Overview

This course gives an introduction to the theory of stochastic differential equations (SDEs), explains real-life applications, and introduces numerical methods to solve these equations. Stochastic differential equation models play a prominent role in a range of application areas, including biology, chemistry, epidemiology, mechanics, microelectronics, economics, and finance. With the ongoing development of powerful computers, there is a real need to solve these stochastic models. The corresponding SDEs generalise the ordinary deterministic differential equations (ODEs).

Similarly to (deterministic) ODEs, analytical solutions of SDEs are rare, and therefore, numerical approximations have to be developed.
Faculty
Faculty of Science

School
School of Mathematics & Statistics

Study Level
Postgraduate

Offering Terms
Term 1

Campus
Kensington

Delivery Mode
Partially online

Indicative contact hours
4

Timetable
Visit timetable website for details
Course Outline

To access course outline, please visit:

MATH5175 Course Outline
## Fees

<table>
<thead>
<tr>
<th>Category</th>
<th>Fee</th>
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<tbody>
<tr>
<td>Commonwealth Supported Students</td>
<td>$1191</td>
</tr>
<tr>
<td>Domestic Students</td>
<td>$3900</td>
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<tr>
<td>International Students</td>
<td>$5580</td>
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**DISCLAIMER**

Please note that the University reserves the right to vary student fees in line with relevant legislation. This fee information is provided as a guide and more specific information about fees, including fee policy, can be found on the [fee website](#).

For advice about fees for courses with a fee displayed as "Not Applicable", including some Work Experience and UNSW Canberra at ADFA courses, please contact the relevant Faculty.

Where a Commonwealth Supported Students fee is displayed, it does not guarantee such places are available.
Pre-2019 Handbook Editions

Access past handbook editions (2018 and prior)

Pre-2019 Handbook Editions
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Authorised by Deputy Vice-Chancellor (Academic)
CRICOS Provider Code 00098G
ABN: 57 195 873 179