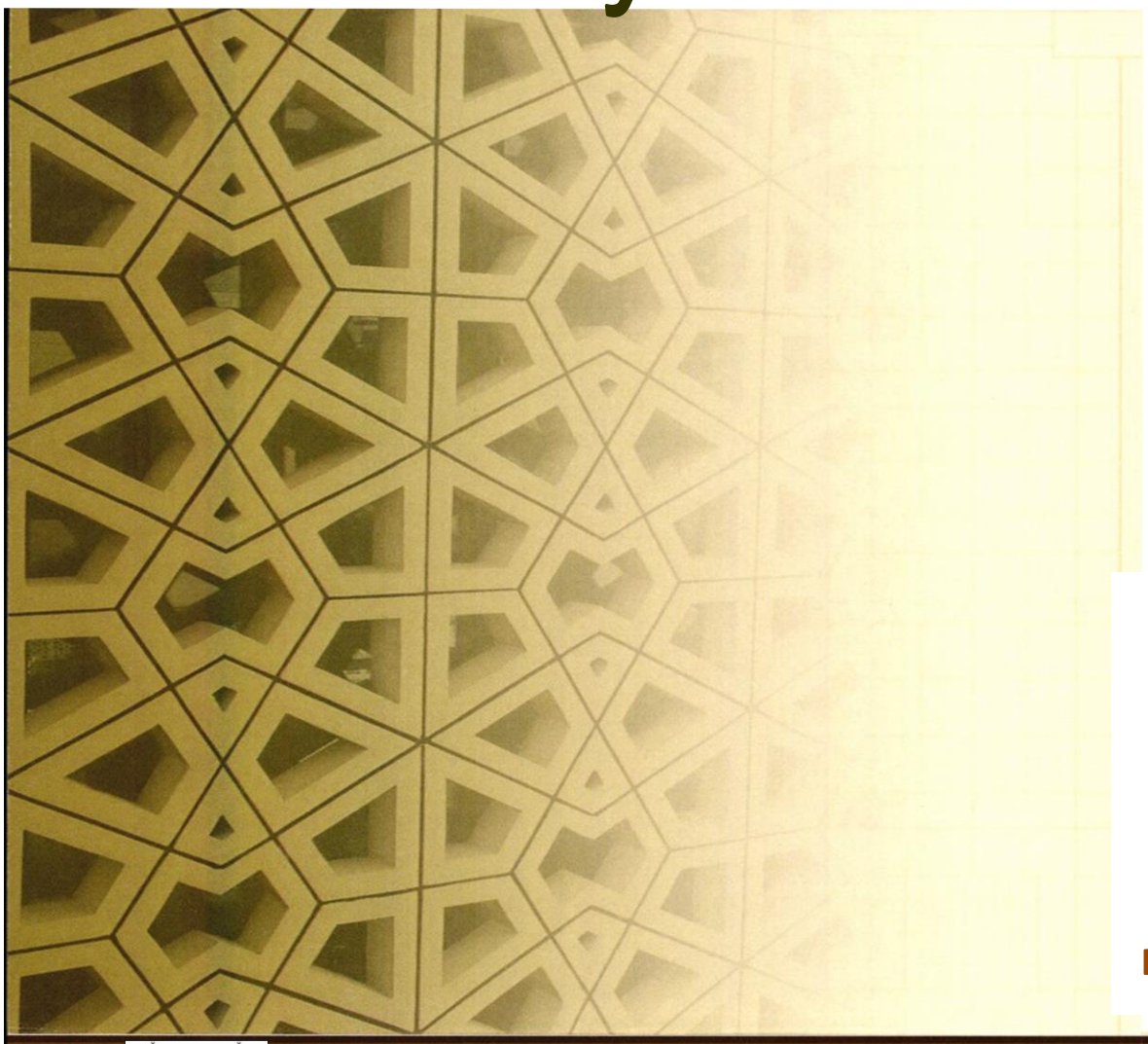
Self-Assessment Report for International Accreditation

Bachelor's degree program in

Medical Physics



كلية العلوم التطبيقية
Faculty of Applied Sciences

قسم الفيزياء

Department of Physics

Umm Al-Qura University, 2017

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List of Figures of Medical Physics Program SAR

0. Formal Specifications (per degree program)

Name of the program (original language)	فيزياء طبية
Name of the program (English translation)	Medical Physics
Final degree	Bachelor of Science in Medical Physics
Standard period of study	4 years, 8 semesters
Credit points (according to ECTS)	231 Credit points (135 credit hours).
Type (several can be indicated)	Full time.
Website of the Higher Education Institution	www.uqu.edu.sa
(First time) program start date within the academic year	10/11/1404 A.H (7-8-1984 A.D)
Intake rhythm	Fall semester
Expected intake number of students	100 students
Amount and type of fees/charges	Free of charges
For the AC-Seal (Germany): classification as consecutive/further education (for Master's degree programs)	Consecutive/further education / N.A.
For the AC-Seal (Germany): (optionally only for Master's degree programs)	Application/research orientation/N.A.
Faculty/Department	Faculty of Applied Science-Department of Physics
Official contact (Program Coordinator) person for publication on the web	**Dr. Saleh M. Alluqmani.** Head of Physics Department **Dr. Hosam Salah El-Din Ibrahim** Coordinator of Medical Physics Program
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Re-accreditation	No
Last accreditation issued by	No
Duration of the last accreditation	……

The site of the execution of the Degree Program in medical physics is the department of physics, Faculty of Applied Science, Umm Al-Qura University. The department of Medical Physics belongs to, Faculty of Applied Science at Makkah that operates under the administration of Umm Al-Qura University.

Faculty of Applied Science brings together the education and research in Medical Physics at Umm Al-Qura University. Faculty of Applied Science coordinates seventh degree programs Chemistry, Industrial (Applied) Chemistry, Biology, Microbiology, Physics, Medical Physics and Mathematics. Umm Al-Qura University is one of the largest and oldest education and research organization in KSA, since it was established in.

0.1 Type of study

Studies are full time and take place on Student Workload per Semester with respect year are ranged from 800 to 1700 hrs. Most courses are offered every semester in English language. All the course details are given in the course descriptions available in the course specification handbook. However, the university also offers courses as intensive courses in the summer semester. Most courses are offered every semester. All the course details are given in the module descriptions available in the course specification handbook (Appendix MPP07). For students, 75% attendance is compulsory. Courses use, study and teaching portals, smart board and whiteboard which facilitate self-study and make distance learning a possibility.

0.2 Final Degree

The degree to be awarded is the Bachelor of Science in Medical Physics (MPhys). Faculty of Applied Science was established (1397) on 23/11/1397 (5/11/1977) (Appendix UQU02) as per the Government Decree on University Degrees (3/M/27277) issued on 21/12/1401 (20/10/1981) (Appendix UQU02).

The grant of the right to award this degree to Umm Al-Qura University Act (3/1/43/1353/2) on 24/3/1402 (20/1/1982) (Appendix UQU02) and the Government Decree on University issued Degrees (39/M) on 28/9/1401 (30/7/1981).

0.3 Standard period of study and credit points gained

The minimum credit hours of studies required for Bachelor degrees are 120 credit hours as per the KSA system which is called the National Qualification Framework (NQF). The required credit hours of study in the Medical Physics Program (MPP) are 135 credit hours to award Bachelor degree. The award of the degree requires a minimum of 15 credit hours of course per semester plus a training hospital course in the final semester of the program.

According to the special values of Umm Al-Qura University due to the holy place in MAKKAH, there are special university required courses as a university requirement that not applied all over the Saudi universities. The university must arrange the courses and prepare a plan of study so that the students are able to complete the degree in time of full- time study (Appendix UQU01).

0.4 Expected intakes for the program

The Faculty Council proposes a number to the rector on the student intake for faculty degree programs. The student intake is decided jointly between the Board of Umm Al-Qura University and the degree program on an annual basis. The student intake has been a constant that is 100 each year for the last four years (table 0.1).

There are different ways variants of acquiring admissions in to the B.Sc. degree program. The Bachelor's degree program includes applicants who have been successful in the preparatory year (two semesters, approximately average 34 credit hrs) in the Computer Science, Engineering and Science branch in the preparatory studying year.

0.5 Program start date within the academic year and the first time the program is offered

The academic year of the university starts in mid-August and ends in mid-June. The academic year is divided into three semesters. The first semester is autumn, the second semester is spring, each comprising of fifteen weeks, and the third summer semester (with conditions) is an intensive semester comprising of seven weeks.

Table 0. 1: Expected intake of students (Male section only).

	Expected	Actual intake
2012	**100**	**10**
2013	**100**	**12**
2014	**100**	**17**
2015	**100**	**56**
2016-2017	**100**	**(121 Male only) ***

* The number of students included both physics and medical physics students enrolled in the physics Department both programs according the updated plan 1437, then the student will be specialized, one year later.

Medical physics degree program commences once a year in the beginning of the academic year. There was an old study plan (recommendation 1419) which was terminated and replaced with a new existed plan (recommendation 1433). The courses being offered are coordinated to ensure this. The degree program in Medical Physics has been offered since the inception of the Faculty in Ramadan 1431 A.H (Studying Plan 1433) two years later. During the first years, preparatory (foundation) year the education was not part of the studies in the medical physics. The Faculty of Applied Sciences decided to change the study plans for all the faculty programs. This is due to the desire of the Faculty board to make more freedom for the student to be enrolled in the Faculty programs apart from the foundation year. This was carried out by changing the study plan into a modern modified one (recommendation 1437) which was started one year ago.

0.6 Amount and type of charges

Education leads to a university degree and the entrance examinations relating to student admission shall be free of charge for the student (Appendix UQU01). The students of Umm Al-Qura University must register in each semester of the academic year.

Appendices:

Umm Al-Qura University

UQU01. The Statute of the council of Higher Education and Universities (Univ. Act).
UQU02. Government Decree on Umm Al-Qura University.

Medical Physics Program

MPP07. Courses Handbook.

1. Degree Program: Content, Concept and Implementation

1.1 Aims of the program of studies

The Development of Umm Al-Qura University

The religious, historical and cultural significance of the Kingdom of Saudi Arabia gives it a leading role among the countries of the Islamic world. Millions of Muslims flow to it to perform the Haj (pilgrimage) or Umrah or visit the mosque of the Prophet - peace and blessings be upon him. Muslims all around the world say their prayers facing the holy Ka'ba of Makkah every day. Commitment to Islam and adherence to Islamic Shari'a has always been central to the Kingdom's domestic and external policies. Such commitment, however, did not hamper the persistent efforts to build a modern society that enjoys all the benefits of contemporary culture. Because of the wise government policy, the Kingdom has acquired an authoritative economic and political status that has produced a considerable effect on regional and international economy and politics.

Since the unification of the Kingdom under the leadership of King Abdul Aziz Bin Abdul Rahman Al-Saud tremendous efforts have been exerted to effect comprehensive development of all aspects of life in the country. Entering a new era of rapid development of the country's infrastructure and economy in the early 1970s, Saudi Arabia devoted special attention to fostering higher education. Established in 1975, the Ministry of Higher Education embarked on a long-term master plan to enable the Saudi educational system to provide the highly trained manpower necessary to run the country's increasingly sophisticated economy.

In 1949 King Abdul Aziz ordered the establishment of the Faculty of Shari'a (Islamic Law) to become the first higher education institution in the country. It constituted the kernel of Umm Al-Qura University and its most prominent Faculty. Henceforward, the establishment of higher education institutions continued. In 1952 the Teachers' Faculty was established, followed by King Saud University in 1957 - the first of eight major universities in the Kingdom. Among these universities, Umm Al-Qura University is distinguished by its unique location in the Holy City and the best academic reputation in the fields of Islamic studies and other modern scientific and applied disciplines.

Umm Al-Qura University has developed through three historical phases:

The first phase (1949 -1971):

The start was in 1949 when the Faculty of Shari'a was established, followed by the establishment of the Teachers' Faculty In 1952 which continued until 1959 when the Faculty of Shari'a took the responsibility of teachers' preparation and became the Faculty of Shari'a and Education. In 1962 the Faculty of Education was established as an independent Faculty.

The second phase (1971 -1981):

In 1971 the Faculties of Shari'a and Education became part of King Abdul Aziz University in Jeddah and constituted its branch in Makkah. The Faculty of Education in Taif was established towards the end of this period, followed by the establishment of other academic departments and centers.

The third phase (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 Faculties of Da'wa (Call to Islam), Arabic Language, Applied Science, Social Science, Engineering and Islamic Architecture were established, beside the Faculty of Education in Taif which was established in 1981. By the establishment of the Faculty of Medicine and Medical Science in 1997 in Makkah and later in Taif, and the establishment of the Faculty of Natural Science in Taif and the Faculty of Community Service and Continuing Education the number of Faculties jumped to twelve, beside the Institute for Teaching Arabic for Nonnative Speakers and the Haj Research Institute. Later on, a community Faculty was established in Baha.

The University offers the Bachelors, Graduate Diplomas, Masters and Ph.D degrees in Islamic Studies, Arabic Language, Education, Social Science, Applied Science, Medicine and Engineering. There were about 30,000 students in the campuses of Makkah and Taif. In 1986 the Custodian of the Two Holy Mosques laid the foundation stone of Al-'Abdiyah campus

to continue the university's educational progress in Makkah and meet the rising demand of the increasing numbers of students.

In 1995 The Faculty of Shari'a and Islamic studies, the Faculty of Arabic Language and the Faculty of Engineering and Islamic Architecture began the gradual move to the new campus, followed by the Faculty of Medicine and Medical Studies which was established by a royal decree in 1997.

Currently, there are three campuses in Makkah. The first campus is in Aziziyah, housing the university administration, the supporting deanships, the Faculty of Community Service and Continuing Education, the Institute of Scientific Research, the Custodian of the Two Holy Mosques' Institutes for Haj Research, and some other Faculties.

The second campus is in Al-Zahir, housing the Deanship of Girls Undergraduate Studies and its facilities, and the third one is the new campus of Al-'Abdiyah. There is another campus in Taif embracing the Faculty of Education and the Faculty of Natural Science. Beside awarding academic degrees, Umm Al-Qura university gives a special attention to research and publication and community service (Appendix UQU03). The University is playing a significant role in these fields.

Umm Al-Qura University Mission:

The University of Umm Al-Qura, with what it has from qualified human resources, advanced infrastructure, scientific programs, research priorities, and management and financial systems, will become:

- Trusted by the community and is its first choice.
- A world authority on accreditation for Islamic studies (Shari'a) and Arabic Language.
- House of expertise and the official reference on the issue of developing the environment of Makkah and the holy places.
- An environment that facilitates innovation in knowledge and science, according to the established world criteria.

The Vision:

Pioneering in Education, scientific research and the service of the local and global society.

Goals:

- World leadership in Islamic science (Shari'a) and Arabic Language.
- To become the number one university in humanities, social and environmental studies related to Hajj and Umrah.
- To be among the first ten universities in the Arab world

Values:

- Adhering to the Islamic approach
- Human and the environment development in Makkah.
- Excellence in work, and appreciating the achievement.
- Team spirit in the work.
- Establishing an excellent education environment.
- Developing skills and capabilities, and supporting the talented people.
- Adopting the principle of continuous education.
- Cooperation, communicating, and partnerships with national, regional and international organizations.

Faculty of Applied Science

The Faculty of Applied Science is the first scientific Faculty at Umm Al-Qura University. The Faculty was established in 1401 A.H. and includes four departments (Physics, Mathematics, Chemistry and Biology). The Faculty departments award Bachelor's and Master's degrees and also the departments of Chemistry and Biology award the Ph.D. degree.

The Faculty of Applied Science 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 an interactive training center that is concerned with giving students the opportunity to train at governmental sectors and private

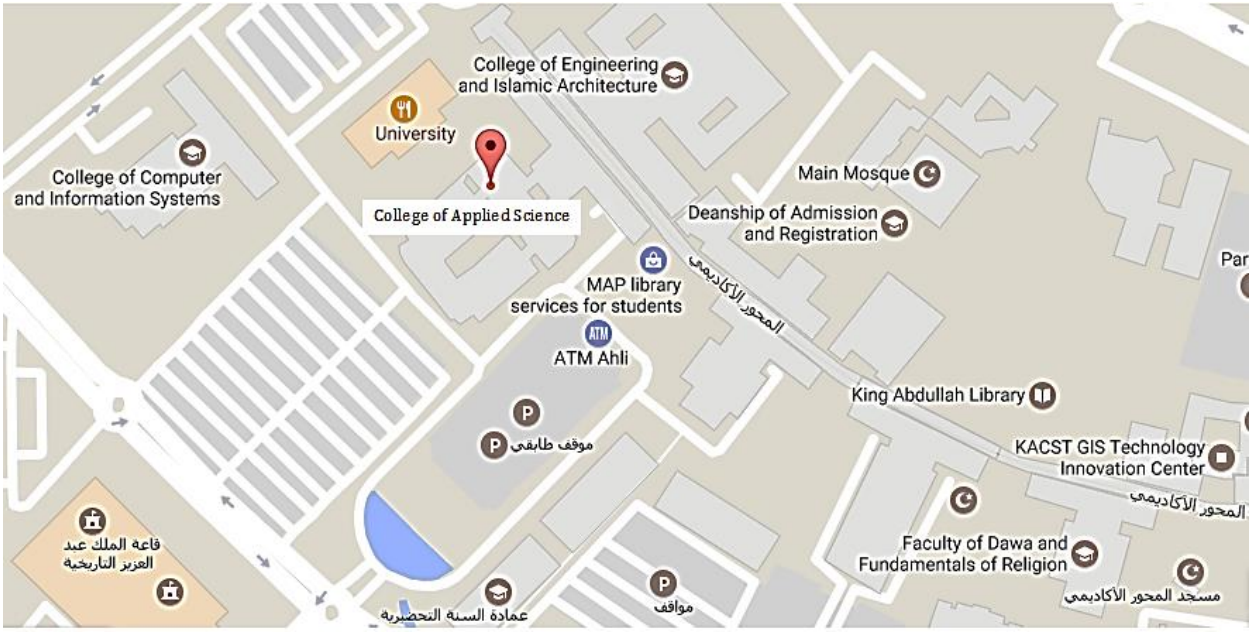
sector establishments. Amplifying scientific programs, particularly those dedicated to serve the society as well as introducing new Ph.D. programs in the departments of mathematics and physics; and starting new departments (e.g. The Department of Environmental Studies) and centers of distinction as well as creating different academic posts of specialization in tandem with a number of international research centers.

