

Ringwood Secondary College
2017 Course Planning Document

VCE Unit 4 Mathematical Methods

Time Allocation

This unit of work will consist of approximately 100 hours of which at least 50 hours will be class time.

To complete this unit of work satisfactorily, students must complete each of the following learning outcomes.

Learning Outcomes

Outcome 1

The student should be able to define and explain key concepts as specified in the content from the areas of study, and apply a range of related mathematical routines and procedures.

Outcome 2

The student should be able to apply mathematical processes in non-routine contexts, including situations requiring problem solving, modeling or investigative techniques or approaches, and analyse and discuss these applications of mathematics.

Outcome 3

The student should be able to select and appropriately use the numerical, graphical, symbolic and statistical functions of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring problem solving, modeling or investigative techniques or approaches.

Assessment Tasks

1. Modelling and Problem Solving Task -Applications of Calculus

Students are required to complete a modelling and problem solving task involving applications of calculus.

Weighting: This task is worth 8.5% of the overall grade

Time allocated to task: 2 periods

Due: Term 3, Week 4

2. Modelling and Problem Solving Task – Probability and Statistics

Students are required to complete a modeling and problem solving task applying their knowledge of probability and statistics.

Weighting: This task is worth 8.5 % of the overall grade

Time allocated to task: 2 periods

Due: Term 3, Week 9

3. Written Examination 1 – Mathematical Methods Exam 1

Students are required to respond to a collection of short-answer and some extended-answer questions covering all areas of the study in relation to Outcome 1. The task is designed to assess students' knowledge of mathematical concepts, their skills in carrying out mathematical algorithms and their ability to apply concepts and skills in standard ways without the use of technology. *(Note: Both exams assess material from Units 3 & 4)*

Weighting: This task is worth 22% of the overall grade

Time allocated to task: 60 minutes

Due: Unit 4 VCAA Written Examinations commence Term 4, Week 4 from 1/11/2017

4. Written Examination 2 – Mathematical Methods Exam 2

Students are required to respond to a collection of multiple-choice questions and extended-answer questions covering all areas of study in relation to all three outcomes, with an emphasis on Outcome 2. The setting panel will assume student access to an approved CAS calculator. The task is designed to assess students' ability to understand and communicate mathematical ideas, and to interpret, analyse and solve both routine and non-routine problems.

Weighting: This task is worth 44% of the overall grade

Time allocated to task: 120 minutes

Due: Unit 4 VCAA Written Examinations commence Term 4, Week 4 from 1/11/2017