Specialist Mathematics

Level: Stage 2

Course length: Full year

Credit value: 20 Credits

Advice to students

Specialist Mathematics draws on and deepens students' mathematical knowledge, skills, and understanding, and provides opportunities for students to develop their skills in using rigorous mathematical arguments and proofs, and using mathematical models. It includes the study of functions and calculus.

The subject leads to study in a range of tertiary courses such as mathematical sciences, engineering, computer science, and physical sciences. Students envisaging careers in related fields will benefit from studying this subject.

Specialist Mathematics is designed to be studied in conjunction with Mathematics Methods.

Course overview

Topics:

Topic 1: Mathematical Induction
Topic 2: Complex Numbers
Topic 3: Functions and Sketching Graphs
Topic 4: Vectors in Three Dimensions
Topic 5: Integration Techniques and Applications
Topic 6: Rates of Change and Differential Equations.

Assessment

6 Skills and Applications	50%
1 Folio	20%
Examination (3 hours)	30%

Pathways

Through the study of Specialist Mathematics students gain the insight, understanding, knowledge and skills to follow pathways that will lead them to become designers and makers of technology.

This subject will provide pathways into university courses in mathematical sciences, engineering, computer science, physical science and surveying.