



Australian Institute  
of Advanced Studies



Σ



**MEM60112 - Advanced Diploma of Engineering**

Get technical at the

# AIAS School of Engineering

All facets of modern society are affected by **the work of engineers**, from satellites, aircraft, drones, 3D printing, mobile technology and renewable energy right down to Polaroid glasses, Velcro and the common clothes peg. Engineers will be vital in the fight to clean up polluted water supplies and develop strategies to deal with climate change.



MEM60122 | CRICOS: 089996D

# Advanced Diploma of Engineering



On completion of this course you may be a part of the design team for the next supersonic aircraft or energy efficient transport systems or developing new manufacturing equipment. This course equips you with the skills of an Engineering Technician. You will learn how to use design calculations, materials, manufacturing processes, 3D modelling and detail drafting to produce a diverse range of technologies for today and tomorrow in various engineering disciplines including; medical, civil, structural, manufacturing, electrical etc.

This two year full time (or part time) course is designed to give you a broad understanding of the concepts and processes to make you a valuable member of an engineering team as an Engineering Technician.



## Pathways & Further Study

The successful completion of this course leads to industry positions in, mechanical, manufacturing, civil/civil structural and electrical industries as Design Draftsman, Engineering Technician, Estimator, Detailers and other technical positions. This course serves as a stepping stone towards practical employment opportunities and also paves the way for future educational pursuits in the field of Engineering at some of the premier universities in Australia.

## Course Requirements

To be awarded an Advanced Diploma of Engineering, competency must be achieved in thirty (30) units of competency, plus one prerequisite unit (MEM13015 Work safely and effectively in manufacturing and engineering).

# Course Overview



## Where can I study?

BRISBANE CAMPUS  
MOUNT GRAVATT

24 MAX CLASS SIZE



## Course start dates

FEBRUARY

JULY



## Commitment

FULL TIME

20HRS – 3DAYS P/W

24 MONTHS

## Programs learned:



Autodesk Inventor (Advanced),  
Autocad, HSM, Revit, Navisworks



Vertex  
CAD/PDM



Tekla  
BIM

## Core Units

**MEM16006** ORGANISE AND COMMUNICATE INFORMATION

**MEM16008** INTERACT WITH COMPUTING TECHNOLOGY

**MEM22001** PERFORM ENGINEERING ACTIVITIES

**MEM22002** MANAGE SELF IN THE ENGINEERING ENVIRONMENT

**MEM30007** SELECT COMMON ENGINEERING MATERIALS

**MEM30012** APPLY MATHEMATICAL TECHNIQUES IN A MANUFACTURING, ENGINEERING OR RELATED ENVIRONMENT

**MSAENV272** PARTICIPATE IN ENVIRONMENTALLY SUSTAINABLE WORK PRACTICES

## Elective Units

**MEM09155** PREPARE MECHANICAL MODELS FOR COMPUTER-AIDED ENGINEERING

**MEM09157** PERFORM MECHANICAL ENGINEERING DESIGN DRAFTING

**MEM09204** PRODUCE BASIC ENGINEERING DETAIL DRAWINGS

**MEM12025** USE GRAPHICAL TECHNIQUES PERFORM SIMPLE STATISTICS

**MEM14087** APPLY MANUFACTURED PRODUCT DESIGN TECHNIQUES

**MEM14089** INTEGRATE MECHANICAL FUNDAMENTALS INTO AN ENGINEERING TASK

**MEM12024** PERFORM COMPUTATIONS

**MEM30033** USE COMPUTER-AIDED DESIGN (CAD) SYSTEM TO CREATE AND DISPLAY 3-D MODELS

## Elective Units

**MEM22013** COORDINATE ENGINEERING PROJECTS

**MEM23003** OPERATE AND PROGRAM COMPUTERS AND/OR CONTROLLERS IN ENGINEERING SITUATIONS

**MEM23123** EVALUATE MANUFACTURING PROCESSES

**MEM13015** WORK SAFELY AND EFFECTIVELY IN MANUFACTURING AND ENGINEERING

**MEM09229** READ AND INTERPRET TECHNICAL DRAWINGS

**RIICWD534E** PREPARE DETAILED DESIGN OF CIVIL STEEL STRUCTURES

**MEM23004** APPLY TECHNICAL MATHEMATICS

**MEM23006** APPLY FLUID AND THERMODYNAMICS PRINCIPLES IN ENGINEERING

**MEM23063** SELECT AND TEST MECHANICAL ENGINEERING MATERIALS

**MEM23109** APPLY ENGINEERING MECHANIC PRINCIPLES

**MEM23120** SELECT MECHANICAL MACHINE AND EQUIPMENT COMPONENTS

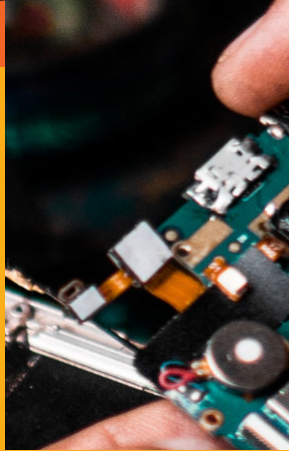
**MEM30005** CALCULATE FORCE SYSTEMS WITHIN SIMPLE BEAM STRUCTURES

**MEM30006** CALCULATE STRESSES IN SIMPLE STRUCTURES

**MEM30025** ANALYSE A SIMPLE ELECTRICAL SYSTEM CIRCUIT

**MEM30031** OPERATE COMPUTER-AIDED DESIGN (CAD) SYSTEM TO PRODUCE BASIC DRAWING ELEMENTS

**MEM30032** PRODUCE BASIC ENGINEERING DRAWINGS



## At the AIAS School of Engineering, you can study this fantastic course:



**MSA30208 Certificate III in Manufacturing Technology**



**MEM40412 Certificate IV in Engineering Drafting**



**MEM50212 Diploma of Engineering - Technical**



**MEM60112 Advanced Diploma of Engineering**

To learn more, email [info@aias.edu.au](mailto:info@aias.edu.au)  
or call **+61 7 3343 8073** and you can visit  
us online at [www.aias.edu.au](http://www.aias.edu.au)