



**IONA**  
PRESENTATION COLLEGE

# 2017

## Mathematics



## LEARNING AREA SUMMARY

The study of mathematics is not only an essential component in the study of many other disciplines, it also has its own status as a creative art. At Iona Presentation College, we hope that students will learn to appreciate both the beauty and power of mathematics.

We aim to educate our students to be able to competently tackle whatever tertiary courses they may choose to study. In addition, we aim to prepare our students to achieve a level of competency in mathematics that will enable them to make sensible decisions and predictions about their personal lives and to be able to manage their finances independently. We also aim to equip them with the tools needed to make informed decisions about the many social and scientific issues concerning the global community.

## COURSES

All mathematics courses at Iona are structured around the three content strands outlined in the Australian Mathematics Curriculum: **Number and Algebra, Measurement and Geometry, and Statistics and Probability.**

These courses aim to develop the four proficiency strands of the Australian Mathematics Curriculum : **Understanding, Fluency, Problem Solving, and Reasoning.**

Details of the mathematics courses offered at Iona can be found in the Year 7 – 10 Information Booklet and the Year 11 – 12 Information Booklet, both of which can be found under “Curriculum” on the Home Page.

## TECHNOLOGY

All students have Apple MacBooks, and these are used extensively in classes. In Years 7 to 10, all student textbooks are in electronic form and are linked to review exercises and various helpful websites. In addition, all students in these years have access to Maths Online, both at school and at home. Maths Online is a web-based learning program that integrates home and school learning via the internet. Students have 24-hour access to Maths Online by using a unique user name and password.

Students in Years 7 through to 10 are allowed to use scientific calculators, while students in Year 10 Extension and Years 11 and 12 are allowed to use CAS Calculators.

## EXTENDING STUDENTS

Students at Iona Presentation College are encouraged to participate in the various state and national competitions that are offered, such as the Australian Mathematics Competition, Have Sum Fun Mathematics Competition, Math-O-Quest, and the Mathematics Challenge for Young Australians.

## MATHEMATICS WEEK

Mathematics Week is celebrated at Iona every year, early in Term Three. A theme is chosen for the week and various fun competitions are run for both students and staff. Some of the previous themes chosen include the Olympic Games, Origami and Tessellations. The lunchtime “Quiz Night” is always a highlight, with tables of students competing for movie tickets and other prizes. Competitions are designed to encourage students of all abilities to get involved in some hands-on mathematics.

## STUDENT SUPPORT

As well as the Maths Online resource, the Mathematics Learning Area also offers support in the iCentre on two nights each week. In addition, the early morning “Maths Club” is run four days each week, in which students can get help in a more informal atmosphere.

## **YEARS 7-10 MATHEMATICS COURSES**

In Year 7, all students study the same course. However, in Years 8 to 10, classes are streamed into Extension, Advanced, Standard and General classes in order to better cater to the needs of the students.

## **YEARS 11-12 MATHEMATICS COURSES**

Iona offers classes in the following subjects in Years 11 and 12:

- Mathematics Essential, Mathematics Applications
- Mathematics Methods, and Mathematics Specialist.

## **CAREERS IN MATHEMATICS**

Mathematicians are in high demand in jobs as varied as one could possibly imagine - from creating the algorithms used in making digital special effects in movies to creating the experimental design for testing new drugs to combat cancer.

Some areas of employment are: Actuarial Science, Accounting, Business Management, Computing, Engineering, Investment Analysis, Law, Military, Public Service, Medicine and Life Sciences, Physical Science, Sales and Marketing, and Teaching.

**For further information, go to** <http://www.mathscareers.org.au>

## **OTHER RECOMMENDED WEBSITES**

<http://www.coolmath-games.com/>

<http://mathforum.org/mathmagic>

<http://www-groups.dcs.st-and.ac.uk/~history/>

<http://mathgym.com.au/>