هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-103
2022

Program Specification

Program Name:	**Physics**
Program Code (as per Saudi university ranking):	**BSc.**
Qualification Level:	6th
Department:	Physics
College:	Science
Institution:	Jazan University
Program Specification:	New ☐ updated* ☒
Last Review Date:	November 2022

*Attach the previous version of the Program Specification.

Content:

Courses	Arrangement
Courses of code start with 1	will have knowledge more than skill by a dif allocation **10%** for competence

Courses of codes start with 2	The knowledge will decrease and become les but the competence will be increased to **15%** taking the 5% from the skills domain.	0% lab
Course of code start with 3	The knowledge is decreased by **5%** and skill for courses with lab will take **5%** from skill	% but
Courses of code start with 4	In this level course are considered as high lev decreased by **10%** to be added to skills and	ge lly
Project	As a special case: this capstone course will a percentage for competence **(45%)** and skills **15%** considered for knowledge	ly

Note: Based on the nature of the course:

- **Courses with lab increased in Competence by 5% compared to its group in the concerned year**
- **Courses of theoretical nature (derivation , calculation, etc.) increased by 5% on skills compared to its group in the concerned year**

The following table includes the % of domains for all courses in Physics Program

Course Title	Course Code	% of Dom	
		Know.	Skills
General Physics	101PHYS	55	35
Properties of Matter and Heat	221PHYS	40	45
Electricity and Magnetism	231PHYS	40	45
Classical Mechanics	251PHYS	35	55
Geometrical Optics	211PHYS	40	45
Waves and Vibrations	212PHYS	35	55
Thermodynamic	222PHYS	40	50
Mathematical Physics	252PHYS	40	50
Electronics (1)	311PHYS	35	55
Physical Optics	312PHYS	30	55
Electrodynamics	331PHYS	35	55
Modern Physics (1)	341PHYS	35	55
Analytical Mechanics	351PHYS	30	60
Atomic Physics & Spectroscopy	342PHYS	30	55
Quantum Mechanics (1)	352PHYS	30	60
Statistical Physics	353PHYS	35	55
Solid State Physics (1)	371PHYS	35	55
Electronics (2)	411PHYS	25	55
Laser & Its Applications	412PHYS	25	60
Quantum Mechanics (2)	451PHYS	25	60
Nuclear Physics (1)	461PHYS	25	60
Graduation Project	491PHYS	15	40
Modern Physics (2)	441PHYS	25	55
Plasma Physics	452PHYS	25	60
Nuclear Physics (2)	462PHYS	25	55
Solid State Physics (2)	471PHYS	25	55

Indirect Measures

- Every semester course evaluation by students (CES) is managed and reported for both course reports as well as Annual Program Report (APR).

• Two other important surveys are conducted every semester for evaluation of student experience (EES) in (6th level) and program evaluation survey (PES) in (8th level) • Faculty member's opinions are also taken through a Faculty Members satisfaction Survey (annually). • Another important survey is currently planned known as Exit Survey with which the expected graduate students will be target to specifically assess the Program Learning Outcomes and get a solid reflection on the gained knowledge, skills and competence. • Moreover, on a periodic basis the department will solicit feedback on graduate skills from Alumni and their employers using either surveys or focus groups. These mechanisms may allow Physics Program to evaluate and improve the target of student outcomes to meet the requirements of the job market. • In all above-mentioned Surveys, Physics Program sets a threshold level of score 3 out of 5 for all responses on these survey for satisfactory achievements. Link: Assessment plan https://www.jazanu.edu.sa/en/colleges/sci/physics-department/department-manual D. Student Admission and Support:	
E. Faculty and Administrative Staff:	8
F. Learning Resources, Facilities, and Equipment:	9
G. Program Quality Assurance:	10
H. Specification Approval Data:	11

A. Program Identification and General Information

1. Program's Main Location:

(Male & Female)
College of Science, Jazan University

2. Branches Offering the Program (if any):

- **Alardha University College**
- **Samtah University College**

3. Partnerships with other parties (if any) and the nature of each: None

4. Professions/jobs for which students are qualified

Education sector (public and private)
- Laboratories.
- Industrial sector.
- Pursuing higher education in physics leading to M.Sc. or PhD.
- Research centers and universities.