Vision

- Raise the educational level of the Faculty students in order to achieve high-quality.
- The development of students research capacity and take advantage of modern technological developments (IT).
- Spread the spirit of mutual cooperation between faculty members within the Faculty and the establishment of scientific lectures and seminars.

Mission

- Accomplishment of the purposes and objectives of higher education and the provision of university education and graduate studies for students of the Faculty, with the scientific and practical skills development, and interpersonal skills both inside and outside the Faculty, with the encouragement of faculty for scientific research members, and participate in community service, and expansion in the areas of translation, authoring scientific books.



Goals:

- Support for university education outputs to the education sector health and the industrial and commercial sector and scientific competencies of Faculty students aligned with the development plans.
- Linking disciplines, departments staffed need the labor market through joint cooperation between the departments of the Faculty and the private and public sector through joint workshops to develop a cooperation mechanism.
- The development of qualified human resources for the teaching profession, Faculty of Applied Science and provide the community with specialists in various Science, both at the level of diploma or bachelor.
- Cooperation with the faculties of Applied Science in the local and international universities.

- The development of behavioral trends (interpersonal skills) I have Faculty students.
- Calendar comprehensive training programs in the light of the results of international experience and developments in the field of scientific and technical knowledge and requirements of the labor market.

Physics Department

The Department of Physics has been established as part of the Faculty of science in the year 1401 A.H. under Faculty of Applied Science at that time, constituted four departments (Mathematics, Physics, Chemistry, Biology). The Department of Physics provides B.Sc. degree in physics and educational physics for female and male which has been upgraded later to join the masters and in 1403 A.H.

A new major of the medical physics was established within the physics department to provide female and male as a medical physicist at the hospitals, research center and radiation protection, when the branch was integrated fully with the base department at the Faculty of Applied Science in 1404 A.H. There was an old study plan 1419.H for both pure and medical physics programs. At present, although there is a current study plan 1433.H that all the graduates from the program, there are still a few students still studying at study plan 1419.H.

The department old study plan (1419.H) for both pure and medical physics. Physics Department is awarding, male and female students who has successfully completed 142 study units, the degree of Bachelor's of Science in physics and M.Sc. is awarded in separate programs. Also in the medical physics program both male and female who successfully completed 146 study units awarded degree in medical physics.

The study plan 1433.H for physics and medical physics for both male & female students are developed by adding a foundation year and to reduce the graduation credit hours for major physics to 132 hours and medical physic to 135 hours with some changes in physics courses to meet with high quality standard education. The modified study plan (recommendation 1437) was conducted to give the student a track apart from the common foundation year with the Faculty of Engineering, Faculty of Computer Sciences, and the Faculty of Applied Sciences trend. This enables the students to admit the programs of the Faculty of Applied Sciences directly.

The B.Sc program in the physics department in the Faculty of Applied Science aims at providing the students with the required knowledge for employment within and outside the university. The Faculty of Applied Science has been consistently carrying out the development of all its programs, including a foundation year for the admitted secondary school students.

This introduction gives a brief recapitulation of the history of the department, its goals, program requirements as well as the overall structure of the plan and content of the main courses and otherwise supports courses. Renew of the two programs (Physics and Medical Physics programs) approval of the overall structure and department plans has been decided by the year 1431 A.H.

Vision of Physics Department

Achieving pioneering in physics and medical physics at a local and international level, and creating active partnerships with community organizations.

Mission of Physics Department

Realizing creativity and distinction in higher education and scientific research in the field of pure and medical physics. The mission is to prepare graduates with high scientific and technical skills who are capable of serving and developing the community.

Objectives of Physics Department

1- Achieving pioneering in higher education, scientific research and community services.

2- Upgrading graduates' standard through application of total quality measures.

3- Preparation of innovative educational programs that qualify graduates who can adequately respond to the community needs and the labor market.

4- Providing students with essential knowledge and skills in the field of pure and medical physics.

5- Promoting scientific research and qualifying professional researchers to participate in conducting distinguished scientific research.

6- Serving community organization through establishing smart partnerships.

7- Establishing smart partnership with research centers and distinguished international universities.

8- Attracting highly qualified scientific Cadre and distinguished administrative caliber.

1.1.1. Aims of the Bachelor's Degree Program in Medical Physics

Aims & learning objectives

The program enables graduate students to work and/or carry out independent research in the field of medical physics. Accordingly, the course provides not only a theoretical background but also many practical sessions where the knowledge can be applied in the context of modern Medical Physics attributes.

The most important professional Program General Objectives:

The Program General Objectives (PGO) of the Medical Physics Program are accomplished with other intended target sub-objectives of each PGO as follows:

PGO 1- Acquired basic knowledge of medical physics related to human anatomy and physiology of body. **Sub-objectives**: *After completing this program, students will:* (a) acquire the knowledge of the normal structure and function of the body and its major organ systems with emphasis on content applicable to clinical diagnostic imaging and/or radiation oncology. (b) define the basics of radiation and radioactivity, its properties, units of measure, dosimetry measurement concepts and methods.(c) recognize detailed knowledge of radiotherapy, nuclear medicine, medical imaging. (d) Enable the graduate to know the radiation safety practices and procedures, including the determination of radiation shielding requirements. (e) list the basics of the biological effects of radiation and its application for radiation safety and radiation treatment.

PGO 2- Develop the ability to perform the clinical support procedures required by a medical physicist. **Sub-objectives**: *After completing this program, students will:* (a) develop the ability to design and complete independent research projects. (b) demonstrate the ability to communicate effectively, both orally and in writing, with colleagues, faculty, scientific journals, and research funding agencies. (c) comply with all applicable regulations and requirements regarding health and safety of self and of others, and of clinical and research ethics and procedures. (d) be trained to bridge the gap between technologists and physicians.

PGO 3- Emphasized the student's ability to retrieve, manage, and utilize information for solving problems for the implementation of radiation safety practices and procedures including the determination of radiation shielding requirements. **Sub-objectives**: *After completing this program, students will:* (a) develop expertise in the critical assessment of technical systems in medicine (b) perform a scientific (life-science related) project (c) successfully tackled technical issues related to medical physics.

PGO 4- Practice, ethical, responsible, reliable, and dependable behavior in all aspects of their professional lives, and a commitment to the profession and society. **Sub-objectives**: *After completing this program, students will:* (a) illustrate the ethical, legal, professional, security and social issues and responsibilities (b) be compassionate in the treatment of patients and research subjects, and respect their privacy and dignity.

1.2 Learning outcomes of the program

Learning outcomes for B.Sc. program in Medical Physics is defined and shown in Table 1.1. Professors of the B.Sc. Program in Medical Physics and course teachers have worked jointly on the definition of the learning outcomes. The requirements of the labor market are transmitted in the definition of the learning outcomes of the degree program. Also the requirements of post-graduate studies have been taken into account in the definition of the learning outcomes.

Also, the correspondence of London university Physics with Medical Physics subject specific criteria and the Learning outcomes of the B.Sc. Program in Medical Physics is available (Appendix MPP05). An overview of the B.Sc. Program in Medical Physics is compiled for curricular analysis (Appendix MPP01). The Students learning outcomes of the B.Sc. Program in Medical Physics is defined Table 1.1. After the completion of the Bachelor's Degree Program in Medical Physics Program the graduates must be able to demonstrate the knowledge of the learning outcomes shown in Table 1.1.

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Table 1.1: Program Learning Outcomes.

a. Knowledge	**Summary description of the knowledge to be acquired and on completing this program, students will be able to:** **a1. Acquire the major aspects of nature and subject of medical physics and the application of physics to medicine.** **a2. List matter in various forms, including crystals, semiconductors, atoms, nuclei and understand the principles of laser and its application in medicine.** **a3. Recognize Bioinformatics in order to know how to analysis data which is used to diagnose with the aid of different medical devices such as X- ray machines, gamma camera, accelerator and nuclear magnetic resonance.** **a4. Define different quantitative, mathematical science and physical tools analyze problems and list some foundations of systems theory to solve and analysis different problems.** **a5. Recognize the nature, properties, dosimetery of radiation and basics of radiation protection and also medical effects of ionizing and non-ionizing radiation.** **a6. Outline the principles of physics of different medical radiation devices and their modern advances, especially in medical radiation therapy and different applications in medical physics.**
b. Cognitive Skills	**Summary description of the Cognitive Skills to be acquired and on completing this program, students will be able to:** **b1. Reorganize mathematical and physical formulas and demonstrate skills of critical thinking and analytical reasoning to solve problems in medical physics and related fields of studies.** **b2. Interpret the data obtained from testing, diagnostic instruments such as MRI, X-rays, ultrasonic images, CT images and gamma camera images.** **b3. Analyze and apply the mathematical expressions in evaluating and understanding of essential facts, concepts, principles and theories of medical physics.** **b4. Formulate and test hypotheses using appropriate experimental**

	design and analysis of data (Computer simulation) and integrate IT-based solutions into the user environment effectively.
c. Interpersonal Skills and Responsibility	**Summary description of the Interpersonal Skills, and Responsibility to be acquired and on completing this program students will be able to:** **c1. Analyze and evaluate information by using computational tools to interpret experimental data relevant to medical physics by using packages from different theoretical and experimental resources, and perspectives.** **c2. Operate some medical instrumentation such as that used for diagnosis of different diseases in medical centers and demonstrate competency in laboratory techniques and safety.** **c 3. Use scientific literature effectively and prepare technical reports that for individual student or making a group of researchers.** **c4. Justify ethical, social and legal responsibilities concerning Medical Physics.**
d. Communication, Information Technology and Numerical Skills	**Summary description of the Communication, Information Technology and Numerical Skills to be acquired and on completing this program students will be able to:** **d1. Illustrate and employ the processes of scientific inquiry and research methods through use effectively information and communications technology (IT) tools and use the basic software, to ensure global understand of medical physics issues.** **d2. Demonstrate scientific concepts and analytical argument, in a clear and organized way, verbally and on writing.** **d3.implement all kinds of relevant information in medical physics through the use of local and internationally accessible libraries, information database, and electronic data and use that information in problem solving activities.** **d4. Work independently and demonstrate the ability to manage time and to work as a part of a team, and learn independently with open–mindedness to learn how solve the daily life problems.**
e. Psychomotor Skills (if applicable)	**NA**

1.3 Learning outcomes of the Courses

The learning outcomes of the program are taught in the individual courses of the program. The learning outcomes for individual courses (modules) are defined in Table 1.1. The descriptions of learning outcomes of the courses are written by the teachers of the courses. The teacher Quality Manual (Appendix FAS02) was used as a guide to help describe the knowledge, skills and competencies acquired in the courses.

The contribution of the individual course in learning outcomes of the program is shown in the objective matrix (Appendix MPP04). The courses' contribution in the learning outcomes of the program was classified as per the Levels, where the teachers of the courses, participate in the description and classification work (Appendix MPP07).

The B.Sc. degree in KSA is considered as a step to M.Sc. degree studies, introducing students to the scientific way of thinking and methodology. The B.Sc. degree starts with general studies, e.g. Computer Skills, Mathematics, Chemistry and Physics which are significant study material in the first year of study. According to ASIIN's criteria, the B.Sc. degree in Medical Physics program consists of five module's percentages as shown in Table 1.2. Table 1.3. represents Medical Physics study plan 1433.H. (Appendix MPP02).

Table 1.2: Percentages's Course.

	Module	Percentage
1.	**Computer skills**	**3.70%**
2.	**General Science**	**32.60%**
3.	**English Language**	**7.40%**
4.	**Medical Physics**	**52.59%**
5.	**Training at the Hospital**	**3.70%**
6.	**Total**	**100%**

Table 1.3: Course requirements.

Degree Requirements	Type	C.H. KSA	ECTS	Percentage
Preparatory year	Compulsory	30	51	**22.22%**
University requirements	Compulsory	21	32	**15.56%**
Faculty requirements	Compulsory	13	22	**9.63%**
Dept- requirements	Compulsory	25	126	**18.52%**
Specialty requirements	Compulsory	41		**30.37%**
Training project	Compulsory	5		**3.7%**
Total		**135**	**231**	**100%**

1.4 Job market perspectives

The fields of education of the KSA universities are defined by the Ministry of Education. The Board of Umm Al-Qura University decides the total number of new entrants. The contents of the degree program are decided by Faculty Council (Appendix UQU04).

The content of the Bachelor's Degree Program in Medical Physics is determined on the basis of the general requirements concerning the education of Medical Physics, the needs and expectations of the industry (especially the hospitals and research center).

The Job market cooperation carried out in the hospital training provides a forum for information exchange about the needs and expectations of the industry regarding the education of Medical Physics.

The amount of employees within the Medical Physics research will increase during the next decade. The proportion of university graduates will increase, because the increasing renewable information revaluations require new knowledge and skills in the medical field.

The courses in the Bachelor's Degree Program in Medical Physics involve laboratory and project work as well as practical hospital training in order to provide an adequate connection to the professional practice and to prepare the students to commence work with existing or foreseeable professional fields. The courses in the degree structure are also closely linked to the research conducted in the program and provide a path to post graduate studies. Practical hospital training is included in the Bachelor's program. The total value of obligatory practical hospital training is 5 credit hours in the Bachelor's (Appendix MPP02 and MPP06).

In the Bachelor's degree, most assignments can be included applications from the life. This assignment has a more general purpose. After completing the courses, the student is able to define and explain, what it is like to be working as an employee, and what are the basic rules of working life from the view of an employee.

1.5 Admissions and entry requirements

1.5.1 Entry requirements for Bachelor's degrees

Saudi Universities Act (2685/23 M/8) (Appendix UQU02) rules the entry requirements for the Bachelor's degree. According to the KSA Universities Act, the board of the university decides the number of new students to be selected each year. Rector decides annually the selection process and basis of the selection criteria of the prospective students after hearing the opinion of the faculties. In practice student selection into the Bachelor's program for KSA secondary school examination graduates is mainly organized by a joint university application system.

Prospective students applying in the Bachelor's degree in universities are:

1. The student should have obtained a general high school certificate or its equivalent from within or without the Kingdom of Saudi Arabia.
2. Student high school certificate or its equivalent should not be older than five years. The University Council may make some exceptions if convincing reasons are provided.
3. A student should be of a good conduct.
4. A Student should successfully pass any test or interview assigned by the University Council.
5. A student should be medically fit.
6. A student should provide a permit for study from his reference, if he works in government or the private sector
7. A student should satisfy any other conditions the University Council determines, announced during application.

8. A student should not be dismissed from any other university for disciplinary or academic reasons. If that became clear after investigation, his acceptance shall be deemed cancelled for the day of his admission.

9. A student dismissed from the University for Academic Reasons may be enrolled in some programs that do not award a Bachelor Degree, as decided by the University Council, or whoever it delegates. This shall not be allowed for the transitional program.

10. Those who already had obtained a Bachelor Degree or its equivalent shall not be admitted to obtain another Bachelor degree. The University Rector has the right for exceptions.

11. A student registered for another university degree or below, shall not be admitted, either in the selfsame university or another.

KSA University applicants have three different quotas where they can be selected according:

1. Success in secondary school examinations;

2. Success in entrance examinations (i.e. General Aptitude Test (GAT) test and Achievement test).

The entrance examinations are organized by the joint application procedure. The entrance examination is based on the KSA secondary school curriculum in mathematics, mathematics and physics.

There are three separate examinations. Prospective students must pass the entrance examination to be selected even if there are fewer applicants than places attained. This guarantees a minimum knowledge level in science of all selected students. There are no extra aptitude tests in the Bachelor's degree.

The student must have a total of 100% in the subsequent examinations divided as follows:

50% high school, 30% abilities test, 20% achievement test.

