



TASMANIAN QUALIFICATIONS AUTHORITY
in conjunction with



Department of
Economic Development

A NEW SENIOR SECONDARY SCHOOL SUBJECT FOR TASMANIA

The Tasmanian Qualifications Authority and the national Manufacturing Industry Skills Council (Manufacturing Skills Australia) are co-operating on the development of a course framework for a proposed new senior secondary level 5 subject covering manufacturing knowledge and practice. A key feature of the subject will be that its delivery will require the development of active collaboration between schools/colleges and local manufacturing enterprises

The new subject will be known as Manufacturing Studies and will provide students with an opportunity to understand technical aspects of manufacturing including the basic principles of modern manufacturing practice.

WHY HAVE A MANUFACTURING SUBJECT?

Manufacturing in the second largest industry sector in the Australian economy, producing 11% of GDP in 2004/05. It is the largest single industry sector in Tasmania employing 24,000 people and contributing 14.6%, or approximately \$2 billion, to the state's economy (Department of Economic Development). Food and beverage manufacturing is the largest component of the sector, with metal product manufacturing being the second, followed by wood and paper product manufacturing.

There are significant skill shortages in manufacturing and access to skills and labour remains a dominant issue affecting the industry's growth and development. The sector is keen to encourage young people to consider a career in manufacturing.

MANUFACTURING STUDIES

"The manufacturing sector in Tasmania is an exciting and innovative career option for all students. Tasmanian manufacturing enterprises need qualified people with a sound educational background in engineering, technology, design, communications or systems management. It is a particularly exciting career for women who, with their often recognised capable management abilities, are essential in the future success of this sector." Diane Tompson, Managing Director, PowerCom; 2005 Telstra Tasmanian Business Women of the Year; Chair, Tasmanian Learning and Skills Authority.

NATIONAL AND STATE DEVELOPMENTS

This course has grown out of a national initiative managed by Manufacturing Skills Australia, to develop manufacturing oriented school based education. The initiative also includes a new Certificate II in Manufacturing Technology, about to be endorsed nationally and suitable for delivery in schools.

The Tasmanian Department of Economic Development is actively promoting skill development in the manufacturing sector. One of its recent initiatives is manufacturing workplace open days whereby students are given the opportunity to visit manufacturing sites to highlight career opportunities that exist within the manufacturing sector. In launching these visits, Minister for Economic Development, Bryan Green said the Open Day gave students a chance to see the many diverse and skilled roles that are required in manufacturing. *"We need to show students that the manufacturing industry is a highly innovative industry with many exciting career options that require a highly skilled workforce"*. (Press release of 11 May 2006)

The development of this new subject is compatible with expected Post Year 10 developments. It is a focussed study consistent with the idea of quality learning with a future focus in a way connecting the school with the broader community.

WHY SHOULD STUDENTS STUDY MANUFACTURING STUDIES?

This new subject is aimed at higher achieving senior secondary students who might pursue careers in: manufacturing management, engineering, laboratory technology, production, marketing, logistics, science, communications technologies, business, maintenance management and product design. Manufacturing Studies would complement existing TCE Level 5 subjects such as mathematics, design graphics, physics, chemistry, economics and technology subjects.

By providing students with an opportunity to study the art and science of manufacturing, students will receive a head start in one of the major industry sectors in Tasmania; one that has career opportunities at every level and excellent preparation for a range of university studies. The subject will be at TCE level 5 with quality assurance comparable with other subjects (TCE subjects, TQA accredited courses and UTAS High Achiever Program) that contribute to students' Tertiary Entrance Ranks.

The subject will provide hands-on opportunities for students to study real workplace issues and develop relationships with personnel in local enterprises. It will build transition skills to further study and a range of occupations.

WHAT DOES MANUFACTURING STUDIES COVER?

Manufacturing is involved in a very wide range of businesses, including light and heavy engineering, electrical / electronics, marine, food & beverage, metals, mineral products, furnishing, printing & publishing, furniture, textiles, clothing & footwear and machinery & equipment. Its unique characteristic is the transformation of raw materials into products.

Manufacturing Studies units are likely to include:

- Introduction to manufacturing as an activity
- Principles of competitive manufacturing practice
- Profit, waste and value in manufacturing
- Process capability and quality
- Material and process management
- Design in manufacturing
- Manufacturing and the community

WHERE ARE WE UP TO IN THE DEVELOPMENT?

The TQA has developed a draft course framework based on discussions with Manufacturing Skills Australia, local enterprises, the University of Tasmania and some schools and colleges. We are also talking to local enterprises about their interest in partnering with schools and colleges to implement the subject.

HOW WILL THE NEW SUBJECT BE IMPLEMENTED?

The TQA will support the implementation during the first 12 months. Once schools / colleges indicate an interest, the TQA will identify local enterprises willing to form partnerships. Manufacturing Skills Australia will provide two days of professional development for teachers intending to deliver the subject. The Department of Economic Development will finance the delivery of Lean Manufacturing workshops in each of the three regions for students and teachers to attend. The TQA is also talking with the University of Tasmania about students undertaking some of their project work in the engineering faculty of the university. The TQA will facilitate combined industry and school / college forums in Hobart and Launceston on 16 and 17 August 2006 respectively.

FOR FURTHER INFORMATION

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