

Royal Holloway, University of London
Course specification for an undergraduate award
BSc (Econ) Economics and Data Science (L140)

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 College prospectus, and in various handbooks, all of which you will be able to access online. Alternatively, further information on the College's academic regulations and policies can be found [here](#). Further information on the College's Admissions Policy can be found [here](#).

Your degree course in BSc (Econ) Economics and Data Science is delivered in three stages, each of which comprises one year of full-time study during which the student must follow modules to the value of 120 credits.

The curriculum is based around a core of mandatory modules. Stage one provides a foundation for the later stages through a grounding in mathematical and statistical techniques, and in contemporary micro and macroeconomics, and some experience of the application of mathematics to formal economic argument. In stage two, students develop their core economic knowledge further and use increasingly sophisticated analytic methods. Students also develop their statistical and data science skills further at this stage. In stage three, most students have the option to research and write an extended essay. Students also select specialist options which provide the opportunity to learn how the general theory and methods they have acquired can be applied in areas which are of specific interest to them.

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 brief description for some of the most important terminology for understanding the content of this document:

Degree course – May also be referred to as 'degree programme' or simply 'programme', these terms refer to the qualification you will be awarded upon successful completion of your studies.

Module – May also be referred to as 'course', this refers to the individual units you will study each year to complete your degree course. Undergraduate degrees at Royal Holloway comprise a combination of modules in multiples of 15 credits to the value of 120 credits per year. On some degree courses a certain number of optional modules must be passed for a particular degree title.

Section 2 – Course details			
Date of specification update	July 2022	Location of study	Egham Campus
Course award and title	BSc(Econ) Economics and Data Science	Level of study	Undergraduate
Course code	3673	UCAS code	L140
Year of entry	2022/23		
Awarding body	Royal Holloway, University of London		
Department or school	Economics	Other departments or schools involved in teaching the course	N/A
Mode(s) of attendance	Full-time	Duration of the course	Three years
Accrediting Professional, Statutory or Regulatory Body requirement(s)	On completion of the course you may be able to apply for certain CIMA exemptions.		
Link to Coursefinder for further information:	https://www.royalholloway.ac.uk/studying-here/	For queries on admissions:	study@royalholloway.ac.uk .

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										
Year	Module code	Module title	Contact hours*	Self-study hours	Written exams**	Practical assessment**	Coursework**	Credits	FHEQ level	Module status (see below)
1	EC1101	Principles of Economics	79	221	60%	0	40%	30	4	MNC
1	EC1108	Data Skills for Economists	136	164	80%	0	20%	30	4	MNC
1	EC1103	Applied Economics and Policy	79	221	0	0	100%	30	4	MC
1	EC1109	Mathematics for Economics	127	173	0	0	100%	30	4	MNC
1	EC1107	Employability 1	5	45	0	0	100%	0	4	MNC
2	EC2202	Macroeconomics	76	224	60%	0	40%	30	5	MNC
2	EC2401	Introduction to Data Science	28	122	30%	0	70%	15	5	MNC
2	EC2402	Economic Modelling and Data Science	28	122	0%	0	100%	15	5	MC
2	EC2201	Microeconomics	78	222	60%	0	40%	30	5	MNC
2	EC2208	Econometrics 1	38	112	60%	0	40%	15	5	MNC
2	EC2209	Econometrics 2	38	112	0%	0	100%	15	5	MNC
2	EC2107	Employability 2	8	42	0	0	100%	0	5	MNC
3	EC3107	Employability 3	8	42	0	0	100%	0	6	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.

*Contact hours come in various different 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. It is intended that these contact hours will be face-to-face as far as possible, but in certain unavoidable situations, these may take place virtually.

**The way in which each module on your degree course is assessed will also vary, however, the assessments listed above are all 'summative', which means you will receive a mark for it 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. 'Coursework' might typically include a written assignment, like an essay. Coursework might also include a report, dissertation or portfolio. 'Practical assessments' might include an oral assessment or presentation, or a demonstration of practical skills required for the particular module.

3.2 Optional modules

In addition to mandatory modules, there will be a number of optional modules available during the course of your degree. The following table lists a selection of optional modules that are likely to be available. However, not all may be available every year. 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, so it is important that this specification is read alongside your department's Student Handbook, which you can access via their [webpage](#).

Year 1	Year 2	Year 3
None	EC2211: Financial Market and Institutions	EC3322 Behavioural Economics
	EC2212 Industrial Growth and Competition	EC3323 Monetary: Economics
	EC2216: Introduction to Economic Growth	EC3329: Advanced Economic Theory
	EC2324: Behavioural Game Theory	EC3354: Economics of Inequality

		EC3337 Labour Economics
		EC3340 Economic Philosophy
		EC3341 Topics in Public Economics
		EC3342 International Economic History
		EC3349 Topics in Developmental Economics
		EC3353 Advanced Topics in Game Theory
		EC3348 Corporate Finance
		EC3350 Topics in Finance

3.3 Optional module requirements

In Year 3 you must choose optional modules to the value of 120 credits from the stage 3 modules offered by the Department (see section 3.2 for a selection of optional modules that may be available). When making your selection, it is a requirement that you take:

i) at least 30 credits from the following *Statistical Inference Basket*:

- EC3133 Advanced Econometrics 1 (15 credits);
- EC3233 Advanced Econometrics 2 (15 credits, EC3133 is a pre-requisite);
- EC3335 Financial Econometrics with Data Science (15 credits);
- EC3367 Time Series for Macroeconomics with Data Science (15 credits, EC2401 is a pre-requisite),

AND

ii) at least 30 credits of modules from the following *Data Science Basket*:

- EC3364 Web-Scraping and Internet-Based Data Collection (15 credits, EC2401 is a pre-requisite);
- EC3365 Data Presentation and Visualisation (15 credits, EC2401 is a pre-requisite);
- EC3366 Machine Learning and Data Mining (15 credits, EC2401 is a pre-requisite);
- EC3367 Time Series for Macroeconomics with Data Science (15 credits, EC2401 is a pre-requisite).

