Preface

At the School of Physics, Transformative Learning and Teaching based on 21st century delivery has been inculcated through futuristic learning spaces as well as the use of the latest digital technology to create immersive learning based on experience.

The program offers 120-123 units with the method of delivery in the program is conventional with a combination of online learning.

The delivery method combines online learning and teaching materials and opportunities to interact online with traditional place-based lecture/tutorial/practical methods. Instructional videos are also uploaded into e-learning, micro-credential development and introduction to software to enhance student competencies.

Research projects are applied to the third year students (semesters five and six) which require students to conduct research as well as produce a thesis and present a final report. Students will also undergo Industrial Training (highly recommended) for 18 weeks in the final semester (semester eight) in agencies, industries and government sectors.

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h t t p s : / / f i z i k . u s m . m y /
B.Sc. (Hons.) Physics

Physics is the first programme established in the School of Physics (since 1969). It provides the foundation for all the other physics programmes. The scope of pure physics encompasses classical mechanics, solid state physics, thermodynamics and statistical mechanics, optics, electromagnetism, and modern physics. Through the Physics programme, the students will be provided with the all-round training in Physics from our pool of research-orientated academic staff.

The program aims to provide students with a broad overview of their understanding of the laws of modern Physics, extensive practical laboratory experience, and research experience with major research groups. The program places special emphasis on three different pathways namely:

- Pure Physics
- Electronic & Semiconductor Physics
- Optical & Photonic Physics

Duration
4 years
(For more information, kindly scan the QR code)

ENTRY REQUIREMENT

Matriculation / Foundation:
Passed with at least CGPA 2.75 and A minimum grade B (3.00) in
- Physics / Engineering Physics
- Mathematics
- Biology / Chemistry / Computer Science / Engineering Chemistry / Basic Engineering

General Requirement:
SPM or equivalent with credit in Bahasa Malaysia/Bahasa Malaysia July papers and obtained at least Band 2, in the Malaysian University English Test (MUET) and pass the subject of History.

STPM:
Passed with at least CGPA 2.75 and a minimum grade B (3.00) in Physics and Mathematics T and a minimum grade C (2.00) in General Studies.

B.App.Sc. (Hons.) Medical Physics

The Medical Physics Program, Universiti Sains Malaysia (USM) was established in 2002. In Malaysia, this program is only offered at the School of Physics, USM. According to a survey conducted, most of the medical physicists that are on the market right now are from the existing Medical Physics Program.

The program was created to train adequate human capital in the field of Medical Physics and to increase the use of high tech medical equipment. In addition, the program aims to expose and enhance students' knowledge in radiation physics, dosimetry, medical instruments, diagnostic imaging methods, radiotherapy and nuclear medicine.

The main role of the existence of this program is to train Medical Physics students to have good analytical skills and be able to understand and solve problems related to their field.

Duration
4 years
(For more information, kindly scan the QR code)

ENTRY REQUIREMENT

Matriculation / Foundation:
Passed with at least CGPA 2.75 and A minimum grade B (3.00) in
- Physics / Engineering Physics
- Mathematics
- Biology / Chemistry / Computer Science / Engineering Chemistry / Basic Engineering

General Requirement:
Possess a Diploma in a related field with a minimum CGPA of 2.75

OR

Pass A-Level with a minimum score of 10 and get at least Grade B in the following subjects:
- Physics
- Mathematics

OR

Pass the International Baccalaureate (IB) with a minimum score of 28 and a minimum score of 5 at the High Level (HL) level in the following subjects:
- Physics
- Mathematics

AND

Other requirements, kindly scan the QR code provided.

B.App.Sc. (Hons.) Geophysics

Geophysics is dedicated to studying the Earth’s structure and motion. The main thrust in the programme includes atmospheric science, environmental geophysics, oceanography, rocks and minerals such as petroleum and natural gas. It involves the application of physical laws and principles to a study of the Earth and other astronomical bodies. Geophysical studies employ physical measurements and mathematical models to explore and analyze the structure and dynamics of the solid earth and similar bodies, and their fluid content. During the course, students are required to work as a team in a one-week field camp, aiming for intensive training on various geophysical techniques.

The program aims to produce human resources skilled in various aspects in the field of Geophysics. In addition, the program is also developed to produce knowledgeable and skilled graduates in the fields required by the industry including exploration, research and higher education institutions to meet the demands and needs of the market.

Duration
4 years
(For more information, kindly scan the QR code)