



CYBERJAYA UNIVERSITY COLLEGE
of MEDICAL SCIENCES

Nurturing the Passion to Care

KPT/JPS/DFT/US/B20



Bachelor of Biomedical Engineering Technology (Hons)

KPT/JPS(N/523/6/0050)12/16 (MQA/PA0544)12/16



BACHELOR OF BIOMEDICAL ENGINEERING TECHNOLOGY (Hons)

KPT/JPS(N/523/6/0050)12/16 (MQA/PA0544)12/16

Biomedical Engineering Technology is the applications of engineering philosophy and skills to the medical field. It combines the design and problem solving skills of engineering with medical and biological sciences to help improve patient health care and the quality of life of individuals. Students will gain exposure and experience handling various equipment and apparatus, such as patient monitors, electrocardiographs, infusion devices, blood-gas analyzers, patient-care computers and other related medical devices.

LEARNING OUTCOMES

Our curriculum provides a strong foundation in engineering, medical, science, mathematics and humanities. We integrate the core knowledge of engineering disciplines and modern biology to solve problems encountered in biological systems. This curriculum will allow students to analyze problem from both the engineering and medical perspectives; to anticipate the special difficulties in working with physicians and evaluate a wide range of possible solutions to problems encountered. The graduate should be able to advance both in the engineering and medical disciplines.

CAREER PROSPECTS

Studies in biomedical engineering technology leads to diverse careers involving:-

- Medical instrumentation
- Image processing and medical imaging
- Biosignal processing
- Biomechanics and rehabilitation engineering
- Bioinformatics and telemedicine
- Biomedical computing & simulation

INTAKE

- January & August

DURATION

- 4 years (8 semesters)

STUDY MODE & DELIVERY METHOD

- Lectures, tutorials, practical and industrial training
- Includes an industrial placement module, students interact with biomedical engineers at the healthcare facilities which adds further depth to their work.

COURSE STRUCTURE

Year 1

- English for Special Purposes 1
- Tamadun Islam dan Tamadun Asia (Islamic & Asian Civilizations)
- Hubungan Etnik (Ethnic Relations)
- Calculus
- Basic Electrical Engineering
- Introduction to Medicine
- Laboratory 1
- Introduction to Biomedical Engineering Technology
- English for Special Purposes 2
- Ordinary Differential Equations
- Information & Communication Technology
- Material Science
- Engineering Mechanics
- Anatomy & Physiology
- Laboratory 2
- Co-Curriculum
- Kerajaan & Dasar Awam Malaysia (Government & Malaysian Public Policy)
- Affective Domain

Year 3

- Haematology & Immunology
- Fundamentals of Entrepreneurship
- Biostatistics
- Biophysics
- Biomedical Signal Processing & Analysis
- Biomedical Measurement & Instrumentation
- Biomedical Electronics & Microcomputer
- Laboratory 5
- Affective Domain
- Pathology & Microbiology
- Biomedical Acts, Standards & Safety
- Biomedical Imaging System
- Biomaterials
- Medical Image Processing & Analysis
- Medical Devices Maintenance & Repair
- Project Management
- Laboratory 6
- Final Year Project 1

Year 2

- Young Mercy 1
- Academic Writing
- Engineering Mathematics
- Computer Programming
- Electric Circuit Analysis
- Engineering Drawing
- Forces, Field & Flows
- Laboratory 3
- Young Mercy 2
- Molecular Biology & Biochemistry
- Biomechanics
- Digital Electronics
- Analog Electronics
- Signal & Systems
- Laboratory 4
- Affective Domain

Year 4

- Final Year Project 2
- Design of Biomedical Devices & Systems
- Hospital Engineering
- Laboratory 7
- Affective Domain
- Elective 1
- Elective 2
- Practical Training

ENTRY REQUIREMENTS

- Sijil Tinggi Persekolahan Malaysia (STPM)
 - Pass with minimum CGPA 2.00 (Grade C) in Mathematics and 1 related Science subject and pass English in SPM (or equivalent)
 - A-Level
 - Pass A-Level including in Mathematics and 1 related Science subject and pass English in O-Level / SPM (or equivalent)
 - CUCMS Foundation in Allied Science / Matriculation / Asasi Sains / other Foundation programmes from recognised HEI
 - Pass with minimum of CGPA 2.00
 - South Australian Matriculation (SAM)
 - Pass with aggregate 60% in related subjects
 - International Baccalaureate
 - Pass with a minimum of 26 points in Mathematics and 1 related Science subject
 - Canadian Pre-University (CPU)
 - Pass with an aggregate of 50% in Mathematics and 1 related Science subject
 - Diploma in Engineering / Engineering Technology (Level 4 MQF) in a related field from a recognised HEI with minimum CGPA 2.00
 - Other equivalent qualifications recognized by the Malaysian Government
- AND
- English Proficiency for Malaysian Students : MUET Band 2; OR English Proficiency for Foreign Students : TOEFL score of 500 or IELTS score of 5.0

THE CUCMS ADVANTAGE

- 1 A Decade of Teaching Experience**
With over 10 years of experience in providing quality tertiary education, CUCMS has a robust, industry relevant curriculum taught by dedicated healthcare experts.
- 2 A Top Tier University**
Rated as a Tier 5, (Excellent) institution by the Malaysian Qualifications Agency, we also boast a SIRIM ISO 9001:2008 QMS certification further ensuring a high quality education experience.
- 3 A Network of Successful Graduates**
Over 1500 successful healthcare professionals have graduated with us. At CUCMS you will be part of a growing alumni of professionals who are contributing to the advancement of the healthcare industry.
- 4 Comprehensive Range of Programmes**
We offer over 20 healthcare programmes including postgraduate studies that opens up a range of career options in the healthcare industry ensuring a bright and fulfilling future.
- 5 Fully Equipped Campus**
Here you will find a modern, green-friendly, campus at the heart of Cyberjaya, Malaysia's Smart City with fully equipped research laboratories, comprehensive library collections and student support facilities to ensure a conducive learning environment.
- 6 High Degree of Student Empowerment**
Students are empowered to achieve greater personal growth and success through volunteerism, humanitarian activities and extra-curricular society such as Young Mercy (in collaboration with MERCY Malaysia).
- 7 Student-Centered Team-Based Learning**
Our teaching model creates an environment of active personal participation and involvement in group learning such as problem-based-learning (PBL) sessions that enhances positive teamwork and leadership.
- 8 Affective Domain Training**
We provide a holistic learning experience that emphasizes on reflection sessions, peer, self and mentor feedback and folio records to ensure an all rounded nurturing of graduates.
- 9 Real World Experience**
We have formed strategic alliances with the Malaysian Ministry of Defense, Ministry of Health and other international healthcare institutions to allow use of their excellent facilities in clinical trainings.
- 10 Research Partnerships**
Our academicians have been active researchers, regularly contributing to the growing body of knowledge through research collaborations with leading partner universities and renowned pharmaceutical companies in Malaysia.

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