

Lecturer David Silvester ◦ (John Parkinson ●)
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Office Hour Monday 10.00am to 11.00am (<https://zoom.us/j/4730677767>)

Synchronous classes

Tuesday 12–1 Weekly review session
Wed/Thur 11-12 Examples class (one per week)

Assessment

Test in week 5 10%
Test in week 8 10%
Final Exam 80%

Useful book

★ L. Bostock and S. Chandler, *Applied Mathematics I*, ISBN-13:978-0859500197.

Outline syllabus

- *Dynamics* I. Newton's laws for motion in a line. Concepts of mass, force, weight, momentum, power, kinetic energy, work as an integral. Impulses, collisions, conservation laws, connected particle problems.
- *Dynamics* II. Newton's laws for general motion in vector form. Position, velocity and acceleration vectors. Power and kinetic energy as scalar products. Free motion under uniform gravity. Motion in a circle with constant speed. Simple harmonic motion.
- *Statics*. Forces and moments. Particles and rigid bodies under systems of coplanar forces. Laws of friction. Centre of mass.