هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

اعتماد NCAAA
T14

Program Specifications
(Postgraduate Degree)

Program Name: MASTER OF SCIENCE (M.Sc.) IN PHYSICS
Qualification Level: 7
Department: Physics
College: Science
Institution: Imam Mohammad Ibn Saud Islamic University (IMSIU)

Content

A. Program Identification and General Information

1. Program Main Location:

Main campus for the Male (Boys) Section.

2. Branches Offering the Program:

Branch 1: King Abdullah City for the Female (Girls) Section.

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

- Fulfill the growing demand for teachers and researchers in physics;
- Response to the industry's needs;
- Contribute to the development of the kingdom of Saudi Arabia in different fields;
- Utilize a local graduate studies in physics for students, especially females, whose for social or other reasons can't seek their graduate study outside the country;
- Graduates are expected to be proficient in different fields of physics and so they become qualified to pursue their postgraduate study in various disciplines.

4. System of Study

☐ Coursework & Thesis ■ Coursework

5. Mode of Study

■ On Campus ☐ Distance Education ☐ Others

6. Educational and Research Partnerships (if any) None.

- Partnership Arrangement:
- Type of Partnership:
- Duration of Partnership:

7. Total Credit Hours for Completing the Program: (51 Credit Hours)

8. Learning Hours: (150 Self-study Hours)
The time that a learner takes to complete learning activities that lead to achievement of program learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times)

9. Professional Occupations/Jobs:

N.	Occupation name	Occupation code
1	Physicist	211101
2	Geophysicist	211402
3	Teaching Methods Specialist	235101
4	Quality Specifications and Metrics Specialist	242122
5	Astronomer	211102
6	Educational Supervision Manager	134511
7	Meteorologist	211201

8	Weather Forecasting and Environmental Monitoring Station	134906
9	Measurement and Evaluation Specialist	235105

10. Major Tracks/Pathways (if any)**:** N.A.

Major Track/Pathway	Credit Hours (For each track)	Professional Occupations/Jobs (For each track)

11. Intermediate Exit Points/Awarded Degree (if any)**:** High diploma of Science in Physics: 30 Credit Hours.

Diploma Learning Outcomes:

Knowledge:

K1. Recognize an advanced and specialized structure of knowledge that includes theories, principles and concepts in the areas of physics.

Skills:

S.. Apply the advanced concepts, principles and theories involved in addressing issues and problems in a range of different contexts.

S.2. Evaluate knowledge and use it to provide innovative solutions to contemporary issues and problems in physics.

Values:

V.1 Demonstrate integrity, professional and academic ethics, participation in finding constructive solutions to some societal issues, and a commitment to responsible citizenship.

V2. Self-evaluate of the level of learning and performance, insist on achievement and excellence, and make logical decisions supported by evidence and arguments independently.

V3. Choose and use a variety of digital technology, information, communication technology tools, to process, analyze and produce data and information; to support and promote specialized research and projects.

B. Mission, Goals, and Learning Outcomes

1. Program Mission:

To provide the students with a quality higher education in physics and serve the community through research, teaching, and outreach.

2. Program Goals:

- Advanced knowledge and skills to teach and practice different fields of physics.
- Enhance the ability of the graduates to become independent learners and conduct independent research in physics.
- A solid foundation for Ph.D. studies, continuing education, and life-long professional development in physics and related fields, which contributes to economic and social development.

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

- The program contributes to implementing the mission of the university by the formation of well qualified graduates in physics;
- The program prepares students for several professions including teaching, postgraduate studies, research and various industrial positions.

4. Graduate Attributes:

- Having a deep knowledge and skills in different fields of physics.
- Experienced in doing scientific research.
- Having the ability to continue graduate studies in the Ph.D. at national or international universities.

