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2020

Program Specification

Program Name: Physics	
Qualification Level : Bachelor of science (B.Sc.)	
Department: Physics	
College: Faculty of Applied Science	
Institution: Umm Al-Qura University-KSA	

Content

A. Program Identification and General Information

1. Program Main Location:
Alabdia

2. Branches Offering the Program:
AlZaher

3. Reasons for Establishing the Program: (Economic, social, cultural, and technological reasons, and national needs and development, etc.)

Physics is one of the basic sciences, based on experiments, measurements, and mathematical analysis to find quantitative physical laws for everything. Physics helps us to understand the world around us on all scales of length, time, and energy. Studying physics develops critical thinking and problem-solving skills. Physicists are versatile, which opens a wide range of future careers. Physics drives technology advancements, impacting society, the environment, and the human economy inquiry, and have had an enormous impact on human culture and civilization. Physics programs may have contributions to the national economy, and there are many reasons behind the support of the fields of fundamental and applied physics by governments. One reason is to improve the general understanding of physics and its role in developing the industrial technologies related to it. Research in physics can be contributing directly to the economy, especially research in renewable energy and new materials.
 	
Physics Program Educational Objective
    1- Educate students with a broad understanding of fundamental and applied physics, both theoretical and experimental.
    2- Develop the necessary skills for critical thinking, problem-solving, and scientific communication.
    3- Prepare students who can function well in graduate university, in international and national organizations.
    4- A recognition of, professional and societal responsibilities, and the impact of Physics Profession on the society.

4. Total Credit Hours for Completing the Program: (130 hr)

5. Professional Occupations/Jobs:
Students graduating from the Physics program apply to regulations 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 applicants. The University decides the contents of the degree program. The content of the Physics program is determined on the basis of the general requirements concerning the education of Physics and the needs and expectations of the job market. The graduate students from the physics program are highly demanded recently in the University and institution research center, company, and schools in KSA. The administrator of the physics program will continue inviting many professors and engineering to give lectures for our students to explain the

new jobs related to the physics program and broaden working opportunities and to know more about the future work even during their undergraduate period. The students work in research Faculty laboratories and under their supervision during the preparation of graduation project, which gives them many skills in the setup of practical experiments, sample preparation, and measurement of optical, electrical, and magnetic properties, which qualifies them to work in the industrial and technological sectors. According to the employment data in recent years, part of graduates participate work in the institute, part of graduates in state-owned enterprises or private enterprises, and there are still some students who choose to continue their higher education. They are mainly engaged in research development. Besides, the graduate can join the Faculty of education to study of one year to be prepared as Teachers. After graduation, they can work physics learning in public and private schools. The occupational profile for the physics graduates are:

- Continue higher educations in physics, leading to MSc. and Ph.D. Degrees.
- Work in research centers and universities.
- Work in public and private sectors school for the education of physics courses.

Work like a machine operator and a data analyst in one of the following industrial regions: Quality control labs. Electric power stations. Water stations. Standards and measurements bureau Petroleum ministry. Manufactures of plastics, steel, textile, glass, ceramics, rubber, electronics, semiconductors, and solar cells, ..etc.

6. Major Tracks/Pathways (if any):

Major track/pathway	Credit hours (For each track)	Professional Occupations/Jobs (For each track)
1. NA		
2.		
3.		
4.		

7. Intermediate Exit Points/Awarded Degree (if any):

Intermediate exit points/awarded degree	Credit hours
1.	
2.	
3.	

B. Mission, Goals, and Learning Outcomes

1. Program Mission:

Innovation and excellence in higher education and scientific research in physics and medical physics, the graduation of students highly skilled scientifically and technically, and the contribution to the service and development of the community

2. Program Goals:

- ➢ To achieve leadership in higher education, scientific research and community service
- ➢ To upgrade graduates' level through the achievement of comprehensive quality standards .
- ➢ To prepare advanced and innovative educational programs that qualify the graduates to keep up with the requirements of knowledge society and labor market.
- ➢ To provide students with basic knowledge and skills in physics and medical physics.
- ➢ To promote scientific research and to qualify specialized scientific and professional cadres to contribute to carrying out distinguished scientific and practical researches
- ➢ To serve community organizations through effective partnerships .
- ➢ To form partnerships with research centers and prestigious global universities

3. Relationship between Program Mission and Goals and the Mission and Goals of the Institution/College.

Mission of Faculty of Applied Science:

The college seeks to achieve the higher education objectives and provide university education and graduate studies; hone student skills; encourage faculty members to produce more scientific research to serve community; and expand the scope of scientific books translation and writing.

Goal of Faculty of Applied Science:

- ➢ To support university education outputs for education, health, industrial, and commercial sectors with academic cadres that serve growth plans.
- ➢ To link college specialties to job market needs through cooperation with public and private sectors for workshops
- ➢ To develop human resources and qualify them for applied sciences education to provide community with specialists with diploma or bachelor's degree.
- ➢ To collaborate with colleges of applied sciences in national and international universities
- ➢ To develop behavioral skills (communication) for college students
- ➢ To evaluate training programs in light of latest developments, job market requirements and international experiences

From the relationship between physics program mission and goals and the mission and goals of the Faculty of applied science   it can found there is a consistently between them.

4. Graduate Attributes:

Physics are dynamic subjects that are continually being developed by discoveries and innovations. In choosing to study physics at umm al-qura university, it will benefit from being taught by research-active physicists who enjoy an outstanding international reputation in all research areas carried out within Physics. We assign a high priority to the continual development and improvement of our teaching methods and curriculum design in order to guarantee students a highly stimulating, as well as enjoyable and fruitful, learning experience. Umm al-qura university graduate attributes are a set of core competencies which we expect students to achieve through the completion of any KSA College degree program.

- ➢ Demonstrate a deep conceptual understanding of their chosen discipline
- ➢ Work effectively in multi-cultural, international teams and across disciplinary boundaries
- ➢ Approach challenges with curiosity, critical thinking, and creativity
- ➢ Innovatively apply their skills to tackling complex real-world problems
- ➢ Understand and value different cultures and perspectives
- ➢ Have developed into independent learners with high self-efficacy
- ➢ Display a strong sense of personal and professional identity

5.Program learning Outcomes*

Knowledge and Understanding

K1	Demonstrate an understanding of the fundamental principles and concepts of core knowledge of both classical and modern physics.
K2	Associate the mathematical concepts to a proper understanding of physics phenomena proficiently
K3	Explore physical phenomena by setting up experiments using a variety of laboratory instruments, collecting and analyzing data, and interpreting their results.
K4	
K...	

Skills

S1	Apply the scientific method to design, execute, and analyze a physical problem or an experiment.
S2	Explain scientific theoretical manipulation procedures as well as experimental observations. .
S3	Communicate physics concepts, processes, and results effectively, both verbally and in writing.
S4	
S...	

Values

V1	Participate effectively in multidisciplinary and/or interdisciplinary teams
V2	Be able to self-learn and conduct written and oral communication in physics-related topics.
V3	Manage a project with due attention to time and resource management
V4	
V...	

* Add a table for each track and exit Point (if any)

C. Curriculum

1. Curriculum Structure

Program Structure	Required/ Elective	No. of courses	Credit Hours	Percentage
Institution Requirements	Required	10	21	16.15%
	Elective			
College Requirements	Required	6	24	18.46%
	Elective			
Program Requirements	Required	21	82	63.07%
	Elective			
Capstone Course/Project		1	3	2.3%
Field Experience/ Internship				
Others				
Total		**38**	**130**	**100%**

* Add a table for each track (if any)

2. Program Study Plan

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
Level 1	4041101	Calculus	Required		4	College
	4021101	General Chemistry	Required		4	College
	7004101	English Language	Required		4	College
	605101	The Holy Qura'an (1)	Required		2	Institution
	601101	Islamic Culture (1)	Required		2	Institution
Level 2	4041101	General Biology	Required		4	College
	4031101	General Physics	Required		4	College
	7004102	English Language	Required	English Language	4	College
	501101	Arabic Language	Required		2	Institution
	102101	Biography of prophet Mohamed (PBUH)	Required		2	Institution
Level 3	4042501	Differentiation and Integration	Required	Calculus	4	Department
	4042402	Linear Algebra	Required	Calculus	4	Department
	4032102	General Physics (2)	Required	General Physics	4	Department
	4032121	Electricity and magnetism	Required	General Physics	4	Department
Level 4	4032141	Theoretical Methods in Physics (1)	Required	Differentiation and Integration	4	Department
	4032131	Optics	Required	General Physics (2)	4	Department
	4032150	Modern Physics	Required	General Physics (2)	4	Department
	4032122	General Physics(3)	Required	Electricity and magnetism	3	Department
	601201	Islamic Culture (2)	Required	Islamic Culture (1)	2	Institution

