

Alexandra Secondary College

Course Outline

Semester 2, 2017

YEAR 11/12

SUBJECT: VCE Foundation Mathematics

WEEK	Topic	Learning Focus
Term 3		
1	Area of Study 1: Space, shape and design	Names and properties of common geometric shapes in 2D Language, symbols and conventions for the representation of geometric shapes, including point, line, ray, angle, diagonal, edge, curve, vertex. To review patterns (Tessellations) made with polygons and their existence in nature and applications in architecture. To use ICT to create tessellations in PowerPoint® and to investigate practical uses.
2	Area of Study 1: Space, shape and design	Names and properties of Polyhedrons and other 3D shapes, (solids with curved surfaces). Language, symbols and conventions for the representation of 3D shapes including prism, vertex, face, cone, flat, cross-section and apex. Different views of solids from different perspectives (isometric projections)
3	Area of Study 1: Space, shape and design	Perspective drawings Investigating nets of solids.
4-5	Area of Study 1: Space, shape and design	Interpretation and use of plans, elevations, models and diagrams Draw plan and elevation views Using plan and elevation views to draw oblique projections. Create and modify diagrams, plans, maps and designs using drawing equipment and digital drawing packages (ICT Sketch up.) Develop three dimensional models for objects and produce two dimensional representations
6-7	Area of Study 1: Space, shape and design	Language, symbols and labelling and drawing conventions for diagrams, maps, plans, and models, including key, scale, direction, distance, coordinates and grid reference and elevation E.g. Using Melways Interpretation and use of location, distance, direction and scale on diagrams, maps, and plans Interpret information on maps to plan and describe travel routes, including use of navigational software and tools (ICT Google maps)
8	Area of Study 1: Space, shape and design	To identify the application and uses of transformation, similarity and symmetry. To apply Similarity and symmetry to problems in art, design and measurement Enlargement and reduction of diagrams and models
9	Area of Study 1: Space, shape and design	To use Pythagoras Theorem in various practical situations

WEEK	Topic	Learning Focus
10	Area of Study 4: Measurement	The meaning and conventions of different metric units, relative scale and conversions, including International System of Units (SI) Interpretation of scales on digital and analogue instruments To review common metric units for length, area, volume, capacity, time, mass, temperature and common derived units.
Term 4		
1	Area of Study 4: Measurement	To review the concepts of tolerance and error To calculate length and area using estimation, approximation and formulas
2-3	Area of Study 4: Measurement	Using formulas to calculate surface area and volume Use formulas to calculate capacity and mass
4	Area of Study 4: Measurement	Calculate and interpret units for duration including 24 hour time and time zones
5	Area of Study 4: Measurement	To apply skills of length and area to house plans (solving workplace measurement problems) (ICT House design)
6		Revision
7		Exam