Students applying in the Bachelor's Program are not supposed to have any former work experience or industrial placements; neither do they help in the applying process for the Bachelor's Program. Medical physics Bachelor's Program courses are fully taught in English, and thus very good English skills are required.

1.6 Curriculum/content

The target of the curriculum work process is the production of a high-level curriculum in terms of both content and communication. The curriculum lays the foundation for teaching and the planning (individual study plans) and implementation of studies. The Dean of the Faculty and Heads of degree programs is responsible for the curriculum work (Appendix MPP06).

The curriculum work ensures the production of high-quality degrees: the expertise obtained from the degree studies is based on current, key research-based knowledge in the field of science in question, and on the development of general competencies as a part of the degree. The curriculum work takes into account the expertise required in the increasingly diverse and international world of work and the perspective of lifelong learning. Degree programs collaborate in curriculum work in order to secure synergy benefits as extensively as possible (Appendix MPP01).

The objectives of degree programs and courses are defined as learning outcomes. The learning outcomes courses are based on the mission of a given degree program. Descriptions regarding instruction (e.g. Learning outcomes and number of ECTS credits) follow regulations and are realistic.

The process results in a degree program and course descriptions, which are published annually in the study guide on the university web site. Publication is coordinated by the Student Affairs Office.

The quality of the process is evaluated by examining the curriculum process and degree program development.

The quality indicators in the curriculum process are: the continuous development and professional relevance of curricula and degree structures, true-to-life course descriptions that follow guidelines and the publication of the study guide on schedule. Changes to study guide are handled by the faculty councils. The description of the Medical Physics Plan 1433 A. H is shown in table 1.4.

The student should successfully pass 135 credit hours before graduation and all the study plan courses are compulsory. This can be achieved through eight semesters distributed on the following levels in table 1.4.

Table 1.4: The description of the Medical Physics Plan 1433 A.H.

Course code	Course name	Credit hours	College or Department
First year (the foundation year)			
Level 1 (Semester 1)			
4800170	**English (1)**	**6**	Foundation year deanship
4800140	**[Mathematics (1)] Introduction to Mathematics**	**4**	Foundation year deanship
4800130	**General Physics**	**4**	Foundation year deanship
4800150	**Computer skills (1)**	**2**	Foundation year deanship
Level 2 (Semester 2)			
4800153	**Basic Computer programming skills (2)**	**3**	Foundation year deanship
4800104	**Learning and studying skills**	**3**	Foundation year deanship
4800171	**English (2) Technical English skills**	**4**	Foundation year deanship
4800141	**[Mathematics (2)] Introduction to Mathematics**	**4**	Foundation year deanship
Total		**30**	
Second year			
Level 3 (Semester 3)			
Course code	Course name	Credit hours	College or Department
403200	**General Physics (2)**	**4**	Faculty of Applied Science / Dept of Phyics
403243	**Method in Theatrical Physics (1)**	**2**	Faculty of Applied Science / Dept of Phyics

401211	**Cell Biology**	**4**	Faculty of Applied Science / Dept of Biology
401102	**Biology (1): zoology**	**2**	Faculty of Applied Science / Dept of Biology
402101	**General Chemistry**	**4**	Faculty of Applied Science / Dept of Chemistry
601101	**Islamic Culture (1)**	**2**	Faculty of Shari'a
605101	**Holly Quran (1)**	**2**	Faculty of Shari'a
Total		**20**	

Level 4 (Semester 4)

Course code	Course name	Credit hours	College or Department
403280	**Fundamental of Medical Physics**	**4**	Faculty of Applied Science / Dept of Phyics
403220	**Classical Mechanics (1)**	**3**	Faculty of Applied Science / Dept of Phyics
403244	**Method in Theatrical Physics (2)**	**3**	Faculty of Applied Science / Dept of Phyics
401364	**Animal Biology**	**3**	Faculty of Applied Science / Dept of Biology
601201	**Islamic Culture (2)**	**2**	Faculty of Arabic Language
605201	**Holly Quran (2)**	**2**	Faculty of Shari'a
Total		**17**	

Third year

Level 5 (Semester 5)

Course code	Course name	Credit hours	College or Department
403381	**Laser in Medicine**	**2**	**Faculty of Applied Science / Dept of Phyics**
403383	**Health Physics**	**3**	**Faculty of Applied Science / Dept of Phyics**
403384	**Physics of Radiation effects**	**2**	**Faculty of Applied Science / Dept of Phyics**
403350	**Modern Physics**	**4**	**Faculty of Applied Science / Dept of Phyics**

403201	**Electromagnetism (1)**	**3**	**Faculty of Applied Science / Dept of Phyics**
601301	**Islamic culture (3)**	**3**	**Faculty of Shari'a**
605301	**Holly Quran (3)**	**2**	**Faculty of Shari'a**
501101	**Arabic language**	**2**	**Faculty of Arabic Language**
	Total	**21**	
	Level 6 (Semester 6)		
Course code	Course name	Credit hours	College or Department
403385	**Medical radiation Physics (1)**	**4**	**Faculty of Applied Science / Dept of Phyics**
403386	**Physics of Radiation Therapy (1)**	**4**	**Faculty of Applied Science / Dept of Phyics**
403388	**Radiation Protection**	**2**	**Faculty of Applied Science / Dept of Phyics**
403389	**Physics of Medical Imaging**	**3**	**Faculty of Applied Science / Dept of Phyics**
403390	**Physics of Ultrasound in Medicine**	**2**	**Faculty of Applied Science / Dept of Phyics**
403391	**Computing in Medicine**	**1**	**Faculty of Applied Science / Dept of Phyics**
403344	**Quantum Mechanics (1)**	**3**	**Faculty of Applied Science / Dept of Phyics**
601401	**Islamic Culture (4)**	**2**	**Faculty of Shari'a**
	Total	**21**	
Fourth year			
	Level 7 (Semester 7)		
Course code	Course name	Credit hours	College or Department
403492	**Medical Radiation Physics (2)**	**4**	**Faculty of Applied Science / Dept of Phyics**

403493	**Physics of Radiation Therapy (2)**	**3**	**Faculty of Applied Science / Dept of Phyics**
403495	**Nuclear Medicine**	**4**	**Faculty of Applied Science / Dept of Phyics**
403496	**Physic of Bio-material**	**3**	**Faculty of Applied Science / Dept of Phyics**
403370	**Solid State Physics (1)**	**3**	**Faculty of Applied Science / Dept of Phyics**
102101	**Profit History**	**2**	**Faculty of Shari'a**
605401	**Holly Quran (4)**	**2**	**Faculty of Shari'a**
Total		**21**	
Level 8 (Semester 8)			
Course Code	Prerequisite	Course name	Credit hours
403498	Dept. acceptance	Training project	5 Hr
Total		**5**	

The executive group and the advisory group managed by the Head of the program make curriculum work processes in the program. The professors, study coordinator and students belong to the groups (Appendix MPP06).

Appendices:

Umm Al-Qura University

UQU02. Government Decree on Umm Al-Qura University & Faculty of Science.
UQU03, Umm Al-Qura University Strategic Plan.
UQU04. Rules of Study and Examinations of Higher Education.

Faculty of Applied Science

FAS 02. Teacher Quality Manual.

Medical Physics Program

MPP01. Program specification.
MPP02. Program Handbook.
MPP04. Objective Matrix Model.
MPP05. Comparison between Learning outcomes of the degree program/London university Physics with Medical Physics Program criteria.
MPP06. Study Plan of Medical Physics Program.
MPP07. Medical Physics Program Courses Specification Handbook.

2. Degree Program: Structures, Methods and Implementation

2.1 Structure and modularity

The credit hour is the unit of measure for the university's course work and forms the bases on which degrees are awarded. The standard duration of medical physics has a degree program of four years. The student must take a number of courses to reach the total of 135 KSA (135 KSA CH=231 ECTS C.P) credits required for the Bachelor's degree program, all subjects are obligatory. The Bachelor's degree begins with the foundation year, which including basic courses such as General Physics (1), Introduction to Mathematics, Computer Skills & English Language. Almost all the students in the Bachelor's degree program study the same major courses (*Appendix MPP06*).

The training field in hospital project and a seminar (5 CH= 9 ECTS) are included as a major subject. More detailed description on training project can be seen in the training project guide (*Appendix MPP10)* The program Structure allows the student for time to be spent at another higher education institution or on a practical placement without loss of time.

2.2 Workload and credit points

Student workload is set at a level that avoids structural pressure on training, quality and requirements for the level of study. Projected time budgets are realistic, so that the program can be studied within the standard period of study for the degree. The basic unit of the studies is a credit point. A course is scored by the assessment required to pass it. To complete the studies of one academic year (2 semesters) requires on average contact 682 hours/year, which corresponds to approximately 31 credit Hour in KSA system (60 ECTS credit points) (*Appendix MPP02*).

One credit point equals to approximately 31-32 hours of workload (7200 ÷ 231= 31.1). This includes the hours spent in face-to-face teaching, individual studying, as well as preparation for and taking part in the examinations.

The Degree Program is composed so that by following the course handbook (*Appendix MPP07*), the Medical Physics B.Sc. degree can be completed within the standard period of study (i.e., it is possible to take 31 credits per year on average), and the maximum of 60 credits is not exceeded in any year (in case summer study) (*Appendix MPP06*).

If a student conducts studies in another university or educational institute in KSA or abroad, he can request the head of the degree program to credit the studies taken elsewhere. A student can credit and replace study courses also by knowledge gained otherwise.

2.2.1 Workload and credit points in Bachelor's Degree

The workload for the Bachelor's degree is presented in Table 2.1 (*Appendices MPP08.a & MPP08.b*). The detailed workload analysis can be found in (*Appendix MPP09*).

Table 2.1: Workload per Week (1st and 2nd) of contact and average independent self-study hours.

Study Year	Contact-Study per Week			Self-Study per Week		
	KSA C.H.	1st Sem.	2nd Sem.	KSA -Self	1st Sem.	2nd Sem.
First Year	32	18	14	61	33	28
Second Year	45	26	19	78	43	35
Third Year	48	22	25	85	41	44
Fourth Year	58	28	30	74	44	30
Total	**182**			**298**		

The academic year consists of two semesters. The student workload analysis in table 2.2. The training project (5 CH=9 ECTS) is scheduled for the periods eight levels in B.Sc. or after 130 Credit. Language studies are scheduled during the first year. The program compulsory courses are from the third to eighth levels. The University compulsory courses are in the levels from third to 7th level.

Table 2.2: Workload per year (15 week for 1st and 2nd semester) of contact and average independent self-study hours.

Medical Physics Program								
Study Year	Per Year				Contact- Study		Self-Study	
	KSA C.H.	KSA -Self	Total	ECTS cp./year	1st Sem.	2nd Sem.	1st Sem.	2nd Sem.
First Year	480	915	1620	51	270	210	495	420
Second Year	675	1170	2085	63	390	285	645	525
Third Year	705	1275	2325	72	330	375	615	660
Fourth Year	870	1110	2085	45	420	450	660	450
Total	**2730**	**4470**	**7200**	**231**	**1410**	**1320**	**2415**	**2055**

Studies in other domestic or foreign higher education institutions can be included in the degree of application approved by the Head of Degree Program. More detailed description of the credit point system and inclusion of studies in other institutions have been presented in the University Regulations on Education and the Completion of Studies (*Appendix UQU04*).

2.3 Educational methods

In the B.Sc. degree of the Medical physics program, the teaching methods include, lectures, laboratories, project work, assignments and seminars *(Appendix MPP09)*. Teaching methods also include class participation, demonstration, recitation, memorization, or combinations of these *(Appendix MPP09)*. Working in groups is also of interest which increase the social competencies of the students. Computer-based active-board and learning environments are widely used in the courses.

The students have a time for self-study as well in the teaching methods (*Appendix MPP09*). For each contact teaching hour, the student has 2 hours of independent study as an average. If the medical field training, which is mostly self-study (*Table 2.1*), is included, the coefficient is 5 (*Appendix MPP10*).

The calculation of the self-study and contact hours for each course is listed in the in the Appendix (*Appendix MPP09*). In the Degree Program, practice-oriented, problem-based learning are applied in some courses.

The Teacher's Quality Manual (*Appendix FAS02*) provides the teaching staff with guidance on the following:

- Teaching planning
- Defining learning outcomes of a study course
- Determining the content of a study course
- Deciding the appropriate methods to evaluate the achievement of the learning outcomes
- Selecting suitable methods of teaching

The Teacher's Quality Manual is available to all teaching staff at the Faculty and it is designed to improve the quality of higher education (*Appendix FAS02*).

The staff handbook (*Appendix MPP11*), contains details about all teaching staff in the department, is available for the students. The student can select his teacher, and he has an academic guidance staff in order to support and advise him to select the suitable courses. The student has a supervisor for his project in order to present it in a good manner. The supervisor offers different topics and the student in turns choose the suitable one for him. Most of these projects have an experimental part, the student does it in the research laboratories with his supervisor.

2.4 Support and advice;

Sufficient resources are available for offering individual support, supervision and advice to students. The advisory methods envisaged (subject-specific and general) are suitable for supporting students to achieve the learning outcomes and complete their degree within the normal period of study. The Faculty offers academic guidance actions that together cover the entire span of studies and efficiently support studies and learning as shown in table 2.3. With this guidance, students are able to complete their studies by following an appropriate study plan that they have prepared themselves and to graduate within the desired time (Appendix MPP12).

Table 2.3: Academic Guidance Methods.

1	**Peer tutor**	Introduces new students to the university, studies and the student community, and helps them with practical arrangements at the start of studies. A peer tutor introduces new students to the university facilities, study guidance staff and other students. A peer tutor makes sure that students know the most important practices related to studies: registration for courses, attending lectures, taking examinations, preparing a course schedule, social aspects.
2	**Tutoring coordinator**	Coordinates and develops the university's peer tutoring together with faculties, student services and the student union.
3	**Student adviser**	Student advisers are LUT students who work part-time while they study. They provide information and guidance in studies, see to the choice of tutors and arrange their training together with the study coordinator and take part in arranging briefings for students.
4	**Study counseling psychologist**	Counsels students in problems related to studies and learning and provides expertise in issues involving learning and guidance, supporting other study guidance personnel.
5	**Study coordinator**	Coordinates study guidance for students. The duties include study and degree guidance for students, from applicants to postgraduate and partly even mature students. The study coordinator helps students in preparing their individual study plan (including the recognition of prior learning and studies outside Umm Al-Qura University, e.g. through the flexible right to study) and provides guidance in administrative issues related to graduation.
6	**Head of degree Program (HOD)**	Is in charge of evaluating and developing study guidance. Grants acceptance of courses not offered by the university.
7	**Head of study affairs**	Is responsible for organizing study guidance in the faculty. Is responsible for administration of studies and partly also for study guidance related to administrative affairs.
8	**Teacher/tutor**	Helps students prepare their individual study plan and follow its progress. Teacher/tutors provides guidance in the selection of compulsory. They are studying guidance personnel appointed for a department or degree program. Students may turn to them with any issues involving studies.
9	**Teachers**	Are responsible for study guidance related to the completion of the courses/modules they are responsible for.
10	**Introductory course/module**	Introductory courses are arranged in all degree programs to help students get started with their academic studies. Introductory courses usually also guide in preparing an individual study plan.
11	**Professors**	Provide guidance in the selection of a research topic, and in preparing final theses for postgraduate studies.
12	**Career Services**	Guides students in career planning and searching for employment.
13	**Library**	Provides guidance in information retrieval and instruction in information literacy.
14	**Origin helpdesk**	Support services for the use of information and communication technology in studies.

At the beginning of their studies, students prepare an individual study plan for the Introductory Courses. The study plan is made for the entire duration of the study. An independent study plan is a tool that helps the students to plan their studies. Its purpose is to help students to see their studies as a whole from the very beginning, and to support students in choosing courses that best suit them. The aim is also to avoid delaying graduation unnecessarily. It also awakens students to realize their own responsibility for their studies, and motivates and incites them to make a commitment to their studies. Examples of study plan for B.Sc. is enclosed in (Appendix MPP13). Based on the individual study plan drawn by the student, the student and the teacher adviser will have a discussion of the plan.

Teacher advisers are experts in the various fields in Medical Physics who provide the students with content related tutoring regarding the individual study plan.

Teachers are responsible for the courses including the matters related to the contents of their own subjects. Persons in charge of the courses are required to have a doctorate degree. Teachers are available at the university mainly during office hours, but students may obtain guidance and individual supervision after these hours by fixing the time with the teacher.

Appendices:

Umm Al-Qura University

UQU04. Implementation rules of undergraduate study and examination.

Umm Al-Qura Faculty of Applied Science

FAS02. Teacher quality manual.

Medical Physics Program

MPP02. Program Handbook.
MPP06. Medical physics study plan.
MPP07. Medical physics Course specification handbook.
MPP08a. Student workload.
MPP08b. KSA-ECTS Student Workload Comparison
MMP09. Teaching methods and Independent Study.
MPP10. Medical Physics program student training handbook.
MPP11.Department of Physics staff handbook.
MPP12. Academic student Advising handbook.
MPP13. Diploma Supplement.