5.Program Learning Outcomes*	
Knowledge:	
K1	Recognize an advanced and specialized structure of knowledge that includes theories, principles and concepts in the areas of physics.
K2	Describe applications of advanced laboratory techniques, numerical techniques and physics development in industry.
K3	Outline methods that lead students to make research and development.
Skills	
S1	Apply the advanced concepts, principles and theories involved in addressing issues and problems in a range of different contexts.
S2	Evaluate knowledge and use it to provide innovative solutions to contemporary issues and problems in physics.
S3	Communicate in different ways demonstrating an understanding of theoretical knowledge, transferring knowledge and specialized skills, and sharing ideas within a variety of audience.
S4	Choose and use a variety of digital technology, information, communication technology tools, to process, analyze and produce data and information; to support and promote specialized research and projects.
Values	
V1	Demonstrate integrity, professional and academic ethics, participation in finding constructive solutions to some societal issues, and a commitment to responsible citizenship.
V2	Self-evaluate of the level of learning and performance, insist on achievement and excellence, and make logical decisions supported by evidence and arguments independently.
V3	Lead teamwork with functional flexibility and effectiveness, and take responsibility for professional development, participating in developing the group's performance, and enhancing the quality of life.

* Add a table for each track or Exit Points/Awarded Degree (if any)

C. Curriculum

1. Study Plan Structure

Program Structure		No. of Courses	Credit Hours	Percentage
Course	Required	**7**	**35**	**69%**
	Elective	**3**	**12**	**23**
Graduation Project (if any)		**1**	**4**	**8%**
Thesis (if any)		**N.A.**		
Field Experience (if any)		**N.A.**		
Others (.....)		**N.A.**		
Total		**11**	**51**	**100%**

* Add a table for each track (if any)

2. Program Courses:

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours
Level 1	**PHY 6101**	**Classical Mechanics**	**Required**	**None**	**5**
	PHY 6131	**Mathematical Methods in Physics**	**Required**	**None**	**5**
Level 2	**PHY 6121**	**Classical Electrodynamics**	**Required**	**None**	**5**
	PHY 6111	**Quantum Mechanics**	**Required**	**None**	**5**
Level 3	**PHY 6161**	**Advanced Solid-State Physics**	**Required**	**None**	**5**

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours
	PHY 6171	Advanced Nuclear Physics	Required	None	5
Level 4	PHY 6251	Advanced Statistical Mechanics	Required	None	5
	PHY 62xx	Elective Course (1)	Elective	None	4
Level 5	PHY 62xx	Elective Course (2)	Elective	None	4
	PHY 62xx	Elective Course (3)	Elective	None	4
Level 6	PHY 6299	Research Project	Required	None	4

Elective course:

PHY 6233: Modeling and Simulation in Physics.
PHY 6235: Symmetry in Physics.
PHY 6241: Selected Topics in Physics (1).
PHY 6242: Selected Topics in Physics (2).
PHY 6263: Physics of Semiconductors and Devices.
PHY 6265: Nanophysics and Technology.
PHY 6267: Physics of Low-Dimensional Systems.
PHY 6273: Radiation Detection and Measurements.
PHY 6275: Radiological Mathematics.
PHY 6277: Radiation Protection and Dosimetry.
PHY 6281: Synthesis and Characterization Techniques.
PHY 6283: Experimental Methods in Radiation Physics.

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

3. Course Specifications

https://drive.google.com/drive/folders/1_ncbeDQX7A3YB6V2k5W5EnriowoBQ40u?usp=share_link

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			Skills				Competence		
	K.1	K.2	K.3	S.1	S.2	S.3	S.4	v.1	v.2	v.3
PHY 6101	I	I	I	I	I	I	I	I	I	I
PHY 6131	I	I	I	I	I	I	I	I	I	I
PHY 6121	I	I	I	I	I	I	I	I	I	I
PHY 6111	I	I	I	I	I	I	I	I	I	I
PHY 6161	I	I	I	I	I	I	I	I	I	I
PHY 6171	I	I	I	I	I	I	I	I	I	I
PHY 6251	I	I	I	I	I	I	I	I	I	I
PHY 6263	P	P	P	P	P	P	P	P	P	P
PHY 6265	P	P	P	P	P	P	P	P	P	P
PHY 6267	P	P	P	P	P	P	P	P	P	P
PHY 6281	P	P	P	P	P	P	P	P	P	P
PHY 6283	P	P	P	P	P	P	P	P	P	P
PHY 6241	P	P	P	P	P	P	P	P	P	P
PHY 6233	P	P	P	P	P	P	P	P	P	P
PHY 6235	M	M	M	P	P	P	P	M	P	P
PHY 6273	M	M	M	P	P	P	P	M	P	P
PHY 6275	M	M	M	P	P	P	P	M	P	P

Course code & No.	Program Learning Outcomes									
	Knowledge			Skills				Competence		
	K.1	K.2	K.3	S.1	S.2	S.3	S.4	v.1	v.2	v.3
PHY 6277	M	M	M	P	P	P	P	M	P	P
PHY 6242	M	M	M	P	P	P	P	M	P	P
PHY 6299	M	M	M	M	M	M	M	M	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.

