

Royal Holloway, University of London
Course specification for a postgraduate award
ENGINEERING MANAGEMENT WITH CYBER SECURITY (3835)

Section 1 – Introduction to your course

This course specification is a formal document, which provides a summary of the main features of your course and the learning outcomes that you might reasonably be expected to achieve and demonstrate if you take full advantage of the learning opportunities that are provided. Further information is contained in the University prospectus, and in various handbooks, all of which you will be able to access online. Alternatively, further information on the University's academic regulations and policies can be found [here](#). Further information on the University's Admissions Policy can be found [here](#).

Your degree course in Engineering Management with Cyber Security provides progressive structures in which you will be able to gain ever-wider knowledge and understanding, and appropriate skills. The course is focussed on the niche area of cyber security which impacts all industries due to the rapid expansion of the digitalisation of business. The course will ensure that students are given a great base knowledge in project management before being given an overview of the key features in cyber security allowing them to understand how the industry and sector works.

Your degree courses at Royal Holloway, University of London, will be delivered over one year, which normally involves modules to the value of 180 credits (which is equivalent to 90 ECTS credits¹).

While Royal Holloway keeps all the information made available under review, courses and the availability of individual modules, especially optional modules are necessarily subject to change at any time, and you are therefore advised to seek confirmation of any factors which might affect your decision to follow a specific course. In turn, Royal Holloway will inform you as soon as is practicable of any significant changes which might affect your studies.

The following is a brief description for some of the most important terminology for understanding the content of this document:

Degree course – Also referred to as 'programme', this term refers to the qualification you will be awarded upon successful completion of your studies. 'Courses' were formerly known as 'programmes' at Royal Holloway.

Module – This refers to the credits you will study each year to complete your degree course. Postgraduate taught degrees at Royal Holloway comprise 180 credits. On some degree courses a certain number of optional modules must be passed for a particular degree title. 'Modules' were formerly known as 'course units' at Royal Holloway.

¹ The European Credit Transfer and Accumulation System (ECTS) is a learner-centred system for credit accumulation and transfer. ECTS credits reflect the total workload required to achieve defined learning outcomes and their associated workload, including teaching hours and guided independent study. 15 UK credits is equivalent to 7.5 ECTS. 30 UK credits is equivalent to 15 ECTS. Further details on ECTS can be found within the [ECTS User Guide 2015](#).

Section 2 – Course details			
Date of specification update	December 2024	Location of study	Central London
Course award and title	MSc Engineering Management with Cyber Security	Level of study	Postgraduate
Course code	3835	Year of entry	2027/28
Language(s) of Tuition	English		
Awarding body	Royal Holloway, University of London		
Department	Physical Sciences and Engineering	Other departments involved in teaching the course	N/A
Mode(s) of attendance	Full time and part time	Duration of the course	One year (52 weeks) full-time Two to five years (104 - 260 weeks) part-time
Accrediting Professional, Statutory or Regulatory Body requirement(s)	N/A		
Link to Coursefinder for further information:	https://www.royalholloway.ac.uk/studying-here/	For queries on admissions:	https://royalholloway.ac.uk/applicationquery

