

The Hong Kong University of Science and Technology

UG Course Syllabus Template

Introduction to Biomedical Engineering

BIEN1010

3 Credits

No pre-/co-requisites

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Course Description

BIEN1010 is an introductory course designed to present fundamental concepts in biomedical engineering. It covers essential basic science and human physiology knowledge used by biomedical engineers and illustrates how this knowledge is applied to solve problems in human medicine. The course aims to link basic science and engineering to various fields of specialization and current research, introducing sub-specialties within biomedical engineering. Through real-life examples, students will explore the types of challenges biomedical engineers address, including topics such as biosensors, bioimaging techniques, biomolecular engineering, and bioinformatics.

Assessments:

Assessment Task	Contribution to Overall Course grade (%)
Participation/Quiz	20%
In-class presentation	30%
Midterm examination	25%
Final examination	25%

Required Texts and Materials

“Biomedical Engineering: Bridging Medicine and Technology”, W. Mark Saltzman, Cambridge University Press; 2nd edition (2009)

Introduction to Biomedical Engineering”, John Enderle, Academic Press; 3rd edition (2011)

[Optional] Additional Resources

None