School-assessed coursework – 20%
- School-assessed task – 50%
- End-of-year examination – 30%

**DESIGN & TECHNOLOGY – WOOD  
UNIT 4 (DTW342)**

**UNIT DESCRIPTION**

Evaluations are made at various stages of product design, development and production by the designer, with reference to the design brief and evaluation criteria in collaboration with a client. Students continue to design and manufacture the product designed in Unit 3. They record modifications and evaluate the effectiveness and efficiency of techniques used and the quality of their product, making judgments about possible improvements.

**OUTCOMES**

On completion of this unit the student should be able to:

1. Analyse similar product types through a comparison of innovative features, function, aesthetic and visual appeal, and any economic, social and environmental benefits and cost.
2. Competently and safely apply a range of production skills and processes to implement the production plan, make the product designed in Unit 3 and made in Unit 4 and manage time and resources efficiently.

**SUBJECT LEVY  
TEXT & COST  
REQUISITES**

The Subject Levy for 2009 was \$28.00.  
Design & Technology VCE Units 1 – 4. Livett & O'Leary (Social Science Press).  
ISBN 9780170130639  
Students will need to purchase own materials for their production.  
Unit 3 only - VCE Top Design & Technology Trip to Melbourne (approx \$300.00)

\$57.95

**CONTACT – ANTHONY FORREST**

**FOOD & TECHNOLOGY – UNIT 1 (FTY111)****UNIT DESCRIPTION**

The emphasis of this unit is on the diversity of food, how it is stored and prepared to achieve quality in safety, health and aesthetics.

**Area of Study 1** - Keeping food safe focuses on safe work practices, causes of food spoilage, principles of food hygiene and safe food handling and storage, and safe use of tools and equipment.

**Area of Study 2** - Food properties and preparation emphasises the links between classification and properties of foods, and how enjoyment of food is associated with different cooking methods and physical, sensory and chemical properties of key foods. It is expected that students apply this knowledge to optimise the quality of food products they prepare. Analysis of the physical and chemical properties of food is the focus of Area of Study 1.

**OUTCOMES**

On completion of this unit the student should be able to:

1. Analyse the physical and chemical properties of food.
2. Explain safe work practices, causes of food spoilage, and principles of food hygiene
3. Show how preparation of food is associated with different cooking methods and physical, sensory and chemical properties of key foods.

**ASSESSMENT** includes end of unit examination, and:

- Records of planning and production
- Tests (short answer, open book)
- Oral reports
- Production work
- Research reports
- Practical tests

**FOOD & TECHNOLOGY – UNIT 2 (FTY222)****UNIT DESCRIPTION**

This unit will enable students to study the preparation of food for small-scale operations. This will include planning considerations, implementation, and evaluation of outcomes and product change to suit specific requirements. Students will also study the impact of technological developments on all phases of food production.

**OUTCOMES**

At the completion of this unit, students should be able to:

1. Use skills and implement processes in food preparation of key foods.
2. Individually, and as a team member, plan, prepare and evaluate meals for a range of contexts.

**SUBJECT LEVY**

The Subject Levy for 2009 was \$65.00.

**REQUISITES & COST**

Students may be required to supply extra ingredients and packaging. (eg. baskets, bottles and jars)

**FOOD & TECHNOLOGY – UNIT 3 (FTY331)****UNIT DESCRIPTION**

This unit covers the function of the natural components of key foods, use of the best cooking techniques for key foods, food preservation and the prevention of food spoilage. Students also develop knowledge of food safety and regulations, and apply safe work practices to food preparation. They develop a design brief, design plan and timeline, make decisions and choices about key foods, properties of food, tools, equipment, cooking and preservation techniques to suit a particular context.

**OUTCOMES**

Students are required to demonstrate achievements of:

1. Analyse how properties of food may impact on food preparation and processing techniques (in industry and small-scale production), whilst exploring a range of methods of cooking, food preparation, food processing and food preservation methods.
2. Identify areas related to food safety such as Hazard Analysis and Critical Control Points (HACCP) and food labelling.
3. Develop a design plan folio to meet the requirements of a specific design brief.

**ASSESSMENT FOR UNITS 3 & 4**

The range of assessment tasks in Unit 3 outcomes 1 and 2 and Unit 4 outcomes 2 and 3 has been expanded to provide greater flexibility. The components of the school-assessed task, completed in Unit 3 outcome 3, include: a design brief, criteria for evaluation, a design plan and a production plan. In Unit 4 outcome 1, the components are: production work (implementation of the design plan developed in Unit 3 Outcome 3) accompanied by a pictorial and written record of progress and modifications, and an evaluation report.

