



## ACE Network Subject Information Guide

### C\*-Algebras

Semester 1, 2022

#### Administration and contact details

Host department	School of Mathematics and Applied Statistics
Host institution	University of Wollongong
Name of lecturer	Aidan Sims
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Name of honours coordinator	Marianito Rodrigo
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Name of masters coordinator	Pauline O'Shaughnessy
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#### Subject details

Handbook entry URL	<a href="https://courses.uow.edu.au/">https://courses.uow.edu.au/</a> and search MTST401
Subject homepage URL	Moodle - TBA
Honours student hand-out URL	Moodle - TBA
Start date:	March 3 2022
End date:	June 2 2022
Contact hours per week:	2
Census date:	31 March 2022
Lecture day(s) and time(s):	Thursday 1:30 - 3:30
Description of electronic access arrangements for students (for example, WebCT)	Moodle

#### Subject content

##### 1. Subject content description

We will cover the basics of the theory of C\*-algebras, including spectral theory, Gelfand duality and the commutative Gelfand-Naimark theorem, the continuous functional calculus,



**Learning Outcome Descriptors at AQF Level 8**

**Knowledge**

K1: coherent and advanced knowledge of the underlying principles and concepts in one or more disciplines

K2: knowledge of research principles and methods

**Skills**

S1: cognitive skills to review, analyse, consolidate and synthesise knowledge to identify and provide solutions to complex problem with intellectual independence

S2: cognitive and technical skills to demonstrate a broad understanding of a body of knowledge and theoretical concepts with advanced understanding in some areas

S3: cognitive skills to exercise critical thinking and judgement in developing new understanding

S4: technical skills to design and use in a research project

S5: communication skills to present clear and coherent exposition of knowledge and ideas to a variety of audiences

**Application of Knowledge and Skills**

A1: with initiative and judgement in professional practice and/or scholarship

A2: to adapt knowledge and skills in diverse contexts

A3: with responsibility and accountability for own learning and practice and in collaboration with others within broad parameters

A4: to plan and execute project work and/or a piece of research and scholarship with some independence

**5. Learning resources**

A set of subject notes and exercises will be provided. No additional learning materials are required.

**6. Assessment**

Exam/assignment/classwork breakdown					
Exam	60 %	Assignment	40 %	Class work	0 %
Assignment due dates					
	15 April 2022	03 June 2022			
Approximate exam date					
				11-23 June	

**Institution honours program details**

Weight of subject in total honours assessment at host department	1/8
Thesis/subject split at host department	Thesis worth 50%
Honours grade ranges at host department	
H1	85-100
H2a	75-84
H2b	65-74
H3	50-64



### Institution masters program details

<b>Weight of subject in total masters assessment at host department</b>	1/16
<b>Thesis/subject split at host department</b>	Thesis worth 1/8
<b>Masters grade ranges at host department</b>	
<b>H1</b>	85-100
<b>H2a</b>	75-84
<b>H2b</b>	65-74
<b>H3</b>	50-64