3. Examinations: System, Concept and Organization.

3.1. Assessment

Assessment is a systematic basis for designing, gathering, analyzing and interpreting information from diverse and various sources in order to follow the performance of the program and to ensure the fulfillment of the mission of Faculty of Applied Science *(Appendix UPU02)*.

3.2. Process and Steps in Assessment

The assessment process has the following steps:

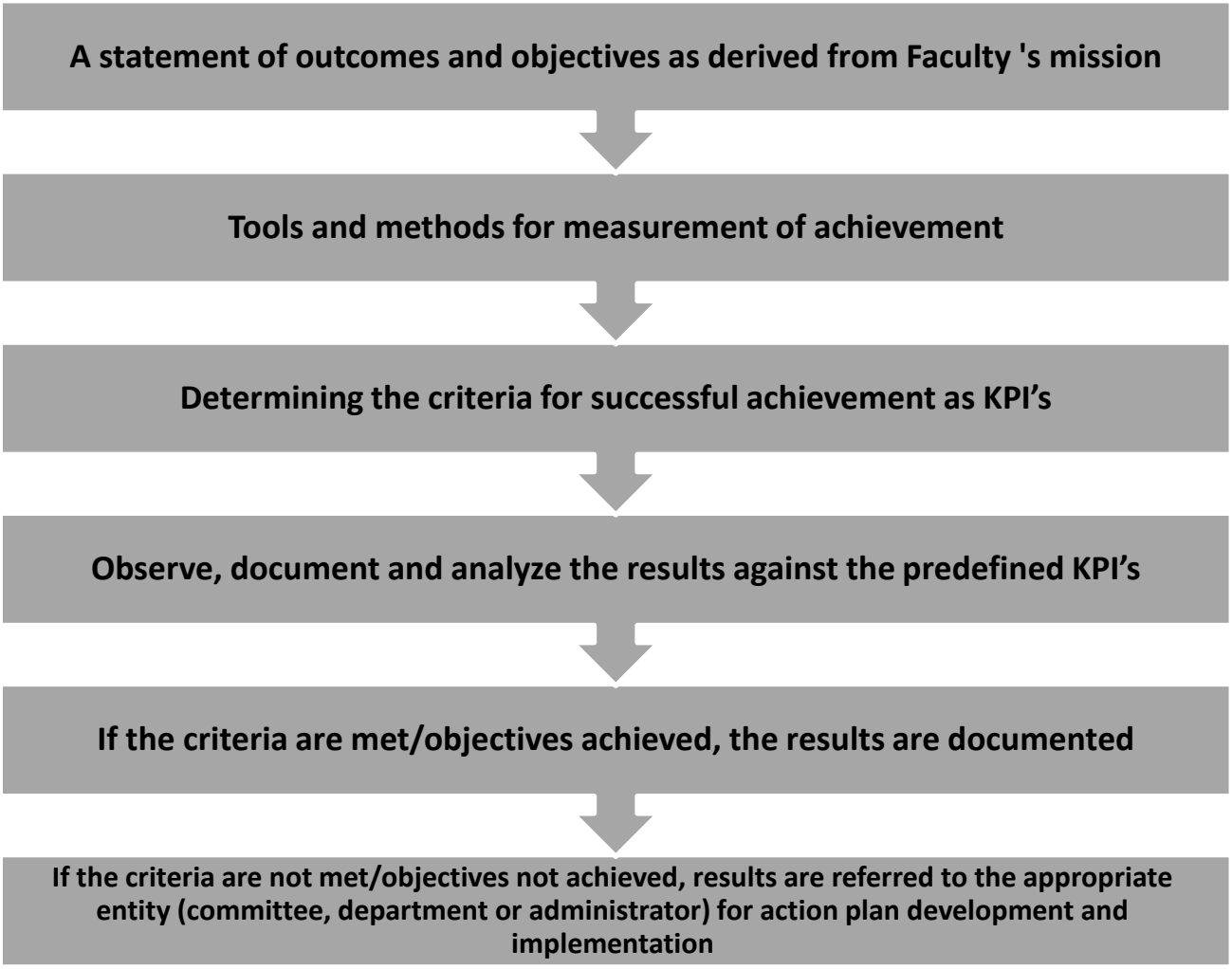


Figure. 3.1. The assessment process steps.

3.3. Assessment plan of Faculty of Applied Science

The distinction and privilege in both of medical physics education and research related to the community services, in addition to the administration and B.Sc. quality satisfaction measures the goals of the Faculty of Applied Science that is dependent on the consistency between both the Faculty of Applied Science and Umm Al-Qura university missions. To satisfy this mission, a qualified B.Sc. by Medical physics program is offered by the Faculty of Applied Sciences. *(Appendix UPU01).*

The performance of both the outcomes of the B.Sc.in Medical Physics program and the strategic plan goals and objectives of Faculty of Applied Science based on the faculty mission is self-assessed through an assessment plan developed by the assessment board of Faculty of Applied Science jointly with the department program committee. These committees are amenable of all measurable procedures ensuring the achievements of the Faculty of Applied Science mission *(Appendix FAS01).*

3.4. Components of Faculty of Applied Science Assessment Plan

3.4.1. Program Assessment Plan

3.4.1.1. Assessment of extent of achievement of terminal program objectives

Current forms of assessment are based upon the analysis of data on student achievement/performance in various medical physics courses and experiential component of the program, including medical field of training, the objectives of all which have been mapped with those of the program.

Also however the performance of the learning outcomes is dependent mainly on the assessment of the students result, the establishment of the score validity and interpretation is required.

3.4.1.2. Assessment of Program Effectiveness

However, the assessment of program learning outcomes is an indicator of the achievement of the program, various strategies is used to measure the effectiveness of the program. These strategies are mainly based on the data from graduating students and include:

a. The amount of graduate scholarships of the Faculty of Applied Science for graduate studies
b. Feedback data from graduates to measure the program outcomes, both quantitatively and qualitatively. These program data are collected from graduate students, alumni, and employers.
c. Benchmarking of students/graduates' achievements with those of the peer national program.

3.4.2. Plan for Assessment of achievements of Faculty of Applied Science

The achievements of the Faculty of Applied Science are assessed through a plan related to the mission of the Faculty. The objectives of the strategic plan are dependent on the quality standards (*Appendix UPU03*). These objectives are designed to follow both of student and staff development, the progress of both research and the community service and the requirement of facilities and resources *(Appendix MPP02).*

3.4.3. Types of Assessment

The assessment of student learning outcomes is one of the staff of Faculty of Applied Science priorities to ensure the success of teaching. However, the assessment is based on defining the learning outcomes, collecting and analyzing the evidence is the main target to improve the program. Direct and indirect assessments are used in the evaluation of the program success.

3.4.3.1. Direct Assessment:

The assessment methods are considered as outcome indicators. However, the written exams are direct assessment methods, they are not the only evaluation tools of the courses (Table 3.1). Several assessment methods such as homework, laboratory work, exercises, quizzes, and seminars etc. may contribute to the total grade of a course. Assessment methods used to measure Student Learning Outcomes are described in *(Appendix MPP03)*. The Schedule of course evaluation (GPA) is shown in Table 3.2

The maximum score for each course is 100 points. The student should have 60 points to pass the course (*Appendix FAS04*). The system calculated automatically the average and cumulative GPA every semester for all students. The obtained grades listed in the university website are transferred automatically to the students' website. Both the degree and weighted average (GPA) are listed in the student academic record (*Appendix MPP13*).

The training field project is a compulsory requirement to complete a Bachelor's degree program. The project is dependent on the performance of students at hospitals that accept his training (Appendix *MPP10.C)*. The departmental acceptance is required to assess the training project (*Appendix MPP06*).

Table 3.1. The schedule of assessment tasks.

Schedule of Assessment Tasks for Students During Semester				
	Assessment task (e.g. Essay, quizzes, group project, examination, oral presentation, participation, etc.)		**Week Due**	**Proportion Assessment**
1	First Class Test		6-7	
2	Second Class Test		13-14	
3	Final exam		16-17	
4	Laboratory	Lab. Reports	Weekly	
5		In Lab. Evaluation	Weekly	
6		Final Practical Exam	15	
7	Quizzes		≈ Weekly	
8	Homework		≈ Weekly	
9	Exercises		One /2 Weeks	
10	Seminar		1/month	
11	Training Project*		1-15	
	Total			100%

- *The training field project in hospital is an independent assessment, the grade point is 100.*

Table 3.2. The schedule of course evaluation (GPA).

Mark	Grade	Symbol	Value
95 – 100	**Excellent^{+}**	**A^{+}**	**4**
90 to < 95	**Excellent**	**A**	**3.75**
85 to < 90	**Very Good^{+}**	**B^{+}**	**3.5**
80 to < 85	**Very Good**	**B**	**3.0**
75 to < 80	**Good^{+}**	**C^{+}**	**2.5**
70 to < 75	**Good**	**C**	**2.0**
65 to < 70	**Pass^{+}**	**D^{+}**	**1.5**
60 to < 65	**Pass**	**D**	**1.0**
< 60	**Failure**	**F**	**0.0**

The grade of the project is scaled at 0-100. Both departmental supervisors and hospital examiners are responsible to evaluate the written project and the seminar (Appendix *MPP10C*) presentation to give the final project mark. All examiners of the project must have M.Sc. at least *(Appendix UQU04)*.

The medical field training project consists of a 15-week hospital-based rotation in: Diagnostic Imaging (x-rays, CT, fluoroscopy, and Diagnostic Ultrasound), MRI, Nuclear Medicine, Radiation Therapy, Mammography, Radiation Protection, and Health Physics. The student will spend three months (Last-Term of his final year) in Specialist Hospitals where they can gain an experience in different departments related to Medical Physics within the hospital in the field of Nuclear Medicine, Radiotherapy, Medical Imaging and medical imaging and radiation protection (Appendix MPP10a). .After re-arranging the student groups to do their training in the hospital upon their requests. Official letters will be sent to hospitals to get the acceptances for the hospital training. The Supervisor of each group (male/female) will make periodic Visits, To follow up the students Progresses, with cooperation Department Staff Supervisors. By the end of the training program (last week) the students (male/female) should have to write a report Assay with short oral presentation about experiences they gained and what kind of difficulties they faced. Finally Marks will be given according to the Evaluation Report form the Hospitals and students easements with the oral presentation they give *(*Appendix MPP10b).

3.4.3.2. Indirect Assessment

The indirect of assessment is dependent mainly on the feedback from surveys such as program, course, student satisfaction of examination, alumni, and stakeholder surveys *(*Appendices MPP15, MPP16 and MPP17*)*, focus group, graduates interviews or any other assessment techniques to evaluate the quality of the learning process. Indirect assessment provides a good assessment indicators to improve the quality of the program *(*Appendix MPP17*)*.

3.5. Program Assessment

3.5.1. Concept

The program assessment is designed to measure the performance of student learning outcomes. Curriculum Development and Assessment Committee members are responsible about:

- Ensure that the basic statements of what students should learn.
- Verifying the design of the program met its learning.
- Gathering the data of assessment indicators to ensure the performance of the learning outcomes.
- Analyze student learning data to improve and develop learning.

3.5.2. Objectives of Program Assessment

The main objectives of program assessment include updating the study plan courses, strategies, improving the courses and student services, measuring the program effectiveness through the feedback data from the further studies of graduates and stakeholders, satisfying of the Faculty resources and comparable benchmarks and accrediting the program teaching and learning process and provided resources and services.

3.6. Program Development Process at Faculty of Science

1. The performance of the program mission and objectives is revised periodically in the consistency of the vision and mission of both the university and Faculty for development and updating of the program *(Appendix UPU01 and UPU04)*.
2. The course instructor in collaboration with program coordinators and curriculum university committee revises periodically both the matching of the course objectives with the student learning outcomes *(Appendix MPP02)* and the methods of teaching and assessment, in addition to updating the computability of courses ILO's and the approved methods of teaching and assessment every semester *(Appendix MPP14 and MPP17).*
3. Benchmarking of study plan with corresponding national or international programs *(Appendix MPP05).*

Appendices:

Umm Al-Qura University

UQU04. Implementation Rules of Undergraduate Study and Examinations.

Faculty Of Applied Science

FAS01. Faculty of Applied Science Strategic plans.
FAS04. Calculation of GPA.

Medical Physics Program

MPP02. Program Handbook.
MPP03b. Student Course Evaluation.
MPP05. Comparison Between UQU Medical Physics Program And London University Physics With Medical Physics Program ILO's.
MPP06. Medical Physics Study Plan.
MPP10a. Training Course Lefltet-book.
MPP10b. Guidelines for the Student of Medical Physics Training Program For Preparing the Report.
MPP10.C. Medical Physics Training Evaluation Report.
MPP13. Diploma Supplement.
MPP14. MPP Annual Report.
MPP15. Program Evaluation Survey.
MPP16. Course Evaluation Survey And Course Feedback, An Example.
MPP17, Questionnaire about Student Satisfaction of Examination

Comparisons among University, Faculty and Program

UPU01. Consistency Between University & Faculty Mission.
UPU02. Consistency Between Faculty & MP Program Missions.
UPU03. Consistency between Medical Physics Mission and objectives.

4. Resources

4.1 Staff involved

The physics department of Faculty of Applied Science, Umm Al-Qura University proves keen to consolidate its human resources to broaden its scientific research basis, committee work, teaching of fundamentals, and student support, resulting in demand a mostly high expert teaching staff. Physics department employs a highly qualified 82 teaching staff members. The staff involved were invited to work at the physics department from different countries and different graduation institutions. According to the competence, staff resources are suited to conduct the physics programs. The staff's expertise is sufficiently supportive of the structure and curriculum of the physics and medical physics programs (Appendix MPP11).

Table 4.1 shows the distribution of the staff members according to their carriers in 2015, while figure 4.1 shows the distribution of the staff in the period 2012-2015. The staff members are distributed between Al-Zaher campus for female and Al-Abdia campus for male students. Out of 82 staff members, 40 members hold a PhD. The PhD's staff is distributed as 31 members for pure physics and 9 members for medical physics.

All PhD's staff teaches physics and medical physics courses for medical physics students. More details about the PhD's staff members in the physics department, such as the Nationalities, specialty, and PhD-graduation (Appendix MPP11). The staff member teaches 65 male students and 152 female students (old study plan 1419.H) specialized in medical physics till now November 2015) (Appendix MPP18).

The researches conducted by the teaching staff members spanned both the academic and the applied aspects of science (figure 4.2). Research work is done by specialized research groups within the staff members and is obviously mainly limited to the male campus at present. Research activities of the physics department are mainly attributed to the research groups in the fields of medical physics, solid state physics, optics, theoretical physics, nuclear and radiation physics.

As the research strength of the department is good, we keen to improve the research activities through the increase of the scientific projects, increase the number of postgraduate students and developing more cooperation between the staff members themselves and other members in other institutes. Figure 4.3 shows the number of research projects and the amount of funds gained by the staff members.

The research interests of the staff members as a list of research groups according to their specialties (Appendix MPP19). Although of a mostly high workload of teaching staff, the research activities of the teaching staff are very good. In 2014, there were 25 published papers, and in 2015 (till now November 2015) there are 24 published papers. The number of publications over the last 6 years is shown in Figure 4.2.

Table 4.1: Staff is contributing in the Physics Department (2016-2017) (Appendix MPP11).

Position	Physics		Medical Physics		Total
	Male	Female	Male	Female	
Professors	4	-	3	-	7
Associate Professors	5	-	0	-	5
Assistant Professor	17	9	3	2	31
Lecturer	3	9	-	1	13
Demonstrator	4	13	-	2	19
Total Academic staff	33	31	6	5	75
Technician	9	6	2	2	19

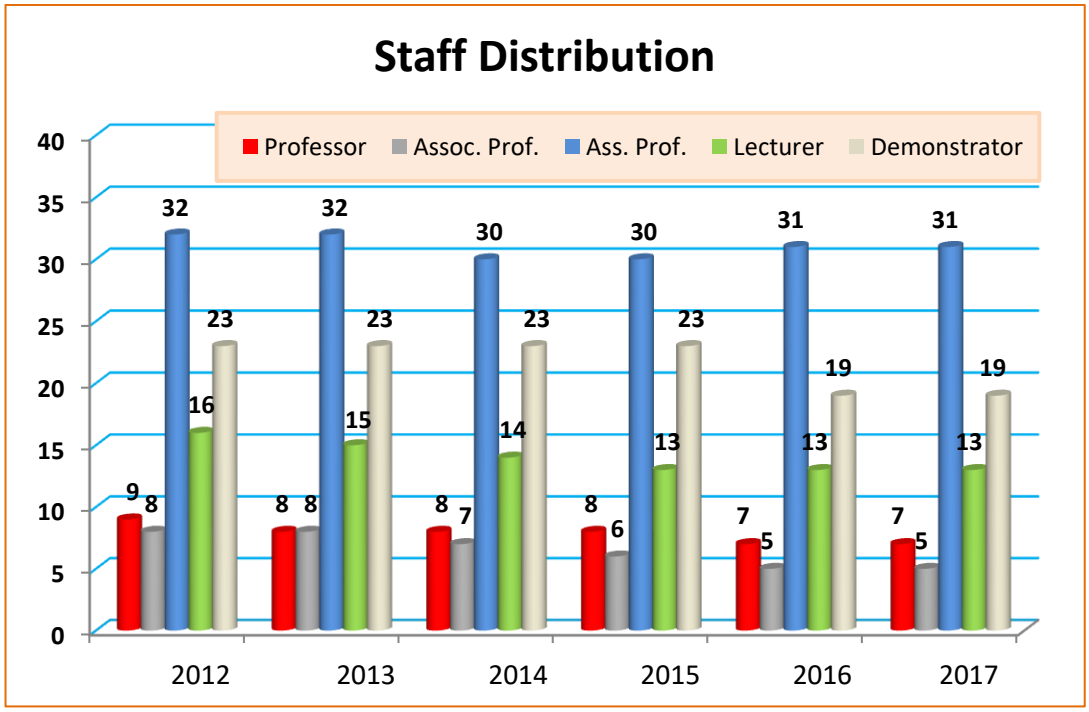


Figure 4.1: Total staff members' distribution in the Physics Department (2012-2017) (Appendix MPP11).

