MATH1021: Calculus of One Variable - Course Information

Unit: MATH1021: Calculus of One Variable (3 CP)

Mode: Normal-Day

On Offer: Yes

Level: Junior

Faculty/School: School of Mathematics and Statistics

Unit Coordinator/s:

Session options: Semester 1

Campus: Camperdown/Darlington

Pre-Requisites: None.

Prohibitions: MATH1011 OR MATH1901 OR MATH1906 OR MATH1111 OR ENVX1001 OR MATH1001 OR MATH1921 OR MATH1931.

Brief Handbook Description: Calculus is a discipline of mathematics that finds profound applications in science, engineering, and economics. This unit investigates differential calculus and integral calculus of one variable and the diverse applications of this theory. Emphasis is given both to the theoretical and foundational aspects of the subject, as well as developing the valuable skill of applying the mathematical theory to solve practical problems.

Topics covered in this unit of study include complex numbers, functions of a single variable, limits and continuity, differentiation, optimisation, Taylor polynomials, Taylor's Theorem, Taylor series, Riemann sums, and Riemann integrals.

Assumed Knowledge: HSC Mathematics Extension 1. Students who have not completed HSC Extension 1 Mathematics (or equivalent) are strongly advised to take the Extension 1 Mathematics Bridging Course (offered in February).