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](#).

All first year undergraduate students are required to take and pass the non-credit bearing Moodle-based Academic Integrity module SS1001 in order to progress into the second year of study (unless their course includes the alternative mandatory SS1000 module). 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 meet the requirements for progression as stipulated in the College's Undergraduate Regulations (Section: Conditions for progression to the next stage) but fail to pass the Moodle-based Academic Integrity module will not be permitted to progress into their second year of academic study at the College.

Section 5 – Educational aims of the course

The aims of this course are:

- to provide training in the principles of economics and to develop an understanding of econometric skills so as to perform the analyse of data in an economic framework;
- to stimulate students intellectually through the study of economics and econometrics and to lead them to appreciate their application to a range of problems;
- to develop in students the ability to apply the knowledge and skills they have acquired to the solution of theoretical and in particular applied problems in economic policy;
- to equip students with appropriate tools for analysing data so as to inform economic policy;
- to develop, through the study of economics and econometrics, a range of transferable skills that will be of value in employment and self-employment;
- to provide students with analytical skills and an ability to develop simplifying frameworks for studying the real world;
- to provide students with the knowledge and skill base from which they can proceed to further studies in Economics and Econometrics or related areas.

Section 6 - Course learning outcomes	
<p>In general terms, the courses provide opportunities for students to develop and demonstrate the following learning outcomes. (Categories – Knowledge and understanding (K), Skills and other attributes (S), and Transferable skills (*))</p>	
<ol style="list-style-type: none"> 1. a coherent core of economic principles;(K) 2. relevant mathematical and statistical techniques; in particular in relation to Econometrics;(K) 3. applying core economic theory and economic reasoning to applied topics;(K) 4. understanding analytical methods appropriate for various data type;(K) 5. a number of specialised areas in Economics;(K) 6. a number of specialised areas in Econometrics;(K) 7. in respect of the Year in Business course also to provide an opportunity to gain a range of practical work based experience required to work within an organisation. 8. abstraction (the ability to simplify while still retaining relevance); (K) 9. analysis and deduction (Economic reasoning is highly deductive and logical analysis is applied to assumption based models);(S) 10. quantification (the organisation and presentation of economic data); (S) 11. Analysing various type of data with the appropriate econometric tools; (S) 12. framing and specification (the ability to decide what should be taken as given or fixed for the purposes of setting up and solving a problem); (S) 	<ol style="list-style-type: none"> 13. decision making; (S) * 14. numeracy; (S)* 15. understanding of the key concepts of opportunity cost, incentives, equilibrium, strategic thinking, expectations and surprises and the relevance of marginal considerations; (S)* 16. learning and study; (S)* 17. written and oral communication; (S) * 18. high level of numeracy and computational knowledge; (S) * 19. information technology, coding; (S) * 20. Data manipulation and storage; (S)* 21. team working; (S)* 22. independent study and time management; (S)*

Section 7 - Teaching, learning and assessment

Teaching and learning in the course are closely informed by the active research of staff. Teaching is mostly by means of lectures and seminars, the latter generally providing a forum for students, with the support of their instructors, to work through problem sets and applications in a smaller and more interactive setting. Learning is through participation in lectures and seminars, designated reading and completion of problem sets and online exercises. Essays and short written answers ensure that the skills of exposition and critique are developed and evaluated. At the end of the course and if the extended essay is undertaken, most students will apply the knowledge and skills they have acquired in the conduct of a piece of original research under the close supervision of a member of staff. It is expected that students with an interest in research will develop the relevant skills for future use. Assessment of knowledge and understanding is typically by formal, unseen written examination, although continuous assessment in the form of unseen tests features in the assessment of a number of modules. Full details of the assessments for individual modules can be obtained from the [Department](#).

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	4-6
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 – Further information

This specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate when taking full advantage of the learning opportunities that are available. More detailed information on modules, including teaching and learning methods, and methods of assessment, can be found via the online [Module 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, such as the Quality Assurance Agency (QAA).

Your course will be reviewed regularly, both by the university as part of its cyclical quality enhancement processes, and/or by your department or school, who may wish to make improvements to the curriculum, or in response to resource planning. As such, your course may be revised during the course of your study at Royal Holloway. However, your department or school will take reasonable steps to consult with students via appropriate channels when considering changes. All continuing students will be routinely informed of any significant changes.

Section 11 – 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
Diploma in Higher Education (DipHE)	Pass in 210 credits of which at least 90 must be at or above FHEQ Level 4 and at least 120 of which must be at or above FHEQ Level 5	Royal Holloway and Bedford New College
Certificate in Higher Education (CertHE)	Pass in 120 credits of which at least 90 must be at or above FHEQ Level 4	Royal Holloway and Bedford New College

Section 12 - Associated award(s)

BSc (Econ) Economics and Data Science (L140)

BSc (Econ) Economics and Data Science with a Year in Business (L141)