The department ensures teaching quality standards through the following actions:

- At the beginning of each semester the syllabi, are given to the students, containing courses detailed information, method of evaluation and grades, etc.
- The courses distribution is done according to the specialities of faculty staff and their wishes.
- At the beginning of each semester two coordinators are nominated for each course, one in Female Branch and the other in Male Brach one, who are asked to communicate and coordinate between them.
- The duties of the course coordinator consist on:
  - Distribution of time according to the course contents.
  - The preparation of the exercises lists, the midterms and the final exam.
- The follow-up of good progress of the course in all the sections through the periodic meetings with course teachers and report.
- The evaluation of the teaching quality and benchmarking between parallel sections (groups) and the sections of the previous session of the same course.
- Collect the course report.
- Update the course folder.
- Annual report is prepared annually.
- Student surveys of all courses and program.
- Teaching staff evaluations of the program.
- Annual Faculty and Staff performance evaluation.

Supports for student independent work:

There are many supports for the independent scientific work of the students and here are some of them:

1) Open Computer Labs: The students can use these facilities to review independently a part of a course, to prepare a home work or an exam, or to access the (local) digital library;
2) Provided free textbooks: The students can use textbooks to prepare independently exercises for the tutorial or to review examples of the course;
3) Digital library via open computer labs: The students can access the (local) digital library to get free papers and theses. They read independently these resources and write reports on them;
4) Materials provided via Google classrooms: The teachers use Google classrooms to give students all kinds of materials related to the courses: syllabi, slides, list of exercises, solutions to exams and home works, etc… These materials can be used independently by students for a best management of the course;

5) At least six office hours provided by each teacher: Each teacher has to choose in his timetable at least six office hours in order to discuss all course issues with students;
6) Research project course. During this course, students have to work independently in order to write a report and to give an oral presentation at the end of the course;
7) Mini-projects and/or home works in some courses: The main goal of these assessment methods is to strength the independence work of students.

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.

Direct Assessment Methods:

- National or regional exam results (developed outside the institution for use by a wide group of students using national or regional norms).
- Capstone Project or Course.
- Entrance/Exit Interviews/exams.
- Performance (participation in campus and/or community events, volunteer work, presentations, internships, art performances, etc).
- Course e-Portfolio.

Indirect Assessment Methods:

- Alumni Survey.
- Course Evaluation Survey.
- Employer/industry Survey.
- Program Advisory Committee minutes.
- Teaching staff surveys on the program.
- Observations (Information can be collected while observing "events" such as classes, social gatherings, activities, group work, study sessions, etc. Observation can provide information on student behaviors and attitudes).
- Syllabus Review.
- Second Examiner checklist (to improve it so that to include: course learning outcomes).
- Course report.
- External assessor report.
- Accreditation review.

D. Thesis and Its Requirements (if any) N.A.

1. Registration of the thesis:

(Requirements/conditions and procedures for registration of the thesis as well as controls, responsibilities and procedures of scientific guidance)

2. Scientific Supervision:

(The regulations of the selection of the scientific supervisor and his/her responsibilities, as well as the procedures/ mechanisms of the scientific supervision and follow-up)

3.Thesis Defense/Examination:

(The regulations for selection of the defense/examination committee and the requirements to proceed for thesis defense, the procedures for defense and approval of the thesis, and criteria for evaluation of the thesis)

E. Student Admission and Support:

1. Student Admission and Transfer Requirements, and Courses Equivalency

In addition to the conditions mentioned in article (13) of the UGSP, applicants to the Master Program should fulfill the followings:

- The applicant should have a B.Sc. degree in physics from a national university or a recognized international university with a GPA equals or equivalent to 3.75 out of 5.
- The applicant should pass the entry exam set by the Physics Graduate Committee (PGC).
- The applicant should get a TOEFL score at least 400 or equivalent scores in other recognized international English test.
- An applicant who was admitted for this program with his/her B.Sc. in physics from a college other than the College of Science may be required to finish successfully some complementary undergraduate courses before registering any course of the master program.
- The complementary undergraduate courses mentioned in (d) are determined for each student by the PGC and should be taken within two academic semesters from his/her enrolment in the program and being dealt on that according to article (18) of the UGSP.
- Students who are enrolled in another recognized physics master program having at least a GPA equal or equivalent to 3.75 out of 5 may be transferred to the program upon establishing all related conditions mentioned above and upon fulfilling the requirements mentioned in article (30) of the UGSP.
- Applicants who got a B.Sc. in a scientific major other than physics will be dealt case by case and an appropriate decision for them will be made by the PGC.
- Students who are enrolled in another graduate program in Al Imam University or in another recognized master program other than physics will be dealt case by case and an appropriate decision for them will be made by PGC according to article (31) of the UGSP.

2. Student Counseling Services

(academic, career, psychological and social)

- Course handbook;
- Departmental web site (www.imamm.org) with details of all degree programs, lecture courses, laboratory work and projects, as well as staff contact details and other information;
- Web site providing electronic resources including lecture course handouts, problem sheets and solutions, discussion forums and online quizzes;
- Induction talks and meetings in the first week;
- Occasional meetings about course structure, option choices etc spread throughout the program;
- Seminars in each course to develop presentation skills;
- The health centre and student counselors available on site;
- Academic committee and coordinator;
- 'Office Hours' when course lecturers are available for consultation;
- Computers with access to Blackboard, email, the world-wide web and other software;
- Facilities for scanning, photocopying and printing;
- A central library containing multiple copies of all course texts and giving access to a wide range of electronic resources;

- Study areas and a room containing copies of text books within the department;
- A student common room area with drinks and nibbles available;
- A staff/student committee meeting monthly during term;
- A departmental career officer and a College career service;
- Well-equipped postgraduate laboratories with demonstrator support and staffed by technicians;
- The teaching program is informed through departmental links with industry and government laboratories, individuals' contacts with industry and departmental spin-off companies.
- In the second year, the student should take the Research Project course (PHY 699) and chooses a research supervisor who will assist and guide him (her) in the compulsory research project;
- The departmental advisor can provide information, advice and support in relation to accommodation, emotional difficulties, assessment of needs and provision of support related to disability, student funding, general welfare, student discipline and complains and part-time work.

3. Support for Special Need Students
(low achievers, disabled, gifted and talented)

Students with special needs or disabilities may be allowed to take only two courses instead of three in a semester upon the consent of the PGC.

F. 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			8	0	8
Associate Professors	Physics			6	1	7
Assistant Professors	Physics			10	8	18
Technicians and Laboratory Assistants						
Administrative and Supportive Staff				1	1	2
Others (specify)						

2. Professional Development

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

- Equipping new faculty members with the knowledge and skills that they will need in their first semester in order to progress toward types of objectives, targeted skills, assessment methods, nature of research, role of funding and graduate students etc...

- Explaining to the new, visiting or part time teaching staff how to design, and deliver a course and assess the learning outcomes.
- Explaining to the new, visiting or part time teaching staff the nature of the university environment and constraints.

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.)

- Teaching staff attend conferences, workshops and training to enhance their knowledge of research in their field of teaching and management.
- Teaching staff members are encouraged to reflect on their teaching and research, in order to develop innovative teaching methods and knowledge of research.
- Training Courses in various aspects of academic development are conducted frequently throughout the academic year.
- Consultation and coordination in teaching are conducted throughout the academic year among the faculty members teaching the same courses;
- Funds for scientific research are selectively provided by the university and other institutions.

G. Learning Resources, Facilities, and Equipment

1. Learning Resources.

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

STEP 1: For each course the PGC assigned a faculty members committee to do the followings:

- Course description (preliminary syllabus),
- Recommend Lists of Required Textbooks, Essential References Materials (Journals, Reports, etc.), Recommended Textbooks and Reference Material (Journals, Reports, etc.), Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.), and other learning material such as computer-based programs/CD, professional standards or regulations and software.
- STEP 2: PGC collects learning resources of all courses and submits the required lists to the Head of the department to get the approbation of the department council.
- STEP 3: After the department council approbation the Department Head asks the College Dean to provide the Required lists of Learning Resources through the University Central Library and/or the IT Deanship.