Due to the school-assessed task being developed in Units 3 and 4, the assessment weighting has been increased to 40% of the study score. School-assessed coursework in the revised study contributes 15% towards the study score for each of Unit 3 and Unit 4. The end-of-year examination will continue to contribute 30% to the study score.

**SUBJECT LEVY**

The Subject Levy for 2009 was \$72.00.

**REQUISITES & COST**

Students may be required to supply extra ingredients and packaging. (eg. baskets, bottles and jars)

Unit 3 only - VCE Top Design & Technology Trip to Melbourne (approx \$300.00)

**FOOD & TECHNOLOGY – UNIT 4 (FTY342)****UNIT DESCRIPTION**

The functions of the natural components of key foods, use of the best cooking techniques for key foods, food preservation and the prevention of food spoilage are covered in this unit. Students also develop knowledge of food safety and regulations, and apply safe work practices to food preparation. They develop a design brief, design plan and timeline, make decisions and choices about key foods, properties of food, tools, equipment, cooking and preservation techniques to suit a particular context. Functional foods, novel foods and foods to meet particular dietary requirements and food sensitivities are also covered.

**OUTCOMES**

Students are required to demonstrate achievement of:

1. Implement the design plan for a set of five to eight food items and evaluate the outcomes against the requirements of the design brief.
2. Analyse factors related to food product development and explain processes involved in the development and marketing of a food product.
3. Analyse new and emerging developments in food production.

**CONTACT – KIM KELLY**

**INFORMATION TECHNOLOGY – UNIT 1  
INFORMATION TECHNOLOGY IN ACTION  
(ITP111)**

**UNIT DESCRIPTION**  
This unit focuses on how individuals use, and can be affected by, information and communications technology (ICT) in their daily lives. Students acquire and apply a range of knowledge and skills to create information that persuades, educates or entertains. They also explore how their lives are affected by ICT and strategies for influencing how ICT is applied. Students develop an understanding of the role technology plays in inputting, processing, storing and communicating data and information.

**OUTCOMES**  
Students are required to demonstrate achievement in three outcomes:

1. Transforming an existing printed information product into an on-screen information product to meet a specific audience need, evaluate the success of this information product, and explain its likely impact on the audience's skills or work practices.
2. Solving an information problem by collecting data and using database management software to manipulate that data.
3. Contributing collaboratively to the creation of an on-screen information product that presents an analysis of a contemporary ICT issue and substantiates a point of view.

**ASSESSMENT**

- Creation Of An Information Product
- Database Project
- Group Website Project

**INFORMATION TECHNOLOGY – UNIT 2  
INFORMATION TECHNOLOGY PATHWAYS  
(ITP222)**

**UNIT DESCRIPTION**  
This unit focuses on how individuals and organisations, such as sporting clubs, charitable institutions, small businesses and government agencies use ICT. Students acquire and apply a range of knowledge and skills to create solutions and information products that meet personal and clients' needs. They also examine how networked information systems are used within organisations. In each outcome of this unit, students use software tools. For Outcome 1, the software tool should be a programming or scripting language. For Outcome 2, students use software that supports the creation and presentation of animated images, such as multimedia authoring and web authoring. Image editing software may be used in conjunction with these software types. For Outcome 3, students use one or both of the software tools studied.

**OUTCOMES**  
Students are required to demonstrate achievement in three outcomes:

1. Demonstrate progression in the ability to use a programming or scripting language, record the learning progress electronically, and explain possible career pathways that require the use of the software skills.
2. Represent a networked information system within an organisation and describe the way a specified set of data flows through the system, where it is stored and processed.
3. Work collaboratively to design a solution and an information product for a client, taking into account client feedback, solve the information problem, and evaluate the efficiency and effectiveness of the solution and product.

**ASSESSMENT**

- Programming Project
- Networking Assignment
- Group Information Product Project

<b>SUBJECT LEVY</b>	The Subject Levy for 2009 was \$22.50.	
<b>TEXT &amp; COST</b>	VCE Information & Technology Unit 1 & 2 (4 <sup>th</sup> Edition) – C. Potts (Thomas Nelson). ISBN 9780170130264	\$67.95

**INFORMATION TECHNOLOGY  
APPLICATIONS ~ UNIT 3 (ITP231)**

**UNIT DESCRIPTION**  
This unit focuses on how individuals or organisations use ICT to solve information problems and to participate actively in a society where use of ICT is commonplace. Students acquire and apply knowledge and skills in solving information problems to assist in decision-making and in managing tasks and timelines. The solutions and information products should meet the specific needs of organisations such as sporting clubs, news agencies, charities, or the needs of individuals. Students also explore how the capabilities of networked information systems support teams of workers or learners to solve problems and share knowledge. For Outcome 1 of this unit, students must use database management software to solve information problems, and for Outcome 2, students use web authoring software to create prototypes of websites.

