

College Name	College Abbreviation
Science	SCI
Department Name (in English)	Department Abbreviation
Physics	PHYS
Department Name (in Kurdish)	
فیزیک	
Department Name (in Arabic)	
فيزياء	
1. Qualification awarded	
Bachelor of Science in Physics	
2. Length of programme	
4 Years	
3. Number of credits	
240 ECTS credits	
4. Level of qualification according to the National Qualification Framework and the European Qualifications Framework	
First cycle, Bachelor's degree	
5. Field(s) of study (e.g. ISCED-F)	
0533	
6. Specific admission requirements (if applicable)	
7. Specific arrangements for recognition of prior learning (formal, non-formal and informal) (if applicable)	
The programme may recognize formal credits earned in a formal context if these credits are relevant to the programme and confirmed by the Transcript of Records.	
8. Qualification requirements and regulations, including graduation requirements	
Students should successfully complete all the core components and collect 240 ECTS credits	
9. Profile of the programme	
The Physics Department was established within the College of Science in 1997. Its first and main academic programme is the Bachelor of Science in Physics, and the programme welcomed its first cohort of students in 2006. The programme is designed and regularly reviewed to meet the current and future needs of the Kurdistan Region and Iraq for qualified physicists, educators, and researchers. The curriculum follows international academic standards and provides a strong and balanced foundation in both theoretical and experimental physics. Laboratory sessions further enhance students' practical skills, analytical thinking, and their ability to apply physical principles to solve real-world problems. The graduation project represents a major component of the programme, encouraging scientific investigation, critical thinking, and effective teamwork. Internships offer students valuable opportunities to apply their knowledge in practical or research environments. These internships strengthen connections with industry, research centres, and educational institutions, while also helping academic staff remain engaged with community needs that can be addressed through students' research projects. Additionally, the programme includes a variety of elective courses, allowing students to tailor	

their studies to their interests and to the evolving demands of the job market, such as advanced topics in modern physics, computational physics, materials science, and applied physics.

10. Programme Educational Objectives (POs)

The Program Educational Objectives (POEs) of the Physics department are to prepare graduates who will:

1. Equip graduates with a solid and comprehensive understanding of both theoretical and applied physics, enabling mastery of fundamental principles and concepts.
2. Develop strong analytical, experimental, and problem-solving skills that empower graduates to tackle complex physics challenges effectively.
3. Prepare students for research endeavors and professional careers in physics and related scientific and technological fields, fostering innovation and scholarly inquiry.
4. Foster ethical awareness and cultivate a lifelong commitment to learning, professional development, and scientific integrity.
5. Enhance graduates' employability and adaptability by equipping them with practical skills, interdisciplinary collaboration abilities, and a readiness to succeed in diverse professional environments.

11. Programme learning outcomes (PLOs)

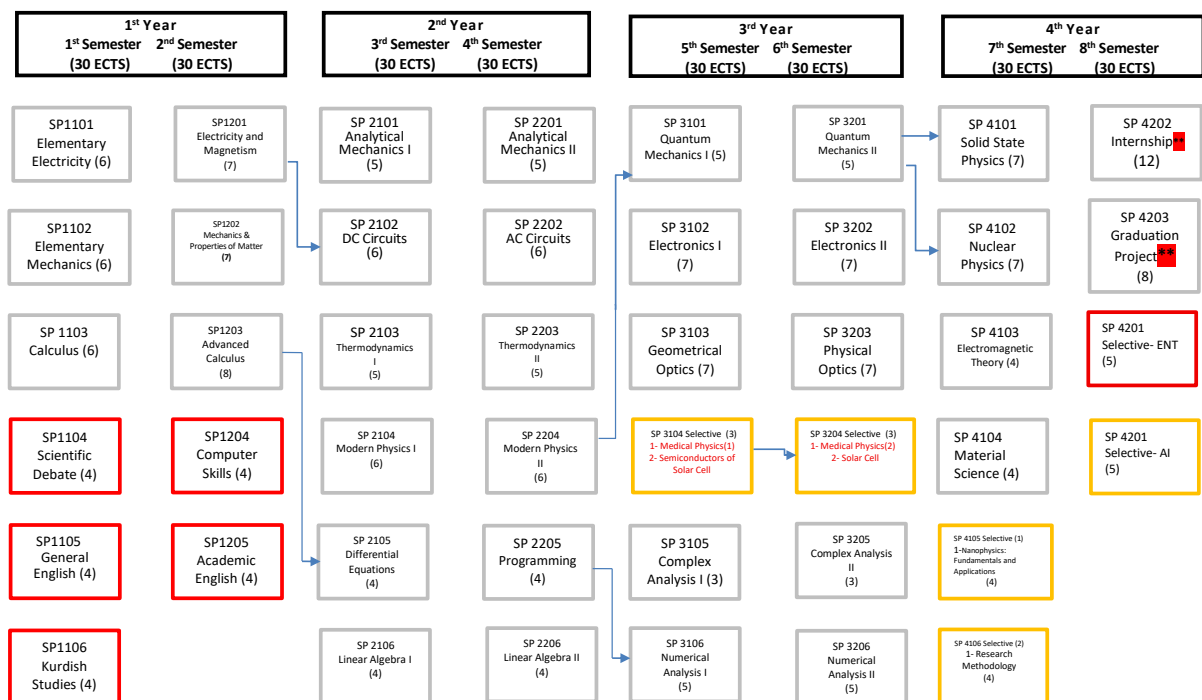
After successfully completing this programme, students should have:

1. Communicate physics concepts and knowledge clearly and effectively in both oral and written forms to diverse audiences.
2. Apply fundamental principles and laws of physics confidently in laboratory, practical, and theoretical contexts.
3. Utilize appropriate mathematical and analytical techniques to model and analyze physical phenomena.
4. Design, conduct, and critically interpret experimental investigations in physics, ensuring rigorous data analysis.
5. Employ computational tools, software, and simulations effectively to solve complex physics problems.
6. Demonstrate a deep understanding of ethical considerations and societal impacts related to physics research and applications.
7. Collaborate effectively as a team member or leader in scientific projects and research activities.
8. Pursue independent learning continuously to stay updated with advancements in physics and related disciplines.

12. Programme structure diagram with credits

Bachelor of Science in -----Physics----- Course Flow Chart - 2025/2026 Catalog (240 ECTS)

v5 (14 Aug 2025)



- The minimum ECTS (European Credit Transfer and Accumulation System) required for student eligibility for an internship is 190 ECTS (completion of 3 years of study).

Academic Approval: The minimum GPA alongside ECTS

- All students are required to attend an internship and undertake a Graduation Project during their final semester.

- Selective Courses
- Core Courses
- Ministry & University Courses

13. Mode of Study

Full time on campus

14. Examination regulations and grading scale

The following grading scale is used:

% Points	Grade
90 – 100	Excellent
80 - < 90	Very Good
70 - < 80	Good
60 - < 70	Medium
50 - < 60	Pass
0 - < 50	Fail

15. Mobility window (if applicable)

16. Work placement(s)/internships (if applicable)

The programme includes a 12 ECTS internship opportunity in semester 8

17. Work-based learning (if applicable)

18. Programme director or equivalent

Revink Ali Ramadhan

email: revink.ramadhan@uod.ac

19. Occupational profiles of graduates

Graduates of this programme are equipped with a strong foundation in fundamental and applied physics.

Their analytical thinking, quantitative skills, experimental experience, and ability to model real-world phenomena prepare them for diverse careers in industry, education, research, and technology. They are well-positioned to adapt to evolving scientific and technological challenges.

Typical roles for graduates include:

1. **Physicist / Research Scientist:**
Conducting theoretical or experimental research in areas such as materials science, nuclear physics, optics, nanotechnology, and environmental physics.
2. **Laboratory Technician / Experimental Specialist:**
Supporting and managing laboratory operations, performing measurements, maintaining instruments, and ensuring accurate data collection and analysis.
3. **Medical Physics Assistant / Radiation Safety Officer:**
Assisting in medical imaging, radiation therapy, and radiation protection in hospitals and healthcare institutions.
4. **Science and Physics Teacher:**
Teaching physics and general science at secondary or preparatory school levels and contributing to science education.
5. **Data Analyst / Computational Modeler:**
Applying mathematical and computational methods to analyse data, simulate physical systems, and solve complex technical problems in various sectors.
6. **Renewable Energy and Environmental Specialist:**
Working on energy systems, environmental monitoring, and sustainability solutions involving solar energy, atmospheric studies, and pollution control.
7. **Technical Consultant / Scientific Advisor:**
Providing expertise to industry or government sectors, supporting product development, quality control, and scientific decision-making.

20. Access to further studies

Graduates are eligible for further studies at higher diploma programmes or second-cycle (Master's) degrees in relevant disciplines.

21. Academic Staff

Full Name	Qualification	Academic title	Email
Revink Ali Ramadhan	PhD	Assist. Prof.	revink.ramadhan@uod.ac
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Sherwan Mohammedmahdi	MSc	Master Degree	
Zozan Yousif Mohammed	MSc	Master Degree	

22. Facilities and Resources (Lecture halls, Labs, etc.)

The programme uses these facilities:

Type	Quantity	Capacity (students)	Type of use	Equipment included
Lecture Hall	7	50	Dedicated	Projector, whiteboard
Mechanic Lab.	1	16	Dedicated	16 benches
Electronic Circuits Lab	1	16	Dedicated	16 benches,
Computer Lab	1	22	Dedicated	22 Desktop computers, a projector, a whiteboard, and internet
Dc and Ac Lab.	1	16	Dedicated	16 benches,
Thermodynamic Lab.	1	16	Dedicated	16 benches,
Modern Physics Lab.	1	16	Dedicated	16 benches,
Electronic Lab.	1	16	Dedicated	16 benches,
Optics Lab.	1	16	Dedicated	16 benches,
Nuclear Physics Lab.	1	16	Dedicated	16 benches, radiation detectors, radioactive sources, and gamma ray spectroscopy.
Solid Physics Lab	1	16	Dedicated	16 benches

23. Accreditation and recognition

The programme is officially recognized by the Ministry of Higher Education and Scientific Research of the Kurdistan Region – Iraq and the Ministry of Higher Education and Scientific Research of Iraq.