



The Student Academic Guide

Physics department



Umm Al-Qura University

The University of Umm Al-Qura was established in 1981 by the royal decree number 39 on 30/7/1981 . During the first decade of the fifteenth Higri century the Colleges of Da'wa (Call to Islam), Arabic Language, Applied Sciences, Social Sciences, Engineering and Islamic Architecture were established, beside the College of Education. By the establishment of the College of Medicine and Medical Sciences in 1997 in Makkah. The University offers the Bachelors, Graduate Diplomas, Masters and Ph.D degrees in Islamic Studies, Arabic Language, Education, Social Sciences, Applied Sciences, Medicine and Engineering. In 1986 the Custodian of the Two Holy Mosques laid the foundation stone of Al-'Abdiah campus to continue the university's educational progress in Makkah and meet the rising demand of the increasing numbers of students. In 1995 the College of Shari'a and Islamic studies, the College of Applied Science, the College of Arabic Language and the College of Engineering and Islamic Architecture began the gradual move to the new campus of Al-'Abdiah campus, followed by the College of Medicine and Medical Studies which was established by a royal decree in 1997. Currently, there are three campuses in Makkah (In Aziziyah, In Al-Zahir, housing the Deanship of Girls Undergraduate Studies and In Al-'Abdiah). Umm Al-Qura university gives a special attention to research and publication and community service. The University is playing a significant role in these fields.

The College of Applied Sciences

College of Applied Sciences is the first scientific college at Umm Al-Qura University. The college was established in 1401 A.H. and includes four departments (Physics, Mathematics, Chemistry and Biology). The college departments award Bachelor's and Master's degrees and also the departments of Chemistry and Biology award the Ph.D. degree. The College of Applied Sciences has taken further steps to enhance its scientific programs and lab as well as research facilities. It now has over 60 laboratories as well as



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an interactive training centre that is concerned with giving students the opportunity to train at governmental sectors and private sector establishments. Amplifying scientific programs, particularly those dedicated to serve the society as well as introducing new Ph.D. programs to the departments of Mathematics and Physics; and Starting new departments (e.g. the Department of Environmental Studies) and centres of distinction as well as creating different academic posts of specialization in tandem with a number of international research centres.

Department of Physics

The physics department is one of the oldest departments in the Faculty of Science and has been established with a number of other departments (Mathematics, Chemistry and Biology) in 1401 A.H. Department of physics developed a comprehensive and includes research groups enriched research and contributed to the renaissance of this country. Many factories and companies contribute with faculty member as advisers. The department requires a student's successful fulfilment of 142 credit hours in eight levels, each ranging from 9 to 22 credit hours, for four years of study. The vision of the department is to be a pioneer in physics, medical physics and their application at the local and international. Highly distinguished education and creative research to serve society and contribute toward knowledge based economy, creative and scientific research. The message of the department is to be a creation and discrimination in higher education and scientific research in physics and medical physics and graduate students with high scientific and technical skills and contribute to the development of society. The objectives of the department are achieving leadership in higher education, scientific research and community service. Raise the level of graduates through total quality standards. Preparation of development and innovative educational programs that qualify graduates to keep up with the demands of the knowledge society and the work market. Provide students with the basic knowledge and skills in the field of physics and medical physics. Enhance scientific research and professional skills of the researchers to contribute the scientific research and its applications. Serving society through effective



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partnership. Partnerships with research centers and universities in the world. Attract distinguished scientific and administrative

Vision

Discrimination and innovation in higher education and scientific research, and community service.

Mission:

Provide a highly educated and distinguished graduate in pure and medical physics, introduce distinctive and innovative scientific research, and provide scientific advice to community service.

Goals

- 1-Providing a highly educated and distinguished graduate in pure physics
- 2- Introduction of distinctive and innovative scientific research work
- 3- Providing scientific advice to community service.

List the courses that are granted into the program.

Level 1		
Course Code	Course Name	Prerequisite
403101-4	General Physics 1	
402101-4	General Chemistry 1	
404101-4	Differentiation and Integration 1	
705101-2	English Language	
601101-2	Islamic Culture 1	
605101-2	Quran 1	
18	Total	



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Level 2		
Course Code	Course Name	Prerequisite
403102-4	General Physics 2	404101+403101
403121-4	Electricity and Magnetism	404101+403101
404102-4	Differentiation and Integration 2	404101
404140-4	Algebra Fundamental	404101
401101-2	General Biology Plant	
401102-2	General Biology Animal	
20	Total	

