Course Guides Part A: Course Overview

Course Title: Advanced Mathematics B

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<th>College</th>
<th>Science, Engineering and Health</th>
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<td>Course Title</td>
<td>Advanced Mathematics B</td>
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<td>Credit Points</td>
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Pre-requisite Courses and Assumed Knowledge and Capabilities

Advanced Mathematics A (Level 3: Assumed Knowledge)

Course Description

The purpose of the Advanced Mathematics B course is to build on the knowledge you acquired in Advanced Mathematics A and equip you with the mathematical skills required for further study leading to tertiary levels in the fields of engineering, applied science and computing. It is a skill-based course that through development of an understanding of integral calculus, complex numbers, aims to provide you with a firm foundation in analysis, problem solving and use of technology in the form of graphic calculators.

Objectives/Learning Outcomes/ Capability Development

Program Capabilities:

This course contributes to the development of the following capabilities:

- Academic English language proficiency
- Solve problems
- Use technology

Learning Outcomes:

At successful completion of this course you should be able to:

1. Define and explain key concepts and perform a range of mathematical routines and procedures in relation to integral calculus and techniques of integration.

2. Apply basic principles of integration to find an area between curves and volumes of revolution.

3. Solve first order and simple second order differential equations.

4. Perform operations over the complex number
5. Represent complex numbers in the Argand plane and in polar form.

6. Determine roots of complex numbers.

7. Utilize graphic calculator capabilities to assist with carrying out routines and procedures in the above topics.

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<tr>
<th>Overview of Learning Activities</th>
<th>The learning activities for this course include contact hours in lecture cum tutorial mode and an equivalent amount of time spent in self-study in completing exercises and assessment tasks.</th>
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<tr>
<td>Overview of Learning Resources</td>
<td>You will be supported in your studies with online resources via myRMIT. This portal gives you access to important announcements, staff contact details, the teaching schedule, assessment timelines and a variety of important teaching and learning materials. You can access online learning tools and content for your program and associated courses at myRMIT <a href="http://www.rmit.edu.au/myrmit">www.rmit.edu.au/myrmit</a>. You are required to purchase a Graphic Calculator.</td>
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<td>Overview of Assessment</td>
<td>Your assessments may include topic tests, take home and/or open book supervised project work and final semester exam.</td>
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