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<script>dataLayer.push({'course_title':' Mathematics, Physics and Education (MMS5)});</script>
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<h1 class="pageTitle"> Mathematics, Physics and Education (MMS5) </h1>
<h2> </h2>
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<div style="text-align:center;padding-top:10px;"><p><strong><em>Curricular information is subject to change</em></strong></p></div>
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    <span class="noPrint">Show/hide content</span>
  </p>
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Vision and Values

This programme is aimed at students who want to develop dual, but complementary, identities of mathematician/physicist and pedagogue in order to pursue professional careers as post-primary mathematics, physics and science teachers. We value, and therefore encourage our students to develop, indepth specialist content knowledge in mathematics and physics, which, when combined with strong pedagogical expertise, the skill of critically reflecting on practice, an appreciation and knowledge of educational research, and a commitment to professional development, enables students to develop, and continue to develop throughout their careers, strong pedagogical content knowledge. We value, and therefore encourage our students to foster, a growth mindset and constructivist approach to learning and teaching mathematics, physics and science, in order to be critically engaged professionals committed to inclusive, caring, innovative, enthusiastic and inspirational teaching. We seek to ensure that all students on the programme develop the leadership and collaborative skills to positively impact the quality of post-primary mathematics and science education in Ireland through classroom-based research and ongoing critical engagement with curriculum content. We aim to ensure that graduates are equipped to contribute, as professionals, to the wider educational goals of post-primary schools and ongoing developments within the broader education community. We aim to create a learning environment where students can develop their full potential as mathematician/physicist and pedagogue in a research-intensive environment with state-of-art facilities. School placements play an essential role in the learning experience and assessment methods include reflective writing, report writing, presentations, lesson study, microteaching, and the creation of a professional portfolio. By including school placements from year one, the learning environment will constantly encourage the student to connect mathematical, scientific and educational theory with practice. In addition to lectures, tutorials, and laboratories, many of the education classes are conducted in active-learning environments where students are encouraged to contribute to, and actively participate in, class.

Subject Description

Programme Outcomes

- 1 - * Demonstrate an indepth, specialist knowledge of mathematics and physics
- 2 - * Demonstrate an indepth knowledge of educational theories as related to mathematics and science education
- 3 - * Demonstrate an indepth knowledge of educational philosophy, sociology, psychology, curriculum and assessment, and the Irish education system, and an awareness of how age, culture and context play a role in students' learning
- 4 - * Apply a scientific approach questioning, hypothesizing, testing, and evaluating to problem-solving
- 5 - * Communicate and present mathematical and scientific ideas creatively in a variety of forms (e.g. oral, written, video) with confidence and enthusiasm
- 6 - * Design and plan innovative, student-focused, content-based lessons, while remaining open to noticing and incorporating student thinking, and making in-the-moment decisions, in the classroom
- 7 - * Manage a classroom in a socially equitable manner that encourages the formation of positive student identity and encourages student interactions and contributions
- 8 - * Critically reflect on his/her practice and engage with educational research, in order to consistently take a fresh approach to teaching and developing professionally
- 9 - * Inspire and motivate students of mathematics, physics and science by being inclusive, caring, innovative, enthusiastic and inspirational teachers, who foster a constructivist, reform approach to learning and teaching, and motivate these students to reach their highest potential
- 10 - * Inspire and scaffold students to a high level of engagement with learning as a holistic and life-long endeavour
- 11 - * Recognise the importance of constantly engaging in professional development to improve practice, and using educational research as a lens to engage in reflective practice
- 12 - * Engage positively with the mathematics, physics and science community both inside and outside of educational spheres, and be a positive role model as a UCD graduate of mathematics and physics

Non-standard Progression Requirements

Additional Standards for Continuation

Approved Additional Standards for Continuation in undergraduate degree programmes in Science (all majors):

Students who return failing grades in a semester amounting to 15 credits, or more, will be identified under the UCD Continuation and Readmission Policy. Students whose rate of progression and performance over two academic sessions (2 years) is deemed unacceptable will be referred to the Academic Council Committee on Student Conduct and Capacity for exclusion from the programme.

Understanding your Degree

Mapping your Degree

International Study Opportunities

Career Opportunities

Further Information & Contact Details

Major Information by Stage

Stage 3

Students take 10 core modules. If not taken in Stage 2, STAT20110 must be taken in Stage 3.