5. Relevant occupational/ Professional sectors:

- **Education**
- **Water authority**
- **Electricity Authority**
- **Research centers**
- **Universities**
- **Private industrial factories**
- **Centers of standardization and quality control.**

6. Major Tracks/Pathways (if any): NA

Major track/pathway	Credit hours (For each track)	Professions/jobs (For each track)
1.		
2.		
3.		
4.		

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

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

8. Total credit hours: (121)

B. Mission, Objectives, and Program Learning Outcomes

1. Program Mission:

Physics Program provides high quality education, research and innovation in the field of physics to contribute to the development of a dynamic society.

2. Program Objectives:

Physics Program Goals

1. Provide distinct and high-quality education and training for Bachelor of Physics.
2. Establish and maintain high-impact research infrastructure and environment in physic related fields.
3. Provide outstanding community services that contributes to the development of society.

Physics Program Objectives

1. To provide students with a solid scientific foundation in various fields of Physics and their problem-solving skills.
2. To train students with adequate physics breadth as to comprehend, research, analyze, solutions for various scientific problems.
3. To inculcate in student's professional and ethical attitude, effective communication teamwork skills, multidisciplinary approach, life-long learning skills and an ability to Physics principles to social context.
4. To provide standard facilities and academic environment with awareness of excellence, leadership, needed for both significant research production and successful professional careers that serve the community with significant development

3. Program Learning Outcomes*

Knowledge and Understanding	
K1	**Describe** various fundamental concepts and theories of physics and their effect in different fields of science and technology
K2	**Discuss** physics phenomena using physics principles and scientific reasoning
Skills	
S1	**Apply** mathematical concepts, strategies, and procedures to solve problems in various fields of physics.
S2	**Demonstrate** analytical skills and competencies to formulate, drive and analyze physics concepts.
S3	**Perform** experiments in various fields of Physics and analyzing their related data for various Physics parameters and quantities
S4	**Develop** competencies in critical thinking, delivering scientific information, reporting and data analysis.
Values, Autonomy, and Responsibility	
V1	**Develop** abilities of team work, bear individual responsibilities on assigned tasks
V2	**Apply** practices of life-long learning in various physics and scientific disciplines with ethical and social responsibilities for their professional career
V3	**Demonstrate** awareness of safety and risk assessment when dealing with various materials and equipment

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

C. Curriculum

1. Curriculum Structure

Program Structure	Required/ Elective	No. of courses	Credit Hours	Percentage
Institution Requirements	Required	3	6	6
	Elective			
College Requirements	Required	7	24	48
	Elective			
Program Requirements	Required	29	91	106
	Elective			
Capstone Course/Project				
Field Training/ Internship				
Residency year				
Others				
Total				

* Add a separated table for each track (if any).

2. Program Courses

Year	Course Code	Course Name	R or E	* Pre-Requisite Courses	Credit Hours			Contact Hours			Type of requirement (Institution, College or Department)
					Th.	Pra	Tot	Th.	Pra	Tot	
Level-1	104ENGL	English Language (1)	R	----	3	0	3	10	0	10	College
	101BIO	General Biology	R	----	3	1	4	3	2	5	College
	101MATH	General Mathematics	R	----	3	0	3	3	0	3	College
Level-2	101PHYS	General Physics	R	----	3	1	4	3	2	5	College
	101ISLM	Islamic Culture 1	R	----	2	0	2	2	0	2	Institution
	105ENGL	English Language (2)	R	104 ENGL	3	0	3	10	0	10	College
Level -3	102 ISLM	Islamic Culture 2	R	----	2	0	2	2	-	2	Institution
	102 ARAB	Arabic Editing	R	---	2	0	2	2	-	2	Institution
	1056ENGL	English Language (3)	R	105 ENGL	3	0	3	10	0	10	College
	101CHEM	General chemistry	R		3	1	4	3	2	5	College
Level -4	221PHYS	Properties of Matter and Heat	R	101PHYS	3	1	4	3	2	5	Department
	211PHYS	Geometrical Optics	R	101PHYS	2	1	3	2	2	4	Department
	201MATH	Differentiation and Integration	R	101MATH	3	0	3	3	0	3	Department
Level -5	231PHYS	Electricity and Magnetism	R	101PHYS	3	1	4	3	2	5	Department
	202MATH	Differential Equation	R	201MATH	3	0	3	3	0	3	Department
	251PHYS	Classical Mechanics	R	201MATH	3	0	3	3	--	3	Department
Level- 6	212PHYS	Waves and Vibrations	R	251PHYS	2	0	2	2	0	2	Department
	252PHYS	Mathematical Physics	R	201MATH	3	0	3	3	0	3	Department
	222PHYS	Thermodynamic	R	221 PHYS	3	0	3	3	0	3	Department
Level-7	341PHYS	Modern Physics (1)	R	251PHYS	3	0	3	3	0	3	Department
	301STAT	Statistics	R	----	2	0	2	2	0	2	Department

