COURSE DETAIL

COMBINATORICS & NUMBER THEORY
Country Ireland
Host Institution University College Dublin
Program(s) University College Dublin
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mathematics
UCEAP Course Number 107
UCEAP Course Suffix
UCEAP Official Title COMBINATORICS & NUMBER THEORY
UCEAP Transcript Title COMBINATOR&NUM THRY
UCEAP Quarter Units 5.00
UCEAP Semester Units 3.30

Course Description

This course introduces and develops some of the basic ideas in the areas of Combinatorics and Number Theory. Topics include: mathematical induction, permutations and combinations, counting arguments, modular arithmetic, Euclidean algorithm, Fermat's and Euler's theorems, fundamental theorem of arithmetic, systems of linear congruences, and the Chinese remainder theorem. Students learn to recognize, read, and use standard mathematical symbols and notation. Students learn to ask pertinent questions, to decide which questions are relevant, answerable, and so on. Students gain an understanding of the reasoning behind any methods or procedures they use and are able to demonstrate that understanding. Students also learn to produce examples themselves, in order to illustrate a definition, show a method, or test boundaries of an idea.

Language(s) of Instruction
English

Host Institution Course Number
MST10040

Host Institution Course Title
COMBINATORICS & NUMBER THEORY

Host Institution Course Details
https://hub.ucd.ie/usis/!W_HU_MENU.P_PUBLISH?p_tag=MODULE&MODULE=MST10040

Host Institution Campus
UC Dublin

Host Institution Faculty

Host Institution Degree

Host Institution Department
Mathematical Studies

Course Last Reviewed
2024-2025

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