



Module Title:	Fundamentals of Mathematical Sciences
Academic year:	2009 2010
Credit Value:	5.0
Pre- requisites:	None
Assessment:	2 Continuous assessments: 2 given, 15% each Final examination: 70%
Aims	This aim of the module is to provide students with a working knowledge and skill in mathematics relevant to a science related course. Students are expected to develop and demonstrate the ability to carry out mathematical calculations that are used in sports industry and sector and to competently undertake various mathematical operations.
Module Content	Evaluating numerical expressions Manipulating Equations Solving functions Rearranging formulae Using Statistical Calculations Representing statistical information graphically Calculating probabilities

Intended Learning Outcomes:
(September 2007)

At the end of this module the students will be able to:

1. Use a scientific calculator.
2. Carry out calculations using basic arithmetic rules.
3. Identify the difference between accuracy and precision.
4. Calculate the mean, standard deviation and other statistics related to performance analysis within sport.
5. Represent data graphically using histograms, frequency curves and ogives.
6. Describe and apply the laws of probability to relevant events.
7. Calculate probabilities using the Normal Distribution probability distribution.
8. Solve algebraic expressions by applying relevant algebraic rules.
9. Solve linear and non linear equations.
10. Rearrange formulae in terms of a different variable.
11. Explain the concept of a function, and apply log and exponential functions to scientific applications.