Kingdom of Saudi Arabia

The National Commission for Academic Accreditation & Assessment

Physics Program Specifications

(PPS)

PHYSICS DEPARTMENT

ZULFI COLLEGE OF SCIENCE

MAJMAAH UNIVERSITY

1434 - 1435 H

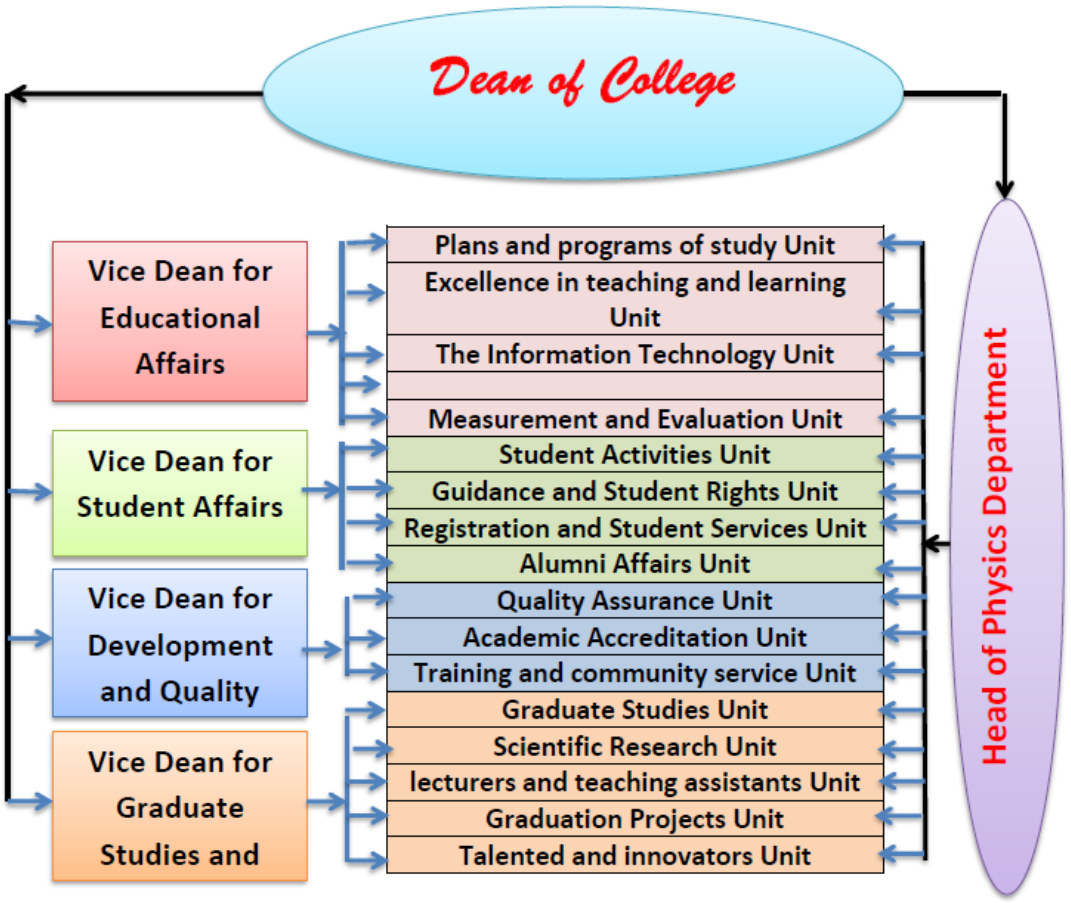
2013 - 2014 M

National Commission for Academic Accreditation & Assessment

Program Specifications

For guidance on the completion of this template, please refer to NCAAA guidebooks.

1. Institution Majmaah university Date of Report 15/6/1435
2. College/Department Zulfi College of Science // Physics Department
3. Dean Dr. Mohamed Al- Aboodi
4. Insert program administrative flow chart



5. List all branches/locations offering this program

Branch/Location 1.

B. Sc. in Physics

Branch/Location 2.

_____

Branch/Location 3.

_____

Branch/Location 4.

_____

A. Program Identification and General Information

1. Program title and code	**Bachelor of Science in Physics (PHYS)**
2. Total credit hours needed for completion of the program	**137 units divided to 8 study levels**
3. Award granted on completion of the program	**B. Sc. in Physics**
4. Major tracks/pathways or specializations within the program (eg. transportation or structural engineering within a civil engineering program or counselling or school psychology within a psychology program)	**Physics**
5. Intermediate Exit Points and Awards (if any) (eg. associate degree within a bachelor degree program)	N**. A.**

6. Professional occupations (licensed occupations, if any) for which graduates are prepared. (If there is an early exit point from the program (eg. diploma or associate degree) include professions or occupations at each exit point)

1- Continue higher educations in physics and obtain their PhD.
2- Work in research centers and universities.
3- Work in the public and private sectors of education.
4- Work in medical laboratories, running machines, recycling its wastes.
5- Work in the industry sector.
6- Work in power stations.
7- Work at water stations, petrol ministry, and geology.
8-Work as a research assistant in king Abdul-Aziz city for science and technology.
9- Work in specialized research centres, quality control labs. and standards and measurements bureau.
10- Work in health ministry, as in hospitals. Specialized

7. (a) New Program	No	Planned starting date	
(b) Continuing Program	Yes	Year of most recent major program review	1433

Organization involved in recent major review (eg. internal within the institution,
Committee of study plans at the university

Accreditation review by __ **Internally in the college** Other_____?

