

# Oxford

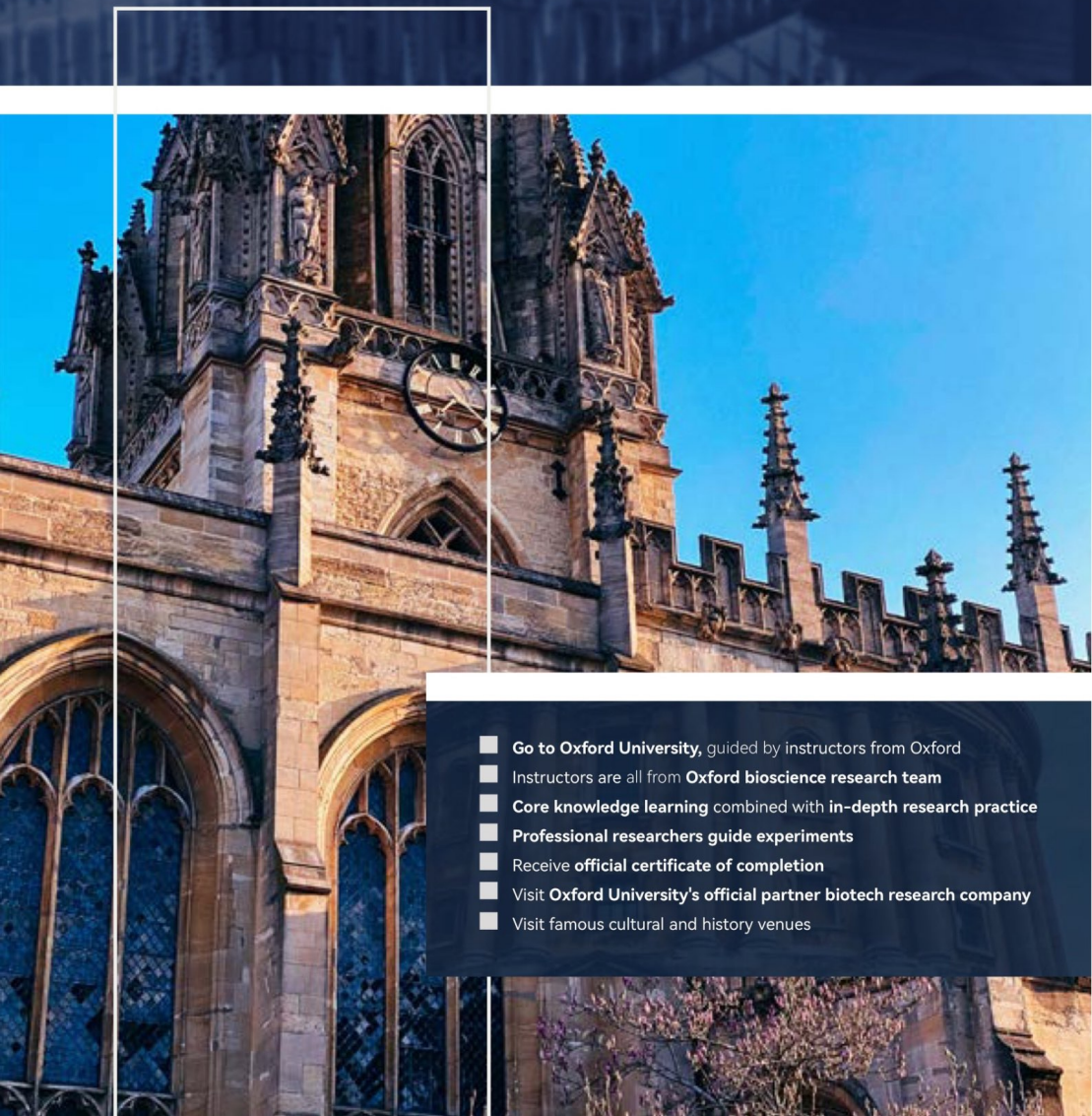
## Biology Winter School



**Location:** UK

**Date:** 2025.1.21–2025.2.3 (14 days)

**Suitable Students:** 16 years and above, interested in biology and related subjects



- **Go to Oxford University**, guided by instructors from Oxford
- Instructors are all from **Oxford bioscience research team**
- **Core knowledge learning** combined with **in-depth research practice**
- **Professional researchers guide experiments**
- Receive **official certificate of completion**
- Visit **Oxford University's official partner biotech research company**
- Visit famous cultural and history venues



## Biology Winter School

### Introduction

The Oxford Biology Winter School is a research-focused Winter School programme organised by the **Oxford Suzhou Centre for Advanced Research (OSCAR)** and ASEEDER. It **offers a curriculum taught by University of Oxford faculty, with official certificates issued by the Engineering Department**. This program enables young students passionate about biology and related fields to **experience research process at the University of Oxford**, enhancing their academic skills and global perspective, ultimately **boosting their qualifications for competitive university applications**.

