

# COURSE DETAIL

## ENGINEERING MATHEMATICS

**Country**

Australia

**Host Institution**

University of Melbourne

**Program(s)**

University of Melbourne

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Mathematics Engineering

**UCEAP Course Number**

110

**UCEAP Course Suffix****UCEAP Official Title**

ENGINEERING MATHEMATICS

**UCEAP Transcript Title**

ENGINEERING MATH

**UCEAP Quarter Units**

6.00

**UCEAP Semester Units**

4.00

## Course Description

This course introduces important mathematical methods required in engineering, such as manipulating vector differential operators, computing multiple integrals, and using integral theorems. A range of ordinary and partial differential equations are solved by a variety of methods and their solution behavior is interpreted. It also introduces sequences and series, including the concepts of convergence and divergence. Topics explored include vector calculus, including Gauss' and Stokes' Theorems, sequences and series, Fourier series, Laplace transforms, systems of homogeneous ordinary differential equations, including phase plane and linearization for nonlinear systems, second order partial differential equations, and separation of variables.

## Language(s) of Instruction

English

## Host Institution Course Number

MAST20029

## Host Institution Course Title

ENGINEERING MATHEMATICS

## Host Institution Course Details

## Host Institution Campus

Parkville

## Host Institution Faculty

## Host Institution Degree

## Host Institution Department

Engineering

## Course Last Reviewed

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