Level 3		
Course Code	Course Name	Prerequisite
403212-3	Heat and Thermodynamic	404102+402102
403231-4	Optics	404102+402102
403240-3	Theoretical Physics 1	404102
403241-4	Classical Mechanics 1	404102+402102
403285-3	Measurements	403121
501101-2	Arabic Language	
19	Total	

Level 4		
Course Code	Course Name	Prerequisite
403213-3	Statistical Thermodynamic	403212
403242-3	Theoretical Physics 2	403240
403245-3	Classical Mechanics 2	403241
403253-4	Atomic physics	403240+40231
705102-3	Communication in English 1	705101
601201-2	Islamic Culture 2	601101
18	Total	

Level 5		
Course Code	Course Name	Prerequisite
403332-3	Electromagnetism 1	403242+403285
403344-4	Quantum Mechanics 1	403252+403242
403346-2	Theoretical Physics 3	403242
403371-3	Solid Stat 1	403253
601301-3	Islamic Culture 3	601201
605201-2	Quran 2	605101
17	Total	



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Level 6		
Course Code	Course Name	Prerequisite
Electromagnetism 2	403332	Electromagnetism 2
Quantum Mechanics 2	403344	Quantum Mechanics 2
Nuclear Physics 1	403344+403253	Nuclear Physics 1
Workshop	403381	Workshop
Computer	403242	Computer
Communication in English 2	705102	Communication in English 2
19	Total	

Level 7		
Course Code	Course Name	Prerequisite
403423-4	Electronics	403371
403432-3	Advanced Optics	403346+403231
403462-3	Radiation Physics	403361
403471-3	Semiconductor	403371
403493-5	Project	Agree department
605301-2	Quran 3	605201
22	Total	

Level 8		
Course Code	Course Name	Prerequisite
403461-3	Nuclear Physics 2	403361
403463-2	Nuclear Technology	403462
403372-2	Solid State 2	403471
605401-2	Quran 4	605301
9	Total	

Preparation of Graduates

- Graduation of outstanding physicist who is knowledgeable, skilled, professional and who demonstrate excellence in creative thinking, prevention and management of handicap.
- Preparation of graduates for not only perform their professional role in patient care, but also to provide leadership for the profession, contribute to the growth of the profession, and contribute to the health care needs of society.
 - Engagement in lifelong academic and professional development through self-assessment, reflection, education, and feedback from others.



Rules and Regulation

- Rules and regulation governing the responsibilities and rights of the student and followers are clearly defined in the university rules and regulation booklets (available to all on line on UQU official site or printed)
 - <https://uqu.edu.sa>

The physics program

- 1- The physics program is regarded as an integral package of courses (theoretical, experimental and project) in the field of physics leading to a qualification titled bachelor of physics
- 2- Physics program is a program that is designed to provide students with the high levels of knowledge and skill required for professional occupations.
- 3- It is also necessary to point out that while learning outcomes-setting, student special attributes and characteristics established by program, faculty and university were included such as :-
 - ✓ Excellence in learning, practice , research and continuous improvement of performance in these areas.
 - ✓ The ability to recall and apply their knowledge in their personal and professional lives for many years after they graduate not just being passed tests and assignments.
 - ✓ Recognize the provisional nature of knowledge field and take this into account in investigating and proposing solutions to academic or professional issues
 - ✓ The ability to behave sensitively, transparency responsibly , and ethically in difficult situations
 - ✓ The ability to work in a spirit of teamwork and appreciation of differences.
 - ✓ The ability to take initiative in identifying and resolving problems and issues both at the individual and group levels, exercising leadership in pursuit of innovative and practical solutions .
 - ✓ The ability to apply the theoretical insights and methods of inquiry from their field of study in considering issues and problems in other contexts.



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- ✓ The continuity to extend their knowledge through habits of lifelong learning
 - ✓ Considering honesty, justice, Caring, Compassion, credibility, empathy and mutual respect in providing services to patients.
- 4- Teaching staff are available at sufficient times for consultation and advice to student through a declared scheduled for office hours adopted in department councils. This matter has been proved by the minutes of the frequent meetings of staff members with students and also in accompanied attendance sheets for these meetings
- 5- Teaching resources are sufficient to large extent to ensure achievement of the intended learning outcomes. This evidence by:
- ✓ The availability of classrooms, staffing, seat, lighting, aeration and air conditioning and time table for their maintenance.
 - ✓ The availability of learning laboratories in the department which are will equipped with teaching and learning audio-visual aids.
 - ✓ The labs are also equipped with assessment equipment in sufficient number for student training.
 - ✓ The availability of teaching and learning aids such as and /or visual equipment, models, educational media and CDs and simulation tools.
 - ✓ The availability of the special field in the project.
 - ✓ The presence of the King Abdallah university library, Faculty of Science library and Physics departments library.
 - ✓ The university's subscription in many of well-known universal information bases and in many well reputed scientific sites and magazines in the field of specialization to provide an opportunity for students to see and use what is new in the physics field in their learning activates.
- 6- Some appropriate preparatory and orientation mechanisms are provided to prepare students for study in higher education environment as the preparatory year and the involved courses concerned with the education of English language and other learning skills.
- 7- Systems are in place within the program for monitoring and coordinating student workload such as:
- ✓ Equally distribution of taught courses on the educational semesters. This matter in order to monitoring, equally distribute and coordinate the educational burdens or work load of the students through the different courses and semesters, as shown in the department



