BSc Biomedical Informatics
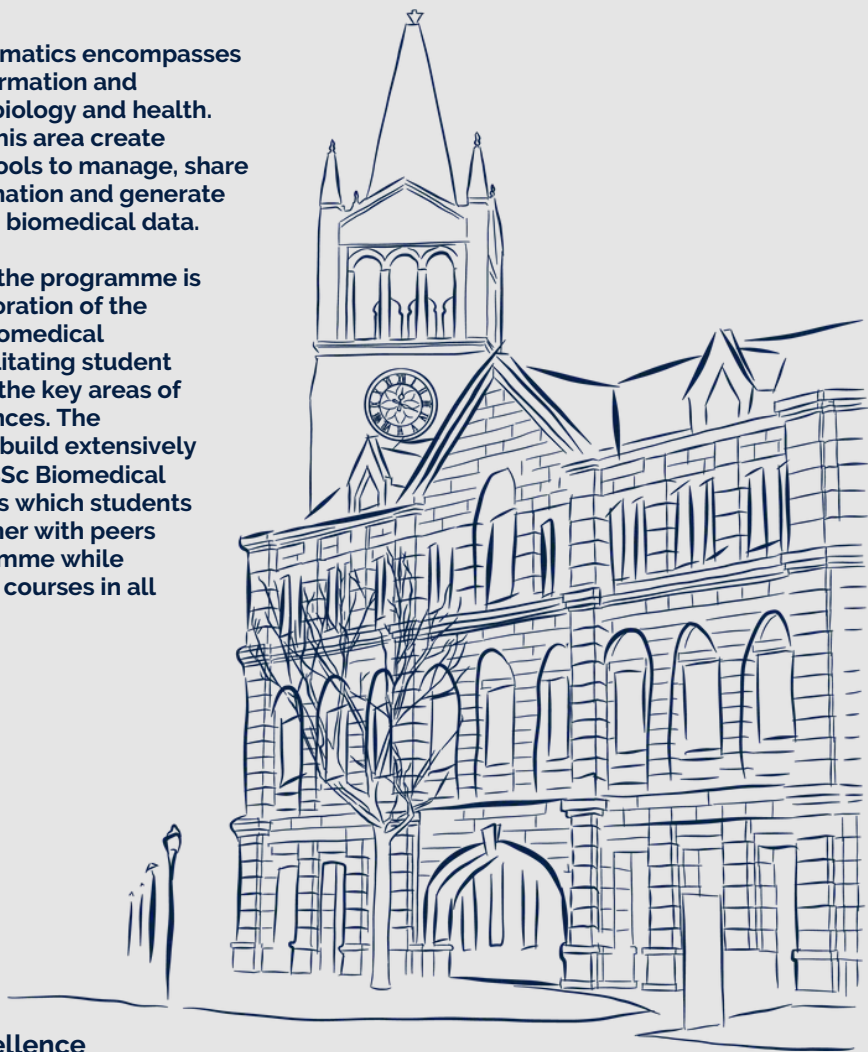
Biomedical informatics encompasses the study of information and computation in biology and health. Researchers in this area create computational tools to manage, share and study information and generate knowledge from biomedical data.

The first year of the programme is an exciting exploration of the application of biomedical informatics, facilitating student development in the key areas of biomedical sciences. The programme will build extensively on the existing BSc Biomedical Sciences courses which students will study together with peers from this programme while introducing new courses in all four years.

Drawn to excellence

THE UNIVERSITY of EDINBURGH

浙江大学
ZHEJIANG UNIVERSITY

Join a transnational degree programme from two world-class universities

Programme overview

Year 1 - Key concepts in Biological and Biomedical Informatics

Integrative Biomedical Sciences 1
This course will develop a foundational core biological knowledge and understanding that emphasises the importance of biology in the context of a biomedical informatics background. Teaching will be delivered through lectures/seminars and supported by extensive small group sessions including facilitated discussions and tutorials led by academic staff.

