TWO INSPIRING PROGRAMMES TO HELP YOU ACHIEVE YOUR CAREER GOALS

“The MSc in Pharmacology and Drug Development will give you an in-depth knowledge of drug development within an academic, clinical and industrial setting. This critical mix of knowledge and interaction with our expert teachers will open exciting opportunities to broaden your career prospects.”
Dr Simon Calaminus, Programme Director, Pharmacology and Drug Development

“The MSc in Pharmacology and Education provides a deep insight into therapeutics, while allowing you to develop your knowledge and skills as an educator – preparing you to pursue a career in academia.”
Dr Laura Sadofsky, Programme Director, Pharmacology and Education

CONTENTS

4 A DIFFERENT KIND OF MEDICAL SCHOOL
6 DISCOVER THE MSc IN PHARMACOLOGY AND DRUG DEVELOPMENT
10 DISCOVER THE MSc IN PHARMACOLOGY AND EDUCATION
14 MODULES
16 PROGRAMME TIMELINES
18 SUPPORTING YOU TO SUCCEED
18 INTERCALATION
19 YOUR APPLICATION

FULL-TIME: 1 YEAR
PART-TIME: 2 YEARS
BASED PRIMARILY AT THE UNIVERSITY OF HULL
AVAILABLE AS AN INTERCALATED DEGREE
A DIFFERENT KIND OF MEDICAL SCHOOL

As a postgraduate taught student at Hull York Medical School, you will be welcomed into our vibrant and supportive community, addressing the needs of an ever-changing healthcare environment.

You will be taught by world-leading subject experts, clinicians and researchers, who will encourage you to think independently and critically, so you graduate with the expertise to succeed in a rapidly changing healthcare environment.

We are the joint medical school of the Universities of Hull and York, and as such you will have access to the world-class facilities, equipment and expertise as well as the learning resources of both our parent universities.

We need to keep asking questions, prompting pioneering research and contributing fresh scientific insight to find solutions to ever more complex problems.

LEARN MORE ABOUT OUR PHARMACOLOGY PROGRAMMES
hyms.ac.uk/pharmacology-drug-development or hyms.ac.uk/pharmacology-education
Pharmacology is the science underpinning the action of drugs on biological systems, and its reach and impact – playing a vital role in medicine, nursing, dentistry and veterinary medicine. Pharmacology therefore touches all of our lives.

This programme is aimed at aspiring clinical researchers, as well as those wishing to gain a deep understanding of the underlying principles of how drugs work and how to develop new drugs.

Our MSc in Pharmacology and Drug Development will provide you with unique and unrivalled opportunities to immerse yourself in the clinical, basic science and industrial aspects of pharmacology. In this programme you will gain the skills to play an active role in developing the next generation of drugs – from first principles in the lab, to testing in clinical trials, and taking new products to clinic.

You will be based in our Centre for Atherothrombosis and Metabolic Disease, where you will learn from experts at the forefront of pharmacology and the drug design process. This includes our own Health Trials Unit as well as invited speakers from internationally relevant drug companies.

As well as learning from their expertise, you will be challenged to think differently and develop skills to become a self-directed learner – allowing you to continually grow your pharmacology knowledge throughout your career.

You will finish your year with us by conducting a significant research project in either basic or applied pharmacology to generate novel and cutting-edge research findings. We will support you to increase your chances of getting your work published.

DISCOVER THE MSc IN PHARMACOLOGY AND DRUG DEVELOPMENT

You will become a lifelong learner, developing the skills and techniques to question perceived knowledge and push boundaries.
Through studying this Masters programme, you will have the opportunity to develop key skills essential for effective design, delivery and interpretation of laboratory and clinical data. This skill set is key for multiple roles within the industrial, medical and academic sectors, both in the UK and internationally.

Within industry this MSc is likely to open job opportunities in drug safety, quality, regulation and compliance including roles such as Consumer Safety or Quality Manager, Clinical Data Associate, or Clinical Data Manager, alongside the more traditional lab roles. Through studying this Masters, you will also develop the skills to further your academic career by pursuing a PhD.

Bruce Charlesworth, Chief Medical Officer at Reckitt
Now more than ever, Pharmacology plays a critical role in healthcare. If you are interested in becoming a pharmacology educator or clinical researcher, and passing on your expertise to the next generation of pharmacology students and colleagues, the MSc in Pharmacology and Education is ideal.

This programme combines modules from the MSc in Pharmacology and Drug Development programme with our Higher Education Academy-accredited MSc in Health Professions Education programme.

Our MSc in Pharmacology and Education will provide you with a unique opportunity to advance your pharmacology knowledge alongside developing as an educator.

You will learn from experts in their field who are at the forefront of pharmacology, medicine or medical education. This includes external experts, our own Health Trials Unit, pharmacology academics and our Health Professions Education Unit (hyms.ac.uk/hpeu).

You will finish your year with us by conducting a significant research project focussing on generation of novel data to support and improve pharmacology education for both science or medical professions. We will support you to increase your chances of getting your work published.