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study plan and its compliance with the minimum and maximum teaching units for each semester and each year as defined by the National Qualifications Framework.

- ✓ The curriculum and courses development committee in the program periodically reviewed the taught topics in each course to avoid its duplication and subsequent increase in the student educational burdens (workload).
- 8- Student surveys and their opinions and satisfaction about their workload.
- 9- Student portfolio for each course and the included learning and educational activities and assignments. These activities were continuously revised and evaluated by the department staff who provide students the feedback about their performance
- ✓ Feedback on performance by students and results of assessments are given promptly to students.
- ✓ Each student has his own university email address through which guidance and instructions from different university departments such as from department, college and deanship of student affairs have been sent to him.
- ✓ The final results for all courses and some periodic courses have been declared for all students through their university sites. Students can access easily to know these results by using their passwords.

Processes for Educational Assistance for Students

- Teaching staff are available at sufficient times for consultation and advice to students through a declared scheduled for office hours adopted in department councils.
- Teaching resources are sufficient to large extent to ensure achievement for the extended learning outcomes
- The availability of classrooms, staffing, safety of seats, lighting, aeration and air conditioning and time table for their maintenance.
- The availability of learning laboratories in the department which are well equipped with teaching and learning audio-visual aids
- The labs are also well equipped with assessments and equipment in a sufficient numbers for student training. The maintain contracts for their safety and periodic follow up have been signed with a well-known companies in this fields.
- The availability of teaching and learning aids such as audio and /or visual equipment, models, educational media and CDs and simulation tools.



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- The availability of the special field in the project.
- The presence of the King Abdallah university library, Faculty of Science library and Physics departments library.
- The university's subscription in many of well-known universal information bases and in many well reputed scientific sites and magazines in the field of specialization to provide an opportunity for students to see and use what is new in the physics field in their learning activates.
- Each student has his own university email address through which guidance and instructions from different university departments such as from department, college and deanship of student affairs have been sent to him.
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- deanship of information technology and deanship of E & distance learning (such as active learning — cooperative learning & - E-learning

Qualification and Experience of Teaching Staff.

- All members of the department staff have good moral character and reputation, scientific and practical efficiency and working with the spirit of teamwork evidenced by the appreciation of the faculty board for the department staff and the positive feedback from the student report in course surveys.
- Teaching staff members have appropriate qualifications and experience for the courses they teach.
- Most of teaching staff members are working full-time.
- All members of the department staff have good moral character and reputation, scientific and practical efficiency and working with the spirit of teamwork evidenced by the appreciation of the faculty board for the department staff and the positive feedback from the student report in course surveys.



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- Most members of the department staff participate in research activities in the fields of study they teach and also involve their students in these activities. Students and their supervisors
- Teaching staff have the appropriate qualifications and experiences for teaching the courses that they teach.
- All the members teaching staff are working a full-time.
- All members of the department staff have good moral character and reputation, scientific and practical efficiency and working with the spirit of teamwork. This is evidenced by the appreciation of the faculty board for the department staff and the positive feedback from the student report in course surveys.
- All the members teaching staff are involved on a continuing basis in scholarly activities that ensure they remain up to date with the latest developments in their field and can involve their students in learning that incorporates those developments.
- The academic staff in the department have a high degree of professionalism, experience and high skilled in the general and specific area of specialization.
- Ratio of the number of courses taught by staff of the department, who is working full-time, to that taught by members from outside the department, indicates that the percentage is 100%.

