Welcome to the MSc Infection & Immunity

Welcome to London, to UCL and to the Division of Infection and Immunity. UCL is one of the top ranking universities in the world for research in medical sciences and clinical medicine. Scientists in the Division of Infection & Immunity conduct immunology, virology and microbiology research across the Bloomsbury and Royal Free campuses. Our aim is to link fundamental laboratory research with the specialised clinical interests of our hospital partners. Indeed, in an exciting new initiative, the Division is leading the establishment of The Institute of Immunity & Transplantation at the Royal Free Campus, where basic and translation immunology will be genuinely integrated with clinical medicine. This strong clinical link, together with our geographical location and the consequent diverse patient case mix, provides a unique research environment within the UK.

The Division of Infection and Immunity is part of the Faculty of Medical Sciences, which brings together UCL Medical School and six of UCL’s Divisions and Institutes. It is one of four Faculties within the UCL School of Life and Medical Sciences.

The MSc Infection & Immunity programme is firmly anchored on the research activities of the Division. A large proportion of the teaching you will receive is research-based and spans the range from basic science to translational clinical research. Divisional staff are committed to research-led teaching and you will have the opportunity to meet many of them during the programme.

As students on the MSc programme you are full members of the Division. We encourage you to take full advantage of this: attend seminars, talk to investigators, get to know post-docs and PhD students. Immerse yourself in this great academic environment.

We offer you a very warm welcome and encourage you to make the most of your time at UCL and your time in London. Above all, we hope that you enjoy the MSc Infection & Immunity Programme.

Richard Milne,  
Programme Director

Derek Kempen,  
Programme Administrator

Email: richard.milne@ucl.ac.uk  
Email: d.kempen@ucl.ac.uk

Handbook Cover Image: Artwork by Primary School children asked to design a microbe during a visit to the Division of Infection and Immunity
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**Important information:**

This Academic Handbook contains descriptions of the content of the programme, and how it is assessed.

You may access detailed guidelines on all academic matters in the UCL Academic manual:

[http://www.ucl.ac.uk/srs/academic-manual/overview](http://www.ucl.ac.uk/srs/academic-manual/overview)

You may access full information on all aspects of the student experience and details of the various student support services that UCL offers in the Infection and Immunity Core Student Information Document on the Programme Moodle page:

[https://moodle.ucl.ac.uk/course/view.php?id=14898](https://moodle.ucl.ac.uk/course/view.php?id=14898)

If you have any questions or concerns you should not hesitate to contact the Programme Director or The Programme Administrator. E.mail is the best way to make contact, but you may visit without an appointment at any time. You may also contact your Personal Tutor, or any other member of staff.
**Attendance, Key dates and Holidays**

Students on full-time taught MSc programmes should plan to be at UCL full time, not just for the university terms. You will be required to attend exams before the start of term 2 and your laboratory project will extend beyond the end of term 3. Students on flexible learning should ensure that they make adequate provision for attending all the necessary teaching sessions prior to commencing the course.

**Core Module examinations**

Epidemiology and Infectious Diseases (STDSG017): 15 December 2016

Molecular Virology (VIRLG001): Monday 9 January 2017, 1400 – 1600

Immunology in Health and Disease (INIMG002): Monday 16 January 2017, 1400 – 1600

(Optional module examination dates will be announced later.)

**Staff Student Consultative Committee meetings**

Wednesday 14 December 2016, 2pm-3.30pm

Tuesday 14 March 2017, 3pm-4.30pm

**UCL term dates and closures for academic year 2016-17**

<table>
<thead>
<tr>
<th></th>
<th>First Term</th>
<th>Second Term</th>
<th>Third Term</th>
</tr>
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<tbody>
<tr>
<td>Christmas College Closure</td>
<td>Close 5.30pm Friday 23 December 2016</td>
<td>Open 9.00am Tuesday 3 January 2017</td>
<td></td>
</tr>
<tr>
<td>Easter College Closure</td>
<td>Close 5.30pm Wednesday 12 April 2017</td>
<td>Open 9.00am Thursday 20 April 2017</td>
<td></td>
</tr>
</tbody>
</table>
Addresses, Enrolment & Registration, Vaccinations

Addresses

It is very important that we have your correct term-time and home addresses. If you change your address it is your responsibility to:

a) Notify the Programme Administrator, Derek Kempen, (d.kempen@ucl.ac.uk)

b) Enter the changes on PORTICO, the UCL Registry and Academic Services website at www.ucl.ac.uk/portico

If we don’t have your up-to-date address and telephone number, we won’t be able to contact you if anything urgent comes up.

Enrolment and registration

You are required to enrol when you arrive to start your MSc programme; enrolment instructions will be provided by UCL Registry. You will have to prove your previous qualifications and your competency in English, if these were conditions in your offer of a place. You need to pay the tuition fees, or to make satisfactory arrangements for this payment. If you have been awarded a grant, your fees will be paid automatically. Please note that you have only 2 weeks from the start of your Programme to complete your enrolment, and until the end of October to pay your tuition fees. Otherwise, after that date your registration for the Programme will automatically be cancelled. Please contact the UCL Registry if you have queries.

You will be issued with an identity card at enrolment that will enable you to access libraries, student union buildings and examination halls.

It is important to note that the name you give at enrolment is the name in which your Degree will be awarded, so give your ‘proper’ name. Any nickname or shortening of your name can be used informally during your time here if you wish.

Hepatitis B vaccine

A majority of the laboratory-based research projects are hosted by laboratories where human material (primary cells, serum, plasma, whole blood etc.) are handled. These present a risk for Hepatitis B exposure. If you have not already been immunised, you are strongly advised to contact your doctor, or the UCL occupational health service, and arrange for a course of the HBV vaccine.
You are not required to have HBV vaccine, but you should bear in mind that local safety rules mean that you may not be able to do your first choice of project if you have not received the vaccine.
Your relationship with us: Personal Tutor, Communication, Absence, Conduct and Complaints

Academic and Personal Tutoring

UCL is committed to providing all students with the academic guidance and personal support that they need to flourish as members of our active learning and research community. You will be assigned a member of staff who can provide constructive academic and personal development guidance and support. You are encouraged to be proactive in engaging with your Personal Tutor: it is your responsibility to keep in touch. You should meet formally with your tutor at least twice during the first term, once during the second term and once during the third term. It is your responsibility to make contact with you your tutor and organise the meetings. As a guide, you should aim to arrange meetings in the weeks beginning:

17 October 2016
5 December 2016
6 March 2017

In addition to routine meetings, your tutor should be your first contact should any problems arise. Remember that it is usually easiest to sort out any problems early on rather than when they have developed into something more substantial. Should you wish to change your personal tutor at any point, for any reason whatsoever, this is perfectly acceptable - please contact the Course Administrator or Programme Director to arrange the transfer to a new personal tutor. You can read more about personal tutoring here: https://www.ucl.ac.uk/ppd/personal_tutors

How we will communicate with you

UCL email  You will be given a UCL e.mail address when you register. This is the address that we will use for ALL communications with you. You should check your UCL email regularly.

Moodle  https://moodle.ucl.ac.uk/ - UCL's online learning space, used by module organisers, programme leaders, departments and faculties to provide essential information in addition to learning resources. You can access

Portico  www.ucl.ac.uk/portico/ - The main UCL student information system which is used by all students for: Updating personal data, completing online module registration, viewing information about programmes/modules, viewing examination timetables and results, pre-enrolment and re-enrolment, Applying for graduation ceremonies.

Beyond the programme, UCL is host to a diverse range of activities: most of these are open to all and we encourage you to take advantage of them. You can keep up to date with what is going on through UCL social media outlets:
Absence from assessment

You should attend all timetabled sessions. UCL expects students to aim for 100% attendance, and has a minimum attendance requirement of 70% of scheduled learning, teaching and assessment activities. If you fail to meet this requirement you may be barred from summative assessment.

If you miss an examination, or if for any reason you are unable to attend taught sessions, you should report this through the Extenuating Circumstances procedure described later in this handbook and contact the Programme Administrator, Mr Derek Kempen (d.kempen@ucl.ac.uk) or 020 3108 2133 for advice. You may be required to provide the appropriate medical certificate(s) or other evidence.