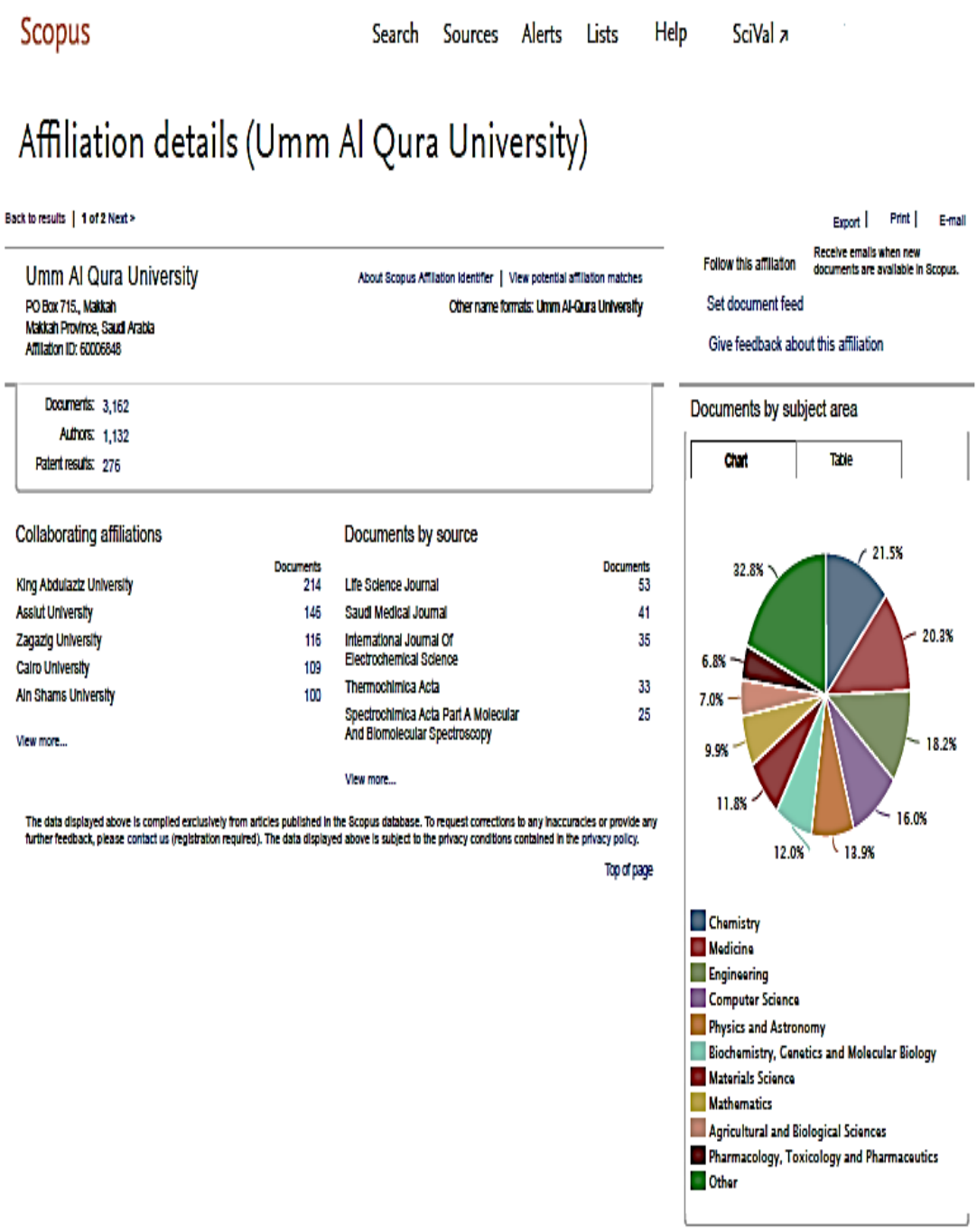


Figure 4.2: Published documents by subject area for Umm Al-Qura University through Scopus 2017.

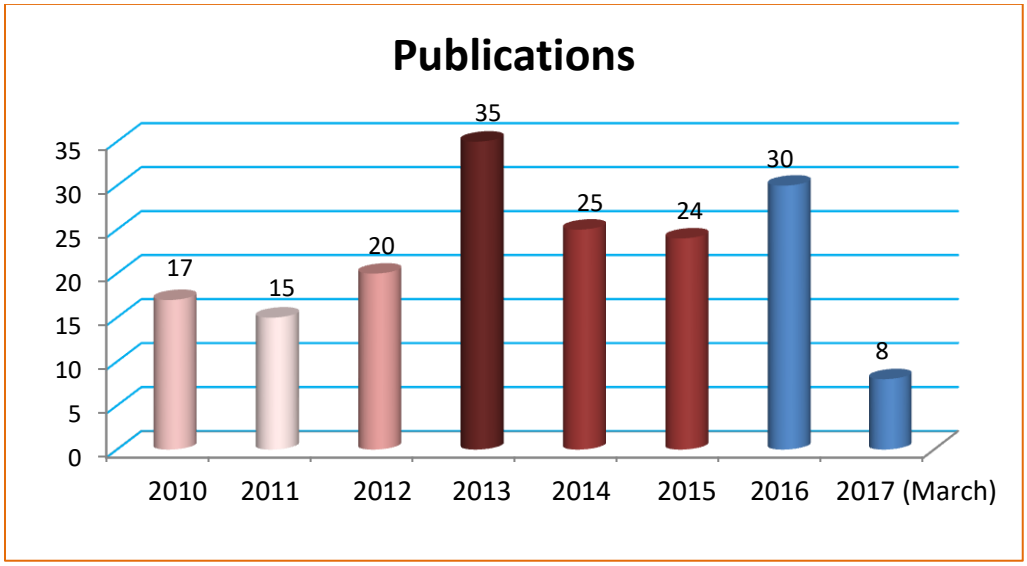


Figure 4.3: The progress of peer reviewed publications of the physics department over the last 6 years *(Last updated 20/3/2017).*

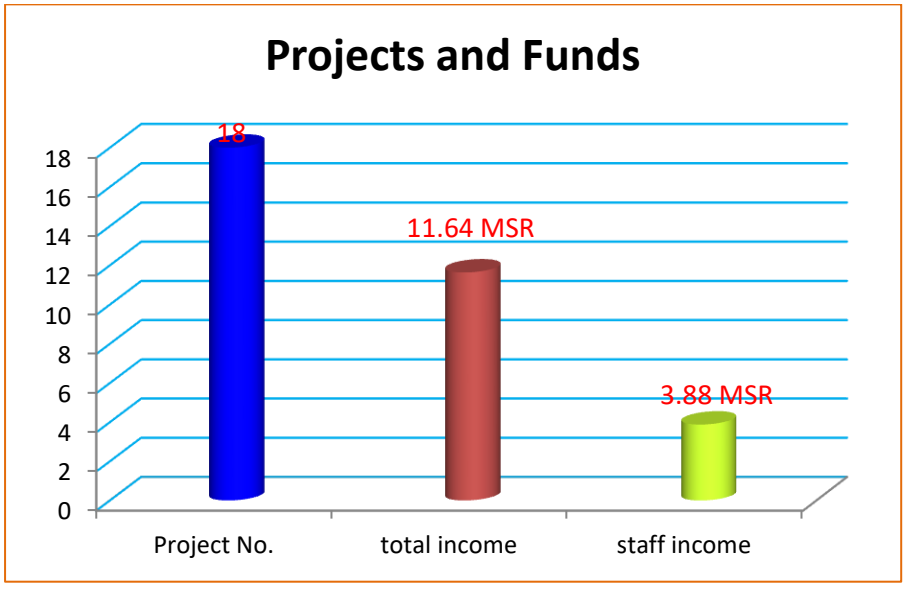


Figure 4.4: A schematic diagram representing the amount of funding over the last 6 years (Last updated 20/3/2017) *(Appendices MPP19 and MPP20).*

4.2 Staff development

Umm Al-Qura University offers a lot of workshops to develop and improve the abilities of staff in the field of teaching and research. Figure 4.5 shows the announcement for different workshops of both the Deanship of Academic Development and the Quality Assurance and the Deanship of E-Learning that are available on the university web page at the website https://uqu.edu.sa/quality https://uqu.edu.sa/elearn, respectively, to develop the academic staff members teaching skills.

Also the Deanship of Scientific Research offers some workshops to develop the research activity of the staff and the announcement of them at the university are available at the website (https://uqu.edu.sa/en/dsr) announce some workshops for the scientific research (*Appendix MPP26*). The teaching staff has the opportunity to attend any workshop. Some certificates of attendance of such workshops are attached (*Appendix MPP25*). Therefore, the university ensures that the teaching staff has the appropriate qualifications and experiences for teaching the courses that they teach.

All the members' teaching staff are working a full-time, with good moral character, good reputation, scientific and practical efficiency and working with the spirit of teamwork. 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 highly skilled in the general and specific areas of specialization. Most of the staff' members participate in research activities in the field of study, they teach and also involve their students in these activities. Furthermore, the university encourage all the faculty academic staff members to be promoted by carrying out remarkable researches (*Appendix UQU06*). Table 4.2 shows the variation of the No. of Master students and the number of scientific papers in the period 2012-2017.

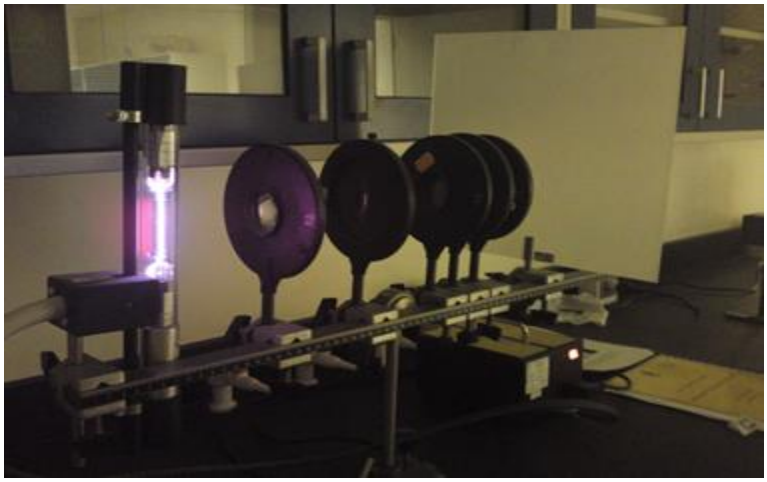
Table 4.2: Scientific research and scientific activities of members of Physics Department (2012-2017).

Scientific Activity / Year		2012-2013 (33-34 H)	2013-2014 (34-35 H)	2014-2015 (35-36 H)	2015-2016 (36-37 H)	2016-2017 (37-38 H)
Post Graduate Students	No. of students entering the program of Master in Physics/Medcical Physics	8	4	2	3	3
	No. of graduate Master Student	-	-	2	9	-
	Total No. of Master Student	9	13	13	7	10
Scientific publications		-	-	-	9 (Until March 2017)	

4.3 Fund and Equipments

4.3.1 Institutional Environment

The institutional environment (facilities, equipments, and infrastructure) at the department of physics, Faculty of Applied Science includes sufficient space and the technology which allows the department to deliver effective and efficient learning process.



The instructional methods and approaches in a conducive learning environment will be more effective by a good use of these facilities and equipment that enable students to take responsibility for their own learning.

The use of these facilities and equipments are assessed regularly in terms of their suitability for all stakeholders, i.e. students, faculty and staff. In the physics department, there are routine maintenance for the laboratories and the equipments. In all classrooms and laboratories, there are an effective technical tools such as Data show. Table 4.3 shows the distribution of the classrooms and the laboratories in male and female campus.

Table 4.3: The classrooms and laboratories in the physics department.

Item	Male campus (Al-Abdia)	Female campus (Al-Zahir)
Laboratories for undergraduate students	**13** (100 square meter)	**7**
Classrooms	**4** (Accommodate 100 students)	**5**
Simulation Room	**1** (Include 29 PC)	**-**
Research Laboratories	**5**	**-**

Note: The female student and female staff will move to a new building in the near future. The building is under construction now. There will be around more than 35 laboratories and classrooms for the physics department in the new building.

4.3.2 Laboratories of Pure and Medical Physics

There are eight specialized laboratories for Physics and 5 specialized laboratories, for medical physics for undergraduate students. The names of the laboratories are listed in table 4.4.

There are 11 (male) and 8 (female) technicians responsible for these laboratories. All technicians are highly qualified and trained, also they should be further trained for new sophisticated and updated technological requirements. Moreover, although the undergraduate student medical physics laboratories are well equipped, they need more improvements with more and new version of practical experiments. Therefore, the physics department sent an order of all demands of new versions of medical physics laboratories, practical experiments to the vice rector for administrative and financial affairs. According to the program manager's vision, we hope to acquire the order of the package apparatus sooner, in order to encourage and develop the students' abilities to be consistent with labor market needs.' The name and qualifications of the technicians within the department (*Appendix MPP21*).

5.3.3 Information Technology

The main goal of the deanship of the information technology is to provide the support systems for smart and advance research, provide the Integrated and Effective Educational Systems, and provide the Comprehensive Financial and Administrative e-Services. Therefore, they are willing to enable information resources and tools to be made accessible and well integrated to facilitate the processes of Education, learning and teaching, Research, and Management for all stakeholders. From the other hand, the deanship of E-learning offers a continuous workshop to enable the staff and the students to use these facilities to enhance the teaching process.

The E. Learning announcement about workshops are available on the university at the website (https://uqu.edu.sa/en/App/Events/2264).

The department of physics established its first stimulating and Learning Lab in 2011, within the Faculty of Applied Science, providing the technology and support for its effective use. The simulation room has 29 PCs with server and SmartBoard.

Table 4.4: The name of the laboratories in the physics department.

1-	Laboratory of PHS 101 (General Physics).	Physics and Medical Physics
2-	Laboratory of PHS 102 (Mechanics).	Physics and Medical Physics
3-	Laboratory of Electricity and Magnetism.	Physics and Medical Physics
4-	Laboratory of Measurements and Instruments.	Physics and Medical Physics
5-	Laboratory of Optics.	Physics
6-	Laboratory of Modern Physics.	Physics and Medical Physics
7-	Laboratory of Nuclear Physics.	Physics and Medical Physics
8-	Laboratory of Electronics.	Physics
9-	Laboratory of Medical Physics	Medical Physics
10-	Laboratory of Medical Radiation Physics 1	Medical Physics
11-	Laboratory of Medical Radiation Physics 2	Medical Physics
12-	Laboratory of Radioactive Isotopes in Medicine	Medical Physics
13-	Laboratory of Physics of Radiotherapy	Medical Physics

They are equipped with up-to-date technology and multiple software packages, both specialized and the more general and popular, for the use of both students and faculty. In addition, each faculty member (i.e. All full time employees) in the department has office computers running standard productivity software, such as Microsoft Office; they also provide email, and print facilities; virus protection and back-up support; and web services. However, there are farther 12 computers in the meeting room available for students and staff.

All students are able to access PCs, Library and Information Resources, software applications, the Internet, on-line resources, e-mail, and printing resources. Staff offer open access to computer labs from at least 8:00 a.m. to 10:30 p.m, to help students log onto the student network; they also answer questions relating to use of the resources. Two general purpose teaching labs are shared while special purpose labs are designated to accommodate individual disciplines. The Faculty has also smart classrooms which contain E-learning equipment such as a smart board, projector, Internet

connectivity, and full wireless network and also the implementation rules of E-learning for the students in the different KSA University *(Appendices MPP22 & MPP23).*

4.3.4. Library

Library, King Abdullah bin Abdul Aziz at Umm Al-Qura University is an institution of scientific, cultural, educational, social. The aim to collect information sources and development of different ways (buying and gifting, exchange and deposit), organize, and retrieve the shortest time possible, and submitted to the community of beneficiaries on their differences through a range of traditional services, as services loan, references and periodicals, photography and modern services as services take ongoing, and broadcast selective information, and other services calculated by means of qualified manpower scientifically and artistically and technically in the field of library and information science (*Appendix MPP27).*

The objectives of the library in the following:

- Provide sources of human knowledge to serve the various scientific disciplines at the university.
- Systems development office in line with recent developments in the field of library and information services.
- Provision of information services and office to facilitate search and retrieval through with the decisions of publications, catalogs, guides, lights, and other .
- Exchange of publications and university publications deanship with universities and scientific institutions at home and abroad, and cooperation and coordination with the similarities.

