**MATHEMATICS C**

**Subject Code:** MAC

**HEAD OF DEPARTMENT:**  *Sharyn Crookes*

**SUBJECT OUTLINE:**
Mathematics plays an important role in many developments and decisions made in industry, commerce, government policy and planning and has been central to nearly all major scientific and technological advances. In Maths C, students are given the opportunity to develop their full mathematical potential and extend the knowledge acquired in Mathematics B. Students will be encouraged to recognise the dynamic nature of mathematics through problem solving applications in life-related situations. The additional rigour and structure of the mathematics required in Maths C, will equip students with valuable skills which will serve them in more general contexts, and provide an excellent preparation for further study of mathematics and other tertiary courses, for example Engineering, Information Technology, Economics, Finance. Maths C is a highly desirable preparatory course for students who intend pursuing a career involving the study of mathematics at a tertiary level.

The syllabus contains both Core and Option topics. A course of study in Maths C contains six topics and a minimum of two Option topics. Core topics are:

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<th>• Introduction to groups</th>
<th>• Vectors and applications</th>
<th>• Real and complex number systems</th>
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<tr>
<td>• Calculus</td>
<td>• Matrices and applications</td>
<td>• Structures and patterns</td>
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This school has chosen Dynamics and Conics as the Option Topics. Students should have attained a High or Very High Achievement in Year 10 Extension Mathematics or show evidence of working at a higher level. Past experience indicates students who have achieved less than a High Achievement find Mathematics C difficult. Enrolment in Mathematics B is a prerequisite for the study of Mathematics C. Homework is set regularly and students should do 30 to 40 minutes per night after each lesson.

**ASSESSMENT OUTLINE:**
The course is assessed by exams and assignments. Students may be assessed in a variety of ways. The assessment techniques include supervised tests and problem solving tasks such as investigations, projects and written reports. There are three assessment items per semester. Student achievement will be judged on three criteria:

- Knowledge and Procedures
- Modelling and Problem Solving
- Communication and Justification

**CAREER PATHWAYS:**
A sound achievement in Mathematics assures students of entry level into various occupations. For specific subject requirements for University courses please consult the appropriate handbook.

**COSTS:**
Included in Resource Hire Scheme

**STUDENT REQUIREMENTS/PREREQUISITES:**
Graphics calculator, exercise pad, ruler, protractor, compasses and Mathomat.