

The background of the slide is a blurred photograph of a classroom. In the foreground, a student's hand is visible, holding a pen over an open notebook. In the background, other students are seated at desks, some looking towards the camera and others looking away. The overall atmosphere is that of a busy, educational environment.

immerse Academic
EDUCATION INSIGHTS

Medicine

SYLLABUS OVERVIEW

15-18 YEARS OLD

LONDON

About the Programme

Immerse Education is an award-winning provider of summer experiences offering academic and career-focused programmes for high school students worldwide, in such locations as Boston, Cambridge, London, New York, Oxford, San Francisco, Singapore, Sydney, Tokyo, and Toronto. Our programmes aim to deliver engaging, academically challenging content within a university-style classroom environment.

The Academic Insights programmes give participants a valuable introduction to studying their chosen subject at an advanced university level, preparing them for future academic success and life at university. During the programme, students experience university-style teaching, explore complex topics, and develop the skills, confidence, and curiosity needed for successful applications and higher-level study.



PLEASE NOTE:

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LONDON



15-18



ACADEMIC INSIGHTS

Academic Sessions

Sessions during the programme are organised into thematic areas that allow students to explore a broad range of topics in depth. The programme combines two types of sessions: theory-based sessions that introduce advanced concepts similar to university study, and practical-based sessions that encourage students to apply this knowledge to case studies, real-world projects, or research tasks. Topics highlighted in this guide are indicative and may be adapted by tutors to reflect their academic expertise or participants' interests. This approach helps students develop both subject knowledge and the ability to think critically and independently.





Preparatory work

Some tutors may ask participants to complete preparatory work before the start of the programme, such as assigned reading, independent pre-research, or a series of short exercises. These tasks help ensure that all students begin the course with a shared foundation of understanding and are ready to engage in higher-level discussion and analysis. Preparatory materials are provided in advance and designed to make students feel more confident, better prepared, and able to get the most out of their academic experience once the programme begins.

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Academic Difficulty

Immerse Education's Academic Insights programmes are designed to introduce students to university-level study and build on necessary skills. The material can be challenging, but tutors provide structured guidance, personalised feedback, and encouragement throughout. Each participant is supported according to their own level and learning goals, ensuring that everyone is able to progress and achieve their potential. This academically stimulating experience is something to look forward to — an opportunity to build confidence, expand knowledge, and develop valuable study skills in a supportive and inspiring environment.



Aim of the Medicine Programme

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Introduction to Medicine

Medicine lies at the intersection of science, ethics, and discovery. This programme introduces students to the core principles of human biology and the academic methods used in medical research and clinical reasoning. Participants explore how the body functions at cellular and systemic levels, how diseases develop, and how science drives innovation in healthcare. Set in London, a city known for pioneering research and medical teaching, the course prepares students for advanced study in medical and health sciences.

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LONDON



15-18



ACADEMIC INSIGHTS

Anatomy and Histology

Study the structure and function of the human body at both macroscopic and microscopic levels. You will explore how organs, tissues, and systems interact to sustain life, examining real examples through guided dissection or microscopy. This topic builds a deeper understanding of structure–function relationships and prepares students to approach anatomy as a cornerstone of medical education and research.

