

# What is an Operator Algebra?

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## **Abstract**

These lectures will cover a very brief overview of the basic ideas and results concerning

- $C^*$  algebras.
- Characterisations: The Gelfand-Naimark-Segal theorems.
- Subalgebras of  $C^*$  algebras.
- States and Representations: The Gelfand-Naimark-Segal construction.
- Positivity and complete positivity: Stinespring dilation.

A variety of examples will be presented.