Stage 4

Students take 8 core modules.

View All Modules

Module ID	Module Title	Trimester	Credits
Stage 3 Core Modules			
		Autumn	5
		Autumn	5
		Autumn	5
		Autumn	5
		Autumn	5
		Autumn and Spring (separate)	5
		Spring	5
		Spring	5
		Spring	5
		Spring	5
Stage 3 Options - A)MIN00F: If not taken in Stage 2, STAT20110 must be taken in Stage 3 for students registered to Stage 3 Mathematics, Physics and Education.			
		Autumn	5
Stage 4 Core Modules			
		2 Trimester duration (Aut-Spr)	20

View All Modules (continued)

Module ID	Module Title	Trimester	Credits
		Autumn	5
		Autumn	5
		Autumn	5
		Autumn	5
		Spring	5
		Spring	5
		Spring	5
Stage 4 Options - A)MIN2OF: Students must select two modules from the list below.			
		Autumn	5
		Autumn	5
		Spring	5

Degree GPA and Award Calculation Rules

See the UCD Assessment for further details<hr>
Module Weighting Info <a data-toggle="modal" data-target="#hubModal" href="W_HU_REPORTING.P_DISPLAY_QUERY?p_query=CB-MODAL&p_parameters=1CF76AE4799C0C1ACB48799F5B73AA94349688EF07E9C CAF5B6191B7E4E14A026F04D63CE50CACAAB524558C0B8D1ADE2F3DB0A75D2DC660B15F50A4541295C286C2FC5C7421D1A1CEF1A4B3B5 729BE4F37E4ECFAB84CDC8B089483A4CB889BC5F47D249D92CB198B69439B00F610C9639FF543409035BC95EC03B16B3BDACEC898CBEA C65F1919357CF2644CE5D879CAE961F5EF0A42112EC503063C72E257353656CDFEDF3529B952598BD28F214F2227B41D75A4CF12DE68A63 343A3DFFCEC902F0475E5C767DC0A598AEAB3A795B964B96821FB5C551D53E8261AE2D9B6C"><i class="fa fa-info-circle las la-info-circle" style="font-size:20px;color:#007eb5">

		Award		GPA	
Programme	Module Weightings	Rule Description	Description	>=	<=
BHSCI001	Stage 4 - 70.00% Stage 3 - 30.00%	Standard Honours Award	First Class Honours	3.68	4.20
			Second Class Honours, Grade 1	3.08	3.67
			Second Class Honours, Grade 2	2.48	3.07
			Pass	2.00	2.47

<div class="pageBreak"><nav class="white-box no-left-arrow zero-top-margin">
<h1 class="printOnly"> UCD Course Search
Mathematics, Physics and Education (MMS5) </h1><h3 class="printOnly">Academic Year 2019/2020</h3> <p class="printOnly">The information contained in this document is, to the best of our knowledge, true and accurate at the time of publication, and is solely for informational purposes. University College Dublin accepts no liability for any loss or damage howsoever arising as a result of use or reliance on this information.</p>
<h3 class="noPrint"> Mathematics, Physics and Education (MMS5)</h3>

<dl>
<dt>School:</dt>
<dd>Mathematics & Statistics</dd>
<dt>Attendance:</dt>
<dd>Full Time</dd>
<dt>Level:</dt>
<dd>Undergraduate</dd>
<dt>NFQ Level:</dt>
<dd>8</dd>
<dt>Programme Credits:</dt>
<dd>Stage 1
Core/Option: 55
Electives: 5
Stage 2
Core/Option: 50

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Electives: 10
<strong>Stage 3</strong>
Core/Option: 50
Electives: 10
<strong>Stage 4</strong>
Core/Option: 60
Electives: 0
</dd>
<dt>Major/Minor Core & Option Credits:</dt>
<dd>Stage 3: 50
Stage 4: 60
</dd>
<dt>Mode of Delivery:</dt>
<dd>Face-to-Face</dd>
<dt>Programme Director:</dt>
<dd>Assoc Professor Maria Meehan</dd>
</dl>
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fa-fw"> Print Page</button>
<span style="font-size:0.8em"><em>( is recommended when printing this page)</em></span></div>
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