List of teaching staff

No.	Name	Academic position	Academic degree
1.	Ameena Naif Mohammad Al Ahmadi	Assistant Professor *	Ph.D.
2.	AbdulAziz Mohammad Sedeeq Saeed Kutb	Professor (Full) *	Ph.D.
3.	Issam Hamed Mohammad Al Ahdali	Professor (Full) *	Ph.D.
4.	Fayz Hmad Hmood Al-Ghorabie	Professor (Full) *	Ph.D.
5.	Khaled Abdul Waged Mohamad Abdul Lateef	Professor (Full) *	Ph.D.
6.	Roshdi Seoudi Mohamed Awed	Professor (Full) *	Ph.D.
7.	Samer Solyman Ahmad Neto	Professor (Full) *	Ph.D.



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8.	Saud Hameed Ahmad Al Ahyani	Professor (Full) *	Ph.D.
9.	Yosry Mohamad Eid Moustafa	Professor (Full) *	Ph.D.
10.	Abdul Aziz Rashad Soroogi	Associate Professor*	Ph.D.
11.	Adel Mohamad Hashemi Madani	Associate Professor*	Ph.D.
12.	Ahmad Mohamad El_Hady Abdel_Ghafar Abdul_Attia	Associate Professor*	Ph.D.
13.	Mufeed Mahmoud Hussein Al-Maghrabi	Associate Professor*	Ph.D.
14.	Mohamed Mahmoud Sabry Salah El_Din Mohamed	Associate Professor*	Ph.D.
15.	Said Mohamad Mohamad Attia	Associate Professor*	Ph.D.
16.	Solyman hamd Mosalam Al_Mosalam	Associate Professor*	Ph.D.
17.	Waleed Gameel Ahmad Altaf	Associate Professor*	Ph.D.
18.	Abdel Rahman y. Lashin	Assistant Professor*	Ph.D.
19.	Abdul_Mageed Omr Ali Taymomi	Assistant Professor*	Ph.D.
20.	Afaf Moawad Abdul_Mageed Ali	Assistant Professor*	Ph.D.
21.	Ahmad Yosef Ahmad bargawi	Assistant Professor*	Ph.D.
22.	Al_Hoseeny Al_Taher Mahdy Mohamad	Assistant Professor*	Ph.D.
23.	Mongi Sassi Amor Ben Moussa	Assistant Professor*	Ph.D.
24.	Ayda Radwan Tolbah Ebraheem	Assistant Professor*	Ph.D.
25.	Doaa Abd Allah Said Mahmoud	Assistant Professor*	Ph.D.
26.	Esam Abdullah Abdul_Rahman Al_Afrag	Assistant Professor*	Ph.D.
27.	Fatema Al_said Mahroos Othman	Assistant Professor*	Ph.D.
28.	Galal El_Naser El_Hady Al_Wafalyi	Assistant Professor*	Ph.D.
29.	Hanan Hosein Ebrahim Amer	Assistant Professor*	Ph.D.
30.	Hosam Salah El_Deen Mohamad Ebraheem	Assistant Professor*	Ph.D.
31.	Maha Mohamad Omr Khayat	Assistant Professor*	Ph.D.
32.	Mehrez Al_Chieriani Mohamed Loulou	Assistant Professor*	Ph.D.
33.	Mohamad Abdul_Hakeem Yonis Bokhari	Assistant Professor*	Ph.D.
34.	Mohamad Omar Mohamad Boustimi	Assistant Professor*	Ph.D.
35.	Mohammed Khalil Mohammed Al Turkestani	Assistant Professor*	Ph.D.



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36.	Mohamad Omar Mohamad Babteen	Assistant Professor*	Ph.D.
37.	Ramadan Ali Hassan Ali	Assistant Professor*	Ph.D.
38.	Saif El_Esam Abdul_Salam	Assistant Professor*	Ph.D.
39.	Taha Mohamad Taha Al_Fawaal	Assistant Professor*	Ph.D.
40.	Tasneem Malak Mohamad Deen Azeem	Assistant Professor*	Ph.D.
41.	Walid Belkacem El_Akremit Belhadj	Assistant Professor*	Ph.D.
42.	Effat Abdul_Allah Ali Ali Rashed	Lecturer	M.Sc
43.	Hend Abdul_Aziz Ahmad Al_Hagagi	Lecturer	M.Sc.
44.	Turky Othman Hameed Al_Maatani	Lecturer	M.Sc.
45.	Fayza Abdul_Kader Hasan Agag	Lecturer	M.Sc.
46.	Hoda Gowybr Aneez Al_Salmi	Lecturer	M.Sc.
47.	Khaled Ali Mohamad Maghrabi	Lecturer	M.Sc.
48.	Mohamad Owaid Fahd Al_Omary	Lecturer	M.Sc.
49.	Noha Farag Mohamad Abdullah Al_Harbi	Lecturer	M.Sc.
50.	Rabab Khaled Mohamad Sendi	Lecturer	M.Sc.
51.	Abeer Ahmad Abdullah Al_Sreehi	Domenstrator	B.Sc
52.	Abdul_Rahman Masood Daif Allah Al_Oteebi	Domenstrator	B.Sc
53.	Ahmad Makbool Mohamad Hekami	Domenstrator	B.Sc
54.	Ali Saleh Aal_Sharaa Al_Shamrani	Domenstrator	B.Sc
55.	Anas Alaa Asad Mohder	Domenstrator	B.Sc
56.	Arwa Muhammad Abdul Hakeem Bukhari	Domenstrator	B.Sc
57.	Asmhan Saud Ali Al_Shekhi	Domenstrator	B.Sc
58.	Balsam Fahd Ebraheem Soofi	Domenstrator	B.Sc
59.	Danya Abdul_Rehem Meki Sendi	Domenstrator	B.Sc
60.	Dawood Bin Abu_Bakr Bin Moosa Watrah	Domenstrator	B.Sc
61.	Ebthal Mastoor Khedr Al_Thebei	Domenstrator	B.Sc
62.	Eman Abdul_Baset Gaber Madkhli	Domenstrator	B.Sc
63.	Eman Saleh Awad Rokaan	Domenstrator	B.Sc
64.	Eman Ahmad Abdul_Raheem Bokhari	Domenstrator	B.Sc