- Induction programs for students and faculty members and the services provided by training how to maintain an edge using available sources of information, and how to take advantage of the assets of the deanship.
- Provide services to Master students by responding to inquiries and requests to meet as soon as possible.
- Create the right climate inside the library for study and research.

The Central Library includes material and software appropriately to serve the attendees the library. Sections of the Central Library:

1. Library Management
2. Services beneficiaries
3. The electronic catalog
4. Hall of free viewing and reading
5. Periodicals
6. References and foreign books.

Saudi Digital Library (SDL): is the largest academic gathering of information sources in the Arab world, with more than (310,000) scientific reference, covering all academic disciplines, and the continuous updating of the content in this. The library has contracted with more than 300 global publishers.

It also provides a digital environment for various Saudi universities, and research organizations in common with it in. This environment has the following advantages:

- One central management- manages this huge content, and it is constantly updated.
- Common share by one University would benefit other universities in any scientific field.
- Enhance the status of universities when evaluating, for Academic Accreditation, and through sources rich, modern, and publish the best Global Publishers.
- Bridging the gap between Saudi universities, where emerging universities can get the same service as available in major Saudi universities.

Faculty Science Library:

- Library lies in the Applied Science Faculty consists of two floors at the University the ground floor on a spacious approximate 400 square meters. Library Departments.
- Library Administration.
- Beneficiary Services.
- Electronic Index.

Library's Possessions:

The library possesses a range of various information sources estimated with a number of titles, copies and volumes in all physical sciences. It contains about 10000 books in the native language (Arabic) and 12000 books in foreign language (English). The total entrance (student visiting) is about 100 daily. The number borrowing of books each semester is about 200 . The number of students entering daily for using the internet is about 120 students.

Library Systems:

Management of the library and its indexes is done through its coding system which is considered to be among the most modern systems used in the library management.

Library Services:

The database includes information about both printed and electronic books as well as the storage information of printed journals. Electronic books can be accessed via a link to the Library catalogue. The Library provides its customers with library and information services both on-site and online. Information literacy education for the entire University is also arranged and given by the Library personnel. The Library is open to the faculty, staff, students, and the general public during the terms on workdays. There are 10 computer workstations available for the customers.

Appendices:

Umm Al-Qura University

UQU06, Regulations Governing the Promotion of Faculty Member.

Medical Physics Program

MPP11. Staff Handbook.
MPP18. Statistics on the staff burden in the first semester 1436-1437 H (2015-2016).
MPP19. Number of Researches.
MPP20. Number of Projects.
MPP21. Department of Physics laboratory handbook.
MPP22. The general rules of E-learning at Umm Al-Qura University.
MPP23. The general rules of E-learning within KSA.
MPP25. Certificates of attendance the academic workshops.
MPP26. Certificates of attendance scientific workshops and conferences.
MPP27. Beneficiary guide, King Abdullah bin Abdul Aziz university library.

5. Documentation and Transparency

5.1. Relevant Regulation

The student must pass 135 credit hours of the medical physics program including the training project to accomplish B.Sc. degree of medical physics of Faculty of Applied Science at UQU university. The university regulations details of the degree are given in the rules of study and examination in UQU university *(Appendix UQU04)*.

5.2. Diploma Supplement

Diploma supplement is derived according to the recommendations of the Faculty Council. It is attached to the transcript of records and the B.Sc. certificate (*Appendix MPP13*). Diploma supplement includes information about the Faculty, full description about plan study of the program, in addition to the grades of the courses completed through all the program duration and the overall grade of student. The detailed calculation of the overall grade and its equivalent weight to the credit hours of each course is calculated systemically by the Faculty of Science for each student. *(Appendix FAS04)*.

5.3 Equal Opportunities and Diversity

5.3.1 Services for students and graduates

Alumni Unit supports the relationships and links between the department and its alumni. It aims to strengthen the relationship between the alumni of the department by providing all possible services for them with high quality through following the alumni affairs and conditions professionally and personally (Appendix MPP29). It builds a database and information for the alumni. It provides statistics on the alumni number and the proportion of employed and unemployed of them. It designed a page on the Internet for the unity of the department graduates at the university site. It develops the skills of the alumni through the organization of training and rehabilitation programs aligned with the needs of the labor market and help them to employ. It benefits from the expertise of the alumni in academic development plans, according to the needs of the labor market. Alumni Unit and its services at physics department are available on the university web page at the website https://uqu.edu.sa/en/physcim/5389. The statistics of the alumni number of the medical physics students (M/F) for both 1419.H and 1433.H study plan students since (1433-1436) as shown in

table 5.1. Also, the number students with scholarships and the number of employed and unemployed (for both 1419.H and 1433.H study plan students) since 1433-1436 (figure 5.2).

Table 5.1: The statistics of the alumni number of the Medical Physics students (M/F) since (1433-1437).

Graduation Year	Semester	Male students	Female students	Total (F+M)
	Summer	4	45	49
1436-1437	Second Term	6	74	80
	First Term	6	19	25
	Total	23	164	154
	Summer	11	58	69
1435-1436	Second Term	5	74	79
	First Term	7	32	39
	Total	23	164	187
	Summer	18	46	64
1434-1435	Second Term	17	63	80
	First Term	6	18	24
	Total	41	127	168
	Summer	9	36	45
1433-1434	Second term	4	16	20
	First term	6	12	18
	Total	19	64	83

* The alumni number includes the graduates (M/F) for both 1419 and 1433.H study plan.

Table 5.2: The number students with scholarships and the number of employed and unemployed (for both 1419.H and 1433.H study plan students) since 1433-1436.

Graduation Year	*No. of (F/M) students*		*No. of students with Scholarships*		*No. of employed*		*No. of unemployed*	
	F	M	F	M	F	M	F	M
1435-1436	164	23	70	10	45	13	49	0
1434-1435	127	41	50	20	30	10	47	11
1433-1434	64	19	30	10	20	9	14	0

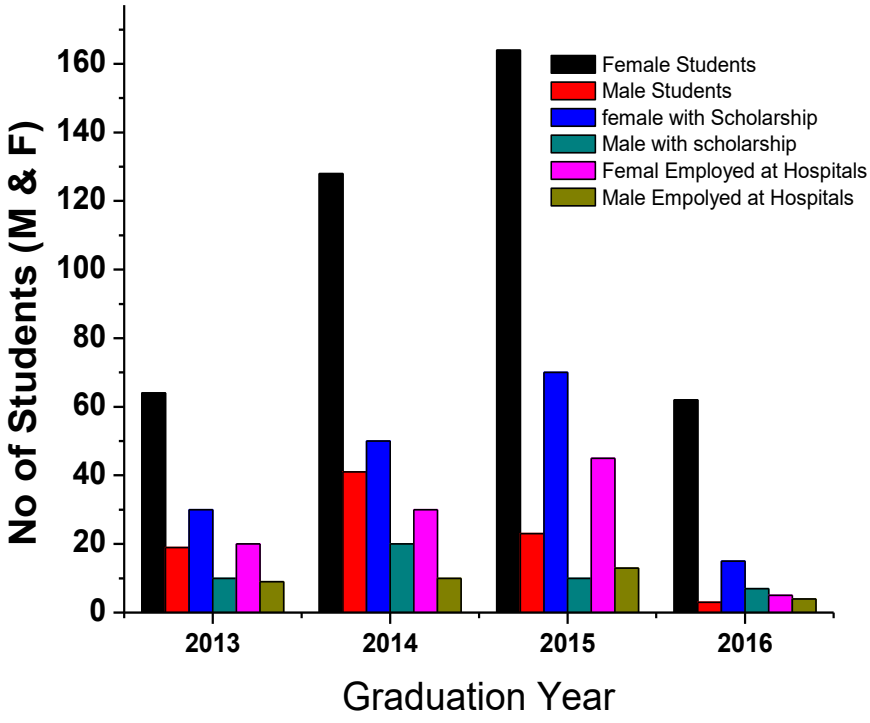


Figure 5.1: The number of graduating students for (M/F) sections for both 1419 H and 1433 H study plans.

Services provided to students in the Department of Physics

The Academic Supervision Committee of the department of physics was established in both male and female sections. The Committee meets at the beginning of each semester to agree on the mechanics of work aiming to offer and provide all the guidance, guidelines and administrative services to students, whether male or female students and follow them up in recording, adding and withdrawing courses as well as working to overcome the obstacles and difficulties faced by the students in the educational career, whether academic, social, moral, psychological, health or financial, in order to reach the desired goal, develop their skills, encourage them to academic excellence creativity and innovation to obtain the necessary skills to increase educational attainment as well as their academic and social abilities of the students through the organization of scientific meetings and activities so that the student can graduate in time (*Appendix MPP12*).

Suggestions and Complaints Committee (in both male and female sections) works on considering the complaints and grievances of the students by filling the form of the application prepared by the department, submitting the application to the committee to study it and informing the student the result of the verification. **Suggestions and Complaints Committee** (in both male and female sections) at physics department (Appendix MPP24).

5.3.2 Access to guidance services

Services provided to students from the university

The Umm Al Qura University offers a number of services to assist students and graduate through a number of Deanships such as **(**Student Affairs, Library Affairs, Information technology and E-Learning).

Student Affairs: It is responsible for all admissions affairs of graduate students. The student is allocated an advisor at the department where he is registered. Each Faculty is assigned a supervisor to take care of its student affairs and all matters pertaining to their graduate study, such as extension procedures, printing permissions, etc. Administration is responsible for preparing reports on graduates and graduation documents for those who fulfill all requirements of the degree (Appendix UQU04). This administration is responsible for monitoring performance of the students whose study periods are about to end, and the students with low academic performance. The link: ***Student Affairs*** at Umm Al-Qura University services are available on the university at the website https://uqu.edu.sa/students-affairs-en.

Library Affairs: The University Library (King Abdullah bin Abdul Aziz Library) is an institution of scientific, cultural, educational, social. Aims to collect information sources and development of different ways (buying and gifting, exchange and deposit), organize, and retrieve the shortest time possible, and submitted to the community of beneficiaries on their differences through a range of traditional services, as services loan, references and periodicals, photography and modern services as services take ongoing, and broadcast selective information, and other services calculated by means of qualified manpower scientifically and artistically and technically in the field of library and information science.

The Library provides sources of human knowledge to serve the various scientific disciplines at the university. The systems development office is in line with recent developments in the field of library and information services. Provision of information services and office is to facilitate search and retrieval through the decisions of publications and catalogues. Exchange of publications and university publications deanship with universities and scientific institutions at home, abroad, cooperation and coordination with similar. Induction programs for students, faculty members and the services provided with training to maintain an edge using available sources of information, and take advantage of the assets of the deanship. Create the right climate inside the library for study and research (Appendix MPP27).

Information technology: It provides the required technical support for UQU staff, which facilitates any technical difficulty to assure staff qualifications & productivity. It provides students with E-Services to facilitate their communication process with various sectors of the university to assure the speed of achieving their educational requirements. It provides the infrastructure (Software, networking, informative) to support the transformation into an intelligent university, which puts UQU in a good position among the prestigious universities. It supports the remote learning by providing a suitable environment for virtual classrooms and means of communication between students themselves and with faculty members.

It provides a complete IT environment, including software servers to contribute in maximizing the scientific research development in the university. It provides communication channels in software between the university and the various external agencies to activate the E-government projects in the country. Information Technology at Umm Al-Qura University services are available on the university web Page at the website https://uqu.edu.sa/en/it.

E-Learning: Production of electronic courses has become an important requirement to achieve a comprehensive quality in higher education so Umm Al Qura University seeks to activate the role of the Deanship of e-learning and distance education in spreading the culture of E-learning and producing the largest amount of courses in electronic form. The Deanship of E-learning and distance education change the courses provided for faculty members to electronic courses and made available on the Internet with ongoing follow-up to her updated.

E-Learning at Umm Al-Qura University services are available on the university web page at the website https://uqu.edu.sa/en/App/Events/2264.

There are other services offered through Deanship of Student Affairs. These services include housing and feeding the cultural and social activities, transportation, traffic and student support.

Deanship of Student Affairs at Umm Al-Qura University services are available on the university web page at the website https://uqu.edu.sa/en/studaff.

Services provided to students in the Faculty of Applied science

Faculty of Applied Science offers many student services through the Educational affairs and it includes Student Affairs and Alumni Affairs.

Services provided to students in the Faculty of Applied Science at Umm Al-Qura University services are available on the university at the website http://studaff.uqu.edu.sa/index.php/user/dashboard.

Services provided to students in the Department of Physics

The academic supervision committee and suggestions and complaints committee are described in 8.1 (services to students and graduates).

5.3.3 Countering discrimination

In the medical physics program, students spend three months (last-term of his/her final year) in specified hospitals where they can gain experience in the field of Nuclear Medicine, Radiotherapy, Medical Imaging and Radiation Protection. Students are classified into groups to do their training. By the end of the training program, students (male/female) should write a report with short oral presentation about the experience (learned and performed procedures) they gained and the difficulties they faced. Finally, Marks are given according to the Evaluation Report from hospitals. Groups of students are allowed to select one hospital (from different hospitals) to do (his/her) training and The Medical Physicists Evaluation Report, which are found in (Appendix MPP10).

The training period taken by the students (male/female) gives them the experience that makes the graduates be able to take career choices and employ, which increases the competition of entering the job market

5.3.4 The Faculty's Commitment

No prospective or actual student or member of staff will be treated less favorably than any other, whether before, during or after their study or employment at Faculty of Science through the physics department for one or more of the following grounds, except when such treatment is within the law and determined by lawful requirements: age; colour; disability; ethnic origin; marital status; nationality; national origin.

With regard to students, this policy applies to (but is not limited to) admissions, to teaching, learning and research provision, to scholarships, grants and other awards under the Faculty's control, to student support, to accommodation and other facilities, to health and safety, to personal conduct and to student complaints and disciplinary procedures.

The Faculty will also avoid, in the fields of employment, education and the provision of goods, facilities, services and premises the use of ostensibly neutral criteria which have disproportionate

adverse impact on those of a particular age; color; disability; ethnic origin; marital status; nationality; national origin; parental status; race; religion or belief; gender; or length or type of contract (e.g. Part-time or fixed-term).

In order to realize its commitment, the Faculty through the physics department will:

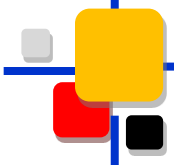
1. Promote the aims of this policy;
2. Be proactive in eliminating discrimination, including harassment and bullying, through training and the production and dissemination of codes of practice and guidance;
3. Have regard to its obligations under relevant legislation, including the requirement to carry out impact assessments in certain areas, and for its policies, codes of practice and
4. Guidance to mirror the same and be changed to meet the demands of new legislation; whilst acknowledging that they are not legally binding, have regard to any Codes of Practice issued or adopted by the Commission for Equality and Human Rights; make this policy, as well as all codes of practice and guidance available to all staff and students;
5. Regularly review the terms of this policy and all associated codes of practice and Guidance.

5.3.5 Responsibilities

5.3.1.1 *Physics Department Council*

The **Faculty Council** is the main body in Faculty dedicated to delivery of the Faculty's diversity and equal opportunities objectives. The **Faculty Council** is convened by the Bursar and meets once per term, regularly during seventh week and reporting to the third Governing body meeting of Term. The **Faculty Council** Terms of Reference read as follows:

The **Faculty Council** is responsible for the development, implementation, monitoring, prioritization and review of policies, procedures and practice to support the Faculty's Equal Opportunities Policy in relation to employees (fellows and staff) students, visitors and others closely associated with the Faculty (Appendix UQU01 and UQU08).



5.3.1.2 Heads of Departments

Heads of the Faculty's operating departments are responsible for the day to day implementation and delivery of the Faculty's objectives of diversity and equal opportunities in their department.

5.3.1.3 The Domestic Bursar

The Domestic Bursar has primary responsibility for facilitating the accessibility of the Faculty's buildings for disabled users.

5.3.1.4 All staff and students

This policy applies to all members of the Faculty, both students and staff, whether permanent, temporary, casual, part-time or on fixed-term contracts, to job applicants, to student applicants, current and former students, to associate members and to visitors to the Faculty. These members of the Faculty have a duty to act in accordance with this policy, and therefore to treat colleagues with dignity at all times and not to discriminate against or harass other students or members of staff, whether junior or senior to them. The Faculty expects all its staff and students to take personal responsibility for familiarizing themselves with this policy and to conduct themselves in an appropriate manner at all times to respect equality of opportunity for all staff, students, applicants and visitors.

