ST MARY'S COLLEGE

FORM 6

Lower 6 Applied Mathematics

Advanced Level Statistics: Crawshaw & Chambers

4 weeks	Mod 1 Collecting & Describing Data	(a) Sources of Data	• Sampling methods (Section 9a pg 421-430) • Definitions of Population Parameters vs Sample Statistics not defined in book
		(b) Data Collection	• Questionnaires, interviews and observation schedules not in book
		(c) Data Analysis	• Charts, diagrams, frequency, mean, variance (Sections 1a-m, pgs 1-99) • Trimmed Mean not in book
8 weeks to end of term	Mod 2 Managing Uncertainty	(a) Probability Theory	• Sections 3a-d, pgs 168-200
		(b) Random Variables	• Discrete Random Variables (Chapter 4 all sections) • Uniform Distn. (Sec 5a) • Continuous Random Variables (Sec 6a, no integration required Only area by geometry)
		(c) Binomial Distribution	• Binomial Distn (Sec 5b-c, pgs 278-290)
		(d) Normal Distribution	• Normal Distn (Sec 7a–f, 360-389)
11 weeks	Mod 3 Analysing & Interpreting Data	(a) Sampling Distribution & Estimation	• Distn of Sample Mean & Proportion (Sec 9c-d, pgs 436-447) • Unbiased Point Estimates (Sec 9e pg 447) • Confidence Intervals (Sec 9e-g, pgs 449-471)
		(b) Hypothesis Testing	• Chapter 11 all Sections
		(c) t-Tests	• Part of Chapter 11
		(d) Chi Squared Tests	• Intro (Chapter 12 pgs 560-563) • Test for Independence (Sec 12c, pgs-582-588)
		(e) Linear Regression	• Chapter 2 (Sec 2a-b, pgs 119-145)