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
Level 5	4033142	Theoretical Methods in Physics (2)	Required	Theoretical Methods in Physics (1)	4	Department
	4033143	Classical Mechanics(1)	Required	General Physics (2)	4	Department
	4033145	Quantum Mechanics (1)	Required	Theoretical Methods in Physics (1)	4	Department
	4033110	Heat and Thermodynamics	Required	General Physics (2)	3	Department
	605201	The Holy Qura'an (2)	Required	The Holy Qura'an (1)	2	Institution
Level 6	4033132	Electromagnetism (1)	Required	Theoretical Methods in Physics (1)	3	Department
	4033146	Quantum Mechanics (2)	Required	Quantum Mechanics (1)	3	Department
	4033111	Statistical Thermodynamics	Required	Heat and Thermodynamics	3	Department
	4033144	Classical Mechanics (2)	Required	Classical Mechanics(1)	2	Department
	605301	The Holy Qura'an (3)	Required	The Holy Qura'an (2)	2	Institution
	601301	Islamic Culture (3)	Required	Islamic Culture (2)	2	Institution
Level 7	4034133	Electromagnetism (2)	Required	Electromagnetism (1)	3	Department
	4034160	Nuclear Physics	Required	Quantum Mechanics (1)	4	Department
	4034170	Solid State Physics (1)	Required	Quantum Mechanics (1)	4	Department
	4034180	Computational Physics	Required	Theoretical Methods in Physics (2)	3	Department
	605401	The Holy Qura'an (4)	Required	The Holy Qura'an (3)	2	Institution
Level 8	4034162	Radiation Physics	Required	Nuclear Physics	3	Department
	4034172	Solid State Physics (2)	Required	Solid State Physics (1)	4	Department
	4034173	Electronics	Required	Solid State Physics (1)	4	Department
	4034199	Graduated Project	Required	Permission of Department	3	Department
	601401	Islamic Culture (4)	Required	Islamic Culture (3)	2	Institution

* Include additional levels if needed
** Add a table for each track (if any)

3. Course Specifications
Insert hyperlink for all course specifications using NCAAA template

4. Program learning Outcomes Mapping Matrix
Align the program learning outcomes with program courses, according to the following desired levels of performance (**I = Introduced   P = Practiced M = Mastered**)

| Course code & No. | Program Learning Outcomes | | | | | | | | | | | |
| | Knowledge and understanding | | | | Skills | | | | Values | | | |
	K.1	K.2	K.3	K4	S.1	S.2	S.3	S4	V.1	V.2	V.3	V4
General Physics 4031101-4	I	I	P		I	I	P		P	P	●	
General Physics (2) 4032102	I	●	I		P	P	●		I	●	I	
Electricity and magnetism 4032121	I	I	I/P		I	I	I		I	I	I	
Theoretical Methods in Physics (1) 4032141	●	I	●		I	P	●		M	M		
Optics 4032131	I	I	I		M	M	M		I	I	M	
Modern Physics 4032150	I	I	●		I	I	M		I	I/P	I/P/M	
General Physics (3) 4032122	I	I	P		I	I	●		M	M	●	
Theoretical Methods in Physics (2) 4033142	M	M	P/M		P/M	M	P/M		●	●	●	
Classical Mechanics (1) 4033143	I	●	●		I/P	I/P	I/P		P	I/P	I/P	
Quantum Mechanics (1) 4033145	I	I	I		I/P	I/P	●		●	I	●	
Heat and Thermodynamics 4033110	I	I	●		P	P	●		I/P	P	P	
Electromagnetism (1) 4033132	I	I	I/P		I/P	I	I/P		I/P	I	P	
Quantum Mechanics (2) 4033146	M	M	P/M		P/M	M	P/M		P/M	M	P/M	
Statistical Thermodynamics 4033111	I	I	●		I	I/M	●		I	I/M	I/M	
Classical Mechanics (2) 4033144	M	M	●		P/M	M	P/M		P/M	M	P/M	
Electromagnetism (2) 4034133	M	M	P/M		M	P/M	P/M		P	M	P/M	
Nuclear Physics 4034160	I	I	I/P		I	I	I/P		M/P	I/P	M/P	
Solid State Physics (1) 4034170	I	I/P	P		I	I	●		P	I/P	●	
Computational Physics 4034180	M	M	M		P	M	P		M	P	M	
Radiation Physics 4034162	I	●	M		I	●	●		M	M	●	
Solid State Physics (2) 4034172	M	●	M/P		M/P	M	M		M	M	P	
Electronics 4034173	M	M	P		P	P	M		M	M	M	
Graduated Project 4034199	M	M	P		M	M/P	●		M	M	●	

* Add a table for each track (if any)

5. Teaching and learning strategies to achieve program learning outcomes

Describe policies, teaching and learning strategies, learning experience, and learning activities, including curricular and extra-curricular activities, to achieve the program learning outcomes.

1. Demonstrating the basic principles through lectures.
2. Discussing phenomena with illustrating pictures and diagrams.
3. Lecturing method: Board, Power point.
4. Practice to solve problems
5. Brain storming
6. Start each chapter by general idea and the benefit of it.
7. Doing team research or team project.
8. Doing team work to perform some experiments
9. Perform the experiments.
10. Demonstrate the results.
11. Write the reports about the experiment.
12. Discussion with the student about the results
13. Searching the internet and using the library.
14. Learn how to cover missed lectures.
15. Summarizing lectures
16. Collecting materials of the course.
17. Practice to solve difficulties in learning and enhance educational skills.
18. Give students tasks of duties.
19. Learn how to write reports in English language.
20. Teamwork and small group discussion

6. Assessment Methods for program learning outcomes.

Describe assessment methods (Direct and Indirect) that can be used to measure achievement of program learning outcomes in every domain of learning.

i) From current students and graduates of the program

• The entry-level students will be administered a locally developed skill-testing test to measure the level of skill and knowledge.

• The graduates will be tested through a locally developed exit exam to measure of the level of attainment of the learning outcomes.

• An exit interview with the graduates will be carried out to receive feedback on the program and their learning experience. The department will note their concerns and suggestions for the improvement of the program and the method of teaching and learning.

• During the course, students provide feedback to the lecturer via course questionnaires. Questionnaire summaries are discussed each term at the staff student consultative committee providing additional student feedback. At the end of each physics course the lecturer completes a pro-forma report, including a summary of student questionnaire responses.

ii) From independent advisors and/or evaluator(s)

Peer review, appraising progress and identifying changes that need to be made. The reports are discussed at theme group meetings who monitor the quality of module delivery and syllabus related issues across groups of related modules forming subject themes

Every three- year, a team of independent evaluators will be invited to evaluate the program on basis of an on-site visit for which the course files of all courses that will also contain the samples of best and worst student work will be made available. Such an assessment may require inspection of laboratories, equipment, class rooms and interviews with faculty, staff and students for a comprehensive evaluation of the program, facilities and the learning environment. The findings and recommendations of the evaluating team will be used for the improvement of the program.

iii) From employers and/or other stakeholders.

Beginning with the fifth year of the commencement of this new program, every two-year interval a comprehensive survey of the employers and alumni will be carried out to collect data and information on the attainment of the program's educational objectives and outcomes. Additionally, face-to-face exit interviews will be conducted with the graduating students to receive feedback on the program, delivery, learning experience and outcomes.

D. Student Admission and Support:

1. Student Admission Requirements

The bachelor's degree is awarded to graduates of secondary schools in the various fields of scientific and theoretical specialties, which have been built according to a highly academic and professional academic plan. It is necessary for students to complete all the study modules allocated for each plan.

Admission to the Program:
1. The admissions system at Umm Al-Qura University is made once before the beginning of the academic year directly after the secondary school results are published, according to the period specified and announced on the website.
2. Apply via the [Unified Admission Portal](#) at Umm Al-Qura University website.
3. Preference is given to applicants who meet the stated conditions and standards and according to the capacity of the colleges of the university.
4. Passing personal interviews and admission tests for the departments that require this.
5. Confirmation of admission by students after the announcement of admission results.
6. The university number will be issued after the admission has been confirmed.