The Faculty regards any breach of this policy by any employee(s) or student(s) as a serious matter to be dealt with through its agreed procedures and which may result in disciplinary action and possibly dismissal (Appendix UQU09).

5.3.5.5 Complaints

The Faculty takes seriously any breach of this policy. Disregard of this policy may result in disciplinary action including dismissal. The Faculty encourages any prospective or current student (Appendix UQU04) or member of staff who has a complaint concerning a breach of this policy to bring such a complaint to the Faculty (Appendix UQU09). Any member of the Faculty may use the grievance procedures given in the and the notes for new Fellows to complain about the discriminatory conduct.

The Faculty is concerned to ensure that staff feel able to raise such grievances and no individual will be penalized for raising such a grievance unless it is untrue and made in bad faith (Appendix MPP24).

5.3.6 Corrective Procedures

5.3.6.1 Discipline

The relevant rules of Faculty of Applied Science regulate any vexation or bothering from an employee or a student towards anyone within the campus of the university according to the Islamic law. In cases of troubles related to the behavior, the Faculty of Applied Science Committee may dismiss him *(Appendix UQU01 and UQU09)*.

5.3.6.2 Monitoring

Faculty of Applied Science policy has a systematic monitoring according to the relevant rules of the University for both the staff and students to ensure equality in opportunities (*Appendix UQU05* and *UQU09*).

5.3.6.3 Positive action

According to systematic monitoring procedure of Faculty of Applied Science. In case of any inequalities, several positive action will be taken with regard the discipline the imbalance, including such measures as:

1. Introducing assertiveness training (*Appendix UQU07).*
2. Encourage all technical laboratory staff members to take more training to improve their skills continuously.
3. Introducing English language training
4- Encourage the medical physics student program to improve their language skills by taking several language workshops.

Appendices:

Umm Al-Qura University

UQU01. (University Act) The Statute of the council of Higher Education and Universities .
UQU04. Implementation rules of study and examination in higher education.
UQU05. Regulations For Student Rights and Duties.
UQU07. Regulations for Universities Financial Affair.
UQU08. Regulations for Recruitment of Non-Saudi Staff Members at Universities
UQU09. Regulation of the employees of Saudi universities Faculty members and the likes.

Faculty of Applied Science

FAS04. The calculation of the Final Grade (GPA).

Medical Physics Program

MPP10a.Training Course Handbook.
MPP12. Academic student advising handbook.
MPP13. Diploma supplement (example).
MPP24. Student suggestion and complaints committee handbook.
MPP27. The beneficiary guide of the University Library.
MPP28. Student Statement.
MPP29. Alumina Questionnaire.

6. Quality Management and Further Development of physics Program

The university has identified as an institution for training profile and study of courses in official learning, therefore the university can be used continuously for evaluation and further development of the learning outcomes. The Quality of the most important goals of the university's strategy is the education provided by the university (undergraduate student, and master program), research, and support services. The Quality of the teacher guide *(Appendix UQU11)* explains the university's policies on quality as well as the goals and practices relating to the evaluation and measurement of the various activities and the development of the university.

To manage and develop quality assurance, it must apply:

1. Submission of documents and then evaluated it and evidence of quality assurance and development.
2. Submission of the report to assess the standard requirements.

Control in Learning and Teaching.

The University continuously uses a control system for teaching and learning. This ensures taking into description the standards for the accreditation of study programs. The Learning objectives include disciplinary and interdisciplinary aspects, in particular scientific or artistic talent, the ability to enter skilled employment, the qualification for social engagement and personal development.

A Quality management committee established by the Faculty of Applied Science, Physics Department receives information from the university to continuously improve their programs *(Appendix MPP28)*. The Quality management system described in the quality of the teacher in the university *(Appendix FAS02)*, such as support services includes documents of quality management at the university and other related materials available on [from NCAAA and the internal network of the Umm Al Qura University].

We've been checking on the quality assurance process through:

(1) Questionnaires at the level of staff members of physics department.

(2) Questionnaires to students of physics department.

(3) A copy of the distribution all Standards of self-evaluation of all staff members.

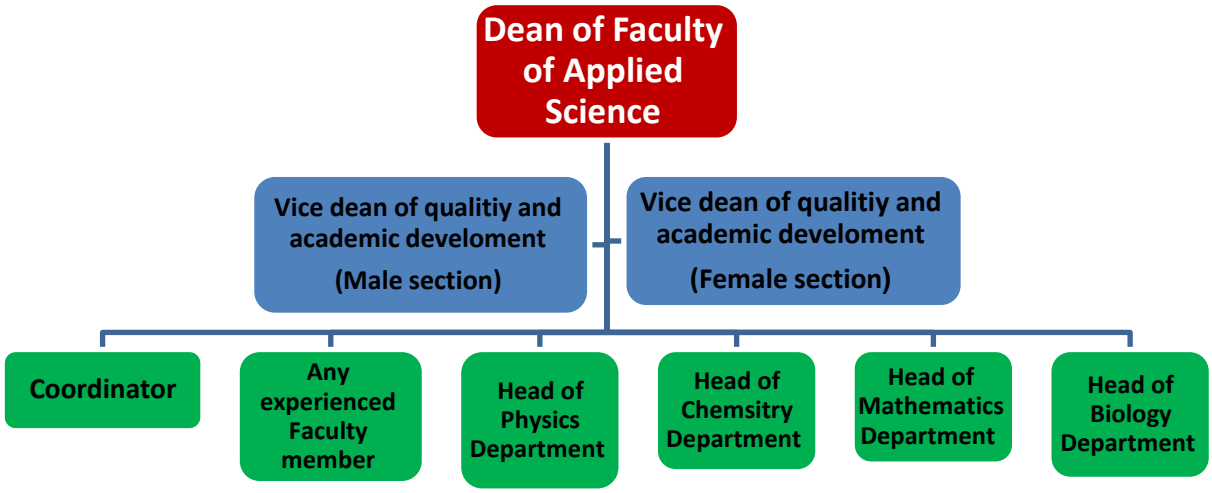
(4) A copy of meetings of the Committee for accreditation and quality.

(5) Department plan was developed and the old plan (1419 H) and the new plan (1433 H).

To evaluate the quality of program implementation, quality committee should give a brief report points of a certain strength, and areas we need to develop, and priorities in implementing. All staff members of the department physics involved in the self-evaluation processes, and cooperate in reporting and performance improvement processes. Developing and updating courses in the physics department to meet international standards and requirements of the market and also, prepare graduates student (Master) with high creative skills in various areas of the medical physics branch.

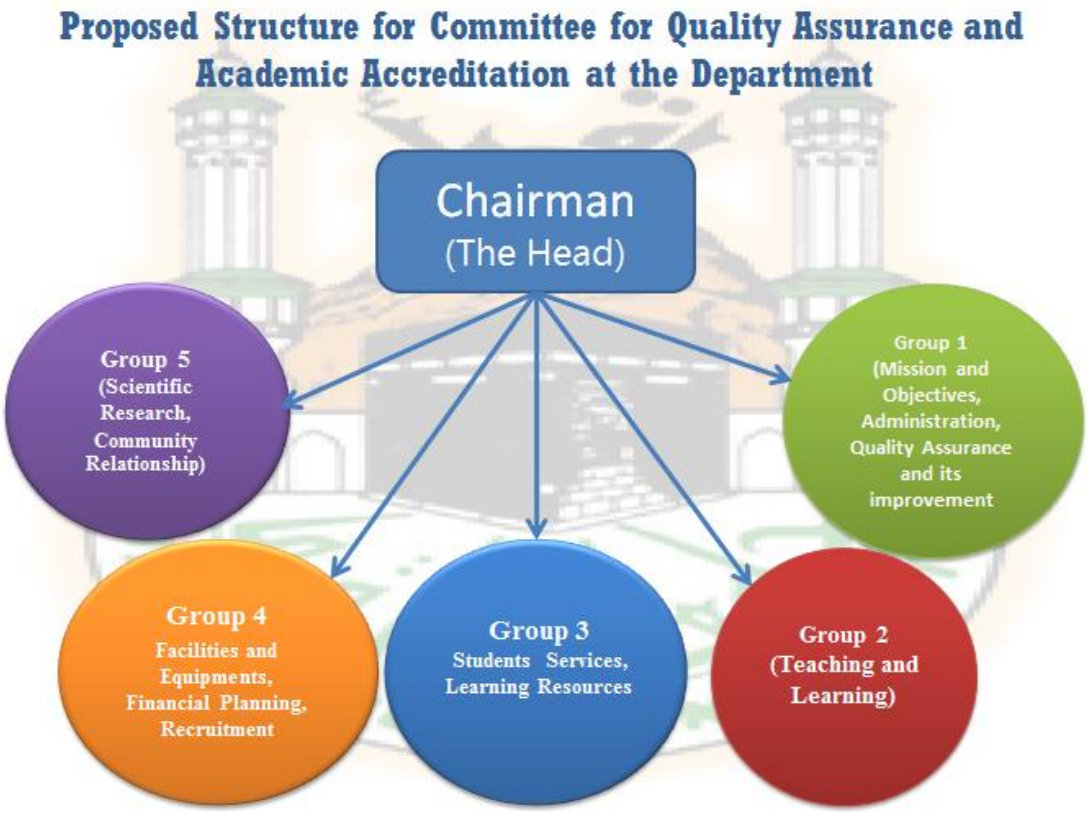
Quality assurance processes in institutions should involve not only the educational programs, but also other matters such as the facilities and equipment, staffing, relationships with the communities served by the institution and the administrative processes that link all these together. This means that a quality assurance system should involve individuals and academic and organizational units throughout an institution, not only those directly involved in the delivery of educational programs.

Within each of these internal units consideration should be given to their inputs, processes and outcomes, with an emphasis on the quality of the outcomes of the services they provide. In the past considerations of quality were largely based on inputs such as the qualifications of Faculty, provision of equipment and facilities and adequacy of resources. However, while these are still important. The most important consideration is the quality of outcomes, although inputs and the processes used are still significant and standards relating to them must be maintained. The quality assurance and academic accreditation committee of the Faculty of Applied Science as follows in the following sketch.



The key aim in the quality management and development is to incorporate quality management *(Appendix FAS06)* into the normal activity of the university, with the underlying idea of continuous improvement. The quality targets have been derived from the university strategy. The university's quality management system covers the entire range of education provided by the university (undergraduate education), research, societal and regional interaction, and support services.

Quality Management Committee (QMC) *(Appendix FAS06)* established and developed by the department of physics in continuously university's mission of improving of its programs.



To manage and develop quality assurance, the Faculty will accomplish the following:

1. Evaluation of the documents and evidence of quality assurance and development.
2. A proposal of unfinished requirements plan.
3. Submit a report to assess the standard requirements.

Comment and General Description of Quality Assurance

- A high quality institution should regard itself as a learning organization, one that systematically studies the quality of its own activities on a continuing basis and uses what it learns from that study to improve its operations.

- The central focus in these assessments should be the quality and extent of students' learning considered as outcomes; what students understand and can do as a result of their studies whether that learning is appropriate to their field, and how well has it been learned. Other important outcomes are research and broader contributions to the community.

- A wide range of other activities that provide supporting infrastructure must also be evaluated and progressively improved. The relative emphasis on these will vary over time in response to the institution's mission, the circumstances in which it finds itself, and its strategic priorities for development.

- A senior member of the Faculty should be given responsibility for leading the quality assurance processes, and a committee drawn from all parts of the organization should be appointed to provide advice and assistance, and oversee what is done. An office should be established within the central administration to coordinate and lead quality assurance activities. Self-assessment and planning for improvement should occur regularly in all parts of the institution, with benchmarks for comparisons *(Appendix MPP05)* of performance selected for the various programs and administrative units. The objectives for each administrative unit should be demanding, but appropriate and achievable.

- Quality improvement should be integrated into the institution's normal planning processes in a continuing cycle of planning, implementation, evaluation and review. The system should involve continuous monitoring of evidence about performance and independent advice on interpretations of that evidence, with adjustments made in activities to ensure that the quality of performance meets the benchmarks that have been established. Internal reporting of performance and adjustments in strategies should take place at regular times, normally at least once each year, with more extensive reviews of programs and broader institutional activities at least once every three years.

- While rigorous standards should be applied, the institution should have an atmosphere of encouragement and support in which weaknesses are openly acknowledged and assistance provided to overcome them.

The QMC Tasks:

i. The core tasks of the Committee are:

1. Determine the nature and sources of information.
2. Inventory of components, measurement instruments and associated subsidiary criteria.
3. Preparation of action plan to achieve the objectives referred to above.
4. Design and collect information forms from different sources.

5. Check the practice field which related to quality requirements.
6. Collect the information from responsible authorities and analysis.
7. Introduce the evidence of finished requirements.
8. Restriction on the unfinished requirements.
9. Introduce the plan process which enables the institute to finish the requirements.
10. Preparation of the reports.
11. Follow-up the implementation of the recommendations of unfinished requirements and collect the evidence.

ii. Contact officials and information sources

1. The Rector managements of the University.
2. The Deans of faculties.
3. Heads of departments.
4. Deans of deanships and specialized centers.
5. Managers and staff.
6. Faculty members.
7. Quality Faculty units.
8. Students.

The nature of the data and information

The committee gathers information and documents for assessing response to quality management standard.

Methods and tools to collect data and information: This will be done through

1. Interviews
2. Questionnaires
3. Collection of reports

Key Performance Indicators (KPIs) involved:

The following key performance indicators are used for the purpose of assessing performance, to verify quality interpretations:

- Students overall evaluation on the quality of their learning experiences.
- Proportion of courses in which student evaluations were conducted during the year.

6.1 Quality assurance and further development

Emphasis should be on support for continuing quality improvement rather than on satisfying required standards.

The primary objective of the system for accreditation and quality assurance is continuing improvement. The system is based on a fundamental assumption that program wish to operate with high and increasing levels of quality, comparable to, and wherever possible exceeding international standards.

The University or Faculty quality management system is described in the quality handbook *(Appendix FAS03)* and the regulations of organizational units (e.g. Support services). These quality regulations include also process descriptions and procedures for key processes.

The main quality manual depicts the quality policies and goals, key resources, the university's management practices, the university's key processes and their quality management, and practices related to the assessment, measurement and development of activities. The main quality handbook lays a foundation for describing the entire quality management system of the university and gives both internal and external stakeholders a comprehensive picture of the quality management of the university's different activities. The Faculty of Applied Science has also set quality targets, which have been derived from the Faculty strategy *(Appendix FAS01)*.

The following quality targets apply to the academic education.

By the end of the course of study, the student shall be to achieve high level academic knowledge and to practice the same. The students and employers are well versed with the norms and regulations as placed by the university.

The possibilities for lifelong learning are diverse and flexible, and education is provided according to the needs of the target groups.

The university has also published UQU Teacher's Quality handbook in order to guide teachers to good teaching, as well as Quality Guide for Studying and Learning in UQU to strengthen the students' role in the quality of education *(Appendix FAS02 and FAS03).*

The Dean is in charge of education at the Faculty. He manages the educational affairs and development of education of the university in cooperation with the heads of degree programs and steering and development committee for teaching *(Appendix FAS01 and FAS06)*.

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The Dean and the heads of programs have regular meetings to evaluate and discuss about the different procedures concerned with education and needs towards further development. The steering and development committee for teaching, in an advisory capacity, aids the Dean in decision making. The committee, headed by the Dean, coordinates and promotes the development of Faculty education, and prepares the application procedure for the quality bonus for teaching and prepares the allocation decision for rector.

6.1.1 Quality Assurance at MP Program

In MP program, there is an advisory steering committee for the program. It supports the head of the program in producing, assessing and developing the program. The advisory steering committee of the degree program in medical physics meets regularly and handles issues related to the degree program's teaching, research, and economy, as well as the development of the program.

6.1.2 Further Development of the Program

The key areas in terms of developing the quality of education at Faculty of Applied Science are the following:

- MPP's quality of education,
- Development projects for teaching, and
- Support services for teaching,

Faculty of Applied Science is actively involved in several educational tools for teaching. The Dean decides on development projects which Faculty of Applied Science engages in and starts to

promote. The training and community service unit is a one of the basic building blocks upon where the Faculty, since its establishment has been to consolidate the meaning of the development and continuing education through that committee. The Faculty gave a great importance to provid services to the community through this unit in line with the university's vision and mission to be an academic environment of high quality to create a future competitor for its graduates to achieve the goals of sustainable development through the provision of educational services and cutting-edge research across the academy system competitive in the context of the professional responsibility community Partnership of effective.

The university grants quality bonuses for the development of education for a year at a time. The quality bonus is a reward for development measures taken and an incentive for the further development of education and teaching. At the end of the academic year, the Faculty of Applied Science Awards the high GPA students to encourage the learning process in the Faculty.

At the moment many of academic staff members have participated in the E-learning training. The teaching staff, also offered other training that supports their teaching and its development, such as training in the use of information and communication technology in instruction. The training is coordinated by personnel services.

The employment of the teaching staff is based on scientific qualifications and their development, the development of teaching skills and the variety of teaching duties, and responsibility for one's field of science and its development.

