



# Guided Weapon Systems

MSc/PgDip/PgCert

The Guided Weapon Systems MSc is a flagship Cranfield course and has an outstanding reputation within the Guided Weapons community. The course meets the requirements of all three UK armed services and is also open to students from NATO countries, Commonwealth forces, selected non-NATO countries, the scientific civil service and industry. This course is an essential pre-requisite for many specific weapons postings in the UK and overseas forces. It also offers an ideal opportunity for anyone working in the Guided Weapons industry to get a comprehensive overall understanding of all the main elements of guided weapons systems. The main objective of the Guided Weapon Systems course is to bring together the wide variety of disciplines constituting guided weapon systems technology and to present them in an integrated manner. It takes you on to an understanding of the principles of guided weapon systems technology and all interrelated and multi-disciplinary facets involved with the complete systems design process. The course structure is modular in nature with each module conducted at a postgraduate level. The interactions between modules are emphasised throughout. A comprehensive suite of visits to industrial and services establishments consolidates the learning process, ensuring the taught subject matter is directly relevant and current.

## Who is it for?

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It typically attracts 12 students per year, mainly from UK, Canadian, Australian, Chilean, Brazilian and other European forces.

## Course structure

The course comprises a taught phase and an individual project. The taught phase is split into three main phases: Part One (Theory), Part Two (Applications), Part Three (Systems).

## Individual project

Each student has to undertake a research project on a subject related to an aspect of guided weapon systems technology. It will usually commence around January and finish with a dissertation submission and oral presentation in mid-July.

## Future career

Successful students will have a detailed understanding of Guided Weapons system design and will be highly suited to any role or position with a requirement for specific knowledge of such systems. Many students go on to positions within the services which have specific needs for such skills.

## Accreditation

The MSc of this course has been accredited by the Royal Aeronautical Society under licence from the UK regulator, the Engineering Council.

## Example modules

Modules form only part of the course, with the project(s) and these 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:

- Electro-Optics and Infra-red Systems 1,
- Electro-Optics and Infra-red Systems 2,
- Guided Weapon Applications - Control and Guidance,
- Guided Weapon Applications - Propulsion and Aerodynamics Applications,
- Guided Weapon Control Theory,
- Guided Weapon Propulsion and Aerodynamics Theory,
- Guided Weapon Structures, Aeroelasticity and Power Supplies,
- Guided Weapon Systems,
- Guided Weapon Warheads, Explosives and Materials,
- Parametric Study,
- Radar Electronic Warfare,
- Radar Principles,
- Signal Processing, Statistics and Analysis.

### Duration:

MSc: 11 months full-time, up to five years part-time.  
PgDip : up to 11 months full-time, up to four years part-time.  
PgCert: up to 11 months full-time, up to three years part-time.

### 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. Additionally an IELTS score of 7.0 is usually required by students for whom English is not a first language.

### ATAS Certificate:

Students requiring a visa to study in the UK may need to apply for an ATAS certificate to study this course.

## Contact details

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For further information please visit  
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