

Graduate Attributes / Program Learning Outcomes

The graduate of this course will have developed the following knowledge and skills:

1. KNOWLEDGE AND SKILL BASE

- 1.1. Descriptive, formula-based understanding of the underpinning science and engineering fundamentals applicable to mechanical engineering
- 1.2. Procedural-level understanding of the mathematics and computer science concepts which underpin mechanical engineering
- 1.3. In depth practical knowledge and skills in mechanical engineering
- 1.4. Awareness of current research and emerging technologies in mechanical engineering
- 1.5. Knowledge and understanding of contemporary workplace practices in mechanical engineering

2. ENGINEERING APPLICATION ABILITY

- 2.1. Application of problem-solving techniques to conceptualise a solution to a mechanical engineering problem
- 2.2. Application of analysis, design and implementation techniques to mechanical subsystems.
- 2.3. Application of established technical and practical methods to assess the adherence of designed and finished products to specification, regulations and contract details.
- 2.4. Application of established technical and practical methods to assist with commissioning of mechanical equipment, and in supervising operations and maintenance.
- 2.5. Application of project management techniques to actively participate in the management of engineering projects.
- 2.6. Application of established technical and practical methods to collect information, perform calculations and use computers to produce designs, detailed drawings and documentation of mechanical systems.

3. PROFESSIONAL AND PERSONAL ATTRIBUTES

- 3.1. Effective participation in team activities and be able to evaluate his/her contribution
- 3.2. Effective communication with the engineering team and the operational staff as well as the broader community
- 3.3. Understanding of and commitment to professional and ethical responsibilities
- 3.4. Creative, innovative and pro-active demeanour
- 3.5. Professional use and management of information
- 3.6. Orderly management of self and professional conduct

Note: These graduate attributes are aligned with the Australian Qualifications Framework level 6 and TAFE SA Graduate Attributes.

They also reflect and are mapped against the [Engineers Australia](#)'s Stage 1 Competency Standard for Engineering Associate.