Cyber Defence and Information Assurance

MSc/PgDip/PgCert

Designed to develop professionals who can effectively manage and exploit the threats and opportunities of cyberspace at the organisational level. The course specifically focuses on responses to serious present and emerging threats in the information domain. The course will specifically focus on responses to serious, present and emerging threats in the information domain. The course enables the student to gain an organisational view of cyber, the domain, the drivers and constraints. Whilst a technical understanding is of value, the course is designed to ensure that the bigger, contextual, aspects of cyber is understood thereby enabling decision making in relation to cyber to be undertaken within an organisation. The course also evaluates the impact of cyber on control systems, leadership and decision making in the command and control environment.

Who is it for?

Students will be government, corporate and critical information infrastructure staff who are one or more of the following:

• Managers or leaders in a cyber environment who need to understand information risk and respond to cyber threats,
• Procurement staff commissioning critical or sensitive projects,
• Policy and planning staff interested in computer network and security operations,
• Those charged with accreditation and assessment of security measures,
• Those holding the positions of, or aspiring to be, Chief Information Officers (CIO) or Chief Information Security Officers (CISO).

Course structure

This course is only offered on a part-time basis and taught through a flexible blend of compulsory residential courses, online Virtual Learning Environment activities and interaction and project based learning. Students are required to begin with the Foundations: Management of Cyber module but then are free to undertake the modules as suited to their own requirements.

Individual project

Students taking the MSc/PGDip must complete a 20 credit project in year two, focused on a work-based problem-solving context. This allows the student to develop and demonstrate the application of knowledge and skills acquired in the taught modules in the context of a continually changing cyber environment and practical problem context.

Future career

This qualification will take you on to become one of the next generation of managers who can understand and effectively manage and exploit the threats and opportunities of cyberspace at the organisational level. Crucially, it will also enable graduates to communicate cyber issues to senior management or executive board level. The course is directly relevant to those wishing to improve their knowledge and skills as, or those aspiring to become, a CIO or CISO.

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:
• Applied Cyber Concepts Project,
• Critical Networks and Process Control,
• Cyber Attack – Threats and Opportunities,
• Cyber Systems Thinking and Practice,
• Foundations: Management of Cyber,
• Incident Management,
• Social Technologies,
• The Human Dimension,
• Understanding Risk.

Elective (choose one):
• Data-led Decision Support,
• Emerging Technology Monitoring.

Duration:
PgCert: up to three years part-time.
PgDip: up to four years part-time.
MSc: up to five years part-time.

(For MOD status students the duration may vary, subject to annual review.)

Start date:
October

Location:
Shrivenham

Entry requirements:
A first or second class honours degree; or 3rd class degree with three years' relevant experience; or pass degree with five years' relevant experience; or HND/C with seven years' relevant experience. Exceptional candidates may be accepted with ten years' relevant experience.

Contact details

T: +44 (0)1793 785220
E: cdsadmissionsoffice@cranfield.ac.uk

For further information please visit
www.cranfield.ac.uk/cdia