Module code	SM-2401			
Module Title	Geometry			
Degree/Diploma	Undergraduate GenNEXT Bachelor degree			
Type of Module	Breadth			
Modular Credits	2	**Total student Workload**	5	hours/week
		Contact hours	2	hours/week
Prerequisite	None			
Anti-requisite	None			

Aims

The module is designed to introduce students who are not majoring in mathematics to the methods and results of Euclidean geometry and their application to a rich variety of plane figures and 3-dimensional solids.

Learning Outcomes

On successful completion of this module, a student will be expected to be able to:

Lower order :	30%	- describe the important properties of triangles, circles, polygons, parallelograms and other special quadrilaterals
Middle order :	60%	- calculate lengths, angles, areas and volumes of various simple geometrical objects; construct a range of simple plane figures using only straight edge and compass; calculate the lengths, angles and areas in elliptic triangles, circles and lunes
Higher order:	10%	- set up, analyse and solve a variety of problems in plane and solid geometry - work independently

Module Contents

- Elementary Euclidean geometry: line segments, rays, angles and triangles; circles, tangents, chords, arcs, secants, sectors and segments; regular polygons; parallelograms and other special quadrilaterals; similarity and congruence; points of concurrency.
- Euclid's postulates; constructions with straight edge and compass; the regular pentagon, the golden mean and the golden rectangle.
- 3-dimensional solids: spheres, cylinders, prisms, cones, pyramids and Platonic polyhedra.
- Spherical geometry: elliptic axioms; area of triangles and lunes; circumference and area of circles.

Assessment	Formative assessment	Tutorial and feedback.
	Summative assessment	Examination: 60%
		Coursework: 40% - 2 class tests (40%)