The support services for education allow teachers to focus on actual teaching and study guidance. The support services provide administrative services related to instruction, as well as technological support, e.g. in setting up web-based instruction. The responsibility for these support services is shared by Student Services and Information Services and Technology, which operate within the context of university services, and by Faculty support services. **D**esire**2L**earn (D2L), a web-based, which is recently activated at university which can be monitored at the website https://uqu.edu.sa/en/it. Information Services and Technology will be responsible for the implementation of the new learning environment and training of the personnel.

The recognition of teaching qualifications and the adoption of teaching portfolios in the appointment of teaching personnel support the development of teaching *(Appendix FAS06)*.

For teaching positions, the university recruits professionals with not only strong scientific expertise in the field in question, but with teaching skills, as well. To this end, applicants for teaching positions must also submit a teaching portfolio or another report on their teaching qualifications *(Appendix UQU09 and FAS06)*. In addition, the appointment of professors requires a trial lecture from the applicant.

The Faculty in question supplies the applicant with instructions regarding the trial lecture. Instructions are also available from the university registrar's office *(Appendix MPP11)*.

6.2 Instruments, methods and data

Students fill in several questionnaires with which they can give feedback and tell their opinions concerning the studies and conditions in the university during their studies. A feedback questionnaire to students and peer tutors helps to evaluate whether the start of studies and initial study guide has been successful. The feedback survey is carried out annually by the Quality Unit *(Appendices MPP17)*. The feedback is discussed with the peer tutors and personnel in charge of study guidance. The feedback combined with practical experiences will be used to develop study guidance for new students and tutor training.

The Medical Physics program, students complete feedback for each course twice a year. The feedback is discussed with professors and course teachers and improvement suggestions are reviewed *(Appendices MPP14)*.

The quality committee also accumulates student feedback regularly every other year. This questionnaire principally focuses on the well-being of the students, and it often points out some needs for development in teaching.

6.2.1 Monitoring of credits

A study plan is a vital tool to evaluate the progress of studies of an individual student. All students in the department prepare a study plan at the beginning of their studies. All individual study plans

are evaluated by the study coordinator. Plans which are non-standard are confirmed by the head of the degree program.

The degree programs are designed and composed so that the completion of degrees is guaranteed within the standard periods of study four years. Examples of student study plans for B.Sc *(Appendix MPP13)*.

The student should successfully pass 135 credit hours before graduation. This can be achieved through eight semesters distributed on the following levels *(Appendix MPP02)*. Table 6.1 shows the percentage of marks, grade and value obtained by the student in each course, which is used to calculate the points.

Table 6.1 The percentage of marks, grade and value obtained by the student in each course, which is used to calculate the points.

Mark	Grade	Marks in letter	Marks value
95-100	A+	Excellent +	4
90 to <95	A	Excellent	3.75
85 to <90	B+	Very good +	3.5
80 to <85	B	Very good	3
75 to <80	C	Good +	2.5
70 to <75	C+	Good	2
65 to <70	D+	Pass+	1.5
60 to <65	D	Pass	1
<60	F	Fail	0
Absent	debarred	H	0

6.2.2 Grade Point Average GPA:

The courses are assessed within the outline of the University's regulations (https://uqu.edu.sa/en/studaff/App/FILES/10040). Indirect assessment, through surveys and interviews, for example, asks students to reflect on their own learning in the classroom.

The assessment outcomes noted above are discussed in detail using the following specifications:

- Courses reports.
- Courses reports *(Appendix MPP14)*.

The Average and cumulative GPA are calculated every semester for the student automatically by the system *(Appendix FAS04)*. To know how to calculate the averages, one should follow the following steps: Calculating the Semester Average: The GPA is calculated considering the following points:

1. Recording the number of hours of the courses.
2. Obtaining the mark obtained in each course.
3. Knowing the equivalent grade of each mark.
4. Obtaining the value of each grade.
5. The points = number of hours of the course × value of the grade.
6. Evaluating the total points obtained in all courses of the semester.
7. Determining the total number of hours registered in the semester.
8. The average is calculated every semester according to the following equation.

Calculating the Average Cumulative:

The GPA average per semester is evaluated as follows:

Table 6.2 and 6.3 show the grand total of points (for certain two semesters that have been studied). The grand total of credit hours (for all semesters that have been studied). The cumulative average is calculated according to the following equation:

$$GPA = (\text{Grand total points}) / (\text{Grand total credit hours})$$

$$GPA = (\text{Grand total points}) / (\text{Grand total credit hours}) = 37/16 = 2.3125$$

Here are some examples of how to calculate the grades.

Table 6.2 Calculating the grade of the first semester.

Course	Number of Credit hour	Mark	Grade	Grade value	Point
431211-4	4	92	A	3.75	4*3.75=15
433231-4	4	87	B+	3.5	4*3.5=14
433240-3	3	71	C	2	3*2= 6
531101-2	2	63	D	1	2*1= 2
635401-2	2	82	B	3	2*3 = 6
433483-1	1	97	A+	4	1*4= 4
Total	16				37

Table 6.3 Calculating the grade of the second semester.

Course	Number of Credit hour	Mark	Grade	Grade value	Point
433361-4	4	90	A	3.75	4*3.75=15
433364-4	4	72	C	3.5	4*3.5=14
433393-3	3	76	C+	2.5	3*2.5= 7.5
433383-2	2	65	D+	1.5	2*1.5= 3
635301-2	2	97	A	4	2*4 = 8
731103-2	2	83	B	3	2*3= 6
Total	17				53.5

$$GPA = \frac{\text{Grand total points}}{\text{Grand total credit hours}} = \frac{53.5}{17} = 3.14705$$

To calculate the average cumulative:

$$GPA = \frac{\text{Total points}}{\text{Total credit hours per semester}} = \frac{37 + 53.5}{16 + 17} = 2.742$$

6.2.3 Course Development

Student feedback for courses is collected for the courses. Teachers together with the Quality Unit are responsible for collecting student feedback. The electronic feedback questionnaire applies the same assessment criteria to the courses.

The following questions deal with the fulfillment of these criteria:

1. The applied working methods were appropriate for the purposes of the course and they supported my learning during the course. Answers on a scale of 1-4 (4 = strongly agree, 1 = strongly disagree).
2. Overall evaluation of the course (scale of 1-4).

The results of the students' feedback (the average of the courses for study semester) are shown in figure 6.1.

Students are motivated to provide feedback. The feedback for each course is summed up by the quality unit every semester with a general reporting form. These reports are progressed to the heads of degree program and to the quality manager.Then quality manager (Head of Department) submits the reports to the Dean before the performance and development discussions between the university management and Faculties.

The committee performance target consultations deal with student feedback, and if the average of the assessment for a course is very low (e.g. 2.5 or lower), the Dean shall get involved and discuss about the topic with the Faculty concerned. In addition, the pass/fail record of each course is followed and discussed in the meeting between the heads of the degree programs organized by the Dean.

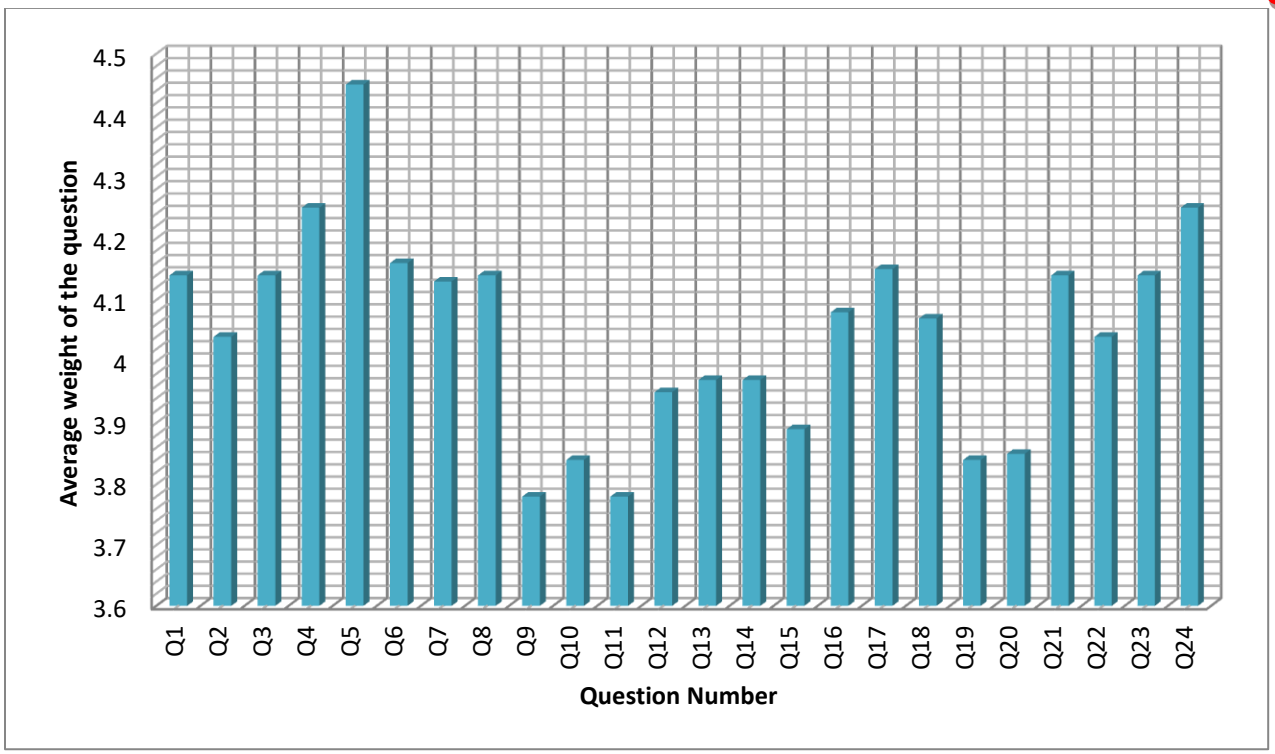

Figure 6.1 The feedback from the Courses Survey.

6.3 Evaluation of the success of the degree program:

All the responsible persons shall certify that the education, providing by the university is effective with a high standard such as the university management, Faculty management, heads of departments and heads of programs. There are different ways to measure success of the degree program as described such as direct and in-directed assessment methods *(Appendix MPP17)*.

6.3.1 Competence of graduates

Students gather different skills and knowledge during the entire education process which described in the training course *(Appendix MPP10)*. This process is prepared by all Bachelor's level students.

6.3.2 Staff-student ratio:

Table 6.4 represents the teaching staff ratios for the Physics Department. The teaching staff comprises Professors, Associate professors, Assistant Professors, Lecturer and Demonstrator.

Table 6.4 Students per teacher per Year Faculty of Science, Physics Department.

Student Stuff Ratio	1433-1434		1434-1435		1435-1436		1437-1438	
	First semester	Second semester	First semester	Second semester	First semester	Second semester	First semester	Second semester
	13.2 : 1	12.63 : 1	12.49 : 1	12.16 : 1	11.81 : 1	10.53 : 1	11.05 : 1	8.5 : 1

6.3.3 Satisfaction with the education

As a part of the self-assessment report, Alumina feedback of the medical physics program is in *Student Statement* and *Alumina Questionnaire*, (*Appendix MPP28 and Appendix MPP29*). The alumina is in contact with the Faculty through the graduate committee office to help them to know the updating information about, the advertisement of positions in any foundation or academic research center (*Appendix FAS05*).

Appendices:

Umm Al-Qura University

UQU09. Regulation of the employees of Saudi universities Faculty members and the likes.

Faculty of Applied Science

FAS01. Faculty of Applied Sciences Strategic Plan.
FAS02. Handbook Teacher's Quality Manual.
FAS03. Quality Guide for Studying and Learning
FAS04. The calculation of the Final Grade (GPA).
FAS05. Graduates Unit Handbook.
FAS06. Professional Teaching Standards for Umm Al-Qura Staff.

Medical Physics Program

MPP02. Program Handbook.
MPP05. Comparison between Learning outcomes of the degree program/London university Physics with Medical Physics Program criteria.
MPP10. Training Handbook.
MPP11. Staff Handbook for Medical Physics 1437-1438 without collaborators.
MPP13. Diploma supplementary, example.
MPP14. MPP Annual Report.
MPP17. Course feedback of MPP handbook.
MPP28. Student statement.
MPP29. Alumini questionnaire

Appendices Groups:

Group (1) Umm Al-Qura University, UQUs:

Code	Appendix
UQU 01	(University Act) The Statute of the council of Higher Education and Universities.
UQU 02	Government Decree on Umm Al-Qura University & Faculty of Sciences.
UQU 03	Umm Al-Qura University Strategic Plan (Old Version).
UQU 04	Implementation Rules of Undergraduate Study and Examinations.
UQU 05	Regulations For Student Rights and Duties.
UQU 06	Regulations Governing the Promotion of Faculty Member.
UQU 07	Regulations for Universities Financial Affairs.
UQU 08	Regulations for Recruitment of Non-Saudi Staff Members at Universities
UQU 9	Regulation of the employees of Saudi universities Faculty members and the likes.

Group (2) Faculty of Applied Science, FASs:

Code	Appendix
FAS 01	Faculty of Applied Sciences Strategy Plan **2013**.
FAS 02	Teacher's Quality Manual.
FAS 03	Quality Guide for Studying and Learning.
FAS 04	The calculation of the Final Grade (GPA).
FAS 05	Graduates Unit Handbook.
FAS 06	Professional Teaching Standards for Umm Al-Qura Staff.

Group (3) Medical Physics Program, MPPs:

Code	Appendix
MPP01	Program Specification.
MPP02	Program Handbook.
MPP03	Objectives Matrix Models. *a.* Course Classification. *b.* Student Course Evaluation. *c.* Instructor Course Evaluation.
MPP04	Learning outcomes Matrix.
MPP05	Comparison Between Learning Outcomes of The Degree Program/London University Physics with Medical Physics Program Criteria.
MPP06	Study Plan.
MPP07	Medical Physics Course specification Handbook.
MPP08	a.Workload Calculations. b. KSA-Ects Student Workload.
MPP09	Teaching Methods and Independent Study.
MPP10	a.Training Handbook. b.Guidelines for the Student of Medical Physics Training Program c.Medical Physics Evaluation Report Model.
MPP11	Staff Biographies (C.Vs., Curriculum vitae) Handbook.
MPP12	Academic Advising Handbook.
MPP13	Diploma supplement (example).
MPP14	Annual Report of Medical Physics Program.
MPP15	Program Evaluation survey.
MPP16	Course Evaluation survey.
MPP17	Exam Course Feedback (example).
MPP18	Statistics of The Staff Burden in The First Semester 1436-1437 H (2015-2016).
MPP19	Number of Researches in Physics Department.
MPP20	Number of Projects in Physics Department.

MPP21	Laboratories Handbook.
MPP22	The general rules of E-learning at Umm Al-Qura University.
MPP23	The General Rules of E-Learning within KSA.
MPP24	Student suggestion and Complaints Committee Handbook.
MPP25	Certificates of attendance the academic workshops.
MPP26	Certificates Of Attendance Scientific Workshops and Conferences.
MPP27	Beneficiary guide, King Abdullah bin Abdul Aziz university library.
MPP28	Statement of Students.
MPP29	Alumina Questionnaire.

Group (4) Comparisons among University, Faculty and Medical Physics Program:

Code	Appendix
UPU 01	Consistency between university & faculty missions.
UPU 02	Consistency between Faculty & MP program missions.
UPU 03	Consistency between MP Program Missions and Objectives.
UPU 04	Consistency between student learning outcomes and program objectives.

Editing Committee of Self-Study Report for Medical Physics Program (SSRMPP)

	Standard (Item)	Committee	Role
1 2	• Formal Specifications (per degree program) • Type. • Degree Program: Content, Concept and Implementation.	Dr. Hosam Salah El-Din Ibrahim (General Coordinator of MPP Editing team) Prof. Yosry Moustafa Dr. Adel Madani Dr. Zinab Mater.	Coordinator Member Member Member
3	Degree Program: Structures, Methods and Implementation.	Dr. Ramadan Ali. Dr. Abdul Rahman Lasheen. Dr. Badea Ewass. Dr. Aida Radwan.	Coordinator Member Member Member
4	Examinations: System, Concept and Organization.	Dr. Fahd Al-Hashmi. Dr. Taha Al Fawaal. Dr. El Hussieny Al Taher. Dr. Hanan Amer.	Member Coordinator Member Member
5	Resources.	Dr. Said Attia. Dr. Aida Radwan. Dr. Abdul Mageed Taymomi. Dr. Fatma Elsayed.	Member Coordinator Member Member
6 7	Documentation and Transparency. Equal Opportunities and Diversity	Prof. Samir Neto Dr. Hanan Amer Dr. Atif Ismail. Dr. Doaa Said	Member Coordinator Member Member
8	Quality management and further development of physics program.	Prof. Saud Al-Lehyani. Prof. Fayez Al-Gorebi. Dr. Amani Alwy. Dr. Afaf Meawed. Dr. Ahmed Al-hadi	Member Member Coordinator Member Member