	331PHYS	Electrodynamics	R	231 PHYS	3	0	3	3	0	3	Department
	301COMP	Computer Programming	R	101 COM	2	1	3	2	2	4	Department
Level -8	312PHYS	Physical Optics	R	212 PHYS	3	1	4	3	2	5	Department
	351PHYS	Analytical Mechanics	R	251 PHYS	3	0	3	3	0	3	Department
	311PHYS	Electronics (1)	R	231 PHYS	3	0	3	3	0	3	Department
	353PHYS	Statistical Physics	R	222 PHYS & 301 STAT	2	0	2	2	0	2	Department
Level-9 9	342PHYS	Atomic Physics & Spectroscopy	R	341 PHYS	3	1	4	3	2	5	Department
	352PHYS	Quantum Mechanics (1)	R	252 PHYS	3	0	3	3	0	3	Department
	371PHYS	Solid State Physics (1)	R	341 PHYS	3	0	3	3	0	3	Department
Level-10	411PHYS	Electronics (2)	R	311 PHYS	3	1	4	3	3	6	Department
	412PHYS	Laser & Its Applications	R	342 PHYS	3	0	3	3	0	3	Department
	461PHYS	Nuclear Physics (1)	R	352 PHYS	3	0	3	3	0	3	Department
Level-11	451PHYS	Quantum Mechanics (2)	R	352 PHYS	3	0	3	3	0	3	Department
	471PHYS	Solid State Physics (2)	R	371 PHYS	3	1	4	3	3	6	Department
	491PHYS	Graduation Project	R	Dept. Approval	1	1	2	1	2	3	Department
Level-12	441PHYS	Modern Physics (2)	R	342 PHYS	3	1	4	3	3	6	Department
	452PHYS	Plasma Physics	R	412 PHYS	3	0	3	3	0	3	Department
	462PHYS	Nuclear Physics (2)	R	461 PHYS	3	1	4	3	3	6	Department

* Include additional levels (for three semesters option or if needed.
** Add a table for the courses of each track (if any)

3. Course Specifications:

Insert hyperlink for all course specifications using NCAAA template (T-104)

https://www.jazanu.edu.sa/en/colleges/sci/physics-department/bsc-courses

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).*

Program Learning Outcomes (PLO's)										
Level	Course Code	Knowledge& understanding		Skills				Values, Autonomy, and Responsibility		
		K1	K2	S1	S2	S3	S4	V1	V2	V3
Level 1	104ENGL	I					I			
	101BIO	I								I
	101MATH	I		I		I				
Level 2	101PHYS	I	I	I		I		I		I
	101CHEM	I								I

