Course Outline

Title: FURTHER ENGINEERING MATHEMATICS

Code: ENCOR3040

Faculty / Portfolio: Faculty of Science and Technology

Level: Advanced

Pre-requisites: (ENCOR2040)

Co-requisites: (ENCOR2031)

Exclusions: Nil

Credit Points: 15

ASCED Code: 039999

Objectives:

After successfully completing this course, students should be able to:

Knowledge:

- **K1.** use differential equations to model physical situations
- **K2.** understand series and their applications
- **K3.** apply the basic concepts of multi-variable calculus

Skills:

- **S1.** apply mathematical concepts to engineering situations
- **S2.** solve engineering problems using mathematical models

Values:

- **V1.** appreciate the use of mathematical concepts to solve engineering problems
- **V2.** recognize the common principles in a variety of engineering applications
- **V3.** appreciate the importance of understanding how integrated engineering systems behave
- **V4.** appreciate learning as a lifelong process

Content:

Topics may include:

- differential equations
- laplace and fourier transforms
- systems of differential equations
- multiple integrals
- sequences and series
- multi-variable calculus

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Assessment:

Assessment Task	Assessment Type	Weighting
Task 1	Assignments and Weekly Quizzes	40% - 60%
Task 2	Examination	40% - 60%

Adopted Reference Style:

Presentation of Academic Work: