

Applied Mathematics, Mathematics & Education

CAO code: DN200 Option: Mathematical, Physical & Geological Sciences (MPG)



Practical class and teaching mathematics

Sample pathway to become an Applied Mathematics and Mathematics teacher *

YEAR 1

ENGAGE WITH THE PRINCIPLES

EDUCATION

Topics include:

- ▶ Introduction to Mathematics Pedagogy

APPLIED MATHEMATICS

Topics include:

- ▶ Applied Mathematics: Mechanics and Methods
- ▶ Applications of Differential Equations

MATHEMATICS

Topics include:

- ▶ Linear Algebra
- ▶ Numbers and Functions
- ▶ Calculus
- ▶ Mathematical Analysis
- ▶ Statistical Modelling

- ▶ One Small-Group Project
- ▶ Elective Modules

YEAR 2

CHOOSE YOUR SUBJECTS

EDUCATION

Topics include:

- ▶ Education Issues and Ideas
- ▶ Science and Mathematics Pedagogy

APPLIED MATHEMATICS

Topics include:

- ▶ Computational Science
- ▶ Vector, Integral and Differential Calculus
- ▶ Oscillations in Mechanical Systems
- ▶ Classical Mechanics and Special Relativity

MATHEMATICS

Topics include:

- ▶ Calculus of Several Variables
- ▶ Groups, Rings and Fields
- ▶ Linear Algebra

- ▶ Elective Modules

YEAR 3

REFINE YOUR KNOWLEDGE

EDUCATION

Topics include:

- ▶ Collaborative Pedagogy in Mathematics Education
- ▶ Schools and Society

SCHOOL PLACEMENT

- ▶ Post-Primary Placement
- ▶ Peer-Assisted Tutoring
- ▶ Small Group Tutoring

APPLIED MATHEMATICS

Topics include:

- ▶ Analytical Mechanics
- ▶ Fluid Mechanics
- ▶ Partial Differential Equations

MATHEMATICS

Topics include:

- ▶ Probability Theory
- ▶ Financial Maths

YEAR 4

PREPARE FOR PROFESSIONAL PRACTICE

EDUCATION

Topics include:

- ▶ Pedagogical Approaches to Mathematics and Science
- ▶ Psychology for Teaching and Learning

SCHOOL PLACEMENT

- ▶ Year-Long Placement in Post-Primary School
- ▶ Classroom Teaching
- ▶ Broad Experience of Wider School Context

APPLIED MATHEMATICS AND MATHEMATICS

Topics include:

- ▶ Differential Equations with Computer Algebra
- ▶ Geometry
- ▶ Complex Analysis
- ▶ History of Mathematics

BSc Applied Mathematics, Mathematics & Education

YEAR 5

PREPARE FOR PROFESSIONAL PRACTICE

EDUCATION

Topics include:

- ▶ Research Methods
- ▶ Professional Dissertation

SCHOOL PLACEMENT

- ▶ Year-Long Placement in Post-Primary School
- ▶ Experience Both Teaching and Non-Teaching Activities
- ▶ Further Development of Professional Practice Portfolio

MSc Mathematics and Science Education

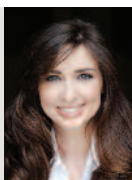
QUALIFIED TO TEACH

Post-Primary School Teacher

Applied Mathematics Leaving Certificate

Mathematics Leaving Certificate

“It is essential that there are more teachers of Mathematics and Science who are knowledgeable and passionate about their subjects. The Science and Mathematics Education pathways in DN200 will contribute to the next generation of well-qualified and innovative teachers.”



Dr Aoibhinn Ní Shúilleabháin, Staff

*See pages 4 and 5 for information on the terminology used above. Potential combinations shown here are examples only and are not guaranteed by UCD. Topics are subject to change each year.



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