

# Applied Mathematics and Mathematics Education

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



## Sample pathway to become an Applied Mathematics and Mathematics teacher \*

**YEAR 1** **ENGAGE WITH THE PRINCIPLES**

EDUCATION <i>Topics include:</i>	APPLIED MATHEMATICS <i>Topics include:</i>	MATHEMATICS <i>Topics include:</i>	
<ul style="list-style-type: none"> <li>Teaching and Learning Mathematics</li> </ul>	<ul style="list-style-type: none"> <li>Applied Mathematics: Mechanics and Methods</li> <li>Applications of Differential Equations</li> </ul>	<ul style="list-style-type: none"> <li>Linear Algebra</li> <li>Numbers and Functions</li> <li>Calculus</li> <li>Mathematical Analysis</li> <li>Statistical Modelling</li> </ul>	<ul style="list-style-type: none"> <li>One Small-Group Project</li> <li>Elective Modules</li> </ul>

**YEAR 2** **CHOOSE YOUR SUBJECTS**

EDUCATION <i>Topics include:</i>	APPLIED MATHEMATICS <i>Topics include:</i>	MATHEMATICS <i>Topics include:</i>	
<ul style="list-style-type: none"> <li>Education Issues and Ideas</li> <li>Science and Mathematics Pedagogy</li> </ul>	<ul style="list-style-type: none"> <li>Computational Science</li> <li>Vector, Integral and Differential Calculus</li> <li>Oscillations in Mechanical Systems</li> <li>Classical Mechanics and Special Relativity</li> </ul>	<ul style="list-style-type: none"> <li>Calculus of Several Variables</li> <li>Groups, Rings and Fields</li> <li>Linear Algebra</li> </ul>	<ul style="list-style-type: none"> <li>Elective Modules</li> </ul>

**YEAR 3** **REFINE YOUR KNOWLEDGE**

EDUCATION <i>Topics include:</i>	SCHOOL PLACEMENT	APPLIED MATHEMATICS <i>Topics include:</i>	MATHEMATICS <i>Topics include:</i>
<ul style="list-style-type: none"> <li>Collaborative Pedagogy in Mathematics Education</li> <li>Schools and Society</li> </ul>	<ul style="list-style-type: none"> <li>Post-Primary Placement</li> <li>University – Peer-Assisted Tutoring</li> </ul>	<ul style="list-style-type: none"> <li>Analytical Mechanics</li> <li>Fluid Mechanics</li> </ul>	<ul style="list-style-type: none"> <li>Probability Theory</li> <li>Financial Maths</li> <li>Geometry</li> <li>History of Mathematics</li> </ul>

**YEAR 4** **PREPARE FOR PROFESSIONAL PRACTICE**

EDUCATION <i>Topics include:</i>	SCHOOL PLACEMENT	APPLIED MATHEMATICS AND MATHEMATICS <i>Topics include:</i>
<ul style="list-style-type: none"> <li>Pedagogical Approaches to Mathematics and Science</li> <li>Curriculum and Assessment</li> <li>Psychology for Teaching and Learning</li> </ul>	<ul style="list-style-type: none"> <li>Year-Long Placement in Post-Primary School</li> <li>Classroom Teaching</li> <li>Broad Experience of Wider School Context</li> </ul>	<ul style="list-style-type: none"> <li>Mathematical Biology</li> <li>Differential Equations with Computer Algebra</li> </ul>

## BSc Mathematics, Applied Mathematics and Education

**YEAR 5** **PREPARE FOR PROFESSIONAL PRACTICE**

EDUCATION <i>Topics include:</i>	SCHOOL PLACEMENT
<ul style="list-style-type: none"> <li>Research Methods</li> <li>Professional Dissertation</li> </ul>	<ul style="list-style-type: none"> <li>Year-Long Placement in Post-Primary School</li> <li>Experience Both Teaching and Non-Teaching Activities</li> <li>Further Development of Professional Practice Portfolio</li> </ul>

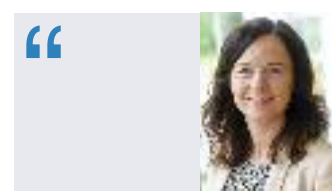
## MSc Mathematics and Science Education

**Post-Primary School Teacher** **QUALIFIED TO TEACH**

Applied Mathematics <i>Leaving Certificate</i>	Mathematics <i>Leaving Certificate</i>



Practical class and teaching mathematics



This degree offers you the opportunity to explore and experience the two worlds of science and education in an integrated manner without compromising one for the other.

Dr Maria Meehan, Staff

\*See page 42 for more information on subject choices. Potential combinations shown here are examples only and are not guaranteed by UCD. Topics are subject to change each year.