1 Why Study Mathematics?

You may be considering a major in mathematics. Maybe you've already made the plunge. In either case, you must have enjoyed mathematics and now probably would like to learn more. These could be reasons enough. But there are other reasons -- good reasons -- for choosing mathematics as your undergraduate major.

Mathematics is the oldest and most fundamental of the sciences. Ancient societies all over the world discovered and applied mathematical ideas independently. Have you ever used the Pythagorean Theorem? The idea of Pythagorean triples has been around for approximately 4000 years.

Mathematics is also a dynamic, rapidly growing subject that sprouts new ideas, new methods, and new applications every day. Major long-standing problems are being solved one after another, and new ones are being identified all the time. Many of the most exciting developments in the "high tech" revolution depend on mathematical discoveries made since you were born - maybe since you entered high school! For instance, secure web sites use algorithms in which the product of two (very) large prime numbers is used to encrypt a message, and the primes themselves are used to decrypt the message.

In recent years, the use of mathematics has been expanding not only in its traditional territory - the physical sciences and technology - but also into the biological and health sciences, the social and management sciences, and even the humanities. Differential equations have been used in the study of brain waves, and statistics are integral to research in the social and management sciences and the humanities.

There are many ways of becoming a part of all this - opportunities that can lead to enjoyable, productive, and satisfying careers. Declaring a major in mathematics is a good first step.

It should also be said that a major in mathematics can be part of a liberal education par excellence, and in particular can provide a solid base for further study in many other fields such as education, business, engineering, the sciences, and more!