Admission Requirements to the Program:
1. The applicant should be a Saudi citizen or born to a Saudi mother (non-Saudis may apply for scholarship programs).
2. The applicant must be holding secondary school certificate (or an equivalent) from the Saudi Kingdom or abroad.
3. The secondary school certificate or its equivalent must be a recent one (not exceeding 5 years). For the Colleges of Medicine, Pharmacy, and Health Sciences, the secondary school certificate should not be more than 2 years old.
4. The student must pass the required admission tests (General Aptitude Test [GAT] and the Summative Assessment), organized by the National Center for Assessment, if required by the desired department.
5. The student must pass any other exam or interview required by the college.
6. The applicant must have not been dismissed from the UQU University or any other university for disciplinary reasons.

2. Guidance and Orientation Programs for New Students

• Each faculty member will be assigned a group of students for counselling and advising. A student will be required to meet his academic advisor at least twice a semester, the first visit being before the registration.
• Each faculty member will be asked to post his office hours during which a student can visit for receiving counselling and advising.

3. Student Counseling Services
(academic, career, psychological and social)

The counseling and guidance department, at Deanship of student affairs, shoulders the responsibility of guiding the students psychologically and socially, and helping them mend their ways, besides providing them with the positive skills required to develop themselves and dealing with others.

Objectives of Guidance and Counseling Department:
▪ Providing the student with necessary information about UQU regulations, besides his rights and duties inside this prestigious educational institution.
▪ Creating a balanced and stable social and psychosocial atmosphere for the student throughout his academic years in the university.
▪ Finding out about the needs of various categories of the students and providing the guidance services necessary to meet such needs.
▪ Addressing the general, individual, educational and behavioral problems of the students.
▪ Fostering cooperation and coordination between the Vice- Deanship for Student Support and colleges in the field of student counseling and guidance.

4. Special Support
(low achievers, disabled, gifted and talented)

General Objectives of special care unit at Deanship of student affairs:

- Catering for students with special needs by receiving their proposals and requests and passing them over to the officials for action.
- Offering support and counseling for students with special needs in all fields.
- Involving students with special needs in the various student activity programs, events and trips.
- Coordinating with the external parties concerned with students with special needs so as to provide programs, books and whatever serves such special needs students.
- Coordinating everything related to students with special needs with the academic guidance units at colleges.

Tasks:

The Special Care unit is concerned with providing a number of services for students with special needs, including;

- Issuing licenses to enter their cars into campus.
- Allocating seats for them in the student transportation vehicles.
- Providing special lavatories for them at all health facilities of the university.
- Providing special seats and tables for them in the classrooms.
- Allocating special seating areas for them at colleges, with all requirements such as seats, tables and drinking water.
- Giving special attention to their study schedules and ensuring classrooms are close to them.
- Getting them familiar with student clubs, activities venues, and equipping those places with whatever suits their special needs.
- Inviting them to student meetings and getting their feedback on the quality of services provided
- Contacting centers and companies concerned with providing services for people with special needs in order to cover all educational requirements of special needs devices, technologies, books, audiovisual materials, etc.
- Relieving them form all fees of student services, shops rented inside campus, and making agreement with the traders and investors in this regard.
- Inviting them to participate in the summer centers organized by the university.
- Giving them the priority in the student employment programs.

E. Teaching and Administrative Staff

1. Needed Teaching and Administrative Staff

Academic Rank	Specialty		Special Requirements / Skills (if any)	Required Numbers		
	General	Specific		M	F	T
Professors	Physics	Variety of specifications including Optics, Solid State, Nuclear, etc..		9	-	9
Associate Professors	Physics	Variety of specifications including Optics, Solid State, Nuclear, etc..		8	1	9
Assistant Professors	Physics	Variety of specifications including Optics, Solid State, Nuclear, etc..		20	12	32
Lecturers	Physics	Variety of specifications including Optics, Solid State, Nuclear, etc..		1	10	11
Teaching Assistants	Physics	Other		3	14	17
Technicians and Laboratory Assistants	Other	Other		11	11	22
Administrative and Supportive Staff	Other	Other		1	2	3
Others (specify)						

2. Professional Development

2.1 Orientation of New Teaching Staff
Describe briefly the process used for orientation of new, visiting and part-time teaching staff

The department has an established process for recruiting new faculty members in the areas needed. The positions are advertised with the specific requirements of qualification and experience. The department has the policy not to offer a professorial rank to instructors without a doctoral degree in the discipline. Qualifications are verified before appointments are made.

2.2 Professional Development for Teaching Staff
Describe briefly the plan and arrangements for academic and professional development of teaching staff (e.g., teaching & learning strategies, learning outcomes assessment, professional development, etc.)

A new faculty member will be given a copy of the Faculty Handbook that contains all information about the duties and responsibilities of the faculty, including the rights, privileges and code of conduct. For the first two semesters, he will be assigned multi-section courses which are coordinated and courses that are within his area of specialty. If necessary and desired, he will be assigned an experienced senior faculty member for receiving teaching help. His students evaluation will be closely monitored to see that there is no problem with his

teaching. He will be asked to attend the workshops on effective teaching and professional development conducted by the Academic Development Unit of the University.

F. Learning Resources, Facilities, and Equipment

1. Learning Resources.

Mechanism for providing and quality assurance of learning resources (textbooks, references and other resource materials, including electronic and web-based resources, etc.)

1. List Required Textbooks
- Besier Concepts of Modern Physics Beiser
- Taylor's Classical Mechanics
- Morin's Introduction to Classical Mechanics with Problems and Solutions
- Problems and Solutions in Introductory Mechanics by Morin
- Kibble's Classical Mechanics
- Griffith's Introduction to Electrodynamics
- Griffith's Introduction to Quantum Mechanics
- Mathematical Methods for Physicists by Arfken, Weber, and Harris
- Classical Electrodynamics by Jackson
- Raymond Serway and Jewett Physics for scientists and engineers

2. Black board, D2L eLearning
   https://lms.uqu.edu.sa/webapps/portal/execute/tabs/tabAction?tab_tab_group_id=_1_1
3. Websites
   https://elearn.uqu.edu.sa/

2. Facilities and Equipment
(Library, laboratories, medical facilities, classrooms, etc.).

1- Libraries
Library, King Abdullah bin Abdul Aziz at Umm Al-Qura University 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 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 to 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 similar.
• 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 M student by responding to inquiries and requests to meet as soon as possible. Create the right climate inside the library for study and research.

Central Library includes material and software appropriate 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. 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.

College Science Library:

Library lies in the Applied Science College consists of two floors at the University the ground floor on a space approximate 400 square meters.

Library Departments:

• Library Administration

• Beneficiary Services

• Electronic Index

Library's Possessions:

Library possess 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 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 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 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 faculty staff, students, and general public during terms on workdays. There are 10 computer workstations available for the customers.

2- Laboratories:

The institutional environment (facilities, equipments, and infrastructure) at the Department of Physics, College of Applied Science include sufficient space and the technology which allow 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 equipment are assessed regularly in terms of their suitability for all stakeholders, i.e. students, faculty and staff.

In the physic department, there are routine maintenance for the laboratories and the equipment. In all classroom and laboratories, there are an effective technical tools such as Data show. Table 4.5 shows the distribution of the classrooms and the laboratories in male and female campus.

Comments:

The female student and female staff will move to a new building in the near future. The building is under construing now. They will be around more than 35 laboratories and classrooms for the physics department in the new building. 4.3.2 Laboratories of pure physics

There are 8 specialized laboratories for student of pure physics. The names of the laboratories are given in section I

3. Arrangements to Maintain a Healthy and Safe Environment (According to the nature of the program)

Staff, students and visitors (researchers and students) are responsible for:

▪ Taking reasonable care of their own health, safety and welfare (HSW), and that of others who may be affected by their actions and omissions;

▪ Obtaining suitable training and information as needed to carry out their research or other work safely;

- Using only competent contractors and consultants, in compliance with University policies on procurement of services and goods;
- Ensuring they start any work liable to create significant risk, <u>only after</u> hazards are identified, risks are evaluated and adequately measures to control them are in place;
- Following the University and departmental guidance on HSW, as published on the departmental (and University Safety Office) Health, Safety and Environment webpages, or as agreed with the DSO and/or specialist safety officers and Civil Defense;
- Co-operating with departmental managers and systems to ensure HSW risks are well- managed;
- Reporting injury accidents, damage to property or the environment, and close calls ('near misses') to their manager/supervisor and the DSO as soon as practicable after an event;
- Actively reporting hazards, they spot as well as any opportunities for improvement they identify to their immediate manager/supervisor, the DSO, the Departmental Safety Committee or relevant Safety Sub-Committee;

✓ A first contacts with students in labs are reserved for safety.