2. Facilities and Equipment

Policies and Procedure for providing and quality assurance of Facilities and Equipment (Library, laboratories, medical facilities, classrooms, etc.).

For the planning and acquisition resources for library, laboratories, and classrooms the PGC proceeds as follows:

- STEP 1: Evaluation of the locals assigned for graduated programs: Library (equipped with textbooks and references provided by the Central Library), Laboratories (equipped with appropriate computers and software), and classrooms.
- STEP 2: In the shortage case of supplies the PGC will report that to the Department Head in order to ask the College Dean to provide such supplies through the University Central Library and/or the IT Deanship.

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

N.A.

H. Program Management and Regulations

1. Program Management

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

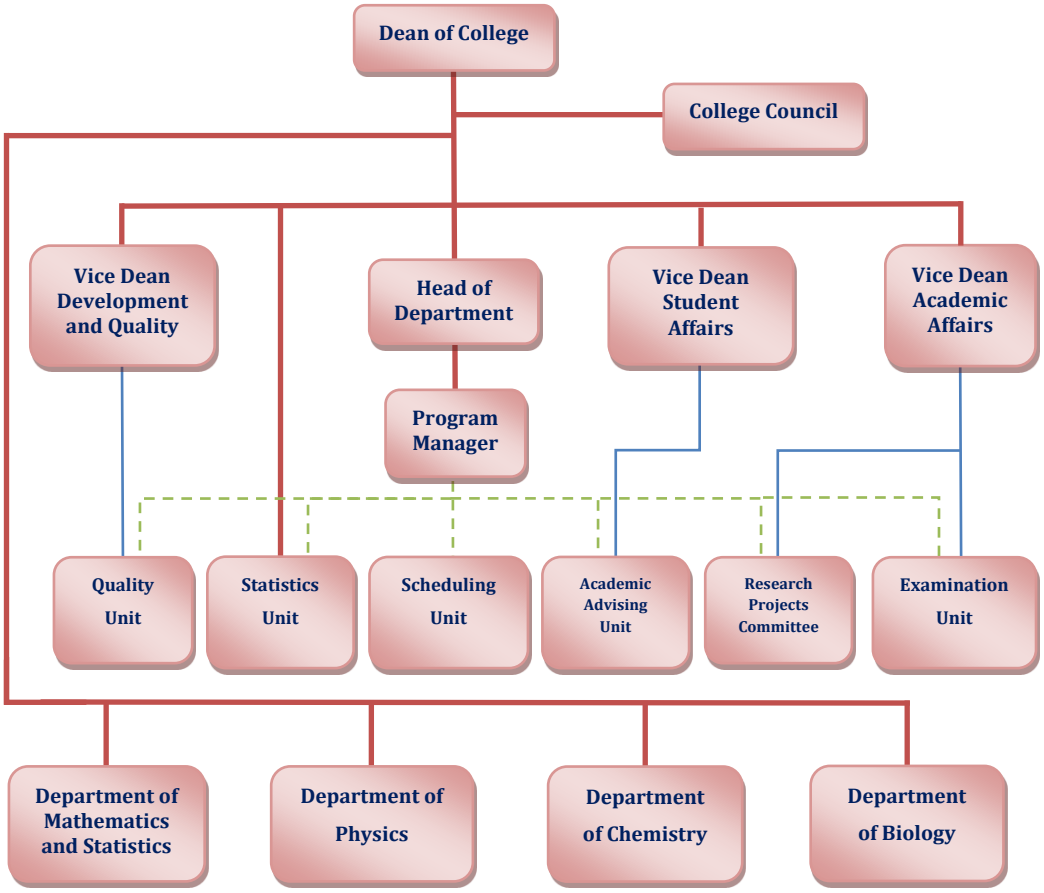

Figure 1 - Program administrative flowchart

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.)

- The department of Physics has an Advisory Board who helps it to improve and develop the program. In this Advisory Board, there are representatives of faculty, employers, graduates and current students.
- Questionnaire of the graduated student employers of the program.

