TAS HSC Subjects 2024

Stage 6 learning at a glance.

Design and Technology

Design and Technology has a unique focus on creativity, innovation and the successful implementation of innovative ideas. It also seeks to develop students' appreciation of the historical and cultural influences on design and the interrelationships of design, technology, society and the environment. Students will investigate the importance of evaluation, the role of computer-based technologies, management, communication and collaborative design, as well as exploring current and emerging technologies. Through the completion of quality design projects, students are provided with the opportunity to develop specific production and manufacturing skills.

Year 11 Course - Designing and Producing
• Design theory and practice
• Design processes
• Environmental, ethical and social issues
• Marketing and market research
• The realisation of ideas through the manipulation of techniques, materials tools and other resources
• Project analysis, management and evaluation
• Research methods
• Manufacturing and production.

HSC Course –
– Innovation and Emerging Technologies
– Designing and Producing (and the Major Design Project).
• Project proposal and project management
• Project development and realization
• Project evaluation

60% of the HSC score comes from the Major Design Project, 40% from a 1.5 hour written exam.

Engineering Studies

Both Year 11 and HSC Courses offer students knowledge, understanding and skills in aspects of engineering that include communication, engineering mechanics/hydraulics, engineering materials, historical/societal influences, engineering electricity/electronics and the scope of the profession. Students study engineering by investigating a range of applications and fields of engineering.

Year 11 Course
Students undertake the study of each of the 4 modules:
• Engineering fundamentals
• Engineered products
• Braking systems
• Biomedical engineering
• An engineering report

HSC Course
Students undertake the study of each of the 4 modules:
• Civil Structures
• Personal and Public Transport
• Aeronautical Engineering
• Telecommunications Engineering
• An engineering report

Engineering reports form 20% of the total school-based HSC assessment & a HSC 3 hour written exam.

TAS HSC Subjects 2024

Stage 6 learning at a glance.

Software Engineering

Software Engineering replaces Software Design and Development commencing from Year 11 in 2024, with the first HSC examination in 2025.

The study of HSC Software Engineering enables students to develop an understanding of the fundamentals of computer science using a range of technologies including the Python programming language. Students will develop knowledge and understanding of software engineering, hardware and software integration, and the development, implementation and evaluation of computer programs.

Year 11 Course – 120 hours	HSC Course – 120 hours
Programming Fundamentals 40% • Software development • Designing algorithms • Data for software engineering • Developing solutions with code **The Object -Orientated Paradigm 40%** • OOP • Understanding OOP • Programming in OOP **Programming Mechatronics 40% .** • Mechatronics hardware and software • Control algorithms • Building mechatronic systems	**Secure Software Architecture 30%** • Designing software and secure code • Impact of safe and secure software development **Programming for the Web 30%** • Data transmission using the web • Designing web applications **Software Automation 30%** • Algorithms in machine learning • Programming for automation • Significance and impact of ML and AI **Software Engineering Project 30%**

Year 12 Software Project forms more than 45% of internal HSC assessment & a HSC 3 hour written exam.

Textiles and Design

The Year 11 course concentrates on skills acquisition in the focus areas of apparel, non-apparel, textiles art, costume and furnishings. Practical experiences integrate a range of skills and experimentation in construction, decoration and colouration of textiles. Students apply sources of inspiration in their designs to create and produce unique products. Communication methods for the supporting documentation are also studied. The HSC course builds upon the Year 11 course and involves the completion of a Major Textiles Project which is specific to a chosen focus area of their choice and includes 12 pages of supporting documentation.

No prior sewing skills are required as the Year 11 course will focus on building these skills.

Year 11 Course	HSC Course
Design - 40% • Principles and element of design • Contemporary designers **Properties and Performance of Textiles - 50%** • Fabric, yarn and fibre classification • Appropriate choice of fabrics for textile project **The Australian Textiles, Clothing, Footwear and Allied Industries (TCFAI) - 10%** • Sectors of the industry • Manufacturing processes	**Design - 20%** • Historical design development • Cultural factors that influence design **Properties and Performance of Textiles - 20%** • Innovations & emerging technologies **The Australian Textiles, Clothing, Footwear and Allied Industries - 10%** • Current issues • Environmental and sustainable practices **Major Textiles Project - 50%**

50% of the HSC score comes from the Major Textiles Project, 50% from a 1.5 hour written exam.