	105ENGL	I				I	I			
Level 3	101 ISLM							I	I	
	221PHYS	I	I	I	I	I	I	I		I
	106ENGL	I				I	I			
Level 4	102 ISLM							I	I	
	102 ARAB						I		I	
	201MATH			I	I	I				
	211PHYS	I	I	I	I	I	I	I		I
Level 5	231PHYS	I	I	I	I	I	I	I		I
	202MATH			I	I	I	I			
	251PHYS	I	I	I	I			I		
Level 6	222PHYS	I	I	I	I			I		
	252PHYS	I	I	I	I		I	I		
	301STAT			I		I	I			
Level 7	212PHYS		I	I	I			I		
	341PHYS	I	I	P	P		P	P		
	331PHYS	P	P	P	P		P	P		
	301COMP				I		I		I	
Level 8	312PHYS	P	P	P	P	P	P	P		P
	351PHYS	P	P	P	P		P	P		
	311PHYS	P	P	P	I		I	I		
	353PHYS	P	M	M	M		P	P		
Level 9	342PHYS	M	M	M	M	M	M	M	I	M
	352PHYS	P	P	P	P		P	P		
	371PHYS	P	M	M	P		M	M		
Level 10	411PHYS	M*	M*	M*	M*	M*	M*	M*		M*
	412PHYS	M*	M*	M*	M*		M*	M*	M*	
	461PHYS	M*	M*	M*	M*		M*	M*		
Level 11	451PHYS	M*	M*	M*	M*		M*	M*		
	471PHYS	M*	M*	M*	M*	M*	M*	M*		M*
	491PHYS	M*	M*	M*	M*	M*	M*	M*	M*	M*
Level 12	441PHYS	M*	M*	M*	M*	M*	M*	M*		M*
	452PHYS	M*	M*	M*	M*		M*	M*	M*	
	462PHYS	M*	M*	M*	M*	M*	M*	M*		M*

* Add a separated table for each track (if any).

5. Teaching and learning strategies applied to achieve program learning outcomes.

Describe teaching and learning strategies, including curricular and extra-curricular activities, to achieve the program learning outcomes in all areas.

6. Assessment Methods for program learning outcomes.

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

The program should devise a plan for assessing Program Learning Outcomes (all learning outcomes should be assessed at least twice in the bachelor program's cycle and once in other degrees).

Direct measures:

- This type of assessment will rely on normal tests and exams and utilize rubrics that were prepared for both grading and assessment at the program level.
- The Rubrics will provide a suitable mean for faculty members to have a consistent manner of evaluation of all kind of assessment question based on their rubrics.
- With rubrics, the evaluation will be done systematically and consistently by any faculty member. Rubrics also will help students to understand the expectation of the department to gauge student progress over time, and to provide a basis for faculty discussions concerning possible areas for program improvement.
- Moreover, with Rubrics students will know in prior the judgment procedure of their achievements in all kinds of assessment.

The following are some of the practiced rubrics.

Problem solving -Essay questions - Derivation and formulation - Presentation - Communication - Lab reports - Group work in lab and assignments - Evaluation of project work by supervisor and referee -Project report

Arrangements for direct assessment process:

The following arrangements have been suggested based on course specification tables and approved by the Department Council

Courses	Arrangement
Courses of code start with 1	will have knowledge more than skill by a difference of **10%** and allocation **10%** for competence
Courses of codes start with 2	The knowledge will decrease and become less than skills by 10% but the competence will be increased to **15%** for courses with lab taking the 5% from the skills domain.
Course of code start with 3	The knowledge is decreased by **5%** and skills increased by **5%** but for courses with lab will take **5%** from skill domain
Courses of code start with 4	In this level course are considered as high level and knowledge decreased by **10%** to be added to skills and competence equally
Project	As a special case: this capstone course will account higher percentage for competence **(45%)** and skills **(40%)** where only **15%** considered for knowledge

Note: Based on the nature of the course:

- **Courses with lab increased in Competence by 5% compared to its group in the concerned year**
- **Courses of theoretical nature (derivation , calculation, etc.) increased by 5% on skills compared to its group in the concerned year**

The following table includes the % of domains for all courses in Physics Program

Course Title	Course Code	% of Domains		
		Know.	Skills	Values

General Physics	101PHYS	55	35	10
Properties of Matter and Heat	221PHYS	40	45	15
Electricity and Magnetism	231PHYS	40	45	15
Classical Mechanics	251PHYS	35	55	10
Geometrical Optics	211PHYS	40	45	15
Waves and Vibrations	212PHYS	35	55	10
Thermodynamic	222PHYS	40	50	10
Mathematical Physics	252PHYS	40	50	10
Electronics (1)	311PHYS	35	55	10
Physical Optics	312PHYS	30	55	15
Electrodynamics	331PHYS	35	55	10
Modern Physics (1)	341PHYS	35	55	10
Analytical Mechanics	351PHYS	30	60	10
Atomic Physics & Spectroscopy	342PHYS	30	55	15
Quantum Mechanics (1)	352PHYS	30	60	10
Statistical Physics	353PHYS	35	55	10
Solid State Physics (1)	371PHYS	35	55	10
Electronics (2)	411PHYS	25	55	20
Laser & Its Applications	412PHYS	25	60	15
Quantum Mechanics (2)	451PHYS	25	60	15
Nuclear Physics (1)	461PHYS	25	60	15
Graduation Project	491PHYS	15	40	45
Modern Physics (2)	441PHYS	25	55	20
Plasma Physics	452PHYS	25	60	15
Nuclear Physics (2)	462PHYS	25	55	20
Solid State Physics (2)	471PHYS	25	55	20

Indirect Measures

- Every semester course evaluation by students (CES) is managed and reported for both course reports as well as Annual Program Report (APR).
- Two other important surveys are conducted every semester for evaluation of student experience (EES) in (6th level) and program evaluation survey (PES) in (8th level)
- Faculty member's opinions are also taken through a Faculty Members satisfaction Survey (annually).
- Another important survey is currently planned known as Exit Survey with which the expected graduate students will be target to specifically assess the Program Learning Outcomes and get a solid reflection on the gained knowledge, skills and competence.
- Moreover, on a periodic basis the department will solicit feedback on graduate skills from Alumni and their employers using either surveys or focus groups. These mechanisms may allow Physics Program to evaluate and improve the target of student outcomes to meet the requirements of the job market.
- In all above-mentioned Surveys, Physics Program sets a threshold level of score 3 out of 5 for all responses on these survey for satisfactory achievements.

Link: Assessment plan

https://www.jazanu.edu.sa/en/colleges/sci/physics-department/department-manual

D. Student Admission and Support:

1. Student Admission Requirements

This section is centrally administered by Deanship of Admission and Registration; however, the college of science and Physics Department may put some requirements approved by their councils.

The Deanship of Admission and registration upon recommendations from college councils shall prepare a presentation of the mechanisms of giving priorities to the students applied for admission to be submitted to the university council or to the competent authority.

http://deanships.jazanu.edu.sa/sites/en/adm/Pages/AdmissionofFreshmanyearstudents.aspx

and

http://deanships.jazanu.edu.sa/adm/PublishingImages/flge/%D8%AF%D9%84%D9%8A%D9%84%20%D8%A7%D9%84%D8%B7%D8%A7%D9%84%D8%A8%201.pdf

and

http://deanships.jazanu.edu.sa/adm/Documents/%D8%AF%D9%84%D9%8A%D9%84%20%D8%A7%D9%84%D8%B7%D8%A7%D9%84%D8%A8%20%D9%84%D9%84%D8%AE%D8%AF%D9%85%D8%A7%D8%AA%20%D8%A7%D9%84%D8%A5%D9%84%D9%83%D8%AA%D8%B1%D9%88%D9%86%D9%8A%D8%A9.pdf

2. Guidance and Orientation Programs for New Students

(Include only the exceptional needs offered to the students of the program that differ from those provided at the institutional level).

The orientation program for new students is held annually for new enrolled students. The Head of the Department supervise the orientation program and give a speech welcoming all and directing all for the new academic year. The orientation program is attended by almost all the faculty members and administration staff. The Orientation program is designed to help students get acquainted with the following:

- Vision, mission and objectives of the department, college and university.
- University and college regulations and code of conduct.
- Tips on leading a successful college life in line with their potential career goals.
- Department and college facilities and places.
- plan of study review course

- methods of evaluation
- Wellness, self-care
- faculty expectations
- certification and licensure information

3. Student Counseling Services

(Academic, professional, psychological and social)
(Include only the exceptional needs offered to the students of the program that differ from those provided at the institutional level).

Academic advising is a key to success at any higher education institution. Our department considers academic advisers a valuable resource to students as they help plan their undergraduate career and, ultimately, prepare them for graduation. Academic advising means guiding the students/advisee on different issues related to their academic progress and to help them find solutions to different academic problems. Academic advising is related to assisting students with educational choices, degree requirements, academic policies/procedures, as well as broader concerns such as career and graduate school options in the future.