✓ Evacuation plan in the Alabdiya Branch - Students of the Faculty of Applied Sciences Umm Al-Qura University for the academic year 1440/1441.

  ✓ **Links**

https://drive.uqu.edu.sa/_/physcim/files/Evacuation%20plan_Ar.pdf

 https://drive.uqu.edu.sa/_/physcim/files/Evacuation%20plan_En.pdf

G. Program Management and Regulations

1. Program Management
1.1 Program Structure
(including boards, councils, units, committees, etc.)

The management of the Program depends on the different committees and units of the department.
i) **Responsibilities of the Department Chairman**
   a) **Administrative affairs:**
1- To head the department, supervise the organization of its affairs, call upon concerned individuals to attend its sessions, implement its decisions, and send the minutes of its sessions to the College dean.
2- To achieve the goals and policies of the college and the university; and implement the College Board's decisions related to the department.
3- To supervise the strategic plan of the department and follow up its implementation.
4- To supervise the department's educational, research, administrative, and cultural affairs.
5- To coordinate and develop the department's relations, within UQU and outside.
6- To supervise the enhancement of the quality level and the development of its outputs.

   b) **Academic Affairs:**
1-To implement the regulations of quality, academic accreditation and evaluation.
3-To supervise the students' activities in the department.
4-To monitor exams and control the system within the department.
5-To supervise the academic development process of the department's programs.
7-To supervise the recruitment of faculty members at the department.

 ii) **Work Mechanism of the Department Board**
Department Board consist of all PhD, Associate and Full professors staff,
Issues raised concerning
- Students' affairs.
- Teaching affairs.
- Or any developments in work.

Will be passed from the administration to be presented to the board. In the Department Board meeting, all such issues raised are discussed, and decisions are taken and passed to the relevant recipient through the administration.

Committees of the Department include:

- Postgraduate Studies Committee
- Committee of Scientific Research
- Curriculum and Course Development Committee
- Advisory Committee
- Laboratories Committee
- Quality and Academic Accreditation Committee
- Safety Committee
- Events and Activities Committee
- Media Committee

The complete organizing structure of the department is as follow
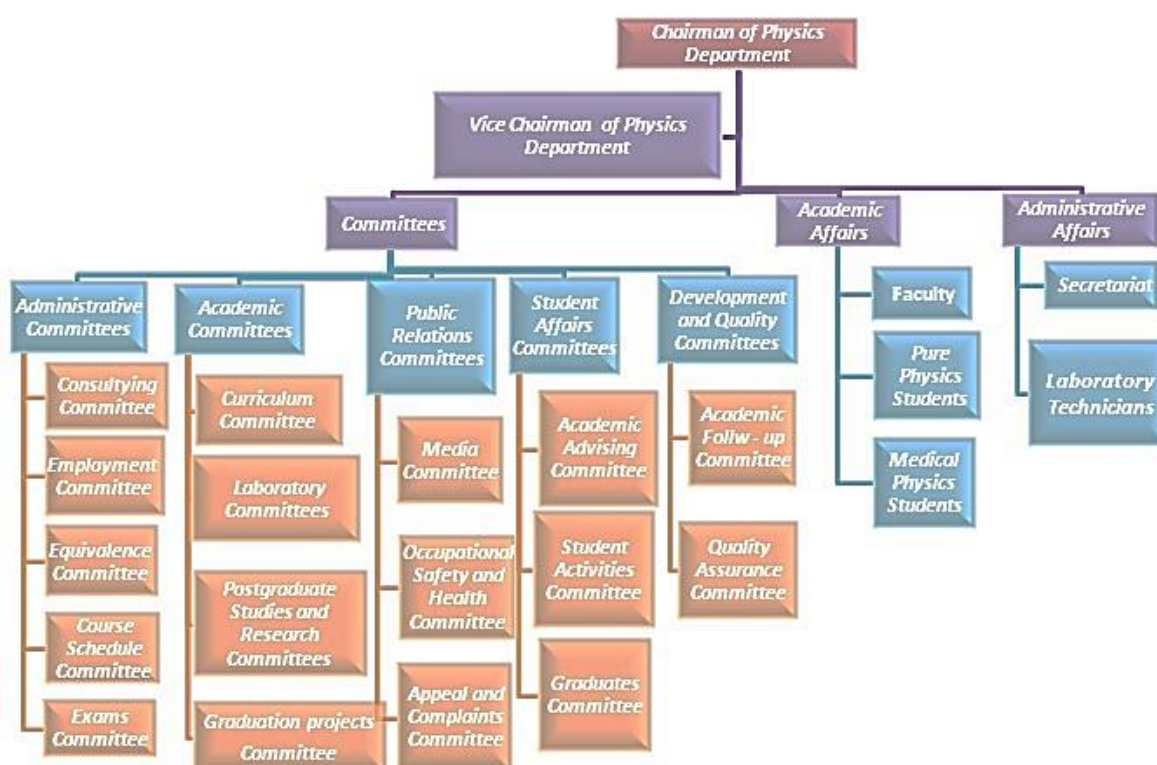
1.2 Stakeholders Involvement

Describe the representation and involvement of stakeholders in the program planning and development. (students, professional bodies, scientific societies, alumni, employers, etc.)

Umm Al-Qura university focus on Showing transparency, mutual respect, tolerance, and a spirit of sharing while dealing with the stakeholders. The program aims to

1- Participating in achieving the objectives of higher education policy in Saudi Arabia.

2 - Preparing graduates, forming their educational experiences and providing them with new skills that help them solve problems and requirements of the society and state.

3 - Developing students' creative skills to help raise the level of scientific research in line with development materials and energy and meet the needs of community.

4 - Preparing specialists to work in research centers and private reserves in the field of physics and work on their development.

5 - Preparing cadres qualified to teach at the university and schools and work in the domains of physics.

1. Regulations for Student Assessment and Verification of Standards

Student performance in each course is evaluated by the instructor, culminating with the assignment of a grade for this course and by independent assessment by faculty from another institution. The number and types of graded assignments will vary according to what is most appropriate for the course in question. These assignments generally comprise some combination of examinations, quizzes, homework, and/or laboratory reports. Projects and/or oral presentations are required for some courses. The final year projects are graded by a group of college members, not only by the supervisor.

2. Student Appeals

1. Student who wishes to appeal an examination result must do so in writing to the head of the department, setting out in full the grounds for the appeal.

2. Upon receipt of a written appeal, the head of the department will refer the matter to the Appeals committee. The appeal committee will handle all communications with the student and the faculty.

3. If necessary, a request should be send to the college council to have the relevant marks rechecked and, within a specific time.

4. Each student repeats appealing regarding the proven ineligibility appeal should be referred to the disciplinary committee

5. Students may postpone study before the commencement of the semester till the end of the first week of study after they provide a valid excuse to the head of the department and college dean.

6. The postponed period is not included in the period required for completion of the program degree.

3. Admission Requirements for the program

An applicant for physics program should be admitted under the Statue of the Higher Educations & Universities and rules of Study and Examinations of Higher Education at Umm Al-Qura University Conditions The admission will be accept in physics program as per their marks in secondary school certificate, the aptitude test and subject test. Just the student accepts in the program the next conditions should be applied

1- Students who fail courses that constitute the minimum number of credit hours in one semester or more than the courses offered in one level are supposed to retake the failed courses.

2- Students who fail courses that constitute less than the minimum number of credit hours in one semester are supposed to the retake the failed courses and add more courses from the next level according to the following:

o Enrolment in the courses is within the study plan and timetables

o Semester load has to be linked to the students' GPA but no less than 12 credit hours

o No conflicts in students' schedules

o Students who cannot enroll in courses from the next level due to conflicts or prerequisites may take courses from next levels (see item

o Students who cannot enroll in the minimum number of credit hours may take courses that are available even if they are less than the minimum number of credit hours.