In the 2025 Winter, Oxford Biology Winter School will open for high school students from China. This programme aims to **provide students who are interested in deepening their knowledge in biology and related fields with the opportunity to explore cutting-edge biological knowledge**. Students will **learn from Oxford mentors, gaining expertise in biology and research methods**. They'll also **get experience in biological experiments under the guidance of professional researchers** from teaching team to enrich their research skills and improve their critical thinking and problem-solving abilities.

### Why Us

#### 1 Experience the Teaching Model of Oxford University

**Students will study in Oxford University, guided by official academic research teams**, to experience the university's teaching model and immerse themselves in the university's learning environment.

#### 2

#### Oxford's Expert Tutors Instruct Various Biology Branches

The teaching team is composed of Oxford University professors, researchers, and PhD students. Guided by Oxford experts, students explore biology through lectures, discussions, lab visits, and experiments.

#### 3

#### Gain Experience in Cutting-edge Biological Research

Throughout the programme, **students work collaboratively under Oxford University mentors**, engaging in the entire research process. Additionally, they will **visit Oxford's collaborative labs to conduct experiments under professional guidance**, and gain real laboratory experience.

#### 4

#### Visit Oxford University Laboratories and Cutting-edge Biotech Companies

**Students can visit Biological lab in Oxford University and biotech company**. They'll engage with experts, experience actual research settings, and explore biology's diverse applications.

#### 5

#### Receive an Official Completion Certificate

During the programme, students collaborate in groups to study advanced biology research topics, conduct research under PhD's supervision, produce academic outputs, and present their findings. They will **receive an official certificate from the Engineering Department of the University of Oxford**.

Students will collaborate in groups to consolidate the knowledge acquired during the course and the exploration process. Through group academic research, they will **produce academic outputs and present them collectively**. This will be followed by feedback and guidance from mentors. Upon completion of the programme, students will **receive an official completion certificate from the Engineering Department of the University of Oxford**, serving as a strong testament to their academic and research capabilities.







### Ian Thompson

University of Oxford Professor  
Fellow of RSB

Ian is Professor of Engineering Science at the University of Oxford. He is also head of the Environmental Bioengineering programme which focuses of exploiting microbiological activities for cleaning and preventing environment. Previously he was Head of Environmental Biotechnology at the NERC Centre for Ecology & Hydrology (CEH) in Oxford.



### Tin Hang(Henry) Hung

Lecturer I in Magdalen College,  
University of Oxford

Henry is a Lecturer I and Ph.D. supervisor in Magdalen College University of Oxford. His research focuses on genetics, genomics, ecology, and plant protection, with multiple publications in these fields. He's also a member of the British Ecological Society's Activities Committee and specializes in genome data integration and climate model development.



### Cynthia

Oxford MESTar Chief  
Researcher

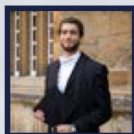
Cynthia, a PhD holder from the University of Oxford, serves as the Chief Researcher at Oxford MESTar. she focuses on wildlife infectious diseases and epidemiology, with a focus on developing quick diagnostic methods for zoonotic diseases to prevent their spread between humans and animals.



### Barnum

Lecturer in Jesus College,  
Oxford University

Barnum, a PhD holder from the University of Oxford, is currently a lecturer and PhD supervisor at Jesus College, University of Oxford. He's deeply interested in blending mathematics and biology, using mathematical modeling to create advanced cell culture systems for innovative drug development.



### Wissam Ghantous

PhD Student in the University  
of Oxford

Wissam is a PhD student in the University of Oxford, He is dedicated to developing algorithms and code to make abstract mathematical concepts computationally explicit, aiding in the verification of theories or finding counterexamples.



### Johnny Zhou

PhD Student in the University  
of Oxford

Johnny is a PhD student in Bioengineering at the University of Oxford, with extensive knowledge and practical experience in molecular genetics, induced pluripotent stem cells (iPSC), and gene editing technologies like CRISPR-Cas9. His current research primarily focuses on developing rapid virus detection devices with array capabilities.



### Alexander Witt

PhD Student in the University  
of Oxford

Alexander is a PhD student in Tissue Engineering at the University of Oxford. His research focus is the reconstruction or repair of organs and tissues using in vitro cultivation or construction methods. Alexander specializes in membrane bioreactor technology and fluid transport in porous elastomeric membranes, exploring ways to optimize bioreactors for enhanced production efficiency and quality.

# Programme Structure

## Oxford Biology Winter School

### Oxford Tutor Lecture

Guided by the Oxford University mentor team, students will explore cutting-edge topics, enhancing their expertise and expanding their horizons in biology.

### PhD Student Guidance

PhD students offer deep academic guidance, helping students enhance their knowledge through practical science and complete individual and collaborative research tasks.

