

## Royal Holloway, University of London

### Programme specification for an undergraduate award

#### BSc Economics and Mathematics (LG11)

#### Section 1 – Introduction to your programme

This programme specification is a formal document, which provides a summary of the main features of your programme 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 programme in BSc Economics and Mathematics is delivered in three stages, each of which comprises one year of full-time study during which you must follow courses to the value of 120 credits or four units (one unit is equivalent to 30 national credits).

The curriculum is based around a core of mandatory units. 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, you develop your core economic knowledge further and use increasingly sophisticated analytic methods. Students following Single Honours and some Combined Honours Degree programmes with Economics as a major component also develop their statistical and econometric skills further at this stage. In stage three, most students have the option to research and write an extended essay. You also select specialist options which provide the opportunity to learn how the general theory and methods you have acquired can be applied in areas which are of specific interest to you.

For joint and combined honours programmes, please refer to the programme specification for your secondary department's corresponding single honours programme for further information on educational aims, and learning outcomes.

While Royal Holloway keeps all the information made available under review, programmes and the availability of individual course units, especially optional course units 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 programme. 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 programme* – Also referred to as 'degree course' or simply 'course', these terms refer to the qualification you will be awarded upon successful completion of your studies.

*Course unit* – Also referred to as 'module', this refers to the individual units you will study each year to complete your degree programme. Undergraduate degrees at Royal Holloway comprise four full units, or a combination of full and half units, to the value of 120 credits per year. On some degree programmes a certain number of optional course units must be passed for a particular degree title.

Section 2 – Programme details			
Date of specification update	March 2020	Location of study	Egham Campus
Programme award and title	BSc Economics and Mathematics	Level of study	Undergraduate
Programme code	1091	UCAS code	LG11
Year of entry	2019/20		
Awarding body	Royal Holloway, University of London		
Department or school	Economics	Other departments or schools involved in teaching the programme	Mathematics
Mode(s) of attendance	Full-time	Duration of the programme	Three years
Accrediting Professional, Statutory or Regulatory Body requirement(s)	N/A		
Link to Coursefinder for further information:	<a href="https://www.royalholloway.ac.uk/studying-here/">https://www.royalholloway.ac.uk/studying-here/</a>	For queries on admissions:	<a href="mailto:study@royalholloway.ac.uk">study@royalholloway.ac.uk</a> .

Section 3 – Degree programme structure										
3.1 Mandatory course unit information										
The following table summarises the mandatory modules which students must take in each year of study										
Year	Course code	Course title	Contact hours*	Self-study hours	Written exams**	Practical assessment**	Coursework**	Credits	FHEQ level	Course status (see below)
1	EC1101	Principles of Economics	81	219	90%	10%	0	30	4	MNC
1	EC1133	Applied Economics and Policy	19.5	130.5	50%	0	50%	15	4	MNC
1	MT1300	Mathematics: Principles of Statistics	44	106	70%	0	30%	15	4	MC
1	MT1720	Functions of Several Variables	43.5	106.5	90%	0	10%	15	4	MC
1	MT1710	Calculus	46.5	103.5	90%	0	10%	15	4	MC
1	MT1810	Number Systems	43.5	106.5	90%	0	10%	15	4	MC
1	MT1820	Matrix Algebra	43.5	106.5	90%	0	10%	15	4	MC
2	EC2501	Microeconomics A	60	240	100%	0	0	30	5	MNC
2	EC2202	Macroeconomics	63	237	95%	0	5%	30	5	MNC
2	MT2300	Statistical Methods	43.5	106.5	80%	0	20%	15	5	MC
2	MT2630	Optimisation	33	117	90%	0	10%	15	5	MC
3	EC3324	Topics in Game Theory	29	121	100%	0	0	15	6	MC

This table sets out the most important information for the mandatory courses on your degree programme. These courses are central to achieving your learning outcomes, so they are compulsory, and all students on your degree programme will be required to take them. You will be automatically registered for these courses each year. Mandatory courses fall into two categories; 'condonable' or 'non-condonable'.

In the case of mandatory 'non-condonable' (MNC) courses, you must pass the course before you can proceed to the next year of your programme, or to successfully graduate with a particular degree title. In the case of mandatory 'condonable' (MC) courses, 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 programme 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 programme 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.

\*\*The way in which each course on your degree programme 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 course, and potentially your degree classification, depending on your year of study. On successful completion of the course 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 course.

### 3.2 Optional course units

In addition to mandatory course units, there will be a number of optional course units available during the course of your degree. The following table lists a selection of optional course units 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 programme 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	EC2216 Introduction to Economic Growth	Economics: EC3335 Financial Econometrics
	MT2320 Probability	Economics: EC3319 Economics of Warfare 1
	MT2830 Rings and Factorisation	Economics: EC3320 Economics of Warfare 2
	MT2900 Complex Variable	Mathematics: MT3120 Computational Number Theory
		Mathematics - MT3660: Public Key Cryptography

### 3.3 Optional course unit requirements

In stage 2 you must take 15 credits of options from the 2nd year options offered by the Department of Mathematics and 15 credits of options offered from the 2nd year options offered by the Department of Economics.

