COURSE DETAIL

CALCULUS 2
Country
Host Institution
Program(s) University of Melbourne
UCEAP Course Level Lower Division
UCEAP Subject Area(s) Mathematics
UCEAP Course Number 15
UCEAP Course Suffix B
UCEAP Official Title CALCULUS 2
UCEAP Transcript Title CALCULUS 2
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description
This course builds on the fundamentals of calculus, introducing students to hyperbolic functions and their inverses, and the complex exponential functions of two variables. Students are exposed to a wider class of differential equation models, both first and second order, to describe systems such as population models, electrical circuits, and mechanical oscillators. The course also covers convergence and divergence. Calculus topics include the intuitive idea of limits and continuity of functions of one variable, sequences, series, hyperbolic functions and their inverses, level curves, partial derivatives, chain rules for partial derivatives, directional derivative, tangent planes and extrema for functions of several variables. Complex exponential topics include definition, derivative, integral, and applications. Integration topics include techniques of integration and double integrals. Ordinary differential equations topics include first order (separable, linear via integrating factor) and applications, second order constant coefficient (particular solutions, complementary functions) and applications.

Language(s) of Instruction
English

Host Institution Course Number
MAST10006

Host Institution Course Title
CALCULUS 2

Host Institution Course Details

Host Institution Campus
Melbourne

Host Institution Faculty

Host Institution Degree

Host Institution Department
Mathematics and Statistics

Course Last Reviewed

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