**OUTCOMES**  
Students are required to demonstrate achievement in two outcomes:

1. Propose and apply project management and problem-solving strategies to produce a solution and an information product, using database management software, which meets the decision-making needs of a specific audience.
2. Create and evaluate a prototype website that meets an organisation's needs of sharing knowledge and collaborative problem-solving within a virtual team environment, and explain the requirements of the networked information system that supports the use of this website.

**ASSESSMENT**

- A solution and information product in response to a design brief
- A project management report
- A Prototype website and a written report

**INFORMATION TECHNOLOGY  
APPLICATIONS ~ UNIT 4 (ITP242)**

**UNIT DESCRIPTION**  
This unit focuses on how ICT is used by organisations to solve ongoing information problems and in the strategies to protect the integrity of data and security of information. Students develop and acquire knowledge and skills in creating solutions and information products using spreadsheet software that can be re-used in the future with new sets of data. When solving information problems, students apply all of the problem-solving stages: analysis, design, development, testing, documentation, implementation and evaluation. Students apply their ICT knowledge and skills to record their decision-making strategies when solving information problems and to reflect on the effectiveness of these strategies.

**OUTCOMES**  
Students are required to demonstrate achievement in two outcomes:

1. Use spreadsheet software to solve an ongoing information problem, taking into account the information needs of an organisation, and evaluate the effectiveness of their problem-solving strategies.
2. Evaluate the effectiveness of the strategies used by an organisation to manage the storage, communication and disposal of data and information, and recommend improvements.

**ASSESSMENT**

- A solution and information product in response to a design brief
- A written report

<b>SUBJECT LEVY</b>	The Subject Levy for 2009 was \$28.50.	
<b>TEXT &amp; COST</b>	VCE IT Applications Units 3 & 4 – T. Keane (Thomas Nelson). ISBN 9780170130257 VCE Info Processing & Management for 2003 Exams (Cambridge)	\$67.90 \$24.95

**CONTACT – DAVID EDDIE**

**INFORMATION TECHNOLOGY  
SOFTWARE DEVELOPMENT  
UNIT 3 (ITS331)**

**INFORMATION TECHNOLOGY  
SOFTWARE DEVELOPMENT  
UNIT 4 (ITS342)**

**UNIT DESCRIPTION**

This unit focuses on the techniques and procedures for determining the ability of networked information systems to meet organisational needs and on how the development of purpose-designed software, using a programming language, helps fulfil these needs. Students explore the roles and functions of networked information systems, and the types of networks. They apply three phases of the waterfall model of the systems development life cycle (SDLC): analysis, design and development. They use this concept as the methodology for making changes to networked information systems.

**OUTCOMES**

Students are required to demonstrate achievement in two outcomes, which include:

1. Analyse an existing networked information system used in an organisation, and propose physical design specifications for a new or modified networked information system.
2. Produce a software module suitable for implementation on a portable computing device, in response to a design specification, verify its performance against this specification and explain how the program has taken into account an ethical dilemma or a legal obligation.

**ASSESSMENT**

- A written report and a labeled visual representation
- A software module in response to a design specification
- A written report

**UNIT DESCRIPTION**

This unit focuses on techniques, procedures and strategies to develop, implement and evaluate proposed networked information systems. Students explore the technical, human, procedural, economic and management factors that need to be considered when undertaking these phases of the systems development life cycle (SDLC). The development phase is realised through the creation of software solutions using the programming language studied in Unit 3.

**OUTCOMES**

Students are required to demonstrate achievement in two outcomes, which include:

1. Apply the stages of software development to produce purpose-designed software that takes into account a networked information system objective and the needs of end-users.
2. Propose and justify strategies for managing, developing, implementing and evaluating the introduction to an organisation of a networked information system that will operate in a global environment.

**ASSESSMENT**

- Information technology solution (including internal documentation) in response to a design brief
- User documentation
- An explanation of how purpose-designed software may cause conflict between program developers and end-users
- A written report

**SUBJECT LEVY  
TEXT & COST**

The Subject Levy for 2009 was \$30.00.  
VCE Software Development Unit 3 & 4 – M. Fitzpatrick & T. Keane.  
ISBN 9780170130585

\$59.95

**CONTACT –SEAN KELLEHER**