8. Name of program coordinator or chair. If a program coordinator or chair has been appointed for the female section as well as the male section, include names of both.
Dr.Thamer Al-Harbi (Head of department)

9. Date of approval by the authorized body (MoHE for private institutions and Council of Higher Education for public institutions).

Campus Branch/Location	Approval By	Date
Main Campus:		
1: Zulfi College of Science	Ministry of Higher Education, KSA	**The program was introduced in 1426 H- 2007 G.**
2:		
3:		
4:		

B. Program Context

1. Explain why the program was established.

a. Summarize economic reasons, social or cultural reasons, technological developments, national policy developments or other reasons.

The urgent need of the market to employ graduates from this department in the educational and Higher Educational

b. Explain the relevance of the program to the mission and goals of the institution.

Keen of local community on the culture of university education

2. Relationship (if any) to other programs offered by the institution/college/department.

a. Does this program offer courses that students in other programs are required to take?

Yes [√]

No [ ]

If yes, what has been done to make sure those courses meet the needs of students in the other programs?

General Physics 2 (Phys217) for computer Science program

b. Does the program require students to take courses taught by other departments?

Yes [√]

No [ ]

If yes, what has been done to make sure those courses in other departments meet the needs of students in this program?

Calculus 1 (MAT 201), Calculus 2 (MATH 202), Differential equation (MATH 310) and Partial differential equations (MATH 324) are needed from Mathematic Department

3. Do students who are likely to be enrolled in the program have any special needs or characteristics? (eg. Part time evening students, physical and academic disabilities, limited IT or language skills).

Yes [√] **No** [ ]

1- Minimum mathematical and physical skills.

2- Linguistic skills in both Arabic and English.

3- Some computer skills.

4. What modifications or services are you providing for special needs applicants?

Students are directed to take some pre-requisite courses by studying the first two semesters that contain all basic courses needed.

C. Mission, Goals and Objectives

1. Program Mission Statement (insert)

Providing a unique education and scientific research, to serve the community in building knowledge and skills in physics through conducive environment for learning, scientific research and society partnership

2. List goals and objectives of the program within to help achieve the mission. For each goal and objective describe the major strategies to be followed and list the indicators that are used to measure achievement.

Goals and Objectives	Major Strategies	Measurable Indicators
1. Conduct and develop distinct academic programs.	Obtain a distinct study plan.	Continuous revision and modernization of the plan.
2. Attract a world-class and diverse faculty members	Distinct scientific and academic promotion for students and faculty members.	Encourage highly qualified teachers to join the department by employing them.
3. Encourage the excellence of scientific research in Physics	Start Master's program in physics.	Attracting members of high competencies.
4. Partnership with peers at regional and international universities.	Strengthen KSA and international partnerships in advanced Physics	Number of post doctor research and Ph.D
5. Provide the community with highly qualified competents.	Increase the quality and quantity of the graduate program	Increasing the number of Research Assistants funded from grants or Government

D. Program Structure and Organization

1. Program Description:

List the core and elective program courses offered each semester from Prep Year to graduation using the below Curriculum Study Plan Table (A separate table is required for each branch IF a given branch/location offers a different study plan).

A program or department manual should be available for students or other stakeholders and a copy of the information relating to this program should be attached to the program specification. This information should include required and elective courses, credit hour requirements and department/college and institution requirements, and details of courses to be taken in each year or semester.

Program Study Plan				
1- Compulsory and elective requisites				
Requisite	Type of requisite	Total credit hours	Percentage of credit hours	Observations
University	Compulsory	--	--	
	Elective	12	8.83	
College	Compulsory	29	21.23	
	Elective	--	--	
Department	Compulsory	84	61.76	
	Elective	9	6.62	
Free courses		3	2.21	
Total hours and percentage		137	% 100	

2- University Requisites					
Course Code	Course Number	Course	Credit Hours	Pre-requisite	Observations
ARAB	101	Linguistic skills	(2+0+0) 2	--	Compulsory
SALM	101	Introduction to Islamic Culture	(2+0+0) 2	--	Compulsory
SALM	102	Islam and building society	(2+0+0) 2	--	Compulsory
SALM	103	Economical system in Islam	(2+0+0) 2	--	Compulsory
--	--	University Elective	(2+0+0) 2	--	Elective
--	--	University Elective	(2+0+0) 2	--	Elective
3- Compulsory College Requisites					
Course Code	Course Number	Course	Credit Hours	Pre-requisite	Observations
PCOM	113	Computer Skills	(2+0+0) 2	--	
PMTH	112	Introduction to mathematics 1	(2+0+0) 2	--	
PENG	111	English 1 for prep. Year	(2+6+0) 8	--	
PSSC	114	Learning and	(2+0+0) 2	--	

		communication skills			
PMTH	127	Introduction to mathematics 2	(3+0+1) 4	--	
PENG	123	English for engineering and science	(2+0+0) 2	--	
PPHS	128	Physics	(2+2+0) 3	--	
PENG	112	English 2 for prep. year	(2+4+0) 6	--	

4- Elective College Courses

Course Code	Course Number	Course	Credit Hours	Pre-requisite	Observations

5- Compulsory Department Requisites

Course Code	Course Number	Course	Credit Hours	Pre-requisite	Observations
MATH	201	Calculus 1	(3+0+0) 3	--	
PHYS	201	General Physics 1	(3+1+0) 4	--	
PHYS	202	General Physics 2	(3+1+0) 4	PHYS 201	
MATH	202	Calculus 2	(2+1+0) 3	MATH 201	
PHYS	211	Classical Mechanics	(3+0+0) 3	PHYS 201 MATH 201	
PHYS	231	Waves and Vibrations	(3+0+0) 3	PHYS 201 MATH 201	
PHYS	241	Thermodynamics	(3+0+0) 3	PHYS 201	
PHYS	291	Thermal Physics Lab.	(0+4+0) 2	PHYS 201	
PHYS	301	Mathematical Physics 1	(3+0+0) 3	MATH 202	
MATH	310	Differential Equations	(3+0+0) 3	MATH 202	
PHYS	321	Electromagnetism 1	(3+0+0) 3	PHYS 202	
PHYS	332	Optics	(3+0+0) 3	PHYS 231	
PHYS	351	Modern Physics	(3+0+0) 3	PHYS 231	
MATH	324	Partial Differential Equations	(3+0+0) 3	MATH 310	
PHYS	302	Mathematical Physics 2	(3+0+0) 3	PHYS 301	

PHYS	393	Optics Lab.	(3+0+0) 3	PHYS 332	
PHYS	342	Statistical Physics	(3+0+0) 3	PHYS 241	
PHYS	392	Electromagnetism Lab.	(0+4+0) 2	PHYS 321	
PHYS	352	Quantum Mechanics 1	(3+0+0) 3	PHYS 351 PHYS 324	
PHYS	322	Electromagnetism 2	(3+0+0) 3	PHYS 321	
PHYS	422	Electronics	(3+1+0) 4	PHYS 202	
PHYS	452	Quantum Mechanics 2	(3+0+0) 3	PHYS 352	
PHYS	494	Modern Physics Lab.	(0+4+0) 2	PHYS 351	
PHYS	481	Nuclear Physics 1	(3+0+0) 3	PHYS 351	
PHYS	471	Solid state physics 1	(3+0+0) 3	PHYS 352	
PHYS	454	Atomic and molecular physics	(3+0+0) 3	PHYS 352	
PHYS	496	Solid state physics lab.	(0+4+0) 2	PHYS 471	
PHYS	497	Nuclear Physics lab.	(0+4+0) 2	PHYS 481	
PHYS	499	Project	(0+4+0) 2	PHYS 497 PHYS 498	

6- Elective Department Requisites

Course Code	Course Number	Course	Credit Hours	Pre-requisite	Observations
PHYS	213	Introduction to astronomy	(3+0+0) 3	--	
PHYS	334	Health Physics	(3+0+0) 3	PHYS 202	
PHYS	333	Laser Physics	(3+0+0) 3	PHYS 351	
PHYS	361	Biophysics	(3+0+0) 3	PHYS 202	
PHYS	405	Computational physics	(3+0+0) 3	PHYS 302	
PHYS	435	Plasma Physics	(3+0+0) 3	PHYS 322	
PHYS	462	Medical Physics	(3+0+0) 3	PHYS 481	
PHYS	472	Solid state physics 2	(3+0+0) 3	PHYS 471	
PHYS	403	Mathematical physics 3	(3+0+0) 3	PHYS 302	
PHYS	473	Semiconductors	(3+0+0) 3	PHYS 471	
PHYS	474	Materials Science	(3+0+0) 3	PHYS 471	
PHYS	476	Renewable energy	(3+0+0) 3	PHYS 471	

PHYS	482	Nuclear physics 2	(3+0+0) 3	PHYS 481	
PHYS	485	Radiation Physics	(3+0+0) 3	PHYS 481	
PHYS	487	Neutron Physics and Reactors	(3+0+0) 3	PHYS 481	
PHYS	484	Elementary particle physics	(3+0+0) 3	PHYS 481	
PHYS	476	Nanotechnology	(3+0+0) 3	PHYS 471	

7- Training requisites

Course Code	Course Number	Course	Credit Hours	Pre-requisite	Observations
PHYS	496	Practical training	1	PHYS 392	

