

Lecture Schedule

Term 1 (September – December)

Weeks Lectures	Section(s) of Liebeck	Section(s) of Stewart	Topic(s)	Notes
Week 1 Lectures 1–4	1	1.1, 1.2, 1.3 6.2, 6.3	Sets and proofs (Liebeck) Functions (Stewart) Exponentials and logarithms (Stewart)	Sept 23–27
Week 2 Lectures 5–8	2 3 4	1.4 1.5 1.6	Number systems and decimals (Liebeck) n^{th} roots and rational powers (Liebeck) Tangents, limits, and limit laws (Stewart)	Sept 30–Oct 4
Week 3 Lectures 9–12	5	2.1, 2.2	Inequalities (Liebeck) Derivatives (Stewart)	Oct 7–11
Week 4 Lectures 13–16	6	2.3, 2.4 6.2, 6.4	Complex numbers (Liebeck) Differentiation formulas (Stewart) Derivatives of trig, exp, log functions (Stewart)	Oct 14–18
Week 5 Lectures 17–20	7	2.5	Polynomial equations (Liebeck) Chain rule (Stewart)	Oct 21–25
Week 6 Lectures 21–24	8	2.6 11.10	Mathematical induction (Liebeck) Implicit differentiation (Stewart) Taylor series (Stewart)	Oct 28–Nov 1
Week 7 Lectures 25–28	9	6.1 6.6, 6.7	Applications of induction (Liebeck) Inverse functions and their derivatives (Stewart) Hyperbolic functions (Stewart)	Nov 4–8
Week 8 Lectures 29–32	10 11	3.1, 3.2, 3.3	The integers (Liebeck) Prime factorisation (Liebeck) Applications of differentiation (Stewart)	Nov 11–15
Week 9 Lectures 33–36	11 12	12.2 12.3	More on prime numbers (Liebeck) Vectors (Stewart) The Dot Product (Stewart)	Nov 18–22
Week 10 Lectures 37–40	13 14	12.4	Congruence of integers (Liebeck) The Cross Product (Stewart)	Nov 25–29
Week 11 Lectures 41–44	14 15	12.5	More on Congruence (Liebeck) Secret codes (Liebeck) Equations of Lines and Planes (Stewart)	Dec 2–6

Term 2 (January – March)

Lecture(s)	Section(s) of Liebeck	Section(s) of Stewart	Section(s) of Poole	Topic(s)	Notes
Week 1 Lectures 45–48			1.1 - 1.3, 2.1 - 2.3 Notes online	Elementary row operations (Poole) Systems of linear equations (Poole)	Jan 13–17
Week 2 Lectures 49–52	16		3.1 - 3.3 up to thm 3.25 Notes online	Counting and choosing (Liebeck) Matrix algebra (Poole) Inverse of a matrix (Poole)	Jan 20–24
Week 3 Lectures 53–56	17	4.1, 4.2 4.4, 7.7		More on sets (Liebeck) Introduction to integration (Stewart) Approximate integration (Stewart)	Jan 27–31
Week 4 Lectures 57–60	18	3.9, 4.3 6.1, 6.4 6.6, 6.7		Equivalence relations (Liebeck) Fundamental Thm of Calculus (Stewart) Inverse, log, exp, hyperbolic funs (Stewart)	Feb 3–7
Week 5 Lectures 61–64	19	4.5, 7.1 7.2, 7.3 7.4, 7.5, 7.8		Functions (Liebeck) Techniques of integration (Stewart) Improper integrals (Stewart)	Feb 10–14
Week 6 Lectures 65–68	20	5.1, 5.2 5.3, 8.1 8.2		Permutations (Liebeck) Area and volume (Stewart) Arc length, surfaces of revolution (Stewart)	Feb 17–21
Week 7 Lectures 69–72	21	10.1, 10.2 13.1, 13.2		Infinity and countability (Liebeck) Parametric equations (Stewart) Vector functions (Stewart)	Feb 24–28
Week 8 Lectures 73–76	25 26	9.1 9.3		Groups (Liebeck) Intro. to differential equations (Stewart) Separable diff. equations (Stewart)	Mar 2–6
Week 9 Lectures 26 77–80	25	9.5 17.1		More on groups (Liebeck) Integrating factors (Stewart) Second order diff. equations (Stewart)	Mar 9–13
Week 10 Lectures	26	17.2 17.3		Even more on groups (Liebeck) Inhomogeneous diff. equations (Stewart) Applications of diff. equations (Stewart)	Mar 16–20
Week 11 Lectures 85–88				Review	Mar 23–27