WHAT WILL YOU MAJOR IN?

Your choice of senior level units of study determines your major subject area in the Science Faculty. To satisfy the Science degree regulations, you must include at least 24 credit points of senior level units of study in a single science subject area, such as mathematics. (There are different requirements for a major in other faculties.)

WHY CHOOSE MATHEMATICS?

Mathematics has always been essential in the physical sciences and engineering, but over the last twenty years it has become an ever more important part of the biological sciences, computer science and economics. Many important models are based on modern mathematical research. Examples are the application of stochastic ODE’s in finance and physics; our increased understanding of chaotic behaviour and its application to a wide range of physical phenomena; the development of improved large-scale numerical techniques used on an everyday basis for applications ranging from weather prediction to models of artificial hearts; the application of number theory to cryptography; and the recent developments of general field theories in mathematical physics based on the most profound work in complex analysis and algebraic geometry.

The subject area of mathematics encompasses both pure mathematics and applied mathematics. You may choose units from either or both areas. If you enjoy problem solving, working with computers and using your mathematics to deal with real applications in science, engineering, economics and biology then you should consider enrolling in some Applied Mathematics units. You will attain a high level of mathematical expertise and a good deal of practical computer experience. If you enjoy mathematics for its own sake or want a deeper understanding of the core areas of algebra, analysis, geometry and discrete mathematics you should consider enrolling in some Pure Mathematics units. You will further develop your depth of understanding, logical thinking and problem solving skills. All mathematics units will stand you in good stead in a wide variety of possible careers, for example in computing, finance, telecommunications, research or teaching.

Many students whose main interests lie in fields such as Physics, Chemistry or Computer Science find that units in mathematics complement their other studies very well.

HOW MANY UNITS OF STUDY SHOULD YOU CHOOSE?

To major in mathematics within the BSc degree, you must complete at least 4 senior mathematics units of study (a total of 24 credit points).
Not majoring in mathematics? You can choose any number of units of study in senior mathematics (either pure or applied) to complement your other subjects. You can vary your pre-enrolment choices during the first few weeks of each semester next year – decisions made now are not irreversible. All senior mathematics units are worth 6 credit points and involve 4 contact hours per week.

SENIOR MATHEMATICS UNITS, 2006

Please note the change to 6 credit point units means that that set of of senior mathematics units of study to be given from 2005 is totally disjoint from the 2005 set and any other previous year set of units previously offered.

♥♥♥♥ The New Mathematics Units ♥♥♥♥


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Detailed information about the new senior level units of study in mathematics is viewable from the Senior Mathematics web page.

www.maths.usyd.edu.au:8000/u/UG/SM

Here a draft of the Senior Level Pure and Applied Mathematics and Mathematical Statistics 2006 Handbook can also be viewed. Copies of this handbook will shortly be available from the Senior Mathematics coordinators, whose contact details are provided below. Please read the handbook carefully, and if you have any questions or would like to talk about the various choices open to you, please talk to one of the coordinators. In particular, students intending to enrol in advanced level senior courses are requested to talk to a coordinator about their choice of units.

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