2. Program Regulations

Provide a list of related program regulations, including their link to online version: admission, study and exams, recruitment, appeals and complaint regulations, etc.)

Same regulations as for the university higher studies procedures in addition of some regulations mentioned in students' rubric.

I. Program Quality Assurance

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

First Link

Second Link

Program review and its development is periodically assessed through the following processes:

- Courses reports are submitted to the program manager every semester.
- Appropriate teaching staff committee is in the charge of assessment and modification.
- Prepare and monitor the annual program report.
- Conduct and analyze surveys opinion of the students about the courses and the program.
- Conduct and analyze surveys opinion of the employers about the program.
- Program manager reviews the proposals submitted by the previous committees and makes appropriate decision after approbation of the department council.
- Monitor a global review for the development of the program periodically each five years if necessary.

All the previous processes follow the Teaching\Learning Quality Assurance Process Diagram:

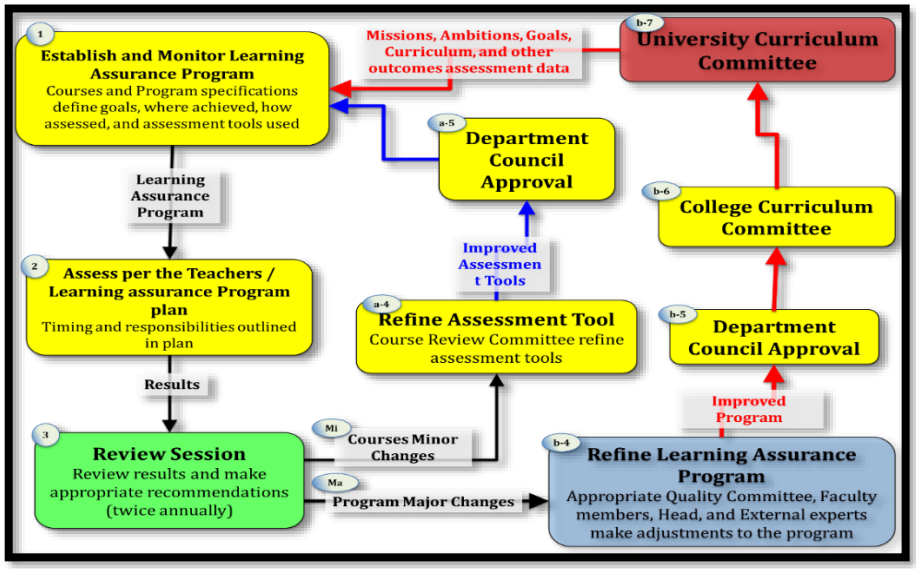

Figure 2 - Teaching\Learning Quality Assurance Process Diagram

2. Program Quality Monitoring Procedures

- At the end of each semester the course instructor should complete a course report, including a summary of student questionnaire responses appraising progress and identifying changes (course contents and/or textbooks and/or references) that need to be made if necessary. In the case where changes are recommended the course responsible reports that to the Department Head in order to take actions.
- Students are asked at the end of this course to fill in an anonymous questionnaire on their assessment of the course. The forms will be analyzed, and the summary of results will be reported to the Department Head for evaluation and then to take actions.

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

N.A.

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

- The students of both campuses are taught at the same time, in the same section, and by the same teacher.
- Furthermore, they have the same exams, homeworks, and required reports.

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

N.A.

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

1. Program Goals.
2. Program Learning Outcomes (PLOs).
3. Program Goals and PLOs.
4. Brief Description of PLOs Assessment:

- **The learning outcomes of the Physics program have been formulated according to the national qualifications framework (NQF) and are recorded in the program specification. Moreover, each course has its own learning outcomes that are recorded in the course specification and related to the learning outcomes of the program.**
- **The learning outcomes are mentioned in the courses and program specifications which are available for students and beneficiaries**

Mechanism for the measure of the learning outcomes and improvement plans:

- **Course folder:**
- **Through the study of the learning outcomes matrix which is stated in the program specification. A model has been selected from the courses learning outcomes which are greatly serving the program plan.**
- **The exams models and learning outcomes have been reviewed for those courses existing in the course and program specification.**
- **Advisory committee report:**

