

CM1015 – Computational Maths Reading List (2025)*

Topic #	TOPIC (2weeks)	BOOK
1	Number Bases	Croft, A. and R. Davison <i>Foundation maths.</i> (Harlow: Pearson, 2016) 6th edition, <u>Chapter 14</u> : Number bases (Croft, from here onwards)
2	Sequences and Series	Croft , Chapter 12: Sequences and series.
3	Modular Arithmetic	Yan, S.Y. <i>Number theory for computing.</i> (Berlin: Springer-Verlag, 2002) 2nd edition. Section 1.2 Theory of divisibility, pp.21–24. Section 1.6 Theory of congruences, pp.111–114, pp.118-127.
4	Angles, Triangles and Trigonometry	Croft , Chapter 22: Introduction to trigonometry.
5	Graph Sketching and kinematics	Croft , Chapter 17: Graphs of functions.
6	Advanced Trig	Croft , Chapter 23 & 24
7	Exponential Functions	Croft , Chapter 19
8	Limits and Derivative	Larson , <i>Precalculus with Limits</i> , Chapter 12: Limits and an introduction to calculus.
9	Vectors & Matrices	Croft Chapter 26: Vectors Larson Chapter 8, sections 1, 2, 3 and 4. Singh, K. <i>Linear algebra step by step.</i> (Oxford, 2014) Chapter 1, sections 1.1–1.2, section 3.1 and section 3.2.2.
10	Probability & Statistics	Croft , Chapter 31: Probability Croft , Chapter 30: Statistics

*This document is student made by collecting the readings from each week in Coursera.

**Week 21 and 22 are reserved for exam revision.