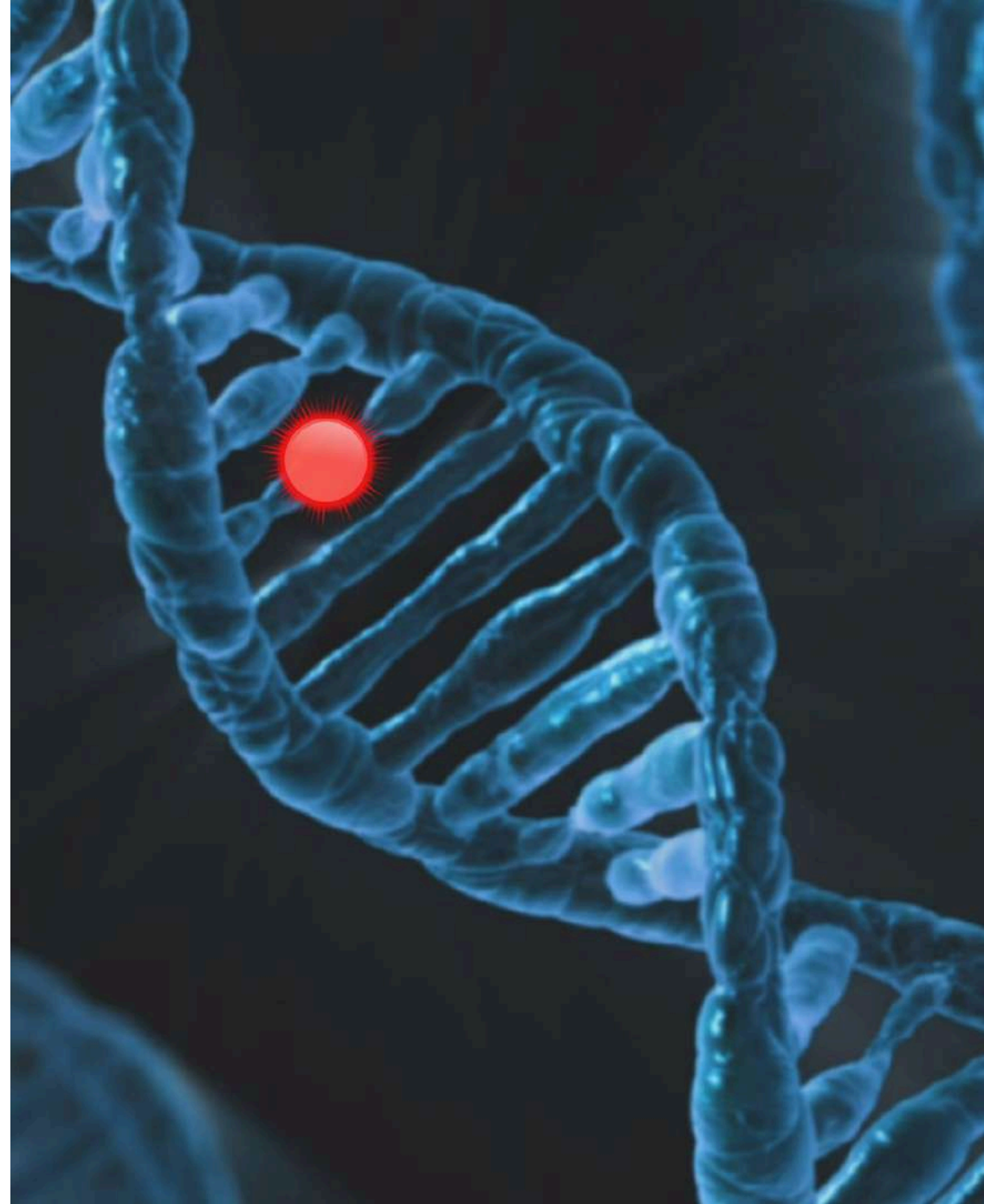
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Molecular Biology and Genetics

Discover how molecular mechanisms control life and influence health. You will study DNA replication, gene expression, and the effects of mutations on cellular function. Students also explore how genetic research contributes to precision medicine and diagnostics. This topic encourages scientific literacy and critical analysis of how molecular discoveries are translated into medical advancements that improve diagnosis and treatment outcomes.