**DISCOVER THE MSc IN PHARMACOLOGY AND EDUCATION**

We encourage all of our students to be lifelong self-directed learners. You will have numerous opportunities to immerse yourself in the subject, enhance your knowledge and gain new skills, but you will be the driving force behind your own learning and development.

We employ a variety of teaching and learning techniques to deliver this programme. These include structured sessions led by clinicians and/or tutors as well as a blended route to mix face-to-face study days with online learning.

The programme is built around core modules that cover the fundamental principles of pharmacology, the clinical relevance of drugs for the major organ systems and the fundamental processes involved in clinical trials. Alongside the pharmacology component, there are core modules covering learning and teaching, assessment, and research methods to train educators of tomorrow. Learn more about our modules on p14.

You will learn from experts at the forefront of pharmacology, medicine or medical education.
MSc in Pharmacology and Education: Key Facts

Programme Duration
You can choose to study full-time for one year, or part-time over two years to fit around your work and home life.

Location
You will be based predominantly at Hull York Medical School’s facilities at the University of Hull, although some sessions will be delivered online or off-campus by external providers. You may also be required to travel to the University of York for some study days on the educational modules.

Modules
The programme is a 180 credit Masters programme, with six core taught modules (20 credits each), and a core research project/dissertation (60 credits). Learn more about modules on p14.

Assessment
Assessments vary by module, and include exams, written assessments, oral presentations, research reports and a dissertation. See p14.

Intercalation
The MSc in Pharmacology and Education will help give intercalating medical students a deeper understanding and appreciation of prescribing and the science of medicines, which can open up a possible career as a Medical Adviser. Learn more about intercalation on p18.

Career Opportunities
Through studying this MSc, you will have the opportunity to expand your pharmacology and therapeutics knowledge as well as gaining an insight into the clinical trials process. Alongside this, the course will equip you with practical knowledge to deliver exceptional teaching, assessment and research. This skill set is key for multiple roles within the industrial, medical and academic sectors.

This course will provide you with expertise to help you become a pharmacology educator and will be useful for those wishing to follow an academic or clinical academic career. In addition, this MSc will give you knowledge and experience to pursue a career in the pharmaceutical industry and is likely to open job opportunities in drug safety, quality, regulation and compliance.

Through studying this Masters, you will also develop the skills to allow you for further your academic career by pursuing a PhD.

Our aim is to find ever more effective treatments for a range of conditions and diseases, to ensure better health outcomes for patients world-wide.
Our Pharmacology programmes offer a mix of shared and unique modules that allow you to broaden and deepen your learning around the relevant topics.

**CORE MODULES ON BOTH PROGRAMMES**

**FOUNDATIONS OF PHARMACOLOGY**
You will learn, discuss, and critically analyse key pharmacological topics such as the general principles of drug action, pharmacodynamics, pharmacokinetics, and adverse drug reactions which underpin the drug development process.

**Assessment:** Essay 100%

**BENCH TO BEDSIDE II: CLINICAL TRIALS**
You have designed a drug – but what next? This module will give you a detailed overview of clinical trials. You will reflect on the different elements of trial design, understand the phases of clinical trials, all the time developing your skills in evidence synthesis and critical appraisal.

**Assessment:** Abstract 30%, clinical trial protocol review 70%

**THERAPEUTICS**
In this module you will explore the use of drugs in cardiovascular, cancer, gastrointestinal, renal, liver, rheumatological, and endocrine disease as well as exploring areas of uncertainty around the prescription of medicines.

**Assessment:** Oral presentation 40%, essay submission 60%

**DISSERTATION**
You will have the opportunity to put your new skills to the test by undertaking a substantive research project within the field of pharmacology, with the opportunity to publish your results.

**Assessment:** Presentation 20%, Written dissertation 80%

**ADDITIONAL PHARMACOLOGY AND DRUG DEVELOPMENT MODULES**

**PRACTICAL RESEARCH SKILLS IN PHARMACOLOGY**
Experimental pharmacology goes hand in hand with the need to develop practical lab skills. In this module you will complete laboratory-based experiments to refine your rigorous approaches to working through an experimental protocol, gaining knowledge of different scientific phenomena.

**Assessment:** BioCOSHH submission 20%, lab report submission 40%, poster presentation 40%

**BENCH TO BEDSIDE I: DESIGN AND DISCOVERY**
You will examine the work that goes on before a drug is given to humans, learning the core concepts of drug design, and having the opportunity to visit testing facilities, where you will receive input from experts in the pharmaceutical industry.

**Assessment:** Portfolio 100%

**ADDITIONAL PHARMACOLOGY AND EDUCATION MODULES**

**LEARNING AND TEACHING**
This module will introduce you to the key principles of teaching and learning in the health professions, enabling you to confidently prepare, deliver and evaluate teaching sessions in your area of practice.

**Assessment:** Written assignment (100%)

**ASSESSMENT AND FEEDBACK**
You will be provided with the framework to analyse and review your experiences in assessment and feedback. You will learn to engage critically with literature relating to assessment and feedback and use case studies to explore the relationships between assessment, feedback and learning.

