

Ringwood Secondary College
2017 Course Planning Document

VCE Unit 4 Specialist Mathematics

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 Functions and graphs, Algebra, Calculus, Vectors, Mechanics and Probability and statistics areas of study, and apply a range of related mathematical routines and procedures.

Outcome 2

The student should be able to apply mathematical processes, with an emphasis on general cases, in non-routine contexts, and analyse and discuss these applications of mathematics.

Outcome 3

The student should be able to select and appropriately use numerical, graphical, symbolic and statistical functionalities 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 or Problem Solving task 1

The student is required to complete modeling or problem-solving task from the Calculus, Probability and statistics areas of study.

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

Time allocated to task: 2 periods

Due: Term 3, Week 5

2. Modelling or Problem Solving task 2

The student is required to complete a modeling or problem-solving task focused on the Functions and graphs, Algebra, Mechanics, Kinematics and Calculus areas of study.

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

Time allocated to task: 2 periods

Due: Term 3, Week 8

3. Written Examination 1

The student is required to apply knowledge and understanding of mathematical concepts, and apply mathematical algorithms and skills, without the use of technology. Students are required to respond to a collection of short-answer questions covering all areas of study in relation to Outcome 1.

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

The student is required to apply knowledge and understanding of mathematical concepts in order to solve routine and non-routine problems. Students are assessed on their ability to interpret, analyse and solve mathematical problems, and communicate mathematical ideas clearly. Students are required to respond to a collection of multiple-choice questions and extended-answer questions covering all areas of the study in relation to all three outcomes, with an emphasis on Outcome 2. A CAS calculator is required for this examination.

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