

Diploma of Engineering Studies (DENS) - DipEngStud

The Diploma of Engineering Studies is only available as an exit program. With the approval of the Dean, students who have completed a component of the Associate Degree of Engineering, Bachelor of Engineering Science, Bachelor of Engineering (Honours) or one of its associated combined degrees, Associate Degree of Spatial Science, Bachelor of Spatial Science Technology, Bachelor of Spatial Science (Honours), Associate Degree of Construction or Bachelor of Construction (Honours) programs, and other requirements of the Diploma of Engineering Studies, may be permitted to exit their study with this award.

The major study areas in the Diploma of Engineering Studies are:

Engineering;
Construction Management; and
Spatial Science.

The Diploma of Engineering Studies as an exit point requires the completion of eight academic courses from the chosen specialisation or enrolled program of study as approved by the program coordinator. At least two of these academic courses must be core courses.

Program Aims:

The Diploma of Engineering Studies is an exit program. The program provides students with a core of technical specialised skills and generic skills, common to all branches of either engineering, construction management or spatial science.

Program Objectives:

The objectives of this program are to provide and develop:

- a broad knowledge of engineering, scientific, computing and mathematical methods and techniques;
- the ability to apply problem solving techniques to problems and issues relative to their chosen field;
- a broad cognitive technical knowledge, skills and methodologies in one of the following fields: engineering; construction or spatial science;
- the skills required to gather and utilise information from a range of sources relevant to their field;
- the capability to function effectively as a member of a team and manage time effectively;
- the ability to effectively communicate information to others.

Program Structure

The program consists of eight courses completed within the specialisations of Engineering, Construction Management and Spatial Science. Students must have successfully completed at least two core courses from the core list and up to six courses from the specialisation list within their chosen program and specialisation of study. Eight appropriate courses must have been completed to exit with this award and meet program requirements.

Core courses

The courses that comprise the core studies for selection in the program are listed in the following table:

Core Courses	Units
Core Academic Courses (must complete at least two of the following courses)	
ENG1002 Introduction to Engineering and Spatial Science Applications	1
ENG1101 Introduction to Engineering Problem Solving	1
OR ENG1003 Problem Solving in Engineering and the Built Environment	
OR ENG1004 Engineering and Spatial Science Problem Solving Principles (Note: only one course from this group of three courses can be credited as a core or elective course)	
ENG1100 Introduction to Engineering Design	1
ENM1500 Introductory Engineering Mathematics	1
ENM1600 Engineering Mathematics	1

Specialisations

There are three areas of specialisation in the Diploma of Engineering Studies. Each specialisation: Engineering, Construction Management and Spatial Science, requires the completion of up to six technical courses. Technical courses that have been completed at USQ at a higher level than listed, would be appropriate for inclusion in the program at the program coordinator's discretion. The courses that would form the basis for specialised studies in the program, are listed in the following table:

Engineering specialisation (must complete up to a maximum of six of the following courses):
CIV1500 Applied Mechanics
CIV1501 Engineering Statics
CSC1401 Foundation Programming
ELE1301 Computer Engineering
ELE1502 Electronic Circuits
ELE1801 Electrical Technology
ENG1002 Introduction to Engineering and Spatial Science Applications
ENG1100 Introduction to Engineering Design
ENG1101 Introduction to Engineering Problem Solving OR ENG1003 Problem Solving in Engineering and the Built Environment OR ENG1004 Engineering and Spatial Science Problem Solving Principles (Note: only one course from this group of three courses can be credited as a core or elective course)
ENG2102 Engineering Problem Solving and Analysis
ENM1500 Introductory Engineering Mathematics
ENM1600 Engineering Mathematics
MEC1501 Introduction to Industrial Processes
MEC1201 Engineering Materials

MEC2304 Solid Modelling
SVY1500 Spatial Science for Engineers

Construction Management specialisation (must complete up to a maximum of six of the following courses):
CIV1500 Applied Mechanics
CMG1001 Introduction to Construction Management and the Built Environment
CMG1002 Residential Construction: Methods, Materials and Management
ENG1002 Introduction to Engineering and Spatial Science Applications
ENG1100 Introduction to Engineering Design
ENG1101 Introduction to Engineering Problem Solving OR ENG1003 Problem Solving in Engineering and the Built Environment
ENM1500 Introductory Engineering Mathematics
ENM1600 Engineering Mathematics
LAW1500 Introduction to Business and Company Law
MEC1201 Engineering Materials
SVY1500 Spatial Science for Engineers
URP1001 Introduction to Urban and Regional Planning

Spatial Science specialisation (must complete up to a maximum of six of the following courses):
CIV1501 Engineering Statics
CSC1401 Foundation Programming
ENG1002 Introduction to Engineering and Spatial Science Applications
ENG1101 Introduction to Engineering Problem Solving OR ENG1003 Problem Solving in Engineering and the Built Environment o OR ENG1004 Engineering and Spatial Science Problem Solving Principles
ENG2102 Engineering Problem Solving and Analysis
ENM1500 Introductory Engineering Mathematics
ENM1600 Engineering Mathematics
GIS1401 Geographic Data Presentation
GIS1402 Geographic Information Systems
LAW1500 Introduction to Business and Company Law
SVY1102 Surveying A
SVY1104 Survey Computations A
SVY1110 Introduction to Global Positioning System
URP1001 Introduction to Urban and Regional Planning