

INTERNATIONAL SUMMER SCHOOL

NEW MEDICAL SCIENCE AND TECHNOLOGY LEADS THE HEALTHY FUTURE

Jun 26th – Jul 7th, 2023

Harbin Institute of Technology, Harbin, P.R. China

GENERAL INFORMATION

The theme of this international summer school is “New Medical Science and Technology Leading the Future of Health”, mainly starting from the acquisition, processing, mining and analysis of big national demand technologies such as omics biological big data. Students understand the cutting-edge development direction and trend of the new medical field, deepen their understanding of the application of engineering algorithms, equipment, and technology in processing biomedical big data, and deeply understand the frontier and necessity of the intersection of medicine and engineering for the development of biology, basic medicine, and clinical medicine. It aims to cultivate undergraduates’ interests in applying engineering theories and methods in the field of biomedicine.

ATTENDANCE REQUIREMENTS

Undergraduate or graduate attendees with background in Biomedical Engineering, Bioinformatics, Computer Science and Technology, Information & Communication Engineering, applied mathematics, etc. are welcomed. All participants must have a good command of English. Some lectures will be given in Chinese with translation in English.

LECTURES AND TALKS

The summer school offers one lecture and eight seminars. Lecturers and speakers are invited from top institutions in the world, including Michigan State University, University of Alcalá, National University of Singapore, Harbin Institute of Technology, University of Tokyo, University of Nottingham Malaysia, and King Abdullah University of Science and Technology.

Module	Topic (preliminary)	Lecturer/Speaker Institution	Units (60 mins/unit)	Credit
Seminar	Soft bioelectronics as precision neural interface	Jinxing Li Michigan State University	2	1
	Micro/nanorobotics: from locomotion to biomedical applications.	Jinxing Li Michigan State University	2	
	Micromotors for bio sensing	Beatriz Jurado Sánchez University of Alcalá Spain	2	
	Current technologies for nucleic acids delivery	Qianqian Ni National University of Singapore	2	
	Cancer theranostics	Xiaoyuan Chen National University of Singapore	2	
	Digital medical health management theories and methods	Douglas Rudy Vogel HIT	2	
	Structural biology and food science	Masaru TANOKURA University of Tokyo	2	
	Design and implementation of medical Robot	Zhiyuan Chen University of Nottingham Malaysia	2	
Lecture	Protein science: from sequence to structure to function	Gao xin King Abdullah University of Science and Technology	20	1
Innovative Practice	Biomedical engineering innovative design		24	1.5
Total			60	3.5

GROUP RESEARCH PROJECT

Participants will be grouped into 5 teams or more, to work on a project on Biomedical Engineering Innovative Design. Each group may select one from specified areas and instructors are available online or offline.

CONTACT INFORMATION

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