3. Students may take courses from the next two consecutive levels.

4. Enrolment is automatic (without prior request from the students) and all schedules are to be ready before commencement of study.

4. Attendance and Completion Requirements

1. The undergraduate curriculum in physics program provide academic content taught in a specific course that agree with the National Calcification Framework (NQF).

2. Success in a course is usually based on the combination of grades awarded to term work and final examination.

3. Each course has a total of 100 points. Out of this, the instructor may allocate 40% to 60% marks to the term work consisting of quizzes, homework, term projects and mid-term or other periodic assessments while the remainder is allocated to the final examination.

4. The rubrics used for the grading system of Umm Al-Qura University. Grade of incomplete (IC) is given to the student if the course requirements are not completed by the student. This is usually allowed in courses that require a project to be completed by the students. It is awarded only on the recommendation

of the instructor and approval of the Department Council. The student getting IC must complete the requirements during the next semester otherwise the IC automatically changes to F. Some courses need more than one term to complete the requirements particularly the Graduation Project. For these courses, the student gets Incomplete Progress (IP) grade. IP grade does not require the approval of the departmental council. Student getting an IP is required to continue the work and appear for the assessment when the work is completed.

5. Students are allowed to withdraw from studying one semester without failing that semester if he/she submitted a valid excuse to the college dean five weeks before the final examinations. Those students studying in an academic year system may apply for withdrawal eight weeks before final examinations. Committee for student academic problems based on a recommendation from the dean may make exceptions to those deadlines. Withdrawing students will be given (W) grade and this semester is counted within the period of graduation.

6. To accept student's excuse to withdraw, the student must be regular in attending classes before the submission of the excuse as will be explained in article 15 (By- Laws of Undergraduate Study and Examinations and Umm Al-Qura University Implementation Rules)

7. Students are automatically enrolled in the following semester.

8. Female students must bring in a parent consent to the withdrawal

H. Program Quality Assurance

1. Program Quality Assurance System
Provide online link to quality assurance manual

In addition to quality assurance and academic accreditation in Saudi Arabia and the university's rules for quality assurance, there is an existing committee in the physics department for quality assurance:

Tasks of the Committee:

- To coordinate with the college administration and the University Vice Presidency for Academic Development to complete process of academic accreditation in the Department
- To disseminate the culture of quality amongst different categories including; faculty members, students, and the administrative staff.
- To provide students skills required by the labor market and the progress achieved in the modern life domains.
- To apply quality standards in setting exams questions.
- To participate with the curricula and study plan committees in the following issues;
  Setting the study courses on annual bases.

1. Reviewing study plans and assuring that they are meeting all elements and standards required annually by the National Commission for Academic Accreditation and Assessment (NCAAA).
2. Setting proper mechanisms for developing curricula and references.

Work Mechanism:

The committee is divided into two sections Abdyia for males and Al-Zahir for females. The committee convenes one time per month and submits its report to the department.

Committee Formation:

- The committee must include members of high qualifications and experiences.
- It must include faculty members with different specialties.

It must include a faculty member of another university (if possible).

2. Program Quality Monitoring Procedures

Stages Involved for Program Monitoring and Review

How Changes Are Proposed and Agreed
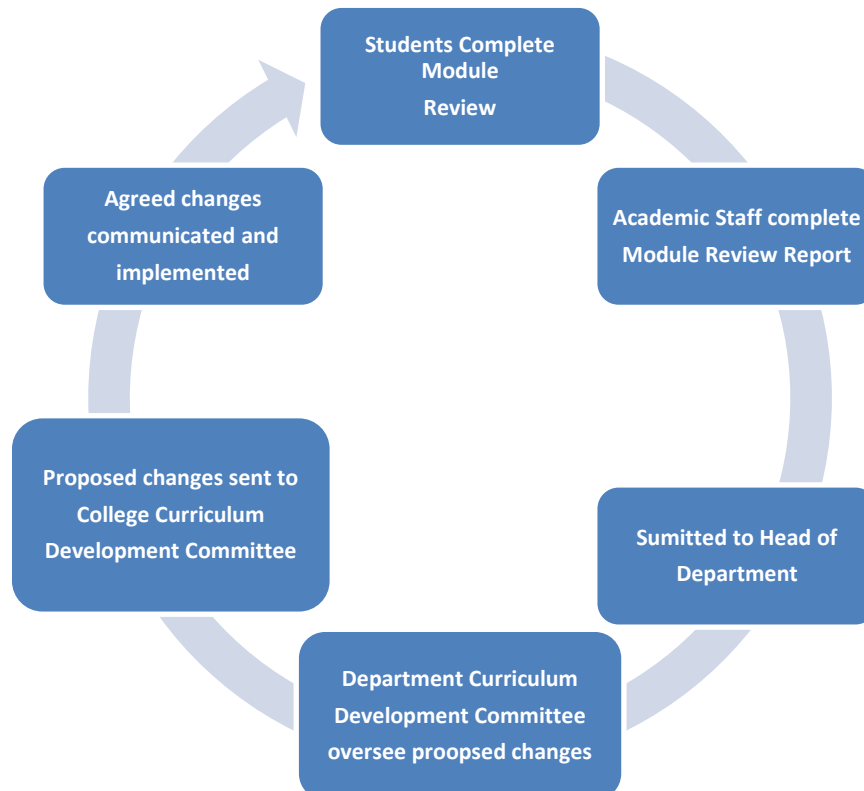
1. *Student Module Reporting (SMR)*

Module Reporting is implemented under the guidance of the Associate Dean for Quality at the end of every semester. It is a vital element of the academic review process and contributes critical information into the Annual Program Monitoring (APM). The Module Evaluation should take place after week 10 of the semester period. Its aim is to:

- Assure module learning outcomes are appropriate, achievable, accomplished and align to the program learning outcomes

- Evaluate the module including resources, comprehensible outcomes, assessment methods and teaching and learning

- Include students in the academic enhancement process has part of our inclusivity strategy

The SMR questions are agreed by academic staff and the Student Council. Under the supervision of the Associate Dean for Quality and will apply the following process:

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┌──────────────┐
│ Module Review│     ┌─────────────────────┐
│  Questions   │     │   Associate Dean    │
│   Agreed     │     └─────────────────────┘
│ by QC and SC │
└──────┬───────┘
       │  ┌──────────────┐
       └─►│Student Module│   ┌─────────────────────┐
          │   Review     │   │ Module Coordinator  │
          │  Completed   │   └─────────────────────┘
          └──────┬───────┘
                 │  ┌──────────────┐
                 └─►│   Module     │   ┌─────────────────────┐
                    │ Coordinator  │   │ Module Coordinator  │
                    │  Produces    │   └─────────────────────┘
                    │  Results     │
                    └──────┬───────┘
                           │  ┌──────────────┐
                           └─►│  Outcomes    │   ┌─────────────────────┐
                              │   Shared     │   │ Module Coordinator  │
                              │ with Students│   └─────────────────────┘
                              └──────┬───────┘
                                     │  ┌──────────────┐
                                     └─►│ Outcomes of  │  ┌────────────────┐
                                        │    CDC       │  │  HOD/Module    │
                                        │  Updated     │  │  Coordinator   │
                                        │  Module      │  └────────────────┘
                                        └──────────────┘
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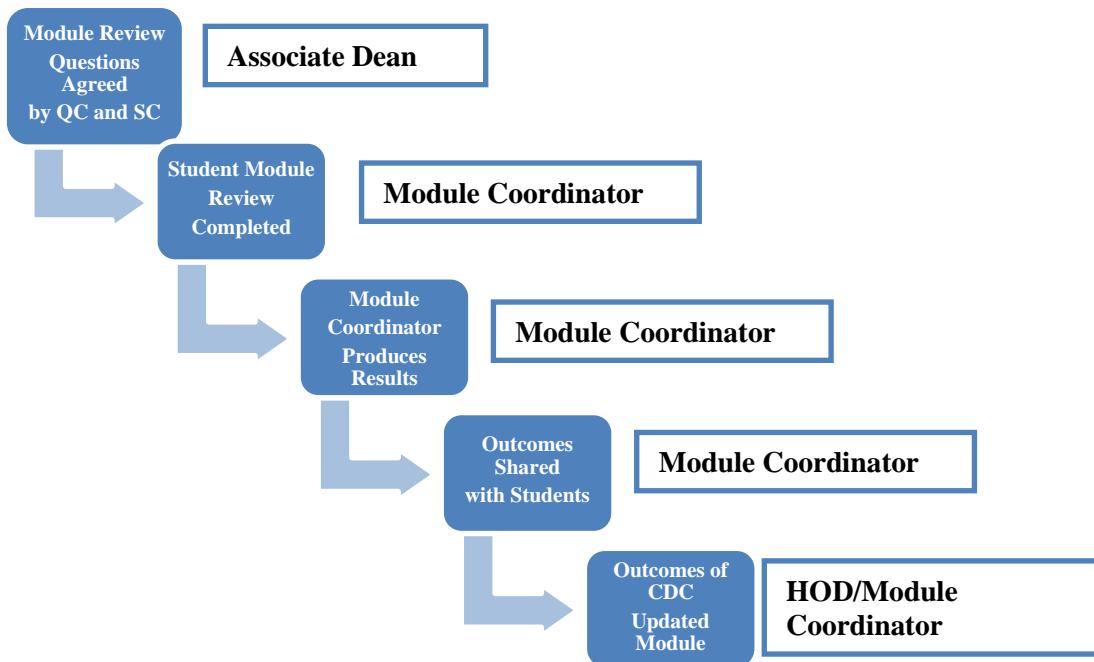
The Module Evaluation covers key teaching, learning and assessment areas including:
• Clarity of learning outcomes

