UNSW SCIENCE

School of Mathematics and Statistics

Course outline

MATH3431

Number Theory

Term 1, 2023

Course Information

Assumed knowledge / Pre-Requisite: 12UOC Level 2 Math courses

It is recommended to take it together with MATH3711, which will provide students with very useful complementing knowledge and skills.

Course Aims

The course will cover some basic notions and techniques of number theory. The focus will be on such topics as divisibility, prime numbers, the arithmetic of residues rings, additive properties of integers and their powers and Diophantine approximations. Some applications of number theory

2	Diophantine equations linear Diophantine equations, congruences, the arithmetic functions d and sigma and their average values, perfect numbers, special prime numbers, the prime number theorem.

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An online Module "Working with Academic Integrity" (https://student.unsw.edu.au/aim) is a six-lesson interactive self-paced Moodle module exploring and explaining all of these terms and placing them into your learning context. It will be the best one-hour investment you've ever made.

Plagiarism

Plagiarism is presenting another person's work or ideas as your own. Plagiarism is a serious breach of ethics at UNSW and is not taken lightly. So how do you avoid it? A one-minute video for an overview of how you can avoid plagiarism can be found https://student.unsw.edu.au/plagiarism.

Additional Support

ELISE (Enabling Library and Information Skills for Everyone)

ELISE is designed to introduce new students to studying at UNSW.

Completing the ELISE tutorial and quiz will enable you to:

ƒ analyse topics, plan searches, and organise research for academic writing and other assessee