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65.	Fahd Abdullah Shokr Al_Hashemi	Domenstrator	B.Sc
66.	Fawzya Mohamad Mokhtar Turkestani	Domenstrator	B.Sc
67.	Hanan Hasan Al_Maklawi	Domenstrator	B.Sc
68.	Hoda Ahmad Abdullah Al_Allawi	Domenstrator	B.Sc
69.	Manal Hosein Omr Khard	Domenstrator	B.Sc
70.	Mashaël Saud Hager Al_Harbi	Domenstrator	B.Sc
71.	Mohamad Abdul_Aziz Mohamad Sedeeq Kutb	Domenstrator	B.Sc
72.	Nada Abdul_Raheem Sedeeq	Domenstrator	B.Sc
73.	Noor Mahmud Mohamad Abdullah Basafr	Domenstrator	B.Sc
74.	Omaima Abdul_llah Abdul_Raheem Bawazeer	Domenstrator	B.Sc
75.	Saleh Marzook Berki Al_Lokmani	Demonstrator	B.Sc
76.	Samr Mohamad Sadoon Al_Selmi	Domenstrator	B.Sc
77.	Thamer Salman Faleh Al_Omeery	Domenstrator	B.Sc

Teaching resources

- Teaching resources are sufficient to large extent to support teaching and learning process and ensure achievement of the intended learning outcomes. This evidenced by:
- The availability of classrooms, staffing, seats, lighting, aeration and air conditioning with time table for their maintenance.
- The availability of learning laboratories in the department which are well equipped with teaching & learning audio-visual aids.
- The labs are also well equipped with assessment equipment in a sufficient numbers for student training. The maintenance contracts for their safety and periodic follow up have been signed with a well-known companies in this field.
- The availability of teaching & learning aids such as audio and /or visual equipment, models, educational media & CDs and simulation tools.
- The subscription in many of well-known universal information bases and in many well reputed scientific sites and magazines in the field of specialization to provide



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an opportunity for students to see and use what 's new in the rehabilitation field in their learning activities

- Ready access to on-line data-bases and research and journal.
- King Abdallah library frequently organizes training courses and workshops for ail teaching staff and students ail over the university to kept them informed about library services, regulation of the library controlling the process of borrowing books, different database that university joint and how to access to them and any other changes in services.

Facilities and Equipment

- Facilities at the College of Applied Science including Department of Physics include sufficient space and state of the technology which allow faculty to deliver effective and efficient learning-centred teaching through a variety of instructional methods and approaches in a conducive learning environment, while good use of these facilities and equipment enable students to take responsibility for their own learning. The use of these facilities and equipment are assessed regularly in terms of their suitability for all stakeholders, i.e. students, faculty and staff.
- Several major improvements have been undertaken in terms of the quality and adequacy of the facilities and equipment in Physics Department, the College and the University as a whole. These enhancements include: the introduction of smart classrooms and the provision of new and upgraded computer laboratories; Internet bandwidth and wireless coverage have also been improved. Furthermore, fully equipped specific labs for each field of physics have been established in the College of Science
- The physics department provides quality of the facilities and equipment from the main users.(Aabdiya campus for male-student and Alzaher campus for female-student) stated that classroom including halls, laboratories are attractive and comfortable.