• Module workload

• Balance between theory and practice

• Participation in workshop

• Teacher helpfulness and preparedness

• Teaching methodology

• Assessment approach

Once the SMR period is completed and the data anonymized, the module coordinator receives the results and must, before the end of semester, discuss the outcomes with students, including any proposed changes to the delivery or content of the module. These outcomes and any proposed changes must be recorded in the relevant Teacher Module Evaluation.

2. *Teacher Module Evaluation (TME) and Information*

The TME is a formal response to the results of the SMR and other relevant feedback and data points. At the close of each semester, academic staff must complete the Teacher Module Evaluation (TME) for the modules they have taught and, at least, include responses to:
• Student Feedback

• Student grades

• Student attendance

• Teacher feedback on module challenges

• Teacher improvement suggestions and feedback

Each module will produce up to 2 reports per year (one for each semester taught) that feed into the **Final Module Review Report.**

3. *Module Review Report (Annual)*

The Module Review Report combines the TMEs for each module and provides academic staff with an annual opportunity to compare reflect on and respond to summary feedback and data points for their taught modules. This enables academic staff to develop module change proposals that are informed by more than one delivery point and cohort.

The Module Review Report introduces evidenced change proposals to the Department Curriculum Development Committee (DCDC) for consideration informed by the requirements of the program and department.

4. *Annual Program Monitoring Report (APMR)*

The Annual Program Monitoring Report (APMR) brings together all the module reporting for each program and provides an integrated overview of the provision within each department. Produced by the DCDC, the APMR oversees the functioning of its program and their constituent modules, considers proposals for module changes, and makes recommendations and referrals to the College Curriculum Development Committee (CCDC).

Each APMR must demonstrate the analysis of and responses to relevant:

• Program-level student progress data;

• Module Review Report findings;

• External Examiner report(s);

• Student feedback, including from Student Council; and,

• Other pertinent information

From this consideration, each APMR should identify practical changes to module content and delivery; areas of strength and challenge; ongoing and emerging enhancement activities/opportunities; and, examples of good practice to recommend for consideration of and approval by CCDC.

5. *Annual Institutional Review*

The Annual Institutional Review (AIR) reports to the Colleges of Excellence and the Technical Vocational Training Cooperation on the college's entire academic provision. The AIR is informed by the inputs and outcomes of External Reviews and Factors, the judgements, approvals and further recommendations of the CCDC, and Quality Assurance and Enhancement processes.

6. *Periodic Review (PR)*

The AEC approach to the PR is guided by the QAA Quality Code and considers all internal processes that provide measurable data and outcomes. The PR is a key step in our Quality Assurance process and in the development of our programs. The PR will not just be led by the APMR but will include the AEC's corporate and strategic plans. It should reflect the college's restructuring with a focus on department utilization and program need analysis. The review will investigate the department and programs in terms of effectiveness and efficient use of AEC resources. The aims of the PR are:

• Quality Assurance and Enhancement statements, policies and college procedures are aligned to the AEC Quality Handbook and Corporate Strategies

• High quality, modern and student-centered learning opportunities are being provided to the student- body that will enable them to achieve the proposed award.

• Student engagement is embedded in all processes including the design, approval and monitoring of modules/programs.

• Student engagement underpins the college approach to enhancing the student experience and is visible in the continuous improvement cycle

The formal preparation for PR should start at the end of the first semester to ensure the evidence and data required is identified and documented. A special committee; Periodic Review Committee (PRC) should be developed that involves all college stakeholders. A preparatory meeting between Dean, Vice Dean of Academics, Associate Dean for Quality, Head of Department and representatives of the Department will agree on the programs to be covered in the review, size of panel, dates for submission of documentation and dates of the review. Each department should provide program information (Department Program Information Template) that will inform PR goals and sampling. The key performance indicators (KPI) will be established from the data trends of the APMR and each department will be expected to complete a Department Self-Evaluation FORM (DSEF) leading up to the scheduled review. Documentation that should be submitted:

• Department Program Information Template

• Program learning outcomes and specifications

• PR KPI Data

• APMR

• External Examiner Reports

• Teaching and Student Experience Reports and Enhancement Plans

• Academic Governance Structures

The PR should take no longer than 3 working days. A proposed agenda is:
• Meetings with students

• Meeting with recent graduates

• Meeting with lecturers to investigate strategic issues and department profile

• Meeting with Head of Departments/ Senior Lecturer to consider- educational aims, curriculum and subject development, quality of learning opportunities and academic standards

• Meeting with Student Affairs and Student Council regarding student support

• Meeting with Academic management regarding Programs
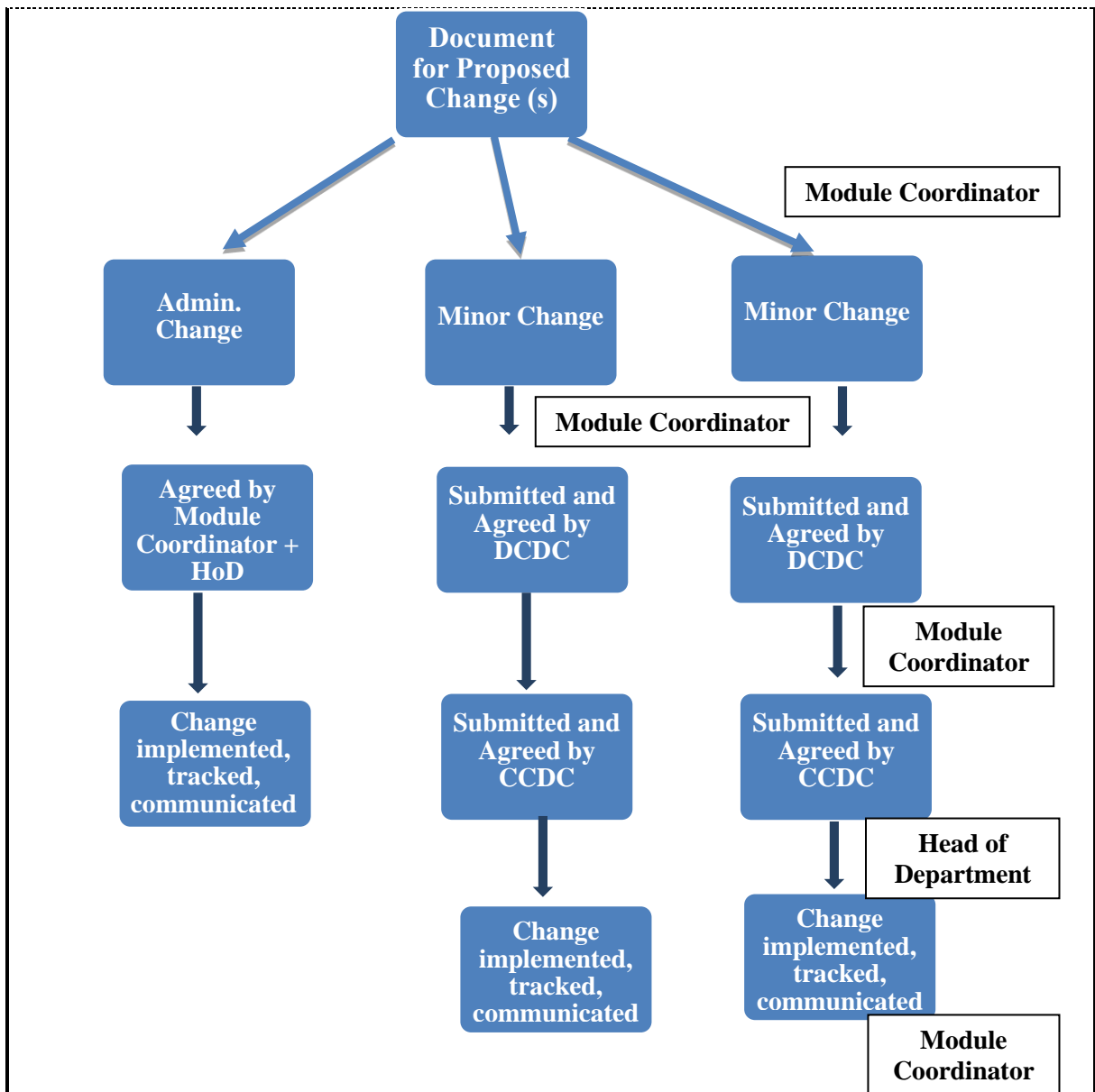
7. Module/ Program: Modification