The four stakeholders involved in the process of academic advising are:

1. The advisee/student.
2. The advisor/faculty member.
3. The Head of the Academic Advising Committee or the Head Academic Advisor.
4. The department/program.

Roles and Responsibilities

An academic advisor is a selected faculty member of the department for the process of guiding the students/advisee on different issues related to their academic progress and problems.

Following are the responsibilities defined for the academic advisor:

1. Advise undergraduate students and address their academic concerns.
2. Follow and report student progress via advising checklist sheet.
3. Participate in orientation and advising services.
4. Assist students in selecting suitable senior projects and supervisors.
5. Check fulfillment of graduation requirements.

The advisee/student has the responsibility to:

1. Recognize that advising is a shared responsibility and accept responsibility for all decisions.
2. Share personal values, abilities and goals.
3. Prepare for advising sessions and bring relevant materials.
4. Meet with the advisor when asked or when in need of assistance.
5. Learn policies, procedures and requirements, i.e. add/drop deadlines, graduation and general education policies.

Each student in the Physics Program has an academic advisor whose job is to provide students with consultation and academic support mainly during registration time but also any time during the semester.

Students may consult their advisor, as well as the Department Chair and the Dean of the College, for any issues or concerns concerning their academic life. Given the number of the Physics students, the students are divided among the college for advising. The process is as follow;

Student Academic Counselling Committee is in charge of student counselling.
Each Faculty is assigned a group of students for counselling.
Faculty will be available for student counselling at specific office hours during on daily basis.
Faculty should make a file for each student in his counselling group where student contact information, a copy of student timetable, a copy of student academic record is kept and updated every semester
Also, JU have different clubs to improve social and career of students as:
Science Club: http://deanships.jazanu.edu.sa/sites/en/stu/Pages/ScienceClub.aspx
Scout Club:
http://deanships.jazanu.edu.sa/sites/en/stu/Pages/ScoutClubJazanUniversity.aspx
Computer Science Club:
http://deanships.jazanu.edu.sa/sites/en/stu/Pages/ComputerScienceClub.aspx
Business Club : http://deanships.jazanu.edu.sa/sites/en/stu/Pages/BusinessClub.aspx
Society Partnership Club:
http://deanships.jazanu.edu.sa/sites/en/stu/Pages/SocietyPartnershipClub.aspx
Other clubs are;
Club of Culture and Dialogue
Literary Club
Club Theater
Al - Falclour Club
Al Jawala
Health Club

4. Special Support

(Low achievers, disabled, gifted, and talented students).

The student population includes students with and without disabilities.

The faculty often co-teach in order to address the wide-ranging needs of their students. NO separate special education classrooms.

Instructors are strongly encouraged to inform students about available services and related procedures.

A good two-fold strategy is to include a statement on instructor syllabus about disability services and to announce to the class at the start of each semester that any student with a disability who needs accommodations or related services can discuss options with the instructor in private.

This will help students with disabilities feel more comfortable speaking with instructor about their needs and also show a good faith effort on instructor part to make students aware that the department does have a system to help them obtain equal access. Faculty members use office hours for advising and try to solve the special needs of students.

.in our program we do not have a special disabilities program

University has special offer for special need students as:

- Physiotherapy services for students with special needs
- Speech therapy services for students with special needs
- Occupational therapy services for students with special needs
- Psychotherapy services for students with special needs
- Adaptive services for students with special needs