Tier 4 students: Absence from teaching and learning activities

In line with UCL’s obligations under UK immigration laws, students who hold a Tier 4 visa must obtain authorisation for any absence from teaching or assessment activities. Further information is available here: http://www.ucl.ac.uk/iss/immigration-visa

Student Code of Conduct

UCL enjoys a reputation as a world-class university. It was founded on the basis of equal opportunity, being the first English university to admit students irrespective of their faith and cultural background and the first to admit women. You can read more about the history of UCL here: https://www.ucl.ac.uk/about-ucl/history

UCL expects its members to conduct themselves at all times in a manner that does not bring UCL into disrepute. You should read and familiarise yourself with UCL’s Student Code of Conduct and be aware that any inappropriate behaviour may lead to actions under UCL’s Student Disciplinary Procedures. You can read the code of conduct here: https://www.ucl.ac.uk/srs/academic-manual/c1/code-of-conduct

Complaints/appeals

You may have complaints and we would like to hear them as soon as possible. Many problems can be fixed, especially if you help us catch them early. If you have a formal complaint, any staff member will be happy to guide you in the correct procedure for pursuing it. If you have general
complaints about the Programme, please see the Programme Director. Please speak to someone about any problem you may be facing before it escalates.
**Aims of the programme**

The programme will provide students with a broad knowledge and understanding of the biology of infectious agents, of the nature of the host response to infection and of approaches to control and prevent infection.

Throughout the programme, emphasis will be placed on research-led teaching and data analysis. Students will regularly read, discuss and critically analyse recent papers.

This dual focus on factual knowledge and critical analysis will provide students with a clear grasp of the language and concepts of the field.

The programme provides considerable scope for students to pursue their own particular interests: we encourage you to do this.

**What do I need to know and at what level?**

You will be expected to know the material presented in the lectures, tutorials and practical sessions. This includes the material in any references which are specified during the course. You will also be expected to do a substantial amount of self-directed learning: reading around the subject, web-based research, discussion of topics with your fellow students, attendance at research seminars.

As a rough guide, it is anticipated that you will undertake at least 5 hours of private study for each hour of staff contact time.

**Hours of study**

During the first term, you will have approximately 18 hours of formal teaching per week. This time is made up of lectures, tutorials and laboratory practicals. In the second term, you will have approximately 14 hours of formal teaching per week (though this may vary depending on your choice of optional modules). There is no formal teaching after the second term as you will be engaged full time on your laboratory research project. As a rough guide, it is anticipated that you will undertake at least 5 hours of private study for each hour of staff contact time.
Programme outline

Term 1
- Core Modules
  - Laboratory Introduction to Basic Bacteriology
  - Epidemiology and Infectious Diseases
  - Molecular Virology
  - Immunology in Health & Disease
  - Stats & Numeracy

Term 2
- Optional Modules
  - Optional Module I
  - Optional Module II
  - Optional Module III

Term 3
- Laboratory-Based Research Project

Total Credits: 100
Modules are the individual units of study which lead to the award of credit.

**Core Modules** - There are FIVE core modules:

Laboratory Introduction to Bacteriology  
Epidemiology and Infectious Diseases  
Molecular Virology  
Immunology in Health and Disease  
Data Interpretation

**Optional modules** - THREE optional modules should be selected from the list below:

Tropical Microbiology  
HIV Frontiers from Research to Clinic  
Immunological Basis of Disease  
Immunodeficiency and Therapeutics  
Microbial Pathogenesis  
Advanced Virology  
Infectious Diseases Epidemiology and Global Health Policy

It is important that you make an informed choice of optional modules. Module leads, as well as the Programme Director, will be happy to advise you (contact details are listed under module descriptions below). Because of timetable clashes, not all combinations are possible. Please consult the diagram later in the handbook for details. Most of the modules are also open to other UCL students, including those from some undergraduate programmes. However, optional modules may not run if an insufficient number of students register. Students are required to select on Portico, and inform the Teaching Administrator (d.kempen@ucl.ac.uk) of, their three optional module choices by 14\(^{th}\) October 2016.

Modular/Flexible Taught Postgraduate students may be unable to pay their fees until they have chosen their modules. Students should check with the UCL Student Fees Team if they are unsure about this by emailing fees@ucl.ac.uk or calling +44 (0)207 679 4125.

Full details of the process for choosing your optional modules can be found here: http://www.ucl.ac.uk/new-students/select-modules

**Research project**

A laboratory-based or computational research project module. You should think carefully about the type of project you want and the subject area. We will do our best to ensure that you get what you want.
### Taught Modules - Core Modules

<table>
<thead>
<tr>
<th>Introduction to Bacteriology</th>
<th>(INIMG011)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epidemiology and Infectious Diseases</td>
<td>(STDGS017)</td>
</tr>
<tr>
<td>Molecular Virology</td>
<td>(VIRLG001)</td>
</tr>
<tr>
<td>Immunology in Health and Disease</td>
<td>(INIMG002)</td>
</tr>
<tr>
<td>Data Interpretation</td>
<td>(CMMGG013)</td>
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(Note that the Data Interpretation Module continues in term 2)

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<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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</thead>
<tbody>
<tr>
<td>0900-1000</td>
<td></td>
<td>Molecular Virology</td>
<td>Immunology in Health &amp; Disease</td>
<td>Epidemiology and Infectious Diseases</td>
<td></td>
</tr>
<tr>
<td>1000-1100</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1100-1200</td>
<td>Immunology in Health &amp; Disease</td>
<td></td>
<td>Epidemiology and Infectious Diseases</td>
<td></td>
<td>Molecular Virology</td>
</tr>
<tr>
<td>1200-1300</td>
<td>Divisional External Seminar</td>
<td></td>
<td></td>
<td>IIT Seminar</td>
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<tr>
<td>1300-1400</td>
<td>Laboratory Introduction to Bacteriology</td>
<td>Data Interpretation (1400-1600)</td>
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<td></td>
<td>Laboratory Introduction to Bacteriology</td>
</tr>
<tr>
<td>1400-1700</td>
<td>Virtual Virology (Monthly)</td>
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</table>
**INIMG011: Laboratory introduction to bacteriology: genome dynamics and intercellular communication**

<table>
<thead>
<tr>
<th>Module Lead</th>
<th>Dr Elaine Allan  (<a href="mailto:e.allan@ucl.ac.uk">e.allan@ucl.ac.uk</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module Deputy</td>
<td>Dr Sean Nair</td>
</tr>
<tr>
<td>Content</td>
<td>Laboratory practicals &amp; lectures</td>
</tr>
<tr>
<td>Summative Assessment</td>
<td>Review article (2000 words)</td>
</tr>
</tbody>
</table>

**Aim and scope**

The module provides an introduction to some current themes in bacteriology through lab practicals, lectures and consideration of research articles.

Lectures will include overviews of growth, genetics, genomics, gene regulation, phylogenetics, pathogenicity, antibiotic therapy and antibiotic resistance and are designed to provide a level of background knowledge which enables and encourages students to access the current scientific literature.

Lab practical sessions will investigate phase variation, biofilm formation, interference with intercellular communication and natural transformation.

The module does not seek to be an all-encompassing introduction to bacteriology nor does it seek to describe detailed molecular mechanisms; rather, the aim is to illustrate some broad concepts key to understanding bacterial adaptation and pathogenicity.

**Summative Assessment**

Students will be required to write a two-part review article:

**Part 1 (approx. 1200 words):** describe the concepts explored in the practicals explaining the likely evolutionary advantages they confer on bacteria in nature.

**Part 2 (approx. 800 words):** discuss how these processes could be targeted for the development of novel antibacterials.
Epidemiology and Infectious Diseases (STDG017)

<table>
<thead>
<tr>
<th>Module Leads</th>
<th>Dr Colette Smith (<a href="mailto:c.smith@ucl.ac.uk">c.smith@ucl.ac.uk</a>) and Dr Clare Tanton (<a href="mailto:c.tanton@ucl.ac.uk">c.tanton@ucl.ac.uk</a>)</th>
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</thead>
<tbody>
<tr>
<td>Content</td>
<td>Lectures and Practicals</td>
</tr>
<tr>
<td>Formative Assessment</td>
<td>Exam-style Short Answer Questions</td>
</tr>
<tr>
<td>Summative Assessment</td>
<td>Short Answer Question Exam (50%) and Group Project (50%)</td>
</tr>
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</table>

**Aim**

The aim of the module is to introduce students to basic epidemiological concepts, with a focus on specific issues relating to infection. The module will enable students to be able to describe, implement and critically appraise basic epidemiological study designs, measures of frequency and association and measures of infectious disease transmission dynamics.