  The remarks and comments from the committee were considered and discussed in the Department council (the minute of the committee and Department).
- **Annual Report:**
- **The learning outcomes were measured through the main KPIs that were approved from the college council. Annually, the results are documented with the improvement plans within the annual report and taking into consideration the available feedback through the following items:**
- **Course report.**
- **Student's feedbacks.**
- **Students' questionnaire.**
- **Employers' feedbacks.**
- **External assessor for the program and the exams.**
- **The minutes of the advisory committee.**
- **Besides, all of these points were discussed in the Department councils and improvements plans were suggested and applied.**
- **External Assessor:**

  All remarks and comments were replied and a report were sent to the head of the Department and discussed in the department council (report of the external assessor, department council minutes and the replies).
- **Evidences:**
- **Courses reports.**
- **Feedbacks from the courses reports.**

- **External assessor reports for the program and exams.**
- **The advisory committee minutes.**
- **Department council minutes (Laboratories improvement mechanism).**
- **Department council minutes (discussion of the annual report).**
- **Department council minutes (external assessor).**
- **Department council minutes (final year projects).**
- **The external assessor report.**
- **The reply on the external assessor report.**
- **The analysis of the student questionnaires about the courses.**
- **Annual report.**
- **The summary of the program annual report.**
- **The results of the student's questionnaires.**
- **The results of the graduate's questionnaires.**
- **The results of the employer's questionnaires.**

5. PLOs Assessment Results.
6. Recommendation for Improvement (from the Annual Program Report).

7. Evaluation of Program Quality Matrix

Evaluation Areas/Aspects	Evaluation Sources/References	Evaluation Methods	Evaluation Time
Leadership	Dean	Evaluation report	End of academic year
Effectiveness of teaching & assessment	Program leader, faculty, independent reviewers, students	Surveys, interviews, visits	End of the semester, during the semester
Learning resources	Employers, faculty, graduates, students	Surveys, interviews	end of the semester, during the semester

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-PG-1	Percentage of achieved indicators of the program operational plan objectives	90%	Surveys, Department data	Yearly starting from the first promotion
2	KPI-PG-2	Students' Evaluation of quality of learning experience in the program	4.50	surveys	Twice per year
3	KPI- PG-3	Students' evaluation of the quality of the courses	4.50	surveys	Twice per year
4	KPI-PG-4	Students' evaluation of the quality of scientific supervision	4.80	surveys	Yearly starting from the first promotion
5	KPI-PG-5	Average time for students' graduation	3 years	Graduation data	Yearly starting from the first promotion
6	KPI-PG-6	Rate of students dropping out of the program	0.5	Graduation data	Yearly starting from the first promotion
7	KPI-PG-7	Graduates' employability	90%	Graduation Unit	Yearly starting from the first promotion
8	KPI-PG-8	Employers' evaluation of the program graduates' competency	-	surveys	Yearly starting from the first promotion
9	KPI-PG-9	Students' satisfaction with the provided services	4.50	surveys	Yearly
10	KPI-PG-10	Ratio of students to faculty members	15.1	Department data	Yearly
11	KPI-PG-11	Percentage of faculty members' distribution based on academic ranking	-	Department data	Yearly
12	KPI-PG-12	Proportion of faculty members leaving the program	0	Department data	Yearly
13	KPI-PG-13	Satisfaction of beneficiaries with learning resources	4.50	surveys	Yearly
14	KPI-PG-14	Satisfaction of beneficiaries with research facilities and equipment	4.00	surveys	Yearly
15	KPI-PG-15	Percentage of publications of faculty members	85%	Department data	Yearly
16	KPI-PG-16	Rate of published research per faculty member	2.00-4.00	Department data	Yearly
17	KPI-PG-17	Citations rate in refereed journals per faculty member	50	Department data	Yearly
18	KPI-PG-18	Percentage of students' publication	40%	Department data	Yearly starting from the first promotion
19	KPI-PG-19	Number of patents, innovative products, and awards of excellence	1.00	Department data	Yearly

* including KPIs required by NCAAA

j. Specification Approval Authority

Council / Committee	Quality Unit-Physics Department
Reference No.	Department council No. 11
Date	16/11/2022