8- Suggested distribution of courses on semesters

Year	Course Code	Course Title	Required or Elective	Credit Hours	College or Department
Prep Year					
1st semester	**PCOM 113**	Computer Skills	**Required**	(2+0+0) 2	Computer Science
	PMTH 112	Introduction to mathematics 1		(2+0+0) 2	Mathematic
	PENG 111	English 1 for prep. year		(2+6+0) 8	
	PSSC 114	Learning and communication skills		(2+0+0) 2	
2nd semester	**PMTH 127**	Introduction to mathematics 2	**Required**	(3+0+1)4	Mathematic
	PENG 123	English for engineering and science		(2+0+0) 2	
	PPHS 128	Physics		(2+2+0) 3	Physics
	PENG 112	**English 2 for prep. year**		(2+4+0) 6	

Year	Course Code	Course Title	Required or Elective	Credit Hours	College or Department
Third Level					
1st semester	**IC 101**	**Introduction to Islamic culture**	**Required**	(2+0+0) 2	
	MATH 201	**Calculus 1**		(3+0+0) 3	Mathematic
	PHYS 201	**General Physics 1**		(3+2+0) 4	Physics
	ARAB 101	**Linguistic Skills**		(2+0+0) 2	
	ZPSY 101	**Thinking skills and learning methods.**		(2+0+0)2	
	-----	**Free course**	**Free**	(3+0+0) 3	
	-----	**University elective course**	**elective**	(2+0+0) 2	
Fourth Level					
2nd semester	PHYS 202	General Physics 2	**Required**	(3+2+0) 4	Physics
	MATH 202	Calculus 2		(3+0+0) 3	Mathematic
	PHYS 211	Classical Mechanics		(3+0+0) 3	
	PHYS 231	Waves and Vibrations		(3+0+0) 3	Physics
	PHYS 241	Thermodynamics		(3+0+0) 3	
	PHYS 291	Thermal Physics Lab		(0+4+0) 2	
Year	**Course Code**	**Course Title**	**Required or Elective**	**Credit Hours**	**College or Department**
Fifth Level					
1st semester	PHYS 301	Mathematical Physics 1	**Required**	(3+0+0) 3	Physics
	MATH 310	Differential Equations		(3+0+0) 3	Mathematic
	PHYS 321	Electromagnetism 1		(3+0+0) 3	Physics
	PHYS 332	Optics		(3+0+0) 3	
	MATH324	Partial Differential Equations		(3+0+0) 3	Mathematic
	PHYS 351	Modern Physics		(3+0+0) 3	Physics

Sixth Level					
2nd semester	PHYS 302	Mathematical Physics 2	**Required**	(3+0+0) 3	Physics
	IC 102	Islam and building society		(2+0+0) 2	
	PHYS 393	Optics Lab.		(0+4+0) 2	Physics
	PHYS 342	Statistical Physics		(3+0+0) 3	
	PHYS 392	Electromagnetism Lab.		(0+4+0) 2	
	PHYS 352	Quantum Mechanics 1		(3+0+0) 3	
	PHYS 322	Electromagnetism 2		(3+0+0) 3	
Year	**Course Code**	**Course Title**	**Required or Elective**	**Credit Hours**	**College or Department**
Seventh Level					
1st semester	PHYS 422	Electronics	**Required**	(3+1+0) 4	Physics
	PHYS 452	Quantum Mechanics 2		(3+0+0) 3	
	PHYS 494	Modern Physics Lab.		(0+4+0) 2	
	PHYS 481	Nuclear Physics 1		(3+0+0) 3	
	PHYS 471	Solid state physics 1		(3+0+0) 3	
	IC 103	Economic system in Islam		(2+0+0) 2	
	PHYS 495	Practical Training		(0+2+0) 1	
Eighth Level					
2nd semester	PHYS 454	Atomic and molecular physics	**Required**	(3+0+0) 3	Physics
	PHYS 496	Solid state physics lab.		(0+4+0) 2	
	PHYS 497	Nuclear Physics lab		(0+4+0) 2	
	PHYS 499	Project		(0+4+0) 2	
		Department elective	Elective	(3+0+0) 3	
		Department elective		(3+0+0) 3	
		Department elective		(3+0+0) 3	

Credit point system

- **Study system is on the basis of levels.**
- The program consists of 8 levels (4 years).
- One level lasts for one semester.
- Total credit hours are 137 hour.
- One credit hour equivalent t one hour lecture or two tutorial/lab hours per week.

Students Workload

Level (Semester)	Credit Hours	Contact hours (class hours)/week		Average of independent Study hours/week	Total workload/ week	Total workload/semester
		Lectures	Tutorials or Labs			
1	14	8	12	16	35	525
2	15	9	12	18	37	555
3	18	17	2	24	45	675
4	18	15	6	27	50	750
5	18	18	0	34	52	780
6	18	14	8	33	56	840
7	18	14	8	33	58	870
8	18	12	12	35	60	900
Grand total	**137**				**393**	**5895**

Student-Teacher ratio for the academic year 1434/1435 is **10:1**.

Faculty average load/Semester is **18** credit hour.