All programs/ modules can be modified post-validation but must follow the AEC procedure and supply supportive documentation with teaching and learning evidence for the proposed modification.

Module Plan level administrative maintenance and/or adjustment by a Module Coordinator is anticipated within the teaching and learning cycle and need to be communicated to and agreed by the Head of Department. Where the Head of Department judges that the changes proposed by a Module Coordinator are beyond administrative maintenance and/or adjustment, these must then be referred to the DCDC as part of the Minor/Major Modification process as illustrated below.

For all other changes (minor and major) the person responsible (module coordinator) needs to follow the process illustrated below and submit the relevant documentation to support and evidence the proposed change.

If there are any doubts regarding the impact of minor changes on a program, then the Vice Dean of Academics should be consulted.

8. Modification Approval Process

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                      ┌─────────────┐
                      │  Document   │
                      │ for Proposed│
                      │  Change (s) │
                      └─────────────┘
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Module Coordinator

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    ┌──────────┐    ┌──────────────┐    ┌──────────────┐
    │  Admin.  │    │ Minor Change │    │ Minor Change │
    │  Change  │    │              │    │              │
    └──────────┘    └──────────────┘    └──────────────┘
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Module Coordinator

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  ┌──────────────┐  ┌──────────────┐  ┌──────────────┐
  │  Agreed by   │  │ Submitted and│  │ Submitted and│
  │   Module     │  │  Agreed by   │  │  Agreed by   │
  │ Coordinator +│  │    DCDC      │  │    DCDC      │
  │    HoD       │  │              │  │              │
  └──────────────┘  └──────────────┘  └──────────────┘
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Module Coordinator

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  ┌──────────────┐  ┌──────────────┐  ┌──────────────┐
  │   Change     │  │ Submitted and│  │ Submitted and│
  │ implemented, │  │  Agreed by   │  │  Agreed by   │
  │  tracked,    │  │    CCDC      │  │    CCDC      │
  │ communicated │  │              │  │              │
  └──────────────┘  └──────────────┘  └──────────────┘
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Head of Department

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                    ┌──────────────┐  ┌──────────────┐
                    │   Change     │  │   Change     │
                    │ implemented, │  │ implemented, │
                    │  tracked,    │  │  tracked,    │
                    │ communicated │  │ communicated │
                    └──────────────┘  └──────────────┘
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Module Coordinator

Categories of Change and Required Approval

Category	Change Frequency	Description	Initial Approval	Final Approval
Administrative Change	Semester	No impact on the LOs, pacing schedule, assessment tariff or structure/content, course description	Module Leader	Head of Department
Minor Modifications	Semester	Module change to: assessment methods, learning and teaching delivery methods, deletion of a topic (not affecting learning outcomes)	Department Development Committee (DCDC)	Curriculum Development Committee (CCDC)
Major Modifications	Every Year	All program modifications. Module changes including: changes to title; learning outcomes, module credit volume, assessment weighting, learning and teaching delivery methods; balance of theory and practice hours	Department Development Committee (DCDC)	Curriculum Development Committee (CCDC

9. Documentary requirements

All changes should be tracked and recorded through the **MODIFICATION(S) PROPOSAL EVIDENCE AND PROCESS FORM.** Also, the program specification, module profiles and the Definitive Record should be amended accordingly.

10. Program Withdrawal

If a department wished to withdraw a module or a program (permanently or temporary) then they must go through the withdrawal process and complete the required documentation (See below). In deciding to withdraw a program from the AEC program portfolio the provision of safeguarding the student experience must be paramount. The academic management must underpin their decision based on how it will impact:

- Prospective students'
- Current students
- Changes to staffing
- College's portfolio management

Foremost, it is the AEC's responsibility to communicate the proposed action with its current students at the earliest opportunity highlighting any academic and quality of learning impact. The action must have a communicated and strategic plan that will take into consideration any short-medium-long term implications that could have an impact on the student outcomes. Protecting the academic interests of our students is paramount and thus any decision to withdraw a program must go through the process below;

1. Withdrawal Proposal Submitted

Detailed reasoning for the proposed withdrawal required and submitted to the Vice Dean of Academics.

2. Impact of Withdrawal

Impact on the student experience completed including student response data with proposed outcomes submitted (Head of Department) to the Vice Dean of Academics.

3. College Decision

Proposal (1) and Impact data (2) presented to the Curriculum Development Committee for action.

4. Decision

The college decision is communicated to all stakeholders and any supportive measures implemented

The college's process is executed when the decision is internal. However, circumstances may arise when the college has no control over the closure of a program e.g. government decision. Yet, the college should still complete the same process and apply the stages where applicable

3. Arrangements to Monitor Quality of Courses Taught by other Departments.

1- Courses and programs are evaluated and reported on annually with information about the effectiveness of planned strategies and the extent to which intended learning outcomes are being achieved, evidenced by courses reports and program reports.

2- Quality indicators that include learning outcome measures are identified and used for all courses and the program as a whole.

3- Reports of the external examiners & evaluators committee and check marking committees that has been established for each course assessment referred to the consistency and compatibility of assessment methods with the learning forms used. They also indicated the ability of questions to measure all intended learning outcomes established and listed in the course specification in advance.

4- Some amendments and improvement have already occurred as a result of identifying and detecting some emerged problems.

5- Procedures are followed for ensuring the appropriateness of learning outcomes and the extent to which

they are achieved gathered from students and graduates through surveys and interviews, discussions with teaching staff, and other stakeholders such as employers. Evidences included:

- ✓ Student surveys and their opinions and satisfaction about the program.
- ✓ Graduate surveys and their opinions and satisfaction about the program.
- ✓ Employer surveys and their opinions and satisfaction about the outcomes of the program.
- ✓ Stakeholder surveys and their opinions and satisfaction about the outcomes of the program.

4. Arrangements Used to Ensure the Consistency between Main Campus and Branches
(including male and female sections)

Organizational difficulties can arise because of difficulties in communication between sections for male and female students.   Arrangements must conform to cultural norms in the Kingdom. However, these do not prevent full participation on committees and sub committees by female members of faculty and staff using appropriate means of communication.

Variations in quality can occur for a number of understandable reasons including difficulties in recruiting appropriately qualified staff, recent development of a section of a campus, or extension of a program with resources still to be fully provided. Variations such as these must be expected and will cause no difficulty in a review for accreditation provided they are recognized and acknowledged and appropriate strategies are in place to overcome the problems. The objective must be to provide services and resources of equal quality, and to achieve equal standards of learning outcomes of for all students and, if this is not the case for particular reasons on a short term basis, action must have been initiated to overcome the problems as quickly as possible.

With respect to standards required for accreditation:

Physics department with sections for male and female students is one institution and the standards apply to the institution as a whole.

A program offered in different sections for male and female students is one program and the standards apply to the program as a whole.