Introduction to Cellular and Molecular Biology 1
This course will develop foundational cellular and molecular knowledge, investigating what is known about cellular structure, function and behaviour and how cells form the basis of life.

Introduction to Biomedical Informatics 1
This course aims to provide students with an overview of the fundamental technological concepts of Biomedical Informatics using real-world applications as examples. The course will lay a strong technical and computational foundation in the areas of operating systems, version control, and programming. Those skills will be taught with a view towards biomedical applications and examples, wherever possible, drawn from the biomedical field.

Year 2 - Foundational understanding of Biomedical Informatics and its importance in the wider biomedical field

In year 2 the focus is on building foundational knowledge in Biomedical Informatics and data science, and linking through to physiology, genetics, genomics and proteomics:

- Databases and Software Technology
- Genomics and Proteomics
- Applied Data Sciences 2
- Integrative Functions of Body Systems 2
- Biomedical Genetics 2

Year 3 - Developing knowledge through experiment

In year 3, the curriculum includes three compulsory courses:

- Integrative Biomedical Sciences 3
- Computational and Systems Biology
- Biomedical Informatics 3

Year 3 aims to be an exciting exploration of the application of biomedical informatics to biomedical sciences, facilitating student development by learning from experiment in key areas for application.

Year 4 - Research in practice

In the final year of the programme students focus on key compulsory courses and optional electives in Biomedical Informatics including a project where Biomedical Informatics approaches are applied to a research question.

The final year aims to develop the application of practical biomedical informatics research skills to address key research questions in biomedical science.

In year 4, it is proposed that all courses, except the elective course (semester 1) will run for the whole academic year.

Example of these courses are:

- Biomedical Informatics 4
- Practical Bioinformatics in Biomedical/Medical/Clinical Research
- Biomedical Informatics Project Preview Dissertation
- Biomedical Informatics Project
- Biomedical Informatics Portfolio

The University of Edinburgh is ranked 19th in the QS World University Rankings and Zhejiang University is a member of the C9 League of Universities and one of the top 3 universities in China. Together, we aim to offer a world-class education to develop the next generation of global leaders in Biomedical Sciences.

http://zje.intl.zju.edu.cn

The Zhejiang University-University of Edinburgh (ZJE) Institute, provides innovative teaching and state of the art research in Biomedical Informatics in brand new facilities at the International Campus in Haining, situated between Shanghai and Hangzhou.

Why study Biomedical Informatics at the ZJE Institute?

This unique dual degree 4 year programme in Biomedical Informatics provides students with the best research training from both universities. Delivered entirely in English, the programme is designed to promote a positive and inquisitive attitude to science and medicine while promoting independent, self-motivated learning.

Employing an integrated approach, students will analyse the contribution of knowledge from a range of disciplines to address key biomedical problems facing individuals, communities and populations today. Investigating how this knowledge can be used to drive research forwards towards new information technologies, this programme places students at the cutting edge of modern bioinformatics research, enabling the translation of biomedical informatics into practice.

We cannot guarantee that all courses will run each year, and will normally notify applicants of any changes to the programme structure and courses on our website.

What do I need to get in?

You will find our most up to date entry requirements at:
http://zje.intl.zju.edu.cn/en/admission/entry-requirements

Financial requirements

Find information on fees at:
http://zje.intl.zju.edu.cn/en/admission/fees-and-scholarships

Scholarships are available

Find information on scholarships at:
http://zje.intl.zju.edu.cn/en/admission/fees-and-scholarships

How do I apply?

Find information on applying to the programme at:
http://zje.intl.zju.edu.cn/en/admission/how-to-apply

Contact us

If you would like further information about our BSc Biomedical Informatics at the Zhejiang University - University of Edinburgh Institute, please contact us at:

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Alternative formats

If you require a copy of this prospectus or any other information in an alternative format, please email: zje_apply@zju.edu.cn.