COURSE DETAILS
Course Code: F18GW
Full Course Title: Mathematics Workshop
SCQF Level: 8
SCAF Credits: 15
Available as Elective: No

DELIVERY LEVEL
Undergraduate: Yes
Postgraduate Taught: No
Postgraduate Research: No

COURSE AIMS
To develop students’ core skills in mathematics from level 1, and to enhance subject-specific skills in technical reading and writing, and transferable skills in independent learning and communication.

LEARNING OUTCOMES – SUBJECT MASTERY
By the end of the course, students should be able to:

• be more independent in the way they study and understand rigorous mathematical arguments
• become familiar with more advanced linear algebra and analysis topics
• present mathematical concepts in a clear and precise way

LEARNING OUTCOMES – PERSONAL ABILITIES
• Demonstrate the ability to learn independently
• Demonstrate knowledge of an area of mathematics.
• Manage time, work to deadlines and prioritise workloads

• Working in a group
• Presentation skills and fluency in oral communication.

SYLLABUS
Content. The course will cover a variety of mathematical topics. It will include, but not necessarily be restricted to, topics in: i) advanced linear algebra, naturally building on the knowledge acquired in the first semester course Linear algebra; ii) analysis, deepening and complementing the content of Calculus A and B; iii) applications of linear algebra and analysis to real life problems.

Format. Only a small part of the course (overall roughly one third) will be delivered in the style of a classic taught course. Most of the lectures will be of tutorial-type, gradually aiding the students towards an active, critical and independent way of learning mathematics.
Students will be given regular written and oral assignments, to be completed individually or in group. Marks will be awarded for the quality of the solution and the clarity of the presentation. The purpose of the assignments is to develop analytical skills, deepen the students understanding of core topics, such as linear algebra and analysis, and to learn how to acquire new mathematical knowledge, both independently and through discussions with your peers and with the lecturer.

### COURSE RELATIONSHIPS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Level</th>
<th>Title</th>
<th>School</th>
<th>Type</th>
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<tbody>
<tr>
<td>F17CB</td>
<td>7</td>
<td>Calculus B</td>
<td>School of Math and Comp Sci.</td>
<td>Pre-Requisite</td>
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<td>F17CC</td>
<td>7</td>
<td>Algebra A</td>
<td>School of Math and Comp Sci.</td>
<td>Pre-Requisite</td>
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### LOCATION AND ASSESSMENT METHODS

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<td>Assessment</td>
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