**Learning objectives**

By the end of the module students should be able to:

- Describe the most common epidemiology study designs and list their main advantages and disadvantages
- Understand how epidemiology can be used to describe spread of infections within a population and describe the different modes by which infectious diseases can be transmitted
- Calculate and interpret basic measures of frequency and association
- Critically evaluate epidemiological studies of the spread and treatment of infections
- Understand potential alternative explanations for observed associations, including chance, confounding and bias

**Practical and transferable skills**

- Communicate effectively and concisely orally
- Communicate effectively in written format
- Critical appraisal of data
- Collaborate in a team and across disciplines
- Reflect on new ideas and approaches
- Use evidence and be open to new interpretations of data to challenge conventional beliefs

**Assessment**

- Formative assessment: Short Answer Questions (SAQ) in style of examination questions: reading week
- Summative exam (50%): Short Answer Questions 15 December 2016
- Group work (50%): Assessed via group presentations (on 14 December 2016) and 600-word individual reflection on project
Molecular Virology (VIRLG001)

<table>
<thead>
<tr>
<th>Module Lead</th>
<th>Dr Richard Milne (<a href="mailto:richard.milne@ucl.ac.uk">richard.milne@ucl.ac.uk</a>)</th>
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</thead>
<tbody>
<tr>
<td>Module Deputy</td>
<td>Prof Greg Towers</td>
</tr>
<tr>
<td>Content</td>
<td>Lectures &amp; tutorials</td>
</tr>
<tr>
<td>Summative Assessment</td>
<td>2 hours unseen exam (80%) in January 2016</td>
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<tr>
<td></td>
<td>2,000 words coursework Essay (20%)</td>
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The aim of the module is to give students an up to date insight into molecular virology, with particular focus on human pathogens and new research developments in the field. Lectures will cover a selection of important human viral pathogens including herpesviruses, HIV and hepatitis viruses, chosen to reflect clinical and research expertise within UCL. The molecular aspects of virus replication will also be put in a broader context of disease pathogenesis with lectures on viral immunology, antiviral therapy and vaccines. A basic knowledge of microbiology, molecular, and cell biology is assumed.

Assessment

A 2000 word coursework essay. (20% of total marks for the module)

2 hours unseen written exam held in January (80% of marks for the module)

Taught sessions of this module are shared with BSc students.
Immunology in Health and Disease (INIMG002)

<table>
<thead>
<tr>
<th>Module Lead</th>
<th>Dr Milica Vukmanovic-Stejic  (<a href="mailto:m.vukmanovic-stejic@ucl.ac.uk">m.vukmanovic-stejic@ucl.ac.uk</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module Deputy</td>
<td>Prof Mala Maini, Prof David Sansom</td>
</tr>
<tr>
<td>Content</td>
<td>Lectures</td>
</tr>
<tr>
<td>Summative Assessment</td>
<td>2 hour exam (80%) in early January + News and Views Articles (20%)</td>
</tr>
</tbody>
</table>

Immunology in Health and Disease provides an overview of the human immune system. Starting at the molecular level (e.g. antigen recognition, antibody diversity), outlining what is known about cellular interactions within the immune system (e.g. cytokines and immunoregulation) and concluding with a consideration of the role of the immune system in host defence, its role in disease, and its possible role in determining ecology and evolution of the species. The module will cover the anatomy and constituents of the immune system and then consider the general principle of how an immune response is generated, beginning with the initial innate immune response to the development of acquired immunity. These concepts will be placed in context: how the immune system fights pathogens, how inappropriate responses can cause disease and how the immune system can be manipulated therapeutically. The module will develop from a basic to a more in depth understanding, with emphasis throughout placed on current developments in this fast moving field.

Assessment

1. Unseen exam: (2 hours) in January that accounts for 80% of the marks. It will consist of:
   i. Two essay questions (from a choice of four).
   ii. Three short answer questions (from a choice of six).

2. Coursework: News and Views Articles (20%):
   You are expected to choose one from a choice of two articles. You will write a review of the article, explaining the context in which the work was done, summarising it briefly, and placing it in a broader perspective. To get an idea of what is required, you should look at the combination of paper plus “news and views” that appears in Nature each week, or the similar feature that appears in Science. News and Views should not exceed 1000 words.

Taught sessions of this module are shared with iBSc and BSc students.

Recommended Textbooks

Murphy, K.B, Travers, P., and Walport M. Janeway’s Immunobiology: The Immune System in Health and Disease. 8\(\text{th}\) (2011) or 9\(\text{th}\) (2016) edition.

Data Interpretation (CMMGG013)

(Module full name: Experimental design & research methods in Medical Microbiology)

<table>
<thead>
<tr>
<th>Module Leads</th>
<th>Dr Milica Vukmanovic-Stejic and Dr Matthew Reeves</th>
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<tbody>
<tr>
<td></td>
<td>(<a href="mailto:m.vukmanovic-stejic@ucl.ac.uk">m.vukmanovic-stejic@ucl.ac.uk</a>; <a href="mailto:matthew.reeves@ucl.ac.uk">matthew.reeves@ucl.ac.uk</a>)</td>
</tr>
<tr>
<td>Content</td>
<td>Tutorials</td>
</tr>
<tr>
<td>Summative Assessment</td>
<td>Data Interpretation (100%)</td>
</tr>
</tbody>
</table>

Aims & Scope

The generation, dissemination and interpretation of data represent the foundations of scientific research. Consequently, communicating our own data and ideas, as well as interpreting and critiquing the data of others are key skills and an absolute requirement for a scientific career.

The aim of this module is for students to develop and refine the skills necessary to read, interpret and critique scientific papers. This will be achieved through series of journal clubs in which you will discuss high impact, cutting-edge research papers in the field of infection and immunity.

A key aspect of these discussions will be to question whether the authors’ interpretation is consistent with the data published and, importantly, whether alternative interpretations are valid. The sessions will illustrate that published research often represents only the beginning of the story and that studies usually generate many more intriguing questions requiring further investigation.

By the end of the module students will have had the opportunity to critique a number of high impact papers and will be able to interpret primary data and appreciate the scientific method. Furthermore, this regular scientific discourse with peers will provide an opportunity to develop communication skills.

Papers for the term 1 sessions will be available on Moodle. Papers for the second term will be chosen closer to time to allow for inclusion of outstanding recent publications. Attendance at all sessions is compulsory. Students are required to read the paper thoroughly before each session and to arrive at the session prepared to discuss the paper.

Summative Assessment

Towards the end of the second term students will be given two primary data sets representing a series of experiments in the fields of infection & immunity. The students will be asked to provide a concise report that introduces, describes and critiques the data with some discussion of the implications of these observations and potential areas for future investigation.
Taught Modules – Optional Modules

You will choose THREE optional modules. These modules cover specialised topics in depth. The modules vary in structure (both teaching and assessment), so you are strongly advised to discuss the details with the module organisers and your personal tutor. We hope to run all of the optional modules listed in this handbook, but you should be aware that some modules may not run unless a minimum number of students register. Note also that, for timetabling reasons, it is not possible to take both “Immunological Basis of Disease” and “Tropical Microbiology”.

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<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>0900-1100</td>
<td>PATHG013 Microbial Pathogenesis</td>
<td>INIMG005 Immuno-deficiency &amp; Therapeutics</td>
<td>PATHG015 Advanced Virology</td>
<td>INIMG012 HIV Frontiers from Research to Clinic</td>
<td>PATHG014 Immunological Basis of Disease or INIMG024 Tropical Microbiology</td>
</tr>
<tr>
<td>1100-1300</td>
<td>PATHG015 Advanced Virology</td>
<td>INIMG012 HIV Frontiers from Research to Clinic</td>
<td>PATHG014 Immunological Basis of Disease or INIMG024 Tropical Microbiology</td>
<td>PATHG013 Microbial Pathogenesis</td>
<td>INIMG005 Immuno-deficiency &amp; Therapeutics</td>
</tr>
</tbody>
</table>

One optional module runs outside of this timetable structure

Infectious Diseases Epidemiology and Global Health Policy (CIHDG045)
You may take this module with any other two modules. Though there may be timetable clashes, all teaching sessions are recorded and special arrangements will be made to accommodate students wishing to take this module.
**Tropical Microbiology (INIMG024)**

<table>
<thead>
<tr>
<th>Module Lead</th>
<th>Prof Tim McHugh</th>
<th>(<a href="mailto:t.mchugh@ucl.ac.uk">t.mchugh@ucl.ac.uk</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module Deputy</td>
<td>Tbc</td>
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<tr>
<td>Content</td>
<td>Lectures</td>
<td></td>
</tr>
<tr>
<td>Summative Assessment</td>
<td>Library project (100%)</td>
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</table>

**Aim**

To describe the major infectious agents (bacteria, virus, and parasites) with emphasis on tropical infections to include examples of protozoa, e.g. plasmodium, toxoplasma, trypanosomes, helminths (worms), e.g. nematodes, flat worms, bacteria, e.g. TB, and viruses, e.g. HIV, Ebola. The epidemiology, pathogenesis, diagnosis and patient management will be covered. Cutting edge translational research and the latest developments in diagnosis and management of disease will be introduced.