**Assessment:** Group wiki project (10%), written assignment (90%)

**RESEARCH APPROACHES IN HEALTH PROFESSIONS EDUCATION**
This module will introduce you to key concepts in quantitative and qualitative research in order to form a research question, plan an appropriate methodological approach and method for data collection and analysis, and write a research proposal.

**Assessment:** Group wiki project (10%), written assignment (90%)

You will finish your year with us by conducting a significant research project and we will help maximise the chances of your work being published.

Please note that specific module details may change from time to time. For the latest information, please visit our website.
## PROGRAMME TIMELINES*

### MSc IN PHARMACOLOGY AND DRUG DEVELOPMENT

#### FULL-TIME OPTION

<table>
<thead>
<tr>
<th>TERM 1</th>
<th>TERM 2</th>
<th>TERM 3 (+SUMMER)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Foundations of Pharmacology (20 credits)</td>
<td>• Therapeutics (20 credits)</td>
<td>• Dissertation (80 credits) Result collection, analysis and write up</td>
</tr>
<tr>
<td>• Practical Research Skills in Pharmacology (20 credits)</td>
<td>• Bench to Bedside II: Clinical Trials (20 credits)</td>
<td></td>
</tr>
<tr>
<td>• Bench to Bedside I: Design and Discovery (20 credits)</td>
<td>• Dissertation (80 credits) Result collection, analysis and write up</td>
<td></td>
</tr>
</tbody>
</table>

#### TWO YEAR PART-TIME OPTION

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>TERM 1</th>
<th>TERM 2</th>
<th>TERM 3 (+SUMMER)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Foundations of Pharmacology (20 credits)</td>
<td>• Therapeutics (20 credits)</td>
<td>• Dissertation (60 credits) Result collection, analysis and write up</td>
<td></td>
</tr>
<tr>
<td>• Practical Research Skills in Pharmacology (20 credits)</td>
<td>• Bench to Bedside II: Clinical Trials (20 credits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td>• Bench to Bedside I: Design and Discovery (20 credits)</td>
<td>• Research Approaches (20 credits)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>YEAR 2</th>
<th>TERM 1</th>
<th>TERM 2</th>
<th>TERM 3 (+SUMMER)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Bench to Bedside I: Design and Discovery (20 credits)</td>
<td>• Bench to Bedside II: Clinical Trials (20 credits)</td>
<td>• Therapeutics (20 credits)</td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td>• Practical Research Skills in Pharmacology (20 credits)</td>
<td>• Research Approaches (20 credits) Result collection, analysis and write up</td>
<td></td>
</tr>
<tr>
<td>• Dissertation (80 credits) Result collection, analysis and write up</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### MSc IN PHARMACOLOGY AND EDUCATION

#### FULL-TIME OPTION

<table>
<thead>
<tr>
<th>TERM 1</th>
<th>TERM 2</th>
<th>TERM 3 (+SUMMER)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Foundations of Pharmacology (20 credits)</td>
<td>• Therapeutics (20 credits)</td>
<td>• Dissertation (60 credits) Result collection, analysis and write up</td>
</tr>
<tr>
<td>• Learning and Teaching (20 credits)</td>
<td>• Bench to Bedside II: Clinical Trials (20 credits)</td>
<td></td>
</tr>
<tr>
<td>• Research Approaches (20 credits)</td>
<td>• Assessment and Feedback (20 credits)</td>
<td></td>
</tr>
</tbody>
</table>

#### TWO YEAR PART-TIME OPTION

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>TERM 1</th>
<th>TERM 2</th>
<th>TERM 3 (+SUMMER)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Foundations of Pharmacology (20 credits)</td>
<td>• Bench to Bedside II: Clinical Trials (20 credits)</td>
<td>• Research Approaches (20 credits)</td>
<td></td>
</tr>
<tr>
<td>• Learning and Teaching (20 credits)</td>
<td>• Assessment and Feedback (20 credits)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>YEAR 2</th>
<th>TERM 1</th>
<th>TERM 2</th>
<th>TERM 3 (+SUMMER)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Research Approaches (20 credits)</td>
<td>• Therapeutics (20 credits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Dissertation (60 credits) Result collection, analysis and write up</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The programme timelines above are for illustrative purposes only and are subject to change.*
INTERCALATION

If you are currently studying Medicine, you may have the option to take a year out of your medical degree to do an intercalating degree. Choosing to intercalate brings many benefits, from broadening your horizons through study of a subject you are passionate about, to developing your research and academic inquiry skills and career prospects.

A well-chosen intercalation programme can provide a significant career stepping stone, whether as a clinical academic or in a particular specialism, providing you with the broader skillset and expertise you need to succeed in your chosen area. Discover more about the benefits of intercalating on our Pharmacology programmes on p9 and p13.

Learn more about intercalation hyms.ac.uk/intercalation
FURTHER INFORMATION

Admissions Enquiries:
pgtadmissions@hyms.ac.uk

Learn more about the MSc in Pharmacology and Drug Development
hyms.ac.uk/pharmacology-drug-development

Learn more about the MSc in Pharmacology and Education
hyms.ac.uk/pharmacology-education