



## Undergraduate Foundation Programme

# Medicine



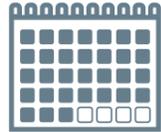
# Programme Details



## Who is this programme designed for?

This Medicine Undergraduate Programme (MUF) is designed to prepare international students, who have completed senior secondary education and met the academic requirements listed, to apply for undergraduate study for a Medicine degree.

## How long will I study for?



This programme lasts one academic year (nine months). The year is divided into three terms of approximately 10 weeks. On average, you will undertake between 21 and (up to) 27 hours of classroom-based study per week.

An Extended programme is available which comprises one term of English language, followed by three terms as described above.

Please note: Minimum and maximum hours are estimated, hours may vary depending on your academic and English level and may be adjusted throughout the course.

## What will I study?

This programme includes four core modules, taken by all students throughout the course. These modules are: Medical Biology, Chemistry for Medicine, Pure Maths with Statistics and English. Students will also follow a Medicine Skills module which will support their application to medical schools.

You will have a Personal Tutor to support you throughout the programme. Your Personal Tutor will help you adjust to life and study in the UK, support you to become a successful medicine student, and prepare you for your university interview.

English Language forms up to six hours of your timetable, is compulsory for students who are below the required level for progression, and will be integrated into the teaching of academic subjects as well as being taught separately if you need additional support. Students who are at or above the required English level for progression are likely to follow a reduced timetable.

Students will be expected to timetable self-study hours in addition to the classroom-based hour.

## How will I be assessed?

You will be assessed by exam for Maths and English, and by a combination of exam and practical work for Biology and Chemistry.

Entry to Medicine is competitive and whilst students who are predicted to achieve the required grades are guaranteed an interview at UCLan and RCSI, there is no guarantee of acceptance on to the course. Students must have met all pre-requisites to be considered for Medicine at our partner universities.



# Modules

Modules taught at **ONCAMPUS UK North** are as shown in the table below. All students will have English incorporated into their study plan.

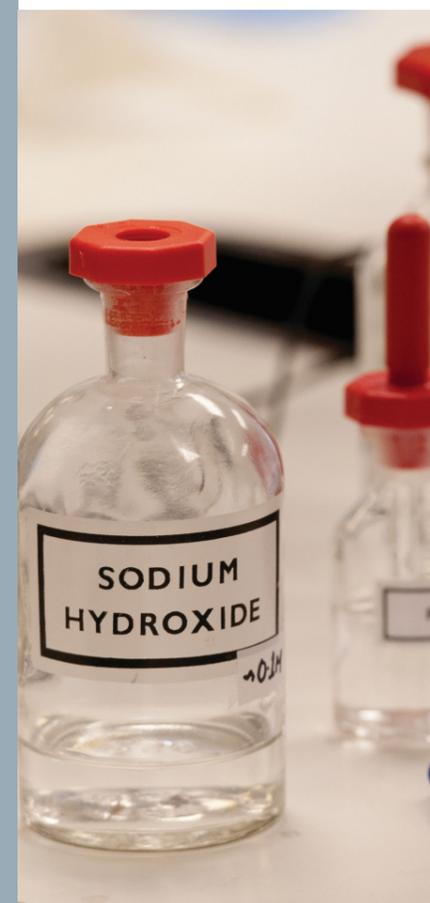
Centre	Chemistry for Medicine	Medical Biology	Pure Maths for Statistics	Medicine Skills
<b>ONCAMPUS UK NORTH</b>	✓	✓	✓	✓



# Chemistry for Medicine

The MUFP chemistry module has been carefully designed to cover most relevant chemistry content at A level that you will need to have a strong chemistry foundation to study medicine at undergraduate level. For each topic, you are advised to think like healthcare practitioners, particularly on the application aspects.

During the course, you will study Module 1 (Foundation Chemistry), Module 2 (Practical Skills) and Module 3 (mostly Organic and Physical Chemistry). The depth of study on each topic depends on how important the topic is relevant to medicine at this stage.