**Learning objectives**

At the completion of the module the student will understand:

- the epidemiology of infectious agents
- transmission
- host-pathogen interactions including the modulation of the immune system
- diagnosis and management of infectious disease
- infection control: community and resource poor settings
- ethical issues in clinical research

**Assessment**

Library project (100%)
HIV frontiers from research to clinic (INIMG012)

<table>
<thead>
<tr>
<th>Module Lead</th>
<th>Prof Ravi Gupta (<a href="mailto:ravindra.gupta@ucl.ac.uk">ravindra.gupta@ucl.ac.uk</a>) and Dr Clare Jolly (<a href="mailto:c.jolly@ucl.ac.uk">c.jolly@ucl.ac.uk</a>)</th>
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<tbody>
<tr>
<td>Module Deputy</td>
<td>Dr Yasu Takeuchi</td>
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<tr>
<td>Content</td>
<td>Lectures</td>
</tr>
<tr>
<td>Summative Assessment</td>
<td>Library project (100%)</td>
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</tbody>
</table>

**Aim**

To gain current, in-depth knowledge of HIV molecular biology, and its application in medicine.

**Learning objectives**

At the completion of the module the student will:

- gain an in-depth understanding of HIV biology by exploring virus-host cell interaction
- gain knowledge of infection history and pathogenesis of HIV in both cell and systemic levels
- acquire up-to-date knowledge on the approaches and progress made in the development of HIV prevention and therapy
- acquire an understanding of the main principles of the clinical management of HIV infection

**Assessment**

Library project (100%).
Immunological Basis of Disease (PATHG014)

<table>
<thead>
<tr>
<th>Module Lead</th>
<th>Dr Ben Seddon (<a href="mailto:benedict.seddon@ucl.ac.uk">benedict.seddon@ucl.ac.uk</a>)</th>
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</thead>
<tbody>
<tr>
<td>Module Deputies</td>
<td>Professors Arne Akbar and Emma Morris</td>
</tr>
<tr>
<td>Summative Assessment:</td>
<td>1 oral presentation (20%)</td>
</tr>
<tr>
<td></td>
<td>Written examination: 3 essay questions and 2 data Interpretation questions (80%)</td>
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</tbody>
</table>

This module focuses on disadvantageous immune responses: when the immune system causes disease by mounting undesired responses to allergens, self or transplanted tissues. We will explore the genetics and immune mechanisms underlying these responses and ask why substantial numbers of individuals react in a harmful way to normally ‘harmless’ environmental antigens such as pollens or food. We will consider autoimmunity: the breakdown in the immunological tolerance mechanisms that normally prevent pathogenic responses against our own body constituents. Organ-specific and systemic autoimmune conditions will be covered and the contribution of the various components of the immune system to the destructive process discussed. We will also explore the artificial situation of transplanting an organ or tissue from one individual to another. In addition to looking into the various immunological mechanisms involved in transplant rejection, we will investigate how transplant survival can be further improved and whether the current need for long term immunosuppression after transplantation can be overcome.

Objectives

On completion of the module you should understand the immunological basis of:
- Autoimmune diseases
- Allergies
- Transplantation

Taught sessions of this module are shared with iBSc and BSc students.
The immune system comprises components that are involved in recognition of invading pathogens and other noxious agents, microbial killing and tissue homeostasis/repair. This module seeks to explore the broad repertoire of both inherited and acquired causes of impaired immunity, together with the consequences for the patient of such deficiencies and the insights provided into our understanding of the normal immune system. The treatment options that are available for these will be discussed, as well as approaches to immunomodulation including research which aims to transform gene and cell therapies into clinical applications.

Aims

In this module we aim to give you the framework and examples by which:

1. To understand the molecular basis and medical importance of selected humoral and cellular primary immunodeficiency syndromes.

2. To understand contemporary research approaches to investigate the molecular mechanisms that underlie primary immunodeficiencies, with specific examples from recent discoveries.

3. To understand the range of disorders associated with acquired immunodeficiency syndrome, focussing on ageing, pregnancy, nutritional deficiency, HIV infection and iatrogenic causes such as bone marrow transplantation or immunosuppressive medication.

4. To explore how the study of mechanisms for immunodeficiency provide new insights into normal immunology and opportunities to modulate immune responses for therapeutic applications.

5. To obtain an overview of therapies that target the immune system, including biological agents, T cell or DC therapies and advances in vaccination.

Learning Outcomes

- Familiarity with the language and concepts of the field.
- Understanding of principles of Immunodeficiency and therapeutics.
- Recognition of current areas of importance in the field.
- Appreciation of experimental design and analysis.
- Enhanced ability to read and critique primary literature.
- Taught sessions of this module are shared with iBSc and BSc students.
Microbial Pathogenesis (PATHG013)

<table>
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<tr>
<th>Module Lead</th>
<th>Prof Rob Heyderman (<a href="mailto:r.heyderman@ucl.ac.uk">r.heyderman@ucl.ac.uk</a>)</th>
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<tr>
<td>Module Deputy</td>
<td>TBC</td>
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<tr>
<td>Content</td>
<td>Lectures and student presentations</td>
</tr>
<tr>
<td>Summative assessment:</td>
<td>Presentation and commentary based on a paper (30%), Paper review (70%)</td>
</tr>
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</table>

*Exploring how bacteria of clinical and public health importance interact with their human host, cause disease, and how they can be treated and prevented.*

The module has the following aims:

a) Provide insights into the strategies that bacteria use to colonise distinct host niches; hijack host molecular functions and transmit to other hosts; and the evolutionary counter-strategies that the host uses to confine bacteria to places where they cause least harm

b) Explore how in addition to direct tissue toxicity, life-threatening disease is caused by the host immune/ inflammatory response to bacterial invasion

c) Assess the molecular basis for the emergence of antimicrobial resistance and the cost of this resistance for both human and bacterial populations

d) Investigate vaccine strategies to prevent bacterial infections.

The module will introduce general concepts and use selected examples of bacteria that have special niches (intracellular / extracellular) and that colonise distinct tissues (e.g. brain; lung and the gut). We will also introduce new molecular and cellular techniques that are being used to probe interactions between bacteria and their hosts. We will explore the impact of antimicrobial resistance on bacteria and their hosts. Finally, we will show how new knowledge of cellular bacteriology, and bacterial and human genomes is being used in development of novel anti-bacterial treatments and prevention strategies.

This module will consist of a series of state-of-the-art lectures given by leaders in their fields followed by a journal club focused on a high impact paper relevant to the previous lecture led by post-doctoral scientists.

Students will be assessed by a short presentation based on a journal article; and a final written examination.

For the *student presentations*, each student will be given a paper to prepare a presentation and discuss. The presentations should be illustrated, clear and succinct.
The purpose of the scientist led journal clubs together with these student presentations is to develop critical appraisal and data interpretation skills. The student presentations will allow the students to demonstrate your ability to present clearly, show your communications skills, understand the literature and ask relevant questions.

Taught sessions of this module are shared with iBSc and BSc students.
**Advanced Virology (PATHG015)**

<table>
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<tr>
<th>Module Lead</th>
<th>Dr Richard Milne  (<a href="mailto:richard.milne@ucl.ac.uk">richard.milne@ucl.ac.uk</a> )</th>
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<tr>
<td>Module Deputy</td>
<td>Tbc</td>
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<tr>
<td>Content</td>
<td>Lectures and student presentations</td>
</tr>
<tr>
<td>Summative Assessment</td>
<td>In-course assessment: by submission of one data-handling exercise and one oral “journal club” presentation</td>
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<tr>
<td></td>
<td>Written examination: 1 compulsory short answer question (write short notes on 3/6 topics); 2 long answer essay questions chosen from 5. One puzzle question chosen from two.</td>
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**Outline**

What are viruses? How do they replicate? Where do they come from? How do they enter the human population? How do they cause disease? Why do they cause epidemics? Why are some viruses much more dangerous than others? How do we control and prevent infections? This module will address these questions by exploring the remarkable and intimate interaction between virus and host at many levels: molecular, cellular, host organism and population. We will discover how viruses have adapted to optimise survival and replication in the fundamentally hostile environment that their host provides and we will discuss the many effector mechanisms that hosts deploy to prevent viral infection or control it once established.

