



BSc in PHYSICS

About the program

Physics is the fundamental exploration of matter and energy, essential to all of the sciences and engineering. With a degree in physics, you develop great problem-solving skills, flexible “outside the box” innovative thinking, and a good familiarity with cutting-edge technologies. This background supports a surprisingly wide range of careers.

The Physics program provides a lean core curriculum delivering the necessary professional skills, competencies, and physics knowledge. Within that core, students learn about Classical Mechanics, Mathematical Physics, Computational Physics, Electricity and Magnetism, Physics Instrumentation, Quantum Mechanics, and Thermal and Statistical Physics. A wide range of elective physics courses is available for students. These include Advance Instrumentation, Astronomy and Astrophysics, Atomic/ Molecular Physics, Biophysics, Nanotechnology, Nuclear and Particle Physics, and Solid State Physics.

Active research programs are ongoing in theoretical, computational, and experimental condensed matter physics and nanotechnology, biophysics, medical physics, nuclear and particle physics, molecular dynamics, astrophysics and cosmology, and physics education.

Tracks

Engineering Physics, Space Science, and Physics Education.

Labs: Khalifa University Core Research Facilities, Atomic Force Microscope, Electromagnet system, Demon and TeraHertz (THz) Spectrometers, and a Mars Photon-Counting CT scanner.

Graduates of the program will:

Develop superior analytical skills making them versatile to adapt and work in many different sectors including industrial, medical, financial, and education sectors or explore careers as consultants, astronauts, advisors, and scientists.

WHY KHALIFA UNIVERSITY?



GLOBAL RECOGNITION

Khalifa University stands out as the leading institution in the UAE, with 90 of its faculty members acknowledged among the world's top 2% most-cited scientists in Stanford University's prestigious 2023 listing.



CONSISTENTLY HIGH-RANKED

Ranked top in the UAE, 2nd in the Arab world, and ranked 27th in Asia in Sustainability; and among top 250 in the world



GLOBALLY-ACCREDITED ACADEMIC PROGRAMS

Khalifa University is fully licensed and all its programs are accredited by the Commission for Academic Accreditation (CAA) of the UAE Ministry of Education.



UNIQUE AND DIVERSE RESEARCH

Including energy, water and environment, healthcare, aerospace, cybersecurity, Intelligent Systems, advanced materials, and fundamental science..



WORLD'S SAFEST CITY

Abu Dhabi, the largest emirate in the UAE, remains the world's safest city for the 8th consecutive year in 2024. Experience safety and a cosmopolitan lifestyle that enhances your learning experience, reinforcing its status as a safe and secure place to live, work, study, and invest.



EXPERT GUIDANCE

We are committed to empowering students for success, fostering collaboration in a diverse community led by world-class faculty. Experience personalized guidance and a conducive learning environment with an impressive 11:6 student-to-faculty ratio, ensuring your path to success is well-supported and rewarding.



DYNAMIC CAREER OPPORTUNITIES

Attractive graduate employment opportunities across a wide spectrum of industries with the opportunity to present research projects at major international conferences.