## Topics:

- Atomic Structure
- Formulae, Equations and Moles
- Structure and Bonding
- The Periodic Table
- Oxidation and Reduction (Redox)
- Lab practical skills
- Energetics
- Kinetics
- Chemical Equilibria
- Organic Chemistry
- Acid-Base Equilibria
- Spectroscopy

## Outcomes:

1. Recognise, recall, and demonstrate a fundamental understanding of chemistry and chemical principles.
2. Relate knowledge of chemistry to applications within medicine.
3. Demonstrate knowledge and understanding of chemical concepts, terms, and standard definitions.
4. Relate scientific evidence to scientific explanations and theories.
5. Analyse and evaluate scientific knowledge and processes.
6. Apply scientific concepts, arguments, and conclusions to familiar and unfamiliar situations.
7. Assess the validity, reliability, and credibility of scientific information
8. Demonstrate and describe ethical, safe, and skilful practical techniques, selecting appropriate quantitative and qualitative methods.
9. Make, record, and communicate reliable and valid observations and measurements with appropriate precision and accuracy.
10. Analyse, interpret, explain, and evaluate the methodology, results and impact of their own or others' experimental investigations.
11. Demonstrate numerical skills, including application of theoretical calculations from practical observations.
12. Demonstrate ability to assess the validity and reliability of data.
13. Select and use a form of communication appropriate to the purpose of the subject – this may include appropriate form of oral communication for purpose of presentation tasks.
14. Organise information clearly and coherently, using specialist vocabulary when necessary.

# Medical Biology

This course aims to develop knowledge and understanding of biological facts, concepts and principles, and to understand the connections between different areas of biology whilst developing the skills necessary to perform biological experiments safely and effectively. It enables you to become competent at scientific investigations, accurate observation, methodical recording of results and the manipulation of data in order to explain the biological processes you are exposed to and to recognise the value of biology in personal life and in society at large and promote its responsible use.



## Topics:

- Microscopes
- Cell biology (structure and function),
- Bio-molecules
- Circulation system
- Defence against disease
- Coordination (nervous and hormonal)
- Homeostasis
- Breathing
- Skeleton and movement
- Cellular respiration
- Fitness
- Nutrition and digestion
- Cell division
- Inheritance
- Gene technology

## Outcomes:

1. Recognise, recall and demonstrate an understanding of living systems.
2. Analyse and evaluate scientific knowledge and processes.
3. Apply scientific knowledge to processes of unfamiliar situations including those related to issues.
4. Assess the validity, reliability and credibility of scientific information.
5. Select, organise and communicate relevant information in a variety of forms.
6. Demonstrate and describe ethical, safe and skilful practical techniques, selecting appropriate quantitative and qualitative methods.
7. Make, record and communicate reliable and valid observations and measurements with appropriate precision and accuracy.
8. Analyse, interpret, explain and evaluate the methodology, results and impact of their own or others' experimental investigations.
9. Demonstrate numerical skills to show the use of number, percentages, rates, means, standard deviations, standard error and correlations. (Calculations will be limited to rates, proportions and means.)
10. Ensure that handwritten text is legible and that spelling, punctuation and grammar are formed so that the meaning is clear.
11. Select and use a form of communication appropriate to the purpose of the subject.
12. Organise information clearly and coherently, using specialist vocabulary when necessary.



# Pure Maths with Statistics Module

Pure Mathematics with Statistics contains a significant part of the core material included in the GCE A level syllabus. The course units are as follows:

Core Mathematics (C1), Core Mathematics (C2), Part of the Core Mathematics (C3) and most of the Statistics 1 (S1).