In stage 3 you must take 45 credits of options from the 3<sup>rd</sup> year options offered by the Department of Economics and 60 credits from the 3<sup>rd</sup> year options offered by the Department of Mathematics

#### Section 4 - Progressing through each year of your degree programme

For further information on the progression and award requirements for your degree, please refer to Royal Holloway's [Academic Regulations](#). As part of your degree programme you may also be required to complete a course to develop your academic writing skills. This course does not carry credit but passing it is a requirement to progress to the next year of study.

#### Section 5 – Educational aims of the programme

The aims of this programme are:

- To provide training in the principles of economics and their application appropriate to the type of degree concerned;
- To stimulate students intellectually through the study of economics and to lead them to appreciate its application to a range of problems and its relevance in a variety of contexts;
- To develop in students the ability to apply the knowledge and skills they have acquired to the solution of theoretical and/or applied problems in economic policy;
- To equip students with appropriate tools of analysis to tackle issues and problems of economic policy;
- To develop in students, through the study of economics, 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 and to be able to appreciate what would be an appropriate level of abstraction for a range of economic issues;
- To provide students with the knowledge and skill base from which they can proceed to further studies in Economics and related areas.

Section 6 - Programme learning outcomes	
<p>In general terms, the programmes 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>)</p>	
<ol style="list-style-type: none"> <li>1. A coherent core of economic principles (K);</li> <li>2. Relevant mathematical and statistical techniques (K);</li> <li>3. Applying core economic theory and economic reasoning to applied topics (K);</li> <li>4. Relevant analytical methods (K);</li> <li>5. Analysing economic data (K);</li> <li>6. A number of specialised areas in Economics (K);</li> <li>7. Abstraction (the ability to simplify while still retaining relevance) (S);</li> <li>8. Analysis and deduction (Economic reasoning is highly deductive and logical analysis is applied to assumption based models) (S);</li> <li>9. Quantification (the organisation and presentation of economic data) (S);</li> </ol>	<ol style="list-style-type: none"> <li>10. 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);</li> <li>11. Decision making (S*);</li> <li>12. Numeracy (S*);</li> <li>13. Understanding of the key concepts of opportunity cost, incentives, equilibrium, strategic thinking, expectations and surprises and the relevance of marginal considerations (S*);</li> <li>14. Learning and study (S*);</li> <li>15. Written and oral communication (S*);</li> <li>16. Numeracy and computation (S*);</li> <li>17. Information technology (S*);</li> <li>18. Team working (S*);</li> <li>19. Independent study and time management (S*).</li> </ol>

Section 7 - Teaching, learning and assessment
<p>Teaching is mostly by means of lectures and seminars, the latter generally providing a forum for you, with the support of your 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 programme 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 courses. Full details of the assessments for individual courses can be obtained from the <a href="#">Department</a>.</p>

<b>Section 8 – Additional costs</b>	
None.	
These estimated costs relate to studying this particular degree programme 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.	

<b>Section 9 – Indicators of quality and standards</b>	
<b>QAA Framework for Higher Education Qualifications (FHEQ) Level</b>	4-6
Your programme 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 programmes of study.	
<b>QAA Subject benchmark statement(s)</b>	<a href="http://www.qaa.ac.uk/quality-code/subject-benchmark-statements">http://www.qaa.ac.uk/quality-code/subject-benchmark-statements</a>
Subject benchmark statements provide a means for the academic community to describe the nature and characteristics of programmes 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 programme 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 course units, including teaching and learning methods, and methods of assessment, can be found via the online [Course 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 programme 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 programme 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 programme as detailed in this document. Any additional criteria (e.g. mandatory course units, 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)	
<p>BSc (Econ) Financial and Business Economics            BSc (Econ) Economics with a Year in Business            BSc (Econ) Financial and Business Economics with a Year in Business            BSc Economics and Management            BSc Economics and Management with a Year in Business            BSc Economics and Mathematics with a Year in Business            BSc Finance and Mathematics            BSc Finance and Mathematics with a Year in Business            BSc Economics, Politics and International relations            BSc Economics, Politics and International relations with a Year in Business</p>	<p>BSc (Econ) Economics with French            BSc (Econ) Economics with French with a Year in Business            BSc (Econ) Economics with German            BSc (Econ) Economics with German with a Year in Business            BSc (Econ) Economics with Italian            BSc (Econ) Economics with Italian with a Year in Business            BSc (Econ) Economics with Management            BSc (Econ) Economics with Management with a Year in Business            BSc (Econ) Economics with Mathematics            BSc (Econ) Economics with Mathematics with a Year in Business            BSc (Econ) Economics with Music            BSc (Econ) Economics with Music with a Year in Business            BSc (Econ) Economics with Political Studies            BSc (Econ) Economics with Political Studies with a Year in Business            BSc (Econ) Economics with Spanish            BSc (Econ) Economics with Spanish with a Year in Business</p>