The module is centred on the idea that an understanding of basic virology is essential for understanding viral disease. Drawing on a major strength in experimental and clinical virology at UCL, the module will provide an advanced understanding of the principles of virus replication and structure, insight into the virus-host interaction and a broad knowledge of individual virus infections, their treatment and prevention.

**Objectives**

You will gain a global and state-of-the-art perspective on viruses. You will be able to apply much of your existing knowledge of biology and medicine in a virological context. You will be challenged with new concepts and you will learn about the close connection between clinical virology and basic virology research.

Taught sessions of this module are shared with iBSc and BSc students.
Infectious Diseases Epidemiology and Global Health Policy (CIHDG045)

Module Leads
Dr Rob Aldridge & Dr Nigel Field
r.aldridge@ucl.ac.uk ; nigel.field@ucl.ac.uk

Content
Lectures

Summative Assessment
Group presentation + poster

Aim

The module will introduce students to key scientific concepts within the field of infectious disease epidemiology, with a practical focus on how these concepts inform evidence-based policy at a global health level. The course will cover core concepts, including factors influencing transmission dynamics, vaccine epidemiology, basic molecular epidemiology and the impact of underlying structural and political factors. Students will be asked to critically appraise examples of policy and the underlying scientific evidence. At the end of the course, students will have a good working knowledge of applied epidemiology for global infectious disease control.

By the end of the module students should be able to:

1. Describe the key elements of pathogen transmission dynamics and measuring infectiousness
2. Describe the most common study designs used within infectious disease epidemiology, including surveillance
3. Articulate a basic understanding of the role of genomics and molecular epidemiology for infectious diseases, covering surveillance and transmission
4. Outline the epidemiology of at least one major vaccine preventable disease and describe some of the key difficulties in implementing immunisation programmes
5. Describe how modelling can be used to predict spread of infections within a population
6. Outline the epidemiology of major global infectious diseases, their associated underlying causes, and how these are linked to control efforts
7. Critically evaluate the range of policy responses to control of infectious diseases

Assessment

1. Group presentation (30 mins) worth 60% of the final mark;
2. Individual short poster describing role and contribution to the presentation (A3 poster, maximum 250 words & 2 figures/ tables) worth 30% of the final mark;
3. Structured student peer-review worth 10% of the final mark.
Research Project Module: INIMG099

<table>
<thead>
<tr>
<th>Module Lead</th>
<th>Dr Richard Milne (<a href="mailto:richard.milne@ucl.ac.uk">richard.milne@ucl.ac.uk</a>)</th>
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</thead>
<tbody>
<tr>
<td>Deputy Lead</td>
<td>Prof Tim McHugh</td>
</tr>
<tr>
<td>Summative Assessment</td>
<td>Project dissertation (90%), Oral examination (10%)</td>
</tr>
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</table>

Aims:

To enhance research skills.
To develop the ability to interpret, critically evaluate and present data.
To present one’s own scientific data as a research manuscript.

Objectives:

On completion, students will have acquired the core skills necessary to undertake a research project and write up the results as a research manuscript. They will be familiar with experimental design, hypothesis generation, data presentation and analysis. More broadly, they will have gained insight into how research laboratories function and how research is conducted.

About the project:

The formal project allocation process starts in term 2 when each student meets with the Programme Director for a discussion about their research interests. Based on this discussion the Programme Director will direct the student to a potential supervisor. It is then the responsibility of the student to contact the supervisor and discuss possible projects.

Guidelines for the project report:

It is expected that the student and supervisor will meet at regular intervals during the project in order to assess progress. The content of the project report must be your own work. The supervisor offers guidance as necessary and must read the work in its final format before it is submitted. It is advisable, of course, for the supervisor to see earlier drafts, but the student is ultimately responsible.

The project must be presented in 10 point ARIAL font with double line spacing. All pages must be numbered starting with the title page as page 1. The report must not exceed 4000 words, excluding the title page, summary, figure legends, tables and references. Citations in the text must be included in the word count. A word count for the summary and main body of the text must be provided.

Examples of projects which have been regarded as particularly well presented are available in
the Divisional Teaching Administrators office and on Moodle for you to examine during the course of the year. (Note that these may have been written following different presentation guidelines.)

The examiners follow the UCL guidelines on plagiarism: published or unpublished work of other persons must be clearly identified. (See notes on plagiarism elsewhere in this handbook).

The project report should contain the following sections:

**Title page:** lists the project title, your name, your supervisors name, the project and summary word counts.

**Summary.** (200 words maximum) This must state the aims of the work, including sufficient background information for the reader to understand them. The key results should then be described, placing them in a broad context and emphasising their significance.

**Introduction:** containing a description of the problem under investigation and placing it in context with a brief survey of existing literature on the subject. This section is NOT expected to be an extensive review of the subject.

**Results:** presents and collates the data as well as providing appropriate analysis of the data in the form of display items (figures and tables) with accompanying text.

**Figures, figure legends and tables:** A maximum of 7 display items (figures and tables) are permitted (this includes those in the Introduction, Results and Discussion). Each figure may include multiple panels and should be one page with its corresponding figure legend at the bottom. This should include the figure number followed by a short title. The legend should include a brief explanation of the experiment that provides sufficient detail for the reader to understand the data without reference to the text. Symbols used in the figure must be explained in the figure legend. Each figure legend must specify the number of times each experiment was independently performed, and the statistical tests used as necessary. Tables do not require a legend, but footnotes are acceptable where needed to define abbreviations etc.

**Discussion:** Provides a critical analysis, interpretation and explanation of the results and places them in a broader context. Addresses questions that are raised and suggests how they might be answered. Enriches, but does not duplicate the Introduction and the Results sections.

**Methods:** describes the materials and methods used in the project in sufficient detail for the reader to understand how the work was carried out.

**Acknowledgements:** Any contributions by others should be explicitly acknowledged in this section.

**References:** You may use any of the standard systems for referencing,
A note on non-laboratory based projects

Non-laboratory projects are not extended essays or reviews. You are required to carry out original research and present your results with data-interpretation and critical analysis. The project should be a “data mining” exercise where you extract and compare relevant data from the primary literature or suitable databases to show an understanding of stated scientific problem.

The guidelines above should be followed for preparation of the report. If appropriate, original data may be included, in addition to the display items, as an appendix. This may only be done after discussion with your supervisor and with the approval of the module lead.

Project symposium

All students will be required to give a short presentation on their projects and to answer questions from the audience at a symposium to be held prior to final submission of the project.

Oral examination (viva)

You will be examined for about 15 minutes by the Programme Director and an internal examiner primarily on matters related to your laboratory project. You should expect to be asked questions on the background to your work, your methodology, the interpretation of your data and on potential future directions. In addition, the examiners will seek to probe the breadth of your understanding of the literature or biological concepts related in some way to your project, but beyond the scope of your specific experiments. The agreed mark for this examination will contribute 10% to the overall module mark.

Key dates for the project

You will have twelve weeks for work in the laboratory, with an extra two weeks for completing the final draft for submission.

Start date for laboratory work: Monday 3 April 2017
End date for laboratory work: Friday 30 June 2017
Project Symposium: Thursday 20 July 2017 (Provisional date, to be confirmed.)
Viva exam: Thursday 27 July 2017 (Provisional date, to be confirmed)
Deadline for submission: 1700, Friday 14 July 2017

Note that part time/flexible students are expected to submit their dissertation in the SAME academic year that they register to undertake this module.
**Project Submission**

You must submit **three** bound printed copies and **one** electronic copy of your project. Any suitable binding is acceptable, most students use card backing and an acetate cover- the ULU offers this service ([http://www.ulucopycats.co.uk/services/copycats/](http://www.ulucopycats.co.uk/services/copycats/)).

**The printed copies** should be handed in to the Programme Administrator.

Room 1.3.12, First Floor, Cruciform Building
Gower Street, London, WC1E 6BT
Tel: 020 3108 2133 (internal: 52133)

**The electronic copy** must be uploaded on the INIMG099 Moodle site before the deadline.
Learning opportunities outside the timetable

The Division of Infection and Immunity is a vibrant and active research environment. You are encouraged to take full advantage of the opportunities this presents.

**Divisional Seminar Programme** (Mondays 1300). National and international speakers.

**Divisional Internal Seminars** (Tuesdays 1300). Regular sessions with short talks from Faculty, PhD students and post-docs.

**UCL/ Royal Free Institute of Immunity and Transplantation seminar programme** (Alternate Thursdays 1200). External speakers with a focus on immunology.