### Laboratory Visits

Students will visit Oxford University's biology research facility and biotech company, gaining exposure to cutting-edge biotechnology and taking part in guided experiments.

### Group Work

Students will choose academic topic groups and, with guidance from Oxford PhD students, explore their chosen subjects deeply.

### Exploration

Students will have the opportunity to visit iconic places on the Oxford University campus, and explore cities like London and Cambridge.

## Sample Schedule

Oxford Tutor Lecture: The Oxford University mentors will select topics based on current trends and cutting-edge research in the field of biology for academic knowledge teaching and sharing. The topics include:

- History and frontier of biotech
- Life Science
- Microbiology
- Computer Science in Biology
- Animal-Origin Infectious Diseases
- Rapid Virus Testing Device with Array Function
- Biomedical, Corporate, and Industrial Applications
- Engineering Research on Plant Enzyme Catalytic Properties

Furthermore, an **Oxford University Chair Professor** will present captivating interdisciplinary research in cutting-edge biology to the students.

Date/Time	10:00-12:00	14:00-16:00	16:00 and after
Day 1	Arrival		
Day 2-Day 5	Oxford Tutor Lecture Oxford PhD Student Guidance/Oxford Academic Writing Guidance	Oxford Tutor Lecture Oxford PhD Student Guidance Campus and City Exploration	Self-Directed Learning  Dinner Time
Day 6	Oxford Tutor Lecture	Oxford IBME Visit	
Day 7	Exploring University of Cambridge Visit historic Cambridge University, explore renowned colleges like King's, Trinity, and St. John's, take a punt ride, and experience the university's unique culture and academic ambience.		
Day 8	Exploring London Visit famous attractions and internationally renowned universities in London and experience the cultural and academic atmosphere of London.		
Day 9	Oxford Tutor Lecture	Oxford PhD Student Guidance Campus and City Exploration	Self-Directed Learning
Day 10	MES*ar Lab Visit Oxford Tutor Lecture	Biology Lab Practical and Mentor Summation	Dinner Time
Day 11			Self-Directed Learning Formal Dinner
Day 12	Oxford Tutor Lecture Oxford PhD Student Guidance	Oxford PhD Student Guidance Preparation for Presentation	Preparation for Presentation Dinner Time
Day 13	Presentation and suggestion	Presentation and suggestion Ceremony	Quiz Night Dinner Time
Day 14	Travel back to Thailand		

\* The final courses and content may vary depending on University of Oxford.

# Oxford

Biology Winter School

## Institution and Corporate Visit

### Institute of Biomedical Engineering (IBME)

Established in 2008, The Institute of Biomedical Engineering (IBME) is an interdisciplinary technology-focused research institute located at the heart of the University of Oxford's Medical Sciences campus, adjacent to the Churchill Hospital. The main field of IBME is to address early diagnosis and treatment of major diseases and conditions. The research areas include biomaterials, biomedical, image analysis, neurotechnology and etc..







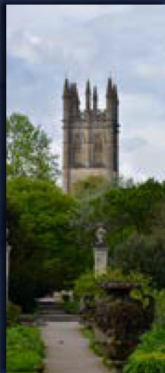
## Oxford MESTar Limited

Located in the Oxford Science Park, Oxford MESTar Limited is a young spin-out company from the Institute of Biomedical Engineering of Oxford University. With their core technical expertise in bioprocessing, bioengineering and bio-manufacture, they have developed enabling technologies for tissue engineering and stem cell therapy. In December 2013, they received £1M investment and another £1.1M in July 2015 from the private sector. Now, this company mainly provides bioengineering products and solutions to serve translational and regenerative medicine.



ACTIVITIES

Oxford  
Biology Winter School



# Application

- **Date:** Jan.21st- Feb.3rd, 2025 (14 days)
- **Suitable Student:** 16 years old and above, interested in biology and related subjects, and with basic biology knowledge
- **Fee: 8975 USD**  
**Includes:** tuition, course materials, accommodation, breakfast, formal dinner fee, excursions fees, ASEEDER group leader service fee, local transportation fees; international insurance

**Excludes:** international transportation costs to and from UK (departure and arrival from Beijing/Shanghai/ Hong Kong/ Shenzhen, you can use a third-party service or ASEEDER's united service, visa and visa service fee (2400RMB, ASEEDER's VIP visa service promises to obtain a visa, or all visa and program fees will be refunded if the visa is refused), lunch and dinner during the programme

- **Requirement**

**Meeting any of the above requirements is sufficient for enrollment.**

- Obtain grade B in ASEEDER EPQ biological research
- Achieve gold awards in ASEEDER international biology challenges.
- English language level equivalent to IELTS level 6.5 or TOEFL 90, and grade A in biology, or a score of 7 in (I) GCSE Biology.
- If the above requirements are not met, an English telephone interview with an ASEEDER teacher is required.

**Registration: Scan the QR code to sign up**



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