Military Operational Research

MSc/PgDip/PgCert

The course provides a detailed exposure to the context, issues and methods used to analyse the increasingly complex problems which are found in the defence environment and to support decision making. The course is suitable for both military and civilian personnel, including those from defence industry and government departments. ten places are normally available for the full-time cohort. The course provides a detailed exposure to the context, issues and methods used to analyse the increasingly complex problems which are found in the defence environment and to support decision making. It exposes the types of analysis and allows practical experience of tools and methods which are used, ranging from judgemental analysis through mathematical techniques to models and simulations. The course includes judgemental elicitation and analysis techniques, mathematical analysis methods (including optimisation), war gaming and combat modelling, logistics modelling and simulation methods. The use and utility of all the methods are explored through practical exercises and studies. On successful completion of the course you will: demonstrate a thorough understanding of the methods, techniques and tools for modelling defence problems and systems, be able to critically assess a range of approaches and methods to help support defence analysis and decision-making.

Course structure

MSc students must complete a taught phase consisting of 12 standard modules, which includes two core, plus four advanced modules, followed by an individual thesis in a relevant topic.

Individual project

An individual research project on an agreed topic that allows you to demonstrate your technical expertise, independent learning abilities and critical appraisal skills.

Future career

This course equips you for appointments within the armed forces or government, or in the defence related activities of commercial organisations. Successful completion of the course can lead to further research and to a PhD.

Example modules

Modules form only part of the course, with the project(s) and theses making up the balance. Please see the course structure for details.

The list below shows the modules offered in the 2019-20 academic year, to give you an idea of course content. To keep our courses relevant and up-to-date, modules are subject to change – please see the webpage for the latest information.

Compulsory:

- Decision Analysis,
- Discrete and Continuous Simulation,
- Intelligent Systems,
- Introduction to Operational Research Techniques,
- Logistics Modelling,
- Statistical Analysis and Trials,
- War Gaming and Combat Modelling,
- Weapon System Performance Assessment.

Duration:
Full time students: 12 months.
Maximum part time registrations of: MSc five years, PgDip four years, PgCert three years.

Start date:
September.

Location:
Shrivenham.

Entry requirements:
A first or second class Honours degree or equivalent in science, engineering or mathematics. Alternatively, a lesser qualification together with appropriate work experience may be acceptable. If you are an international student you will need to provide evidence that you have achieved a satisfactory test result in an English qualification, with a minimum IELTS of 6.5.

Contact details

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For further information please visit
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