

SACE Technology 2019 Index



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Subject Code Information:

Subjects with an A or B in their name: these subjects are Semester long units that can be studied individually or together to make a full year subject. There is **no** assumption that A has been studied before students can undertake the B option. Some subjects highly recommend both are studied (see course descriptions).

Subjects with a 1 or a 2 in their name: these subjects are sequential. Before students can study the 2nd option they must undertake the 1st option. There **is** an assumption that students know the content of the 1st option before they undertake the 2nd to enable them to be successful.

Length: 1 Semester

Assumed Knowledge:

None

Description:

There is little doubt that citizens of the future will need to be able to operate in the digital world. They will need to understand this technology and be able to use it as a tool to solve their own and world problems.

In this course students will learn the skills of using a range of technologies (3D printers and scanners, CNC routers, data loggers and other advanced technologies) as tools to solve real world problems.

Students will plan and manage a digital project based on a problem that needs to be solved. They design their own programs using real world data. They take account of privacy and security requirements and analyse their solutions in terms of risk/security and for the potential for innovation and enterprise. They will share and collaborate online and will develop the ability to do this in ethically and fairly.

The problem may be one of their own choosing or it may be a problem that is identified by a local business.

This course is suited, but not limited to, those students who have been involved in the Gaming (coding) program conducted with Adam Jenkins from UniSA, those who enjoyed multimedia or who have an interest in all things Digital. The course is offered to students in all year levels subject to timetabling constraints.

Future:

Skills developed in this course will be very useful for many school subjects as well as personal or professional use in the future.

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Length: 1 Semester

Assumed Knowledge:

Year 10 Construction Technology-Wood preferred

Description:

The course is based on the design and making of an article of furniture.

Students will:

- Have access to a wide range of materials, information and systems to investigate and develop design proposals, planned by them.
- Have the opportunity to learn about workshop practice through completing a range of skills to a very high standard
- Use computer facilities to help with the design and planning processes.

Note: Students are to provide the materials for the take home article of furniture and safety glasses and solid shoes are required.

Future:

Technology Studies, TAFE Pre-vocational Courses. Valuable skills for entry into a trade, recreation, home improvement and maintenance.

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Length: 1 Semester

Assumed Knowledge:

Year 10 Construction Technology-Metal preferred

Description:

The course is based on the design and making of a metal article.

Students will:

- Have access to a wide range of materials; information and systems to investigate and develop design proposals, planned by them.
- Develop skills and knowledge of Gas, Arc, Mig and Tig welding techniques.
- Develop skills knowledge of Plasma cutting, Milling, Metal lathe work and fabrication techniques.
- Have available the resources of the whole workshop including the computer facilities to help with the design and planning processes.

Note: Students are to provide the materials for the take home article and safety glasses and solid shoes are required.

Future:

Technology Studies, TAFE Pre-vocational courses. Valuable skills for entry into a trade, recreation and home improvement and maintenance. Possible participation in the Pedal Prix or Solar Challenge.

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Information Processing & Publishing

Stage 1

Length: 1 Semester

Assumed Knowledge:

None

Description:

This course has a practical basis and emphasizes the development of skills and understanding in designing, making and evaluating publications and presentations. The following units will be offered:

Data Input:

Students will

- use equipment to input data that can be used in information processing and publishing.

Personal Publishing:

Students will

- follow the designing process to produce for personal use paper-based publications such as essays, letters, reports, flyers, menus and invitations.

Business Publishing:

Students will

- develop paper-based publications which will provide them with broad entry-level industry skills.

Future:

Information Processing and Publishing, further studies at TAFE, employment.

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Video Game Design

Stage 1

Length: 1 Semester

Assumed Knowledge:

Nil

Description:

Video games provide engaging and dynamic and powerful interactions in our society. Popular and obscure examples are analysed to uncover the different elements that create a meaningful gaming experience. These elements can include: images, text, visual style, animation, sound effects, music, gameplay, user interface, and narrative techniques. Students then use this understanding to create their own engaging games using free, but powerful software.

Students will:

In first term, be introduced to:

- Programming by creating a simple 3D game in Unity,
- 3D Art by creating a simple 3D model (which can then be 3D printed), and
- Character/Story Design by creating the backstory and lore for a character and/or location.

In second term:

- Choose a speciality: Art, Programming and/or Level Design.
- Form indie game companies and collaboratively design and author a video game (or prototype).
- Students can also negotiate to work individually and/or specialise in animation, visual effects, music/sound effects, narrative and other game industry roles.

Assessment Details:

Folio of tasks 60%, Major Product 40%

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Length: 2 Semesters

Assumed Knowledge:

SACE Stage 1 Material Products A or B

Description:

Students will be required to design, analyse and construct an article of furniture or a project using metal as the major material. Students are also required to complete a material study. The course has three areas of assessment, Skills and application, Product and Folio. The folio is externally marked.

Students will

- Have the use of the machinery and tools of the workshop.
- Use the computers to assist in the design process.
- Work to a high standard of construction skills
- Understand the importance of accuracy and safety.

Assessment Details:

SSABSA moderated.

Future:

Employment and personal fulfilment.

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Length: 2 Semesters

Assumed Knowledge:

None

Description:

A subject that focuses on the use of computer technology to design and implement information processing solutions. Students complete 2 units from 3 offered:

- Personal Documents or Business Documents or Desktop Publishing
- **Personal Documents:**
The focus is on the use of the computer as a personal communication tool.
- **Business Documents:**
The focus is on the use of the computer as a communication tool for businesses.
- **Desktop Publishing:**
The focus of this unit is the use of page layout and other software to assemble text and graphics electronically for publishing on paper.

At the end of all units students will

- Operate and manage computer hardware and software efficiently.
- Understand and apply the designing process in planning and completing tasks.
- Use appropriate software applications to input, store, retrieve, edit and publish.
- Understand, analyse and evaluate the impact of social, ethical, and/or legal issues related to information-processing and publishing technologies.
- Understand and use effective design and layout principles.

Assessment Details:

Students provide evidence of their learning through eight to ten assessments, including an external assessment component. Students undertake:

- At least five practical skills assessments
- Two issues analysis assessments and two technical and operational understandings assessments
- One product and documentation assessment.

Future:

Vocational and tertiary pathways and the opportunity to gain recognition for nationally endorsed VET units of competence

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