**Virtual Virology**: (1600 Thursdays, monthly). A flagship monthly virology seminar series with a London-wide audience.  [https://www.ucl.ac.uk/towers-lab/virtual_virology](https://www.ucl.ac.uk/towers-lab/virtual_virology)

**Divisional Postgraduate club**: (17:00 Thursdays, monthly). Careers talks, networking opportunities, science talks, non-science talks, food, drink... Run by Divisional postgraduate students for Divisional postgraduate students.

All events are widely advertised with posters and details can be found on the Divisional web page:  [http://www.ucl.ac.uk/infection-immunity](http://www.ucl.ac.uk/infection-immunity)
Assessment

Types of assessment

A wide range of assessment formats are used in the programme, as outlined in the module descriptions above, they fall into two categories:

**Formative assessments** are used in some of the modules. These assessments provide you with feedback so that you can form an impression of how well you are doing, but the mark does not contribute to your final mark for the module. If an assessment is formative rather than summative this will be made clear to you.

**Summative assessments** contribute towards the overall mark you are awarded for the module. In this handbook the term ‘assessment’ usually refers to summative assessments and the weighting of each assessment to your final mark will be indicated. Assessment includes coursework, unseen examinations and final oral examinations.

Marking, Second-Marking and Moderation

All work that is submitted for summative assessment is marked by a UCL Internal Examiner or Assistant Internal Examiner. All UCL programmes also include rigorous second-marking and internal moderation processes to ensure that marking is consistent and fair. Second-marking can take a number of different forms depending on the type of assessment, but the overall aim is to ensure that marking is as accurate as possible. Internal moderation also helps UCL to ensure that marking is equitable across different modules, pathways, options and electives.

Marking is carried out “blind” wherever practical (this means that the marker does not know the identity of the author of the work being marked). Exceptions to this are oral presentations, some coursework and the final project. In discussions at the Board of Examiners meeting, candidates are referred to by code number rather than name.

External Examining at UCL

External Examiners are senior academics or practitioners from other universities who help UCL to monitor the quality of the education we provide to our students. In particular, External Examiners scrutinise the assessment processes on each programme, helping UCL to ensure that all students have been treated fairly, that academic standards have been upheld and that the qualifications awarded are comparable with similar degrees at other UK universities.

Each External Examiner submits an annual report. Faculties and departments are required to reflect on any recommendations and address any issues raised in a formal response. The report and response are discussed with Student Reps at the Staff-Student Consultative Committee, and are scrutinised by faculty, department and institution-level committees. Students can access
their External Examiner’s report and departmental response via their Portico account or by contacting their Departmental Administrator in the first instance or Student and Registry Services directly at examiners@ucl.ac.uk.

**UCL Feedback Turnaround Policy**

Regular feedback is an essential part of every student’s learning. It is UCL policy that all students receive feedback on summative assessments within one calendar month of the submission deadline. This feedback may take the form of written feedback, individual discussions, group discussions, marker’s answers, model answers or other solutions (although students should note that UCL is generally unable to return examination scripts or comments on the same). Students writing dissertations or research projects should also expect to receive feedback on a draft on at least one occasion.

If, for whatever reason, a department/division cannot ensure that the one calendar month deadline is met then they will tell students when the feedback will be provided - it is expected that the extra time needed should not exceed one week. Where feedback is not provided within the timescale, students should bring the matter to the attention of their Departmental Tutor or Head of Department.
Submission of Coursework and Project Reports

You will be informed by module organisers of the method of submission of coursework and project reports. Most of your coursework will be submitted online via the Turnitin system on Moodle.

Coursework and Project Deadlines

Submission deadlines will be clearly stated for all coursework. A ‘deadline’ is not the time and date the work should be submitted. It is the absolute final time that work will be accepted. Stated deadlines are INFLEXIBLE except in the case of genuine emergencies. (Note that computer-related problems NEVER fall into this category.) Late submission will result in substantial penalties (see below). In most cases work may be submitted days, or even weeks, before the deadline. We strongly suggest you aim to submit all coursework earlier than the last due date.

On occasions students have questioned why there are several deadlines all in the same week. Working to deadlines is a crucial transferrable skill. Researchers face deadlines regularly, for example, with grant or fellowship applications and paper submissions. It should be evident that having to do several pieces of work in a short time can easily be avoided by managing your time effectively. You can commence work as soon as it is assigned and then submit it prior to, not on, the date of the deadline.

Late Submission of Coursework

1. Where coursework is not submitted by a published deadline, the following penalties will apply:

   a) The marks for coursework received up to two working days after the published date and time will incur a 10 percentage point deduction in marks (but no lower than the pass mark).

   b) The marks for coursework received more than two working days and up to five working days after the published date and time will receive no more than the pass mark (40% for UG modules, 50% for PGT modules).

   c) Work submitted more than five working days after the published date and time but before the second week of the third term will receive a mark of zero but will be considered complete.

   d) In the case of coursework that is submitted over- or under-length and is also late, the greater of any penalties will apply.
2. Where there are Extenuating Circumstances that have been recognised by the Faculty Extenuating Circumstances Panel, these penalties will not apply until the agreed extension period has been exceeded.

3. In the case of coursework that is submitted late and is also over length, then the greater of the two penalties shall apply. This includes research projects, dissertations and final reports.

**Over-length coursework including projects**

Written assessments usually have a stated word limit. Most academic journals and grant awarding bodies impose word limits on submissions and reject them if the word limit is exceeded: *DO NOT EXCEED THE STATED WORD LIMIT.*

For submitted coursework, where a maximum length has been specified, the following procedure will apply:

a) The length of coursework will be specified in terms of a word count or number of pages.

b) Assessed work should not exceed the prescribed length.

c) For work that exceeds the specified maximum length the mark will be reduced by ten percentage marks; but the penalised mark will not be reduced below the pass mark.

d) In the case of coursework that is submitted late and is also over length, then the greater of the two penalties shall apply. This includes research projects, dissertations and final reports.
**Cheating and Plagiarism**

**Cheating**

Cheating or attempts to cheat will lead to serious consequences, including the degree not being awarded. You should read and adhere to examination regulations. Unless you are explicitly informed otherwise, you are not allowed to take any written material into an examination.

**Plagiarism**

Plagiarism is the *presentation of another person's thoughts or words or artefacts or software as though they were a student's own.*

Plagiarism is cheating: it is not acceptable.

Most of the notes in this section of the handbook are taken directly from the UCL Guidance for students:

[http://www.ucl.ac.uk/current-students/guidelines/plagiarism](http://www.ucl.ac.uk/current-students/guidelines/plagiarism)

Any quotation from the published or unpublished works of other persons must, therefore, be clearly identified as such by being placed inside quotation marks, and students should identify their sources as accurately and fully as possible. A series of short quotations from several different sources, if not clearly identified as such, constitutes plagiarism just as much as does a single unacknowledged long quotation from a single source. Equally, if a student summarises another person's ideas, judgements, figures, software or diagrams, a reference to that person in the text must be made and the work referred to must be included in the bibliography.

Recourse to the services of 'ghost-writing' agencies (for example in the preparation of essays or reports) or of outside word-processing agencies which offer correction/improvement of English is strictly forbidden, and students who make use of the services of such agencies render themselves liable for an academic penalty.

Use of unacknowledged information downloaded from the internet also constitutes plagiarism. Where part of an examination consists of 'take away' papers, essays or other work written in a student's own time, or a coursework assessment, the work submitted must be the candidate's own.

It is also illicit to reproduce material which a student has used in other work/assessment for the course or programmes concerned. Students should be aware of this 'self-plagiarism'. If in doubt, students should consult their Personal Tutor or another appropriate teacher.

Failure to observe any of the provisions of this policy or of approved departmental guidelines constitutes an examination offence under UCL and University Regulations. Examination offences will normally be treated as cheating or irregularities under the Regulations in respect of
Examination Irregularities. Under these Regulations students found to have committed an offence may be excluded from all further examinations of UCL or the University or of both.

The expression of original ideas is considered intellectual property, and is protected by copyright laws, just like original inventions. Almost all forms of expression fall under copyright protection as long as they are recorded in some way (such as a book or a computer file).

All of the following are considered plagiarism:

- turning in someone else's work as your own
- copying words or ideas from someone else without giving credit
- failing to put a quotation in quotation marks
- giving incorrect information about the source of a quotation
- changing words but copying the sentence structure of a source without giving credit
- copying so many words or ideas from a source that it makes up the majority of your work, whether you give credit or not (see Turnitin section on "fair use" rules)

Believe it or not...