Section 3 – Degree course structure				
3.1 Mandatory module information				
The following table summarises the mandatory modules which students must take in each year of study				
Module code	Module title	Credits	FHEQ level	Module status (Mandatory Condonable MC or Mandatory Non-Condonable MNC)
EE5000	Project by Dissertation	60	7	MNC
EE5001	Project and Programme Management	30	7	MC
EE5004	Technology Innovation and Change Management	30	7	MC
EE5005	Professional Practice	15	7	MC
EE5010	Research Methods	15	7	MC
EE5051	Information Risk Management and Governance	15	7	MC
EE5053	Enterprise Cybersecurity and Data Analytics	15	7	MC
This table sets out the most important information for the mandatory modules on your degree course. These modules are central to achieving your learning outcomes, so they are compulsory, and all students on your degree course will be required to take them. You will be automatically registered for these modules each year. Mandatory modules fall into two categories: 'condonable' or 'non-condonable'. In the case of mandatory 'non-condonable' (MNC) modules, you must pass the module before you can proceed to the next year of your course, or to successfully graduate with a particular degree title. In the case of mandatory 'condonable' (MC) modules, these must be taken but you can still progress or graduate even if you do not pass them. Please note that although Royal Holloway will keep changes to a minimum, changes to your degree course may be made where reasonable and necessary due to unexpected events. For example, where requirements of relevant Professional, Statutory or Regulatory Bodies have changed and course requirements must change accordingly, or where changes are deemed necessary on the basis of student feedback and/or the advice of external advisors, to enhance academic provision.				
3.2 Optional modules				
In addition to mandatory modules, there may be a number of optional modules available during the course of your degree. Although Royal Holloway will keep changes to a minimum, new options may be offered, or existing ones may be withdrawn. For example, where reasonable and necessary due to unexpected events, where requirements of relevant Professional, Statutory or Regulatory Bodies (PSRBs) have changed and course requirements must change accordingly, or where changes are deemed				

necessary on the basis of student feedback and/or the advice of External Advisors, to enhance academic provision. There may be additional requirements around option selection; please contact the Department for further information.

Section 4 - Progressing through each year of your degree course

For further information on the progression and award requirements for your degree, please refer to Royal Holloway's [Academic Regulations](#).

Progression throughout the year/s is monitored through performance in summative or formative coursework assignments. Please note that if you hold a Student Visa and you choose to leave (or are required to leave because of non-progression) or complete early (before the course end date stated on your CAS), then this will be reported to UKVI.

All postgraduate taught students are required to take and pass the non-credit bearing Moodle-based Academic Integrity module SS1001 in order to be awarded. The pass mark for the module assessment is stated in the on-line Academic Integrity Moodle module. Students may attempt the assessment as often as they wish with no penalties or capping. Students who otherwise meet the requirements for award as stipulated in the [Academic Taught Regulations](#) but fail to pass the Moodle-based Academic Integrity module will not be awarded.

Section 5 – Educational aims of the course

The aims of this course are to:

- To provide students with a knowledge of different project management frameworks particularly applicable to infrastructure, development, and operation of information security projects. This will enable students to plan, monitor, and manage also large-scale projects.
- To provide students with sufficient knowledge of key information security concepts and problems such that they can evaluate and assess domain expert opinions related to the subject matter in the project.
- To provide students with an understanding of security management and supply chain assurance processes, permitting them to realise projects able to satisfy requirements from and governance processes driving both domains.
- To support critical thinking and self-directed learning ability in support of continuous professional development also after completion of the course.
- To provide students with the ability to seek out and deepen process and domain knowledge in support of specialised projects which also may require novel adaptations of commonly used practices and methods in information security project management.

Section 6 - Course learning outcomes	
In general terms, the courses provide opportunities for students to develop and demonstrate the following learning outcomes. (<i>Categories – Knowledge and understanding (K), Skills and other attributes (S), and Transferable skills (*)</i>)	
K (Know. & Und.) S (Skills & Att.) T (Transf. Skills)	Course Learning Outcome
K / T	Comprehensive understanding of a range of project management tools and frameworks and their application to information security projects in planning, management, monitoring, and maintenance stages (*)
K	Understand range of risk management frameworks including ISO standards through identification, evaluation and implementation of these within various environments.
K	Gain an advanced knowledge of a variety of tools, techniques and new digital and security approaches applicable to the specific field of global projects and programme management.
K	The articulation of knowledge & understanding of tools, concepts and theories relating to the chosen area of Project Management at an advanced level.
K	Knowledge of key information/cyber security concepts and problems adequate to enable evaluation and assessment of domain expert opinions related to the information security area.
K	Understanding of the relation between information security management and technical information security including how this relates to the managerial aspects of the discipline.
S	The ability to critically develop and evaluate approaches and practices in the fields of project management within information and cyber security domain.
S / T	The ability to analyse, critically interpret and utilise software tools, empirical findings and data. (*)
S/ T	The ability to further develop skills of reflection on reading and learning, and skills in information handling and retrieval, with independent presentation of logical and coherent written and oral arguments*
S/ T	To enhance interpersonal skills and collaborative teamwork, involving recognising and respecting the viewpoints, and interacting constructively with other people *
S / T	The ability to organise and interpret complex data and information through structured and systematic way, and to comprehend and develop sophisticated concepts*

