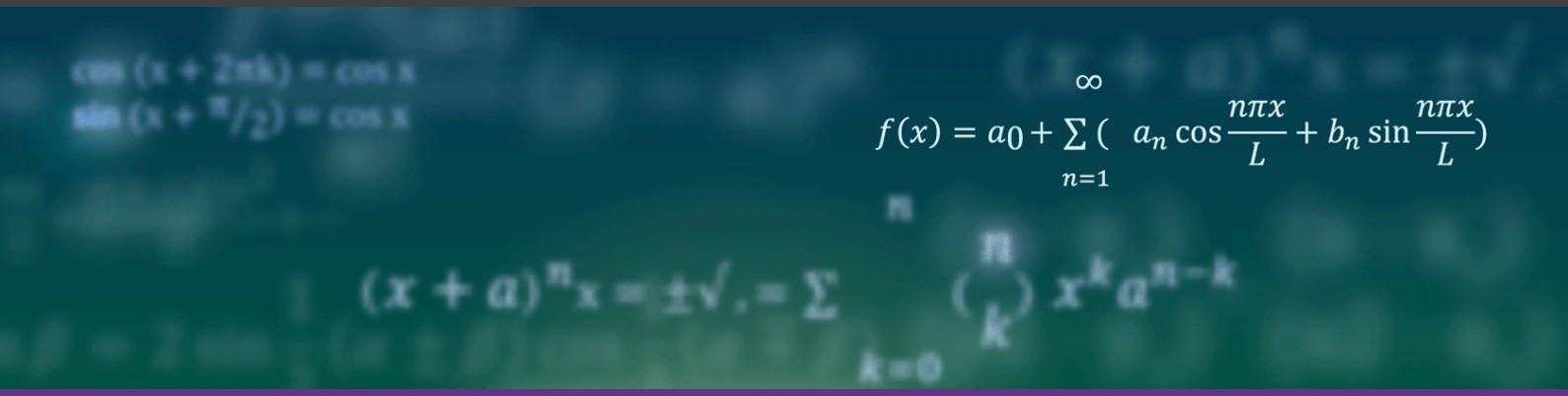

Advanced Mathematics and Engineering Calculus skill set

State ID: GAB95

About this course

Get a handle on advanced mathematics for engineering

The skill set will offer you a unique opportunity to systematically grasp advanced engineering mathematics and numerical methods techniques to innovatively solve engineering tasks.

You will develop analytical problem-solving abilities to carry out engineering design and operations or maintenance activities. It is ideal for those pursuing higher engineering qualifications and careers at para-professional level.

This course is ideal for FIFO workers - talk to us about how you can study this course flexibly.

Gain these skills:

- Develop your underpinning core mathematical skills and essential knowledge in technical mathematics/advanced engineering mathematics;
- Gain advanced engineering abilities to become a qualified engineer;
- Enhance subsequent education choices to transition into a university engineering qualification and career choices;
- Develop your analytical problem-solving skills;
- Identify the key parameters and their effect on system behaviour by solving ordinary differentiation equations (ODEs);

- Visual and interactive job-relevant learning experience of calculus and advanced algebra using MATLAB to find analytical/numerical solutions expeditiously;
- Develop the capability for applying MATLAB as an interactive mathematical analysis tool to support engineering and scientific applications;
- Apply mathematical modelling using MATLAB/SIMULINK for practical & complex engineering problems;
- Demonstrate practical applications of the various mathematical concepts and the associated MATLAB operations to various engineering application areas, e.g. thermodynamics; fluid mechanics; probability and statistical analysis in project management and maintenance, etc.

Dates in 2021:

Semester 1 workshop and lectures: Tuesdays weekly 5pm to 8pm, from 2 February to Tuesday 22 June 2021

Requirements of the course

This course requires both on-campus practical and theory classes; and connectivity to learning management systems for self-paced study.

On-campus practical and theory classes:
For 3 hours every week, you will need to attend workshops and lectures on-campus.

Connectivity to learning management systems for self-paced study:
Once enrolled, you will receive information about how to login to our eCampus. Your study will include 6 to 8 hours a week using Blackboard, where you will access learning content, assignments, lesson plans and pre-reading for classes, at your place of choice, on or off-campus. To access the full suite of software activities, you will need to use College computers at Munster campus.

Course cost:

2021 fees for this course will be published soon.

Overview

This course may be offered with a blended, flexible delivery model to enable social distancing measures to be undertaken during the COVID-19 pandemic. This approach may include a mix of online and classroom based

delivery, as well as practical and work experience placements. Lecturers will provide any specific instructions if your training delivery style needs to change.

All year round, 2021

Munster - Part Time-Self Paced Onsite-Local-Skill Set

When: **All year round**

How: **Part Time**

Prerequisites

Students will need to have studied the unit MEM23004A - Apply technical mathematics prior to undertaking this skill set.

For more information, visit the Applied Engineering and Mathematics skill set page.

Study pathway

Advanced Diploma of Engineering

This skill set forms part of MEM60112 Advanced Diploma of Engineering, which provides pathways towards university entry requirements.