Changing the words of an original source is not sufficient to prevent plagiarism. If you have retained the essential idea of an original source, and have not cited it, then no matter how drastically you may have altered its context or presentation, you have still plagiarized. Most cases of plagiarism can be avoided, however, by citing sources. Simply acknowledging that certain material has been borrowed, and providing your audience with the information necessary to find that source, is usually enough to prevent plagiarism. See the section on citation for more information on how to cite sources properly. See the UCL document on how you should cite your references and referencing styles.

Detection of Plagiarism

UCL uses a sophisticated detection system, Turnitin, to scan all submitted work for evidence of plagiarism. This system has access to billions of sources worldwide (websites, journals etc.) as well as work previously submitted to UCL and other universities.

You may upload your work to Turnitin to screen it for plagiarism at any time prior to the final submission deadline.

Did you know?

The penalties for plagiarism can be surprisingly severe, ranging from failure of classes to expulsion from academic institutions!

- It doesn't matter if you intend to plagiarise or not! In the eyes of the law, and most publishers and academic institutions, any form of plagiarism is an offence that demands punitive action. Ignorance is never an excuse.
• It is even possible to plagiarise from yourself, if you are citing a work you submitted elsewhere. In most Universities this will result in a failing grade for the work, and possibly for the course!
• Plagiarism is almost always a symptom of other educational problems.

Why do students plagiarise?

There are two main types of plagiarism – intentional and unintentional. The list below is not exhaustive but contains the most commonly encountered reasons:

On the whole unintentional:
• Misunderstanding about citation
• Over-reliance on the original source material
• Following practices encouraged or accepted in previous educational experience or culture
• Not fully understanding when group work ceases and individual work begins
• Compensating for poor English language skills
• Poor note-taking practice

On the whole intentional:
• Leaving the work to the last minute and taking the easy option
• Needing to succeed
• Sheer panic
• Thinking that it is easy to get away with it
• Having problems with the workload
• Copying others is easier than original work
• Sensing that the teacher will not mind

What does this mean in practice for you, as a student at UCL?

It means you CAN'T do the following:
• Cut and paste from electronic journals, websites or other sources to create a piece of work.
• Use someone else's work as your own.
• Recycle essays or practical work of other people or your own (this is self-plagiarism).
• Employ a professional ghost-writing firm or anyone else to produce work for you.
• Produce a piece of work based on someone else's ideas without citing them.

So what CAN you do?
• You can quote from sources providing you use quotation marks and cite the source (this includes websites). See www.ucl.ac.uk/Library/CitationPlagiarism.doc for how to cite references.
• You can paraphrase (take information from a piece of work and rewrite it in a new form) but you must still mention the source.
• In the case of joint practical or project work (or some group projects) individuals may use the same data, but the interpretation and conclusions derived from that data i.e. the ‘write-up’ must be their own.
Examinations

Examinations are set by the module organiser, checked by a second internal examiner and reviewed by the External Examiner (from outside the College, see below). Past papers are usually available on Moodle or from the Library.

Students must ensure that they are aware of the regulations governing written examinations detailed in the UCL Examination Guide for Candidates on the Examinations and Awards website:

http://www.ucl.ac.uk/current-students/exams_and_awards

Students should pay particular attention to the regulations around examination irregularities. Students who are suspected of any form of cheating or of breaching the Examination Regulations will be investigated under UCL’s Examination Irregularities and Plagiarism procedures.

Examination Irregularities

UCL students are expected to be aware of and adhere to UCL’s referencing and examination requirements as a condition of their enrolment:

- **For examinations**, the *UCL Examination Guide for Candidates* is published annually on the Examinations and Awards website. All candidates for written examinations must ensure they are familiar with the requirements for conduct in examinations set out in this guide.

Examination guide for candidates:

http://www.ucl.ac.uk/current-students/exams_and_awards
**Assessment guidelines**

You will be given clear guidance on the form of assessment, the marking system and the overall weighting for each module. In most cases, past exam papers or example questions will be available on Moodle.

**Marks and grades**

- <40% Grade D Fail
- 40-49% Grade C Fail (In condoned zone)
- 50-59% Grade B Pass
- 60-69% Grade A Pass (Merit zone)
- ≥ 70% Grade A+ Pass (Distinction zone)

Note that the following guidelines are generic: you will usually be given clear guidance on what is expected for each individual assessment.

Coursework with careless or sloppy presentation, spelling mistakes or which fails to adhere to the stated guidelines is unlikely to get high marks.

**Essays for coursework and unseen examinations**

- <40%
  - Clear lack of understanding
  - Major errors of fact and no grasp of key concepts
  - Major omissions
  - No discernible essay structure
  - Inadequate references
  - Very poor discussion of future directions

- 40-49%
  - Several errors of fact and no grasp of key concepts
  - Many omissions
  - Poor essay structure
  - Inadequate references
  - Minimal discussion and consideration of future directions
50-59%
Some errors in fact and limited grasp of key concepts
Some omissions
Reasonable discussion of future research directions
Adequately structured
Reasonable referencing

60-69%
A few minor factual errors
Clear understanding of key concepts
Few omissions
Some attempt at critical analysis/appraisal of topic
Less well structured and researched than A as reflected in the literature survey and discussion
Future research directions showing less insight than A

70% and above
No errors/omissions in facts
Clear and in depth understanding of key concepts
Excellent structure: an essay which introduces then leads the reader through the subject
Well researched: up-to-date literature survey which is incorporated in the text and as a discursive element in the conclusions
Balanced and coherent argument
Refined and thoughtful critical analysis of topic
Obvious clarity of ideas and writing

Data interpretation for unseen examinations and coursework

<40%
Clear lack of understanding
Numerous major and minor omissions and errors
Inadequate data content
Very poor presentation

40-49%
Numerous major and minor omissions and errors
Inadequate data content
Poor understanding of data
Little analysis
Confusing presentation
50-59%

Some major and/or minor omissions and errors
Adequate presentation of information
Reasonable understanding of data
Reasonable analysis

60-69%

Few omissions and errors
Good presentation of information
Good understanding of data
Some attempt at critical analysis/appraisal of subject

70% and above

No major omissions or errors
Precise and clear presentation
Excellent structure
Thorough understanding of the scientific principles
Original approach to analysis
A comprehensive and critical coverage
Logical deduction and conclusion

**Oral presentations**

In general you will be assessed on:

Clarity of presentation
Contents of presentation
Use of visual aids
Depth of understanding of the topic presented
Critical analysis /appraisal of the subject
Response to questions

**Research project reports**

<40%

Inadequate and inappropriate information
Numerous major and minor omissions and errors
Incomprehensible presentation
Inadequate discussion of information presented
References not cited in the text
Incomplete reference list

40-49%

Inadequate introduction
Major and/or minor omissions and errors
Poor and confusing presentation
Inadequate discussion of data
References not cited in the text
Incomplete reference list

50-59%

Adequate introduction
Some major omissions and errors
Informative to coherent presentation
Adequate discussion of the data presented
Some attempt at critical analysis
Some suggestions of future directions

60-69%

Good introduction
Some minor omissions and errors
Informative to coherent presentation
Good discussion of the data presented
Critical analysis and original ideas for future directions

70% and above

Thorough and well-written introduction
Essentially no omissions and errors
Comprehensive and logical presentation
Outstanding critical analysis
Informed and well-written discussion
Intelligent suggestion of future directions

Oral examination

<40% - A very poor performance with many serious faults in knowledge and understanding of background literature and methodology, and interpretation of data.
40-49% - Barely acceptable performance with many serious faults in knowledge and understanding of background, methodology, or data interpretation.

50-59% - An acceptable performance with a few serious or many minor faults in knowledge and understanding of background literature or methodology, or interpretation of data.

60-69% - Good performance that shows knowledge and understanding of the background literature and methodology, with competent interpretation of results. A few minor faults in any of these aspects are allowable within this category.

70% and above - Very good performance that shows a wide knowledge of the literature relating to the research topic, clear understanding of the subject or critical evaluation of data.
Absence from Assessment

Any student who is absent from an assessment will receive a mark of zero unless they obtain authorisation for the absence and formally defer their assessment to a later date by submitting a request for Extenuating Circumstances (details are given later in this handbook). Absences from assessment need to meet the criteria for Extenuating Circumstances and be supported by appropriate evidence. If Extenuating Circumstances are not approved, the mark of zero will stand. In line with UCL’s obligations for students studying under a visa, Tier 4 students must also obtain authorisation for any absence from teaching or assessment activities under the Authorised Absence procedures:

https://www.ucl.ac.uk/srs/academic-manual/c1/taught-registration/absence#top
Extenuating Circumstances and Reasonable Adjustments

Reasonable Adjustments - UCL will make Reasonable Adjustments to learning, teaching and assessment to ensure that students with a disability are not put at a disadvantage. UCL also provides Reasonable Adjustments for students who might not consider themselves to have a ‘disability’ but who nevertheless would benefit from additional support due to an ongoing medical or mental health condition. It is the responsibility of the student to request Reasonable Adjustments, and students are encouraged to make a request as early as possible.