This does not mean that any assessment for either the institution or a program is "averaged" across the two sections. Information about quality must be collected in common form for each section in any quality report (annual report or periodic self-study), then combined into a single report that identifies any common strengths or weaknesses and any significant variations. If there are any significant variations in quality between the sections, the report should acknowledge this and include plans for responding constructively to the problems found.

The requirement to combine information from different sections means that information must be collected in similar form using comparable standards of judgment. To help ensure that this can occur, both sections should participate on steering committees and subcommittees, and be involved in planning surveys and data collection including the selection of quantifiable performance indicators

Reporting on Programs in a Program Evaluation.

Program evaluations and reports must include educational programs. They are the core function of the institution. However, the way this is done is a little different from other functions because there are other thorough processes for the evaluation of each program and each of the courses included in them.

What is needed in relation to programs in an institutional evaluation and report is an overview of all of the programs, something that is not provided for in the individual program reviews. The process is essentially one of combining certain selected information about all the programs and reporting on the overall result and significant variations from it. In situations where a number of programs are managed by departments or colleges this should be a two-stage process with combinations at college level initially, and then further consolidation for the institution as a whole.

At the initial stage as described above for institutional self-assessments, the rating scales for Learning and Teaching should be completed for all programs (though how and when this is done must be carefully considered as part of an implementation strategy). These scales might be supplemented by other information available for all programs such as program completion rates, or by student ratings of the quality of their programs. The scales can then be aggregated, (for a college, or for the institution depending on the size of the institution) and significant variations in the ratings noted. Some suggestions for combining ratings in this way are included in the section on combining assessments below.

The planning process should allow for an appropriate balance of local flexibility and overall coordination. The requirements for effective learning and the environment affecting programs, varies for different fields of study. It is entirely appropriate for colleges (and programs) to have different priorities and there should be scope in planning for these priorities to be addressed.

However, because of the importance of learning and teaching as the central task of an educational institution, it is likely that one of the major goals and strategic plans for the institution will focus on the development and improvement of programs across the institution. Annual operational plans would also normally be prepared for the institution's programs generally.

This means that, as well as providing for developments that departments and colleges require for their particular sphere of activity, there must also be scope for total institutional priorities and for policies established for programs throughout the institution. This should be done if general institutional policies are established for programs, or if any general weaknesses are found in all or most programs.

It is generally regarded as good practice for an institution to decide on certain characteristics (or attributes) of graduates that it wants to develop, and for action to be taken in all programs to develop those characteristics. For example, an institution may decide as an overall institutional policy that its graduates should be particularly skilled in information and communications technology or that they should be particularly good at applying their learning in creative problem solving. If this is done, attention should be given to these outcomes in all programs in addition to the outcomes sought in particular courses of study. Indicators of achievement relating to these special institutional student attributes should be developed and used throughout the institution.

While a lot of detail is needed for the annual reporting and planning within individual programs, this is not needed at the institutional level and would be unmanageable for an institution as a whole. Consequently, a small number of key performance indicators should be selected for reporting within the institutional monitoring process. The indicators may vary according to institutional mission and priorities, but should always include progress towards total institutional policy initiatives for programs and some general measures of quality of outcomes and processes that are directly related to them.

Some possible examples are:

- Current statistics and trends in student progression and completion rates;

- Current statistics and trends in student assessments of teaching or quality of programs;

- Data on graduate employment outcomes;

- Extent of staff involvement in professional development activities relating to teaching quality;

- Number and proportion of program reports that comply with requirements that are completed by a specified date.

The indicators selected should include the Key Performance Indicators required by the NCAAA, and also others needed for the institution's own policy objectives and quality improvement strategies.

5. Arrangements to Apply the Institutional Regulations Governing the Educational and Research Partnerships (if any).

There are no partnerships arrangements have been established with other institution to assist with the planning and or delivery of the program at the Department:

✓ Teaching staff in physics department do not visit and participate other physics departments regularly to consult on the details of courses and evaluation criteria and there is no discussion and courses requirements.

✓ There are no arrangements for the correct work of the students include students from the other departments involved in accreditation or by local departments. There is no specify clearly the responsibilities of local departments and responsibilities organization participating in formal agreements governed by the laws of the Kingdom of Saudi Arabic.

In order to activate this, it must do the following:

1. Official twinning agreements, cooperation and participation at the local and international department of physics that applicable laws of Saudi Arabia with identifying the responsibilities of the parties involved.

2. Follow-up on twinning and cooperation activities and participate regularly.

3. Discussion and consultation on courses and requirements effectively and make arrangements for consultation about the developments.

4. The members staff, who have knowledge of the specific level of courses, should be visit regularly the other departments to consult on the details of courses and evaluation criteria.

5. Arrangements include correcting the students by participating departments in addition to corrected in the departments, so the final results is completed without delay and results will be available to students in the early time of the completion of the students requirements

6. If the program is provided by the departments of physics from outside the university, it must make sure that the courses, assignments and exams are amended to conform to the local environment and avoid using slang terms using as examples to illustrations that not match with the environment in which the program is offered.

7. Work programs and courses are compatible with the requirements of the qualifications framework of Saudi Arabia

6. Assessment Plan for Program Learning Outcomes (PLOs), and Mechanisms of Using its Results in the Development Processes

Umm Al-Qura University follows a best practice model of learning outcomes assessment. At the most basic level this is represented as *Assess-Analyze-Act* which includes an annual planning and reporting mechanism (see Figure). This annual assessment model is aligned with the expectations

Assessment Model
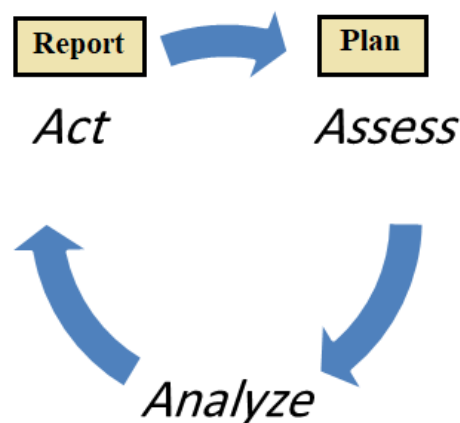
of the major international accreditors

➢ The program must regularly use appropriate, documented processes for assessing and evaluating the extent to which student outcomes are being attained. The results of these evaluations must be systematically utilized as input for the continuous improvement of the program

➢ The university uses well-documented, systematic processes for determining and revising degree program learning goals; designing, delivering, and improving degree program curricula to achieve learning goals; and demonstrating that degree program learning goals have been met.

> ➢ The unit regularly assesses student learning and uses results to improve curriculum and instruction…. Assessment is a focused and deliberate process to learn if students are learning what a unit expects them to learn and to improve the quality of the program overall.

7. Program Evaluation Matrix

Evaluation Areas/Aspects	Evaluation Sources/References	Evaluation Methods	Evaluation Time
Leadership	Student, Faculty	Questionnaire and Interview	Annual
Effectiveness of teaching and assessment	Student, Graduates, Alumni, Faculty, Program Leaders	Questionnaire and Interview	At the end of the semester
Learning resource	Students, Graduates, Alumni, Faculty, Program Leaders,	Questionnaire and Interview	At the beginning of each term
Partnership	Alumni, Employers, Independent Reviewers	Questionnaire and Interview	end of academic year

Evaluation Areas/Aspects (e.g., leadership, effectiveness of teaching & assessment, learning resources, partnerships, etc.)
Evaluation Sources (students, graduates, alumni, faculty, program leaders, administrative staff, employers, independent reviewers, and others (specify)
Evaluation Methods (e.g., Surveys, interviews, visits, etc.)
Evaluation Time (e.g., beginning of semesters, end of academic year, etc.)

8. Program KPIs*

The period to achieve the target (.........) year.

No	KPIs Code	KPIs	Target	Measurement Methods	Measurement Time
1	**KPI-P-01**				
2	**KPI-P-02**	50%	60 %	Student questionnaire	411
3	**KPI-P-03**	76%	85 %	Student questionnaire	411
4	**KPI-P-04**	30 %	60 %	Database	411
5	**KPI-P-05**	N/A	-	-	411
6	**KPI-P-06**	N/A	-	-	411
7	**KPI-P-07**	36.3%	60 %	Student questionnaire	411
8	**KPI-P-08**	33%	60 %	Database	411
9	**KPI-P-09**	N/A	**-**		411

* including KPIs required by NCAAA

I. Specification Approval Data

Council / Committee	
Reference No.	
Date	