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 Campus
Parkville

Host Institution Faculty

Host Institution Degree

Host Institution Department
Engineering

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