More details can be found here:

https://www.ucl.ac.uk/srs/academic-manual/c4/reasonable-adjustments/principles
http://www.ucl.ac.uk/disability

Special Examination Arrangements - (SEAs) are adjustments to central or departmental written examinations which can be made as a Reasonable Adjustment for students with a disability or longer-term condition or as a form of mitigation for students with shorter-term medical Extenuating Circumstances. This may include, but is not limited to extra time, a separate room, rest breaks and specialist equipment. Students must make an application to use the special examination facilities.

More details can be found here:

https://www.ucl.ac.uk/srs/academic-manual/c4/examinations/special-examination-arrangements

Illness and other Extenuating Circumstances - UCL recognises that some students can experience serious difficulties and personal problems which affect their ability to complete an assessment such as a sudden, serious illness or the death of a close relative. Students need to make sure that they notify UCL of any circumstances which are unexpected, significantly disruptive and beyond their control, and which might have a significant impact on their performance at assessment. UCL can then put in place alternative arrangements, such as an extension or a deferral of assessment to a later date.

More details, including a guide on how to apply, can be found here:

https://www.ucl.ac.uk/srs/academic-manual/c4/extenuating-circumstances/principles
**Longer-term conditions** - The Extenuating Circumstances regulations are designed to cover unexpected emergencies; they are not always the best way to help students who might have a longer-term medical or mental health condition or a disability. Although there may be times when it is necessary for such students to use the EC regulations, students should make sure they are aware of, and take advantage of, all the other support mechanisms provided by UCL such as reasonable adjustments and special examination arrangements (see above)
Degree requirements

Requirements for the degree of MSc Infection & Immunity

The degree of Master of Science in Infection & Immunity requires a total of 180 credits. The Programme comprises five core modules; three optional modules and a research project. The core and optional modules each carry 15 credits and the research project carries 60 credits. Credits are acquired on successful completion of modules. The pass mark is 50% for all modules. In order to be awarded the MSc Degree a student must achieve a pass (that is an overall mark of 50% or higher) in all modules.

Laboratory Introduction to Basic Bacteriology (INIMG011) 15 credits
Epidemiology and Infectious Diseases (STDSG017) 15 credits
Molecular Virology (VIRLG001) 15 credits
Immunology in Health and Disease (INIMG002) 15 credits
Data Interpretation (CMMGG013) 15 credits

Optional modules 3 x 15 credits

Laboratory-Based Research Project 60 credits

TOTAL 180 credits

Pass mark for the degree is 50%.

A merit will be awarded if the overall mark is 60% or above with 60% or above in the Research Project, no marks below 50%, no condoned marks, no re-sits, and all marks based on first attempts.

A distinction will be awarded if the overall mark is 70% or above with 70% or above in the Research Project, no marks below 50%, no condoned marks, no re-sits, and all marks based on first attempts.

Rounding is applied to obtain the integer marks, for example 64.4 is rounded to 64%, but 64.5 is rounded to 65%. The rounding principles also apply to borderline and distinctions decisions.

If you fail a written examination you will have the opportunity to re-sit (as soon as is possible and once only) a new exam paper (see “Reassessment” below). If you fail a piece of coursework, one resubmission is also allowed. Though you need to achieve an overall mark of 50% or above to pass a module, you do not need to achieve a pass mark in each component of a module.

Overall module marks from 40-49% may be condoned at the discretion of the Board of Examiners. A maximum of 25% of the taught element of the programme (i.e. excluding the project) can be condoned (that is equivalent to two 15 credit modules) provided the overall mark for the programme is 50% or greater. This means that the degree may still be awarded
with two modules with overall marks in the 40-49% range. Note that in this case, the mark is not increased and the fail mark will still appear on the transcript. Note that a failed research project module cannot be condoned. If you fail the research project module the Programme Board of Examiners will determine whether you should:

a) Resubmit the dissertation in the same academic session, or
b) Interrupt and re-register in the following academic session in order to resubmit at the end of the first term and be considered for the award of a degree in January, or
c) Interrupt and re-register in the following academic session in order to resubmit at the next scheduled occasion and be considered for the award of a degree at the end of that academic session.

Where a student must be reassessed in a significant proportion of the taught modules, and this might affect performance in the dissertation or research project, the Programme Board of Examiners may recommend that the student undertakes the reassessment for the taught modules in the current academic session, and re-registers in the following academic session in order to resubmit their dissertation.

Requirements for Postgraduate Diploma in Infection & Immunity

Requires an accumulated total of 120 credits (total of 8 modules: 4 core plus 4 optional) with an overall average mark of 50% or greater. A maximum of 25% of the programme may be condoned (at 40-49%), at the discretion of the Board of Examiners. The award of merit will be given if the overall mark over 120 credits is 60% or higher and there are no marks below 50%, no condoned marks, no re-sit marks, and all marks are first attempts. The award of distinction will be given if the overall mark over 120 credits is 70% or above, there are no marks below 50%, no condoned marks, no re-sit marks, and all marks are first attempts.

Requirements for Postgraduate Certificate in Infection & Immunity

Requires an accumulated total of 60 credits (4 core modules, or by consultation with Programme Director alternative optional modules) with an overall average mark of 50% or greater. A maximum of 25% of the programme may be condoned (at 40-49%), at the discretion of the Board of Examiners. The award of merit will be given if the overall mark over 60 credits is 60% or higher and there are no marks below 50%, no condoned marks, no re-sit marks, and all marks are first attempts. The award of distinction will be given if the overall mark over 60 credits is 70% or higher and there are no marks below 50%, no condoned marks, no re-sit marks, and all marks are first attempts.

Reassessment

The Programme Scheme of Award describes the modules which students must complete and pass in order to achieve their degree. Where a student fails to meet these requirements at the
first attempt, and there are no Extenuating Circumstances material to that failure, they may be reassessed on one more occasion only, unless they have been awarded a degree, are eligible for the award of a degree, or have been excluded from UCL on the grounds of academic insufficiency or as a result of misconduct. Students who have passed a module are not permitted to resit or repeat that module.

**Timing of Reassessment**

Reassessment must be made at the next scheduled occasion, which may be almost immediately, in the late summer period or in the next academic session, depending on the programme structure and the student’s circumstances.

**Resit Marks**

Students will receive the higher of the marks achieved at the first or second attempt, whether for the original module or a substitute module. Marks will be included in the classification calculation for the year in which the module was originally taken.

**Format of Reassessment**

Students will normally only be reassessed in those module components which they have failed.

**Substitution of Failed Module(s)**

Subject to faculty approval, modules up to the value of 30 credits (one course unit) across the whole programme may be substituted for modules that have been failed. Students will be required to attend all teaching and undertake all assessment for the new module, but the assessment for the new module will be treated as a second attempt. All applications for the substitution of new modules must be made by the faculty to UCL Assessment & Student Records.

**Graduation ceremony**

The graduation ceremony (for students who have completed their degree) normally takes place in the August/September of the year after you have completed your degree. Arrangements for this are made by the Registry and not the Department and you should receive your application form for places from the Registry which you must return by the specified date if you wish to attend. Transcripts are also provided by the Registry and not the Department.
Programme Management and Quality Control

The quality of the MSc Infection & Immunity Programme is monitored by the following procedures:

Board of Examiners of MSc in Infection & Immunity

All results are reviewed and approved by this group, which meets once a year. Membership includes the programme director and all module leads. The meeting is also attended by the external examiner and a faculty representative.

MSc in Infection & Immunity Programme Working Committee

This group, which comprises the programme director, module leads, other divisional teaching staff and student representatives, meets once a term to oversee the running of the programme and discuss changes.

Student-Staff Consultative Committee

Teaching staff meet all students once a term to discuss issues related to the programme. Matters raised are reported to the programme working committee where appropriate decisions are made and acted upon.

Faculty Post-Graduate Research Committee

The Programme Director is responsible for liaising with and reporting to the Faculty Graduate and Research Committee of matters arising from the MSc Infection & Immunity Programme approved by the Board of Examiners, the Programme Working Committee and the Student-Staff Consultative Committee.

Student Questionnaires

Online questionnaires are used to obtain feedback from students for each module. We take these surveys very seriously and often change module content in response to your views. A summary of the response is reported to the Programme Working Committee.