For low achievers, Instructor should,

- First of all, know well who low-achiever learners are. They are learners who usually:
  - Lack basic knowledge or skills.
  - Have difficulty in comprehension.
  - Lack concentration.
  - Confuse easily in the classroom**.**
- Make a registration of students' names in a special register for follow-up
- Change your attitudes towards them.
- Give them clear, step by step instructions.
- Be ready to give them extra help or explanation.
- Motivate them all the time using all possible ways. i.e, by words / awards / good marks to give confidence and give them other opportunities in the absence of answer, not to use words that make them hate study.
- Be aware of their learning or studying habits and try to improve them.
- Know their leaning styles and adapt your teaching to them.
- Set the objectives that students should achieve at the end of learning sessions and prepare how to assess their achievement. Objectives should be SMART (specific, measurable, acceptable, realistic and timed) and be informed to the students orally at the beginning of each learning session.
- Diagnose the difficulties as soon as possible or anticipate them and prepare how to deal with and react to them.
- Observe the students and provide them with immediate feedback concerning to their points of weakness.
- Prepare some procedures that students should follow or design and implement a remedial plan to remedy your students' points of weakness.
- Consult and get advice as early as possible from your colleagues, supervisor, psychological and social specialist regarding to learning issues of your students.
- Employing the textbook during the class.
- Follow up the personal effort accurately. In the case of an error in the answer of a question, the teacher himself writes the correct answer and asks the student to repeat and record it himself after that, and the instructor will follow the good and give him a degree in the office book.
- Identify the reasons for the frequent absence of the student with his assistant, his assistant, student affairs and social worker, and inform the administration of the treatment and direct contact with the family and the guardian to solve the problems that the student suffers to improve his level.
- The work of the strengthening groups announced by the school administration to the weak students and select competent teachers to carry out.
- Taking additional lessons and focusing on the weak students in explaining or understanding the unclear and difficult parts and answering some of their questions in the article.
- For Gifted Students

If you want to support gifted students in your classroom, it's important that you make an effort to:

Support for gifted students

Gifted students have special needs, requirements, and trends in behavior. They need special arrangements to meet their needs and better support them in the classroom by:

- Creating tiered assignments for students: This can meet the needs of all students but for gifted students adding some challenging [giving gifted students higher level of critical thinking problems or reasoning questions -adding a second component to assignments, such as having them apply the skill they've learned to a real-world situation or asking them to write an explanation of their thinking].
- Including a variety of levels in classroom library: A variety of texts and /or reading materials to support the reading ability and interests of gifted students.
- Utilizing their talents and interests: let them do a brainstorming to expand their talents and interests to further explore certain skills. For example, students could write or draw something related to the assignment/skill or they could act out solutions to the problem or project.

Exploring real-world application: encouraging students to think and act beyond the skill they're learning by applying it in the real world.

E. Faculty and Administrative Staff:

1. Needed Teaching and Administrative Staff

Academic Rank	Specialty		Special Requirements / Skills (if any)	Required Numbers		
	General	Specific		M	F	T
Professor	8	All Fields of Physics		4	4	8
Associate Professor	25			15	10	25
Assistant Professor	35			15	20	35
Lecturer	10			3	7	10
Teaching Assistant	20			5	15	20
Technicians and Laboratory Assistant	16			4	12	16
Administrative and Supportive Staff	8			2	6	8
Others (specify)	4	Secretary		1	3	4

F. Learning Resources, Facilities, and Equipment:

1. Learning Resources

Learning resources required by the Program (textbooks, references, and e-learning resources and web-based resources, etc.)

- A list of learning resources is kept in the Program QA Unit.
- The list of learning resources is annually updated by teaching Faculty and gets approval by Program Board.
- The updated list of learning resources is then raised to College of Science Deanship and hence to Deanship for Library Affairs.
- Every year, the Head of physics department collects from faculty their need concerning the research databases and he sends them to the library Deanship.
- The faculty and students have free accessibility to digital library where they can find various materials including textbooks, references, thesis and scientific journals.

2. Facilities and Equipment

(Library, laboratories, classrooms, etc.)

Every year the physics department collects the equipment needed in all lab and sends the request to the Science College that in his turn sends it to the equipment purchase administration.

Library

In the 2nd floor, the college library is there, this library contains books in sufficient number for all student in the college including physics students. Also, the central library in the university student may use beside the digital library of Saudi Arabia all students use their ID to enter its site http://deanships.jazanu.edu.sa/_layouts/Authenticate.aspx?Source=/lib/Pages/sdl.aspx

Textbooks and Course Materials

Wherever necessary, a scheduled course has a designated textbook, which has been adopted by the department. As all students registered in a course will have a copy of this book, an instructor may freely refer to the textbook as and when necessary. The adoption of a textbook does not restrict the instructor to use this book exclusively in his teaching and therefore he may freely adopt other references to supplement teaching material, which may include his own prepared lecture notes.

