

COURSE DETAIL

VERTICALLY INTEGRATED PROJECT: MATHEMATICAL SOFTWARE

Country

United Kingdom - Scotland

Host Institution

University of St Andrews

Program(s)

University of St Andrews

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Mathematics

UCEAP Course Number

186

UCEAP Course Suffix

B

UCEAP Official Title

VERTICALLY INTEGRATED PROJECT: MATHEMATICAL SOFTWARE

UCEAP Transcript Title

PROJECT: SOFTWARE 3

UCEAP Quarter Units

4.00

UCEAP Semester Units

2.70

Course Description

This Vertically Integrated Project (VIP) develops sophisticated integrated software systems which would allow mathematicians to combine the latest algorithms to solve their problems without needing to understand the details of their implementation. The project includes the following pieces of work: graphs and digraphs (for example, is a graph planar, connected, biconnected, what is its chromatic polynomial), groups and semigroups (for instance, what is the size of a semigroup or group generated by a set of elements, how to compute a presentation of one of these objects), other mathematical algorithms relating to other modules undertaken at St Andrews, and how to represent problems to a computer so they are easy to use and the implementations are as efficient as possible.

Language(s) of Instruction

English

Host Institution Course Number

VP3097

Host Institution Course Title

VERTICALLY INTEGRATED PROJECT: MATHEMATICAL SOFTWARE

Host Institution Course Details

https://www.st-andrews.ac.uk/subjects/modules/catalogue/?meta_semester_sand=2&m...

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Vertically Integrated Projects

Course Last Reviewed

2025-2026

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