2. Required Field Experience Component (if any, e.g. internship, cooperative program, work experience).

Summary of practical, clinical or internship component required in the program. Note: see Field Experience Specification
a. Brief description of field experience activity Not applicable
b. At what stage or stages in the program does the field experience occur? (eg. year, semester) Not applicable
c. Time allocation and scheduling arrangement. (eg. 3 days per week for 4 weeks, full time for one semester) Not applicable
d. Number of credit hours (if any) Not applicable

3. Project or Research Requirements (if any)

Summary of any project or thesis requirements in the program. (Other than projects or assignments within individual courses) (A copy of the requirements for the project should be attached.)
a. Brief description Research project. The topics and contents vary depending on the ability of the student and the courses that he has completed.
b. List the major intended learning outcomes of the project or research task. Ability to undertake research work by investigating and analyzing mathematical results.
c. At what stage or stages in the program is the project or research undertaken? (e.g. year, semester) After completing 100 credit hours.
d. Number of credit hours (if any) 3 credit hours.
e. Description of academic advising and support mechanisms for students. Weekly meetings and discussions between the student and his supervisor.

f. Description of assessment procedures (including mechanism for verification of standards) Copies of the written project are provided to the examiners. The student defends his project before the examiners by presenting a short resume' of his project followed by the relevant question and answer session. Finally the deserving grade is awarded to the student.

4. Learning Outcomes in Domains of Learning, Assessment Methods and Teaching Strategy

Program Learning Outcomes, Assessment Methods, and Teaching Strategy work together and are aligned. They are joined together as one, coherent, unity that collectively articulate a consistent agreement between student learning and teaching.

The ***National Qualification Framework*** provides five learning domains. Learning outcomes are required in the first four domains and sometimes are also required in the Psychomotor Domain.

On the table below are the five NQF Learning Domains, numbered in the left column. For Program Accreditation there are four learning outcomes required for knowledge and cognitive skills. The other three domains require at least two learning outcomes. Additional learning outcomes are suggested.

First, insert the suitable and measurable learning outcomes required in each of the learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each program learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process.

NQF Learning Domains and Learning Outcomes		Teaching Strategies	Assessment Methods
A	**Knowledge**		
a1	Knowledge of principles and concepts for specific core subject areas.	1- Lectures. 2- Conduct scientific research and the follow-up of all new topics. 3- Seminars 4- Class work and in class discussions.	1- Short tests and quizzes. 2- Homework. 3- Research
a2	Match the principles and the concepts to analyze problems within specific core areas.		
a3	Aware of relevant knowledge and theory in other related disciplines and professional fields.		
B	**Cognitive Skills**		
b1	Discuss how to overcome educational problems.	• Solving problems. • Homework. • Dialogues and discussions. • Lectures • Looking in the internet. • Using computers and software's to understand and analyze data and using simulation programs. • Experimental work and its outcomes.	Oral and written tests, seminars and discussions.
b2	Design and use valid Physics models in physical laboratories		
b3	Analyze and interpret quantitative results;		
b4	Dealing with the problems in Physics by using suitable mathematical principles.		
b5	Gains the skills of solving scientific problem related to industrial development plans in the kingdom.		
b6	Gain mental calculating skills and trains on it.		
C	**Interpersonal Skills & Responsibility**		
c1	Work effectively in groups and exercise leadership when appropriate	• Awareness of time management in completing their reports. • Encourage students to help each other • Group assignments • Small group work. • Lab. demonstrations. • Whole group discussion.	• Respecting deadlines. • Helping each other in doing their experiments. • Giving clear and logical arguments • Lab. Exam • Oral exams.
c2	Familiarity with current developments in Physics.		
c3	Recognize life-long learning is a necessity as well as a responsibility of every Graduate.		

D	**Communication, Information Technology, Numerical**		
d1	Learn how to collect and classify the material for a course	**By direct lecturing.** • **Computer labs.** • **Soft wares.** • **Smart Boards.** • **PowerPoint.**	• Surveys • Practical exams. • Written exams. • E – learning home work
d2	Communicate effectively in oral and written form		
d3	Gain the skills to use the internet communicates tools.		
E	**Psychomotor**		
e1	Employ software skills.	• Lab. demonstrations. • Co-operative learning	• Lab. reports. • In-lab. evaluation
e2	Use a perfect experimental tools to solve Physics problems		

Program Learning Outcome Mapping Matrix

Identify on the table below the courses that are required to teach the program learning outcomes. Insert the program learning outcomes, according to the level of instruction, from the above table below and indicate the courses and levels that are required to teach each one; use your program's course numbers across the top and the following level scale. Levels: I = Introduction P = Proficient A = Advanced

	Program Learning Outcomes	PHYS201	PHYS202	PHYS212	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210
A	**Knowledge**																					
a1	Knowledge of principles and concepts for specific core subject areas.																					
a2	Match the principles and the concepts to analyze problems within specific core areas.																					
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b1	Discuss how to overcome educational problems.																					
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b3	Analyze and interpret quantitative results;																					
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C	**Interpersonal Skills & Responsibility**																				
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d1	Learn how to collect and classify the material for a course																				
d2	Communicate effectively in oral and written form																				
d3	Gain the skills to use the internet communicates tools.																				
E	**Psychomotor**																				
e1	Employ software skills.																				
e2	Use a perfect experimental tools to solve Physics problems																				