## Topics:

### Statistics

- Data measures of location and dispersion
- Probability
- Correlation and regression
- Discrete random variables
- The Normal Distribution

### Core Maths

- Algebra and functions, including quadratics
- Equations and inequalities
- Sketching curves
- Coordinate geometry in the  $(x, y)$  plane
- Geometric sequences and series
- Differentiation and integration
- Factor and remainder theorem
- Trigonometry
- Exponentials and logarithms
- Binomial expansion

## Outcomes:

1. Develop their understanding of mathematics and mathematical processes in a way that promotes confidence and fosters enjoyment.
2. Develop abilities to reason logically and recognise incorrect reasoning, to generalise and to construct mathematical proofs, extend their range of mathematical skills and techniques and use them in more difficult, unstructured problems.
3. Develop an understanding of coherence and progression in mathematics and of how different areas of mathematics can be connected.
4. Recognise how a situation may be represented mathematically and understand the relationship between 'real-world' problems and standard and other mathematical models and how these can be refined and improved.
5. Use mathematics as an effective means of communication read and comprehend mathematical arguments

and articles concerning applications of mathematics.

6. Acquire the skills needed to use technology such as calculators and computers effectively, recognise when such use may be inappropriate and be aware of limitations.
7. Develop an awareness of the relevance of mathematics to other fields of study, to the world of work and to society in general take increasing responsibility for their own learning and the evaluation of their own mathematical development.



# Medicine Skills Module

The Medicine Skills module ensures that students are fully prepared to apply for and study medical related degrees that include training in the NHS. The module will help students to develop appropriate skills to submit a sound and relevant personal statement as part of their application and prepare students for interview for MBBS. The module will also provide students with the opportunity to review and reflect upon their suitability to study medicine or other health profession courses and offer guidance in making progression choices.

The main focus of Term 1 is supporting students to produce a strong Personal Statement (PS) to support their application(s) to the medical school(s).

The main focus of Term 2 is supporting students to prepare for their Multiple Mini Interviews (MMIs) with their chosen medical school.



## Topics:

### Term 1

- Course introduction
- Reflecting on Work Experience
- NHS Values
- Communication
- Teamwork
- Resilience
- Personal Statements' Reviews
- NHS News and Plan Bs
- Personal Statements' Feedback and MMIs Practice
- Medical Ethics

### Term 2

- Introduction to Medical Ethics
- Euthanasia/Assisted Dying
- Doctor-Patient Interaction
- Counselling and Breaking Bad News
- Data Analysis and Interpretation
- Teamworking
- The NHS and the History of Medicine
- NHS – On the Front Line
- Interview Tips



# Resources and reading list

## Chemistry for Medicine

Older, J. and Smith, M. (2015). *OCR A Level: Chemistry 1*. London: Hodder Education.

Fullick, A. and McDuell, B. (2008). *Edexcel AS Chemistry: Student's Book*. Harlow: Pearson Education Limited.

## Medical Biology

McGlade, C. *et al.* (eds.) (2020). *A-Level Biology Exam Board: AQA: Student Book*. Coordination Group Publications Ltd (CGP).

Boyle, M. and Senior, K. (2008). *Human Biology*. 3rd end. London: Collins Educational.

## Pure Maths with Statistics

Attwood, G. *et al.* (2008). *Core Mathematics 1: Edexcel AS and A-level Modular Mathematics C1*. Harlow: Pearson Education Limited.

Attwood, G. *et al.* (2012). *Statistics 1: Edexcel AS and A-level Modular Mathematics S1*. Harlow: Pearson Education Limited.

# Example Timetable

Please note this is an example timetable and will vary for every student. Students should anticipate lessons starting earlier than 9am or later than 5pm. Students will be expected to allocate self study and revision hours within their timetable which will be given at the start of the academic term.

	9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5
Mon	English	English	Medicine Skills	Lunch	Chemistry for Medicine	Chemistry for Medicine		Personal Tutorial
Tues	Medicine Skills	Medical Biology	Medical Biology	Lunch	English	English		
Wed	Pure Maths with Statistics	English	English	Lunch	Chemistry for Medicine	Chemistry for Medicine		Pure Maths with Statistics
Thur	Medical Biology	Medical Biology	Chemistry for Medicine	Lunch	Pure Maths with Statistics	Pure Maths with Statistics		
Fri	Medical Biology	Medical Biology	Pure Maths with Statistics	Lunch	Pure Maths with Statistics			Chemistry for Medicine



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