Where there is no designated textbook, an instructor must rely on his own collection of materials and whenever necessary and appropriate, he should distribute the course materials to the students in his class. An instructor can propose a new textbook, either as a replacement for an existing one or as a new addition for a course where there is no designated textbook, by following the University`s procedure, which requires approval of the department, the college and the University.

Teaching Laboratories

The laboratories are well equipped with standard educational equipment. Multiple teaching laboratories serve students in all fields of Physics, including introductory courses and courses in Optics, Properties and Matter, Modern Physics, Atomic Physics, Solid State Physics and Nuclear Physics.

Other Facilities

Physics Department offers to their students male and female a well-equipped infrastructure (classrooms, laboratories, library facilities, IT and audio-visual teaching materials, safety, first aids aids and consumables. There are several study open places in all floors, computer rooms, Sports activities Room, Cafeteria, theater and all other necessary premises

3. Procedures to ensure a healthy and safe learning environment

(According to the nature of the program)

College of science is committed to providing a safe and healthy campus environment. Among its highest priorities are the health and safety of all faculty, staff, and students, the visiting public, and members of the neighboring community in order to implement environmental and occupational health and safety programs and to ensure compliance with all relevant governmental laws and regulations. A variety of health care services to students, faculty, staff and community members.

- The Campus Health Clinic is located inside the main campus and a small room over the medical support inside the College of Science building.
- Smoking is prohibited in any University facility and on any University grounds.
- First aids boxes are located in almost all rooms.
- The purpose of the Chemical Safety Program is to ensure the proper handling of hazardous chemicals, as well as hazardous waste management and disposal. Exposure to hazardous chemicals is kept at a minimum by using the appropriate Personal Protective Equipment and by performing experiments in a certified chemical fume hood.
- Fire prevention guidelines are listed in all places
- Emergency Exit doors in all parts with sufficient Signboards in all places.
- Safety and safety instructions are announced at the laboratories and the places where students gather.

G. Program Quality Assurance:

1. Program Quality Assurance System

Provide a link to quality assurance manual.

1. Program Quality Assurance System

Provide online link to quality assurance manual

QMS-Physics Program

https://www.jazanu.edu.sa/en/colleges/sci/physics-department/department-manual

Planning; the process of setting goals, developing strategies, outlining the implementation arrangements and allocating resources to achieve those goals. It is important to note that planning involves looking at a number of different processes

- Identifying the vision, goals or objectives to be achieved
- Formulating the strategies needed to achieve the vision and goals
- Determining and allocating the resources (financial and other) required to achieve the vision and goals
- Outlining implementation arrangements, which include the arrangements for monitoring and evaluating progress towards achieving the vision and goals

Review processes to support academic quality assurance should, ideally, be in place at different levels and cover specific issues:

Quality is delivered through performance and improvement. This is the basic assumption of the system of quality assurance of teaching and learning. Performance is achieved by complying with the performance criteria derived from our mission and Policy. Improvement is achieved by continuously working towards improving the quality of teaching and learning throughout the department, while the performance criteria function as the touchstone of good quality. Improvements are monitored during the planning and control cycle.

2. Program Quality Monitoring Procedures

Monitoring; the ongoing process by which stakeholders obtain regular feedback on the progress being made towards achieving their goals and objectives. Reviewing progress against achieving goals. Monitoring also involves tracking strategies and actions being taken by partners and non-partners, and figuring out what new strategies and actions need to be taken to ensure progress towards the most important results.

Evaluation, is a rigorous and independent assessment of either completed or ongoing activities to determine the extent to which they are achieving stated objectives and contributing to decision making. Evaluations, like monitoring, can apply to many things, including an activity, project, program, strategy, policy, topic, theme, sector or organization.

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

Quality committee observation and follow-ups every semester. All Faculty Members are required to submit all quality files (report, assessment results & analysis, samples of all activities) every semester and the committee is handling review and giving feedback

Quality committee contact the staff who teach courses to Physics Program to collect all related data about out student.
The Quality Committee collect CS, CR, Exams, quizzes, assessments, assignments, attendance sheets, final marks and grades, feedbacks.

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

In sections