	Program Learning Outcomes	PHYS201	PHYS202	PHYS211	PHYS231	PHYS241	PHYS291	PHYS301	PHYS321	PHYS332	PHYS351	PHYS302	PHYS393	PHYS342	PHYS392	PHYS352	PHYS322	PHYS422	PHYS452	PHYS494	PHYS481
A	**Knowledge**																				
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d3	Gain the skills to use the internet communicates tools.																				
E	**Psychomotor**																				
e1	Employ software skills.																				
e2	Use a perfect experimental tools to solve Physics problems																				

Program Learning Outcomes		PHYS471	PHYS495	PHYS454	PHYS496	PHYS497	PHYS499	PHYSEC	PHYSEC	PHYSEC	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210	PHYS210
A	**Knowledge**																				
a1	Knowledge of principles and concepts for specific core subject areas.																				
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E	**Psychomotor**																				
e1	Employ software skills.																				
e2	Use a perfect experimental tools to solve Physics problems																				

5. Admission Requirements for the program

Attach handbook or bulletin description of admission requirements including any course or experience prerequisites**.**

6. Attendance and Completion Requirements

Attach handbook or bulletin description of requirements for:

a. **Attendance.**
b. Progression from year to year.
c. Program completion or graduation requirements.

E. Regulations for Student Assessment and Verification of Standards

What processes will be used for verifying standards of achievement (eg check marking of sample of tests or assignments? Independent assessment by faculty from another institution) (Processes may vary for different courses or domains of learning.)

- **Unified exams, group marking and group grading for multi-section courses.**
- **Internal assessment at the end of semester.**

F Student Administration and Support

1. Student Academic Counselling

Describe the arrangements for academic counselling and advising for students, including both scheduling of faculty office hours and advising on program planning, subject selection and career planning (which might be available at college level).

1. **Forming committees' for student's orientation.**
2. **Assign an academic supervisor for each student with a maximum of 10 students for each faculty member if possible.**
3. **Announce the office hours for each faculty member to be part of the academic supervision and scientific help.**
4. **Meeting new students.**
5. **Provide counselling to the students.**
6. **Guide the Library to open for extended hours up to 7 p.m. This will give the opportunity for the students to follow up with all new activities.**
7. **The availability of full information about the department and its members, and their contact information.**
8. **The availability of full information about study plan and the courses taught.**

2. Student Appeals

Attach the regulations for student appeals on academic matters, including processes for consideration of those appeals.

List of higher education

G. Learning Resources, Facilities and Equipment

1a. What processes are followed by faculty and teaching staff for planning and acquisition of textbooks, reference and other resource material including electronic and web based resources?

1. **Staff member prepares the relevant scientific material of his course.**
2. **Staff member prepares the course file that includes the detailed description of the topics covered in the course, references and readings, and examination.**
3. **dates and marks plus all other relevant information pertinent to the course.**
4. **Reserve books and reading material needed for the course at the library.**

1b. What processes are followed by faculty and teaching staff for planning and acquisition resources for library, laboratories, and classrooms.

1. **Using the public library of the University.**
2. **Adopting the references and text books approved by the council of the physics department or any authorized committee.**
3. **Participating in the University's database that allows the access to most international publishers.**
4. **Writing books and translation by the department members.**
5. **Purchasing and providing the necessary books.**

2. What processes are followed by faculty and teaching staff for evaluating the adequacy of textbooks, reference and other resource provisions?

1. **Review the returns of the books, through the monitoring of the students results and the student's opinion about how simple are these references.**
2. **Periodic review of the references of the department.**
3. **Evaluation of the reference and translated books.**
4. **Proving the expensive reference books in the University Library to ease the financial burden on the students.**

3. What processes are followed by students for evaluating the adequacy of textbooks, reference and other resource provisions?

Students have the opportunity to evaluate textbooks within student course experience survey as well as annual student focus group. Both activities are run by the college-level Academic

Assessment Unit.
4. What processes are followed for textbook acquisition and approval? **Textbooks are made available to students through the University Bookstore. Departments submit their revised textbook lists at the end of the academic year before summer to be made available by beginning of following year.**

H. Faculty and other Teaching Staff

1. Appointments

Summarize the process of employment of new faculty and teaching staff to ensure that they are appropriately qualified and experienced for their teaching responsibilities.

1. **Department announcements on the university's website for available vacancies.**
2. **Forming a committee to study the resumes of the applicants and choose the best.**
3. **Place a personal interview with the applicant through the internet.**
4. **Employ the distinguished graduates of the department or other physics departments in the Kingdom as lecturers, who will then be sent abroad to do their master of science and doctor of philosophy in one of the physics disciplines.**

2. Participation in Program Planning, Monitoring and Review

a. Explain the process for consultation with and involvement of teaching staff in monitoring program quality, annual review and planning for improvement.