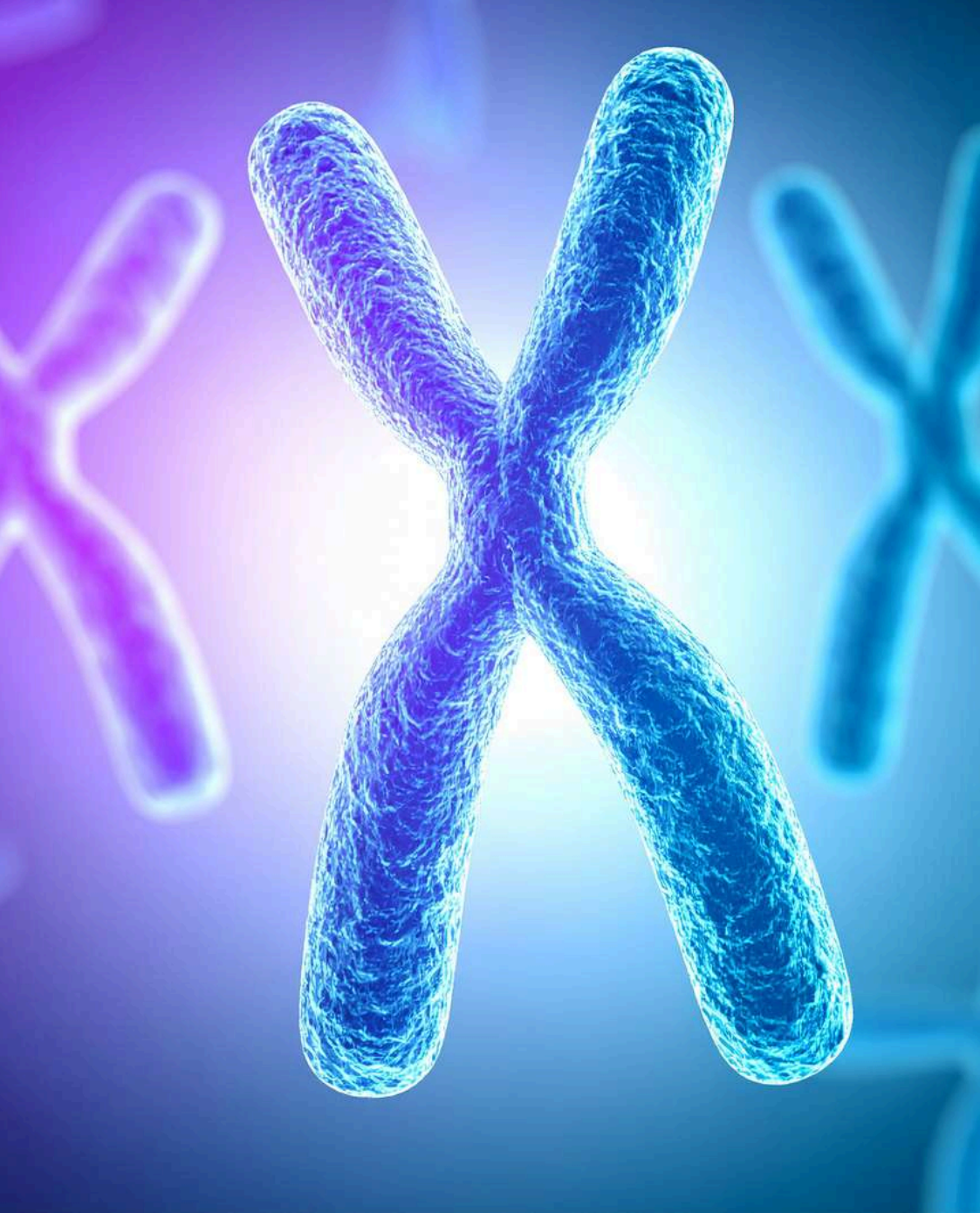
Neuroscience and Neuropsychology

Explore how the brain and nervous system communicate, process information, and regulate behaviour. You will study neural signalling, sensory processing, and the effects of neurological disorders such as Parkinson's and epilepsy. This topic links molecular mechanisms with cognitive function, helping students understand how neuroscience research informs treatments for mental and neurological health conditions.

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Genetics and Molecular Medicine

Discover how genetic information determines health and disease. You will explore the structure of DNA, gene expression, and how genetic mutations lead to inherited disorders. Students will also examine modern genomic techniques, including CRISPR and genetic screening, that are transforming medicine. This topic develops analytical and ethical awareness of how molecular biology shapes the future of healthcare.

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Pharmacology and Drug Development

Learn how medicines work at the molecular and physiological levels. You will study drug interactions, mechanisms of action, and the development of new treatments through pharmacological research. Students analyse how medications are tested and regulated and discuss emerging challenges such as antibiotic resistance. This topic builds an understanding of translational medicine — the bridge between laboratory discovery and patient care.



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Experimental and Translational Medicine

Examine how scientific discoveries move from research laboratories to real-world clinical applications. Students explore the stages of medical research, from hypothesis and experimentation to clinical trials. Case studies highlight breakthroughs in regenerative medicine, biotechnology, and immunology. This topic helps students appreciate how rigorous scientific method and collaboration advance medical knowledge and improve patient outcomes.



Personal Project

Each Academic Insights programme includes an individual project focused on independent research and academic reflection. The Personal Project allows students to explore a specific topic or question in greater depth, applying theoretical knowledge and original thinking. With guidance from their tutor, participants develop their ideas throughout the programme and present their findings at the end. The Personal Project may take the form of essay, presentation, creative piece, or report.

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After Your Programme

By the end of the programme, students gain a solid understanding of their chosen subject and how it is studied at university. They leave with enhanced independent thinking, critical research and analysis, and communication skills, as well as confidence for advanced learning. Each participant receives an individual feedback report from their tutor, highlighting strengths, progress, and personalised recommendations for future study. Students can also use their Personal Project and tutor feedback as part of their university applications or portfolios, showcasing both academic ability and intellectual curiosity.

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Step into your future



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FAQS