S / T	Enhanced time management and organisational skills including working to deadlines, prioritising tasks, organising worktime. *
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Section 7 - Teaching, learning and assessment

Teaching and learning on your course is closely informed by the active research of staff, particularly in the areas of Electronic Engineering. In general terms, the course provides an opportunity for you to develop and demonstrate the learning outcomes detailed herein.

Teaching and learning is mostly by means of formal but interactive lectures, seminar discussions, oral presentations, lab work, in-class and project management related problem-solving exercises, guided independent research, coursework essays, and a dissertation on management in information security project management and related practice. The basic strategies are to nurture the interest and enthusiasm of the students for the field, to embed the student in frontier knowledge in the field, to develop the students' critical and communication skills and to develop analytical, research, creativity and innovative problem-solving skills. Assessment of knowledge and understanding will be performed through summative coursework in the form of essays, examinations, and a dissertation.

Contact hours come in various forms and may take the form of time spent with a member of staff in a lecture or seminar with other students. Contact hours may also be laboratory or, studio-based sessions, project supervision with a member of staff, or discussion through a virtual learning environment (VLE). These contact hours may be with a lecturer or teaching assistant, but they may also be with a technician, or specialist support staff.

The way in which each module on your degree course is assessed will also vary. Assessments designated as 'summative' will receive a mark which will count towards your overall mark for the module, and potentially your degree classification, depending on your year of study. On successful completion of the module you will gain the credits listed.

More detailed information on modules, including teaching and learning methods, and methods of assessment, can be found via the online [Royal Holloway Curriculum Catalogue](#). The accuracy of the information contained in this document is reviewed regularly by the university and may also be checked routinely by external agencies.

Section 8 – Additional costs

There are no single associated costs greater than £50 per item on this degree course.

These estimated costs relate to studying this particular degree course at Royal Holloway. General costs such as accommodation, food, books and other learning materials and printing etc., have not been included, but further information is available on our website.

Section 9 – Indicators of quality and standards	
QAA Framework for Higher Education Qualifications (FHEQ) Level	7
Your course is designed in accordance with the FHEQ to ensure your qualification is awarded on the basis of nationally established standards of achievement, for both outcomes and attainment. The qualification descriptors within the FHEQ set out the generic outcomes and attributes expected for the award of individual qualifications. The qualification descriptors contained in the FHEQ exemplify the outcomes and attributes expected of learning that results in the award of higher education qualifications. These outcomes represent the integration of various learning experiences resulting from designated and coherent courses of study.	
QAA Subject benchmark statement(s)	http://www.qaa.ac.uk/quality-code/subject-benchmark-statements
Subject benchmark statements provide a means for the academic community to describe the nature and characteristics of courses in a specific subject or subject area. They also represent general expectations about standards for the award of qualifications at a given level in terms of the attributes and capabilities that those possessing qualifications should have demonstrated.	

Section 10– Intermediate exit awards (where available)		
You may be eligible for an intermediate exit award if you complete part of the course as detailed in this document. Any additional criteria (e.g. mandatory modules, credit requirements) for intermediate awards is outlined in the sections below.		
Award	Criteria	Awarding body
PG Diploma	Passes in at least 120 credits, with fails of between 40% to 49% for up to 40 credits condonable (with the exception of any course specific requirements).	Royal Holloway and Bedford New College
PG Certificate	Passes in at least 60 credits with no condonable fails	Royal Holloway and Bedford New College