



An Introduction to General Mathematics Stage 6 in the New HSC

The new *General Mathematics Stage 6 Syllabus* replaces the 1981 Mathematics in Society and 1989 Mathematics in Practice syllabuses.

The syllabus describes a new course and provides information that includes descriptions of course requirements, assessment weightings for internal and external assessment and examination specifications.

Features of the syllabus

- General Mathematics approaches specific mathematical skills through a range of applications that clearly demonstrate the need for, and use of, these skills.
- Emphasis on the particular application of mathematics to finance and data analysis reflects uses of mathematics that are prevalent in modern society.
- Through the wide range of applications, the needs of individual students may be catered for.
- The HSC course clearly builds on skills, knowledge and understanding gained in the Preliminary course.

Rationale (p 6)

The rationale for General Mathematics has a strong emphasis on the acquisition of mathematical skills, knowledge and understanding that will be of benefit to students both within their HSC pattern of study and in the future. This section highlights the contrast between the applications-based approach taken by the General Mathematics syllabus and the more abstract approach taken by the other Stage 6 mathematics courses.

Aim (p 8)

The statement of aim is brief and focuses on the direct application of mathematical skills and techniques to the broad range of human activity.

Objectives (p 8)

The objectives are in line with, and build upon, the objectives of the Stage 5 Mathematics courses.

Course Structure (p 9)

The course content is presented in five areas of study, aspects of which are studied in each of the Preliminary and HSC courses. Within each area of study, units of work focus on specific skills, knowledge and understanding. There are no options in either the Preliminary or HSC course.

Outcomes (pp 10-11)

The development of outcomes for the course is in line with the outcomes-based approach to teaching and learning that is evident in all Mathematics syllabus documents K-12. The outcomes are differentiated between the Preliminary and HSC courses, and are clearly linked to the course objectives and content.

Content (pp 13-78)

The scope and depth of course content is made clear by the description of the skills, knowledge and understanding that students will acquire. It is this described content that will be assessed and examined.

The Preliminary course contains units of work in each of the five areas of study:

- Financial Mathematics
- Data Analysis
- Measurement
- Probability
- Algebraic Modelling.

Within each unit of work, the mandatory content is clearly stated. Advice is also given about terminology introduced in each unit and the way(s) in which technology may be used in the teaching and learning of the unit. A short list of suggested applications and modelling tasks accompanies each unit.

Indicative hours provide advice on the depth required by these areas of study.

The structure of the HSC course is similar to that of the Preliminary course. Content builds on skills, knowledge and understanding gained in the Preliminary course.

Course Requirements (p 79)

The content for General Mathematics is fully prescribed. There is no intention that equal time be allocated to each area of study.

Assessment (pp 81-87)

The internal assessment of General Mathematics reflects the applications-based approach taken by the syllabus. Teachers are advised to use a range of assessment tasks in both the Preliminary and HSC courses to generate their assessment marks. Up to 30% of the HSC assessment may be based on material from the Preliminary course.

What is needed to teach this subject?

- General Mathematics Stage 6 Syllabus (1999)
- General Mathematics Stage 6 Support Document
- General Mathematics 2001 HSC Specimen Paper; Sample Marking Guidelines; Draft Performance Bands
- The New Higher School Certificate Assessment Support Document
- Access to a broad range of applications and modelling tasks.

Various resources are appropriate for use with the new syllabus although there may need to be some adjustment in the way teachers use them.

A list of a number of print and electronic resources, as well as five sample spreadsheets, is on the Board's website, <http://www.boardofstudies.nsw.edu.au>.

There is a website dedicated to the New HSC: <http://www.newhsc.schools.nsw.edu.au>. Materials from cross-sectoral professional development workshops for General Mathematics are available on this website.

CURRICULUM SUPPORT for Teaching in Mathematics 7-12 – is a publication distributed each term by the Department of Education and Training.

Assessment and Reporting Bulletin - published as a joint venture of the Department of Education and Training, the Catholic Education Commission and the Association of Independent Schools - builds on principles outlined in Board of Studies' newsletters and assessment support materials.