1. **Forming several academic committees in the department such as: course timetables committee, scientific research committee, quality committee.**
2. **Activate the recommendations of these committees by discussing it in the department's council and the present the recommendations of these committees.**

b. Explain the process of the Advisory Committee (if applicable)

3. Professional; Development

What arrangements are made for professional development of faculty and teaching staff for:

a. **Improvement of skills in teaching and student assessment?**

1. **Encourage the faculty members to attend conferences and workshops to use them for their promotions.**
2. **Launch talks and seminars in the department.**
3. **Encourage the faculty members to publish their work.**

b. Other professional development including knowledge of research and developments in their field of teaching specialty?

1. **Launch the talks and seminars in the department and the university.**
2. **Invite specialist professors to throw some lectures in the department.**

4. Preparation of New Faculty and Teaching Staff

Describe the process used for orientation and induction of new, visiting or part time teaching staff to ensure full understanding of the program and the role of the course(s) they teach as components within it.

1. **Introduce the department's programme and described its courses.**
2. **Introduce the internal regulations of the university and the higher education.**
3. **Hold workshops to introduce the college.**

5. Part Time and Visiting Faculty and Teaching Staff

Provide a summary of Program/Department/College/institution policy on appointment of part time and visiting teaching staff. (ie. Approvals required, selection process, proportion to total teaching staff, etc.)

Does not exist.

I. Program Evaluation and Improvement Processes

1. Effectiveness of Teaching

a. What processes are used to evaluate and improve the strategies for developing learning outcomes in the different domains of learning? (eg. assessment of learning achieved, advice on consistency with learning theory for different types of learning, assessment of understanding and skill of teaching staff in using different strategies)

1. **Survey's to evaluate the different courses.** 2. **Survey's to evaluate the faculty member by the student.** 3. **Internal workshops in the department.**
b. What processes are used for evaluating the skills of faculty and teaching staff in using the planned strategies? 1. **Survey's to evaluate the faculty member by the student.** 2. **Self-evaluation by the head of department and the dean of the college.**

2. Overall Program Evaluation

a. What strategies are used in the program for obtaining assessments of the overall quality of the program and achievement of its intended learning outcomes:
(i) From current students and graduates of the program? • **Polls for the enrolled students and those who graduated from the program** • **Alumni surveys** • **Establishing an internet open forum to get student feedback**
(ii) From independent advisors and/or evaluator(s)?. **Asking for external evaluation from external referees.**
(iii) From employers and/or other stakeholders. **Polls for the employers to know suitability of these graduates to the job, and how good their scientific knowledge is.**

Complete the following two tables.

1. **Program KPI and Assessment Table**
2. **Program Action Plan Table**

b. What key performance indicators will be used to monitor and report annually on the quality of the program? **1. The annual self-assessment report** **2. The report from the committee supervising the program.** **3. The auditing report and its comparison with equivalent programs.**
c. What processes will be followed for reviewing these assessments and planning action to improve the program? **1. Annual reports and make any notes about the program and alumni.** **2. Activate these observations in the first amendment to modify the program and the regulations.**

Program KPI and Assessment Table

Program KPI and Assessment Table							
Standard 3Management of Quality Assurance and Improvement							
Kpi#	**List of Program KPIs Approved by the Institution**	**KPI Target Bench mark**	**KPI Actual Bench mark**	**KPI Internal Bench marks**	**KPI External Bench marks**	**KPI Analysis**	**KPI New Target Bench mark**
1	Students overall evaluation on the quality of their learning experiences.	75%					80%
1.1	**Advice and Support**	75%					80%
1.2	**Learning Resources and Facilities**	75%					80%
1.3	**Learning and Teaching**	75%					80%
1.4	**Help and Support for my Learning**	75%					80%
1.5	**Resources to Support my Learning**	75%					80%
1.6	**Evaluation of my Learning**	75%					80%
2	Proportion of courses in which student evaluations were conducted during the year.	75%					80%
Standard 4Learning and Teaching							

Kpi#	List of Program KPIs Approved by the Institution	KPI Target Bench mark	KPI Actual Bench mark	KPI Internal Bench marks	KPI External Bench marks	KPI Analysis	KPI New Target Bench mark
1	Ratio of students to teaching staff(Based on full time equivalents)	1:10					
2	Students overall rating on the quality of their courses.						
2.1	**Questions about the start of the course**						
2.2	**Questions about what happened during the course**						
2.3	**Evaluation of the Course**						
3	Proportion of teaching staff with verified doctoral qualifications.						
4	Percentage of students entering programs who successfully complete first year.						
5	Proportion of students entering undergraduate programs who complete those programs in minimum time.						

6	Proportion of graduates from undergraduate programs who within six months of graduation are: (a) employed (b) enrolled in further study not seeking employment or further study.						
Standard 5Student Administration and Support Services							
Kpi#	**List of Program KPIs Approved by the Institution**	**KPI Target Bench mark**	**KPI Actual Bench mark**	**KPI Internal Bench marks**	**KPI External Bench marks**	**KPI Analysis**	**KPI New Target Bench mark**
1	Ratio of students to administrative staff	1:100					
2	Proportion of total operating funds (other than accommodation and student allowances) allocated to provision of student services						
3	Student evaluation of academic and career counselling.	75%					80%
4	Student evaluation of library services.	75%					80%
Standard 6Learning Resources							
Kpi#	**List of Program KPIs Approved by the Institution**	**KPI Target Bench mark**	**KPI Actual Bench mark**	**KPI Internal Bench marks**	**KPI External Bench marks**	**KPI Analysis**	**KPI New Target Bench mark**

1	Number of book titles held in the library as a proportion of the number of students.						
2	Number of web site subscriptions as a proportion of the number of programs offered.						
3	Number of periodical subscriptions as a proportion of the number of programs offered.						
4	Student evaluation of library services. (Average rating on adequacy of library services on a five point scale in an annual survey of program students.)						
	Standard 7Facilities and Equipment						
Kpi#	**List of Program KPIs Approved by the Institution**	**KPI Target Bench mark**	**KPI Actual Bench mark**	**KPI Internal Bench marks**	**KPI External Bench marks**	**KPI Analysis**	**KPI New Target Bench mark**
1	Annual expenditure on IT as a proportion of the number of students						
2	Number of accessible computer terminals per student						
3	Average overall rating of adequacy of facilities and equipment in a survey of teaching staff						
4	Internet bandwidth per user						

Standard 8Financial Planning and Management							
Kpi#	**List of Program KPIs Approved by the Institution**	**KPI Target Bench mark**	**KPI Actual Bench mark**	**KPI Internal Bench marks**	**KPI External Bench marks**	**KPI Analysis**	**KPI New Target Bench mark**
1	Total operating expenditure (other than accommodation and student allowances) per student.						
Standard 9Employment Processes							
Kpi#	**List of Program KPIs Approved by the Institution**	**KPI Target Bench mark**	**KPI Actual Bench mark**	**KPI Internal Bench marks**	**KPI External Bench marks**	**KPI Analysis**	**KPI New Target Bench mark**
1	Proportion of teaching staff leaving the institution in the past year for reasons other than age retirement						
2	Proportion of teaching staff participating in professional development activities during the past year						
Standard 10 Research							
Kpi#	**List of Program KPIs Approved by the Institution**	**KPI Target Bench**	**KPI Actual Bench**	**KPI Internal Bench marks**	**KPI External Bench marks**	**KPI Analysis**	**KPI New Target Bench**

		mark	mark				mark
1	Number of refereed publications in the previous year per full time equivalent member of teaching staff. (Publications based on the formula in the Higher Council Bylaw excluding conference presentations)						
2	Number of citations in refereed journals in the previous year per full time equivalent teaching staff						
3	Proportion of full time member of teaching staff with at least one refereed publication during the previous year						
4	Number of papers or reports presented at academic conferences during the past year per full time equivalent members of teaching staff						
5	Research income from external sources in the past year as a proportion of the number of full time teaching staff members						
6	Proportion of total operating funds spent on research.						

Standard 11 Institutional Relationships with the Community							
Kpi#	**List of Program KPIs Approved by the Institution**	**KPI Target Bench mark**	**KPI Actual Bench mark**	**KPI Internal Bench marks**	**KPI External Bench marks**	**KPI Analysis**	**KPI New Target Bench mark**
1	Proportion of full time teaching and other staff actively engaged in community service activities						
2	Number of community education programs provided as a proportion of the number of departments						

NOTE The following definitions are provided to guide the completion of the above table for Program KPI and Assessment.

KPI refers to the key performance indicators the programs used in the SSRP and are approved by the institution (if applicable at this time). This includes both the NCAAA suggested KPIs chosen and all additional KPIs determined by the program (including 50% of the NCAAA suggested KPIs and all others).
Target Benchmark refers to the anticipated or desired outcome (goal or aim) for each KPI.
Actual Benchmark refers to the actual outcome determined when the KPI is measured or calculated.
Internal Benchmarks refer to comparable benchmarks (actual benchmarks) from inside the program (like data results from previous years or data results from other departments within the same college).
External Benchmarks refer to comparable benchmarks (actual benchmarks) from similar programs that are outside the program (like from similar programs that are national or international).
KPI Analysis refers to a comparison and contrast of the benchmarks to determine strengths and recommendations for improvement.
New Target Benchmark refers to the establishment of a new anticipated or desired outcome for the KPI that is based on the KPI analysis.

Program Action Plan Table

Directions: Based on your "*Analysis of KPIs and Benchmarks*" provided in the above Program KPI and Assessment Table, list the recommendations identified below.

No.	Recommendations	Action Points	Assessment Criteria	Responsible Person	Start Date	Completion Date
1						
2						
3						
4						
5						
6						
Action Plan Analysis (List the strengths and recommendations for improvement of the Program Action Plan).						

Attachments:

1. **Copies of regulations and other documents referred to in template preceded by a table of contents.**

2. **Course specifications for all courses including field experience specification if applicable.**

Authorized Signatures

Dean / Program Chair	Name	Title	Signature	Date
Program Dean or Chair of Board of Trustees Main Campus				
Vice Rector				