COURSE DETAIL

GEOMETRY
Country United Kingdom - Scotland
Host Institution University of Edinburgh
Program(s) University of Edinburgh
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mathematics
UCEAP Course Number 110
UCEAP Course Suffix
UCEAP Official Title GEOMETRY
UCEAP Transcript Title GEOMETRY
UCEAP Quarter Units 4.00
UCEAP Semester Units 2.70

Course Description
The course begins with curves in euclidean space, which have no intrinsic geometry and are fully determined by the way they bend and twist (curvature and torsion). The rest of the course then develops the classic theory of surfaces. This is done in the modern language of differential forms. Surfaces possess a notion of intrinsic geometry and many of the more advanced aspects of differential geometry can be demonstrated in this simpler context. One of the main aims is to quantify the notions of curvature and shape of surfaces. The culmination of the course is a sketch proof of the Gauss-Bonnet theorem, a profound result which relates the curvature of surfaces to their topology.

Language(s) of Instruction
English

Host Institution Course Number
MATH10074

Host Institution Course Title
GEOMETRY

Host Institution Course Details
http://www.drps.ed.ac.uk/15-16/dpt/cxmath10074.htm

Host Institution Campus
Edinburgh

Host Institution Faculty

Host Institution Degree

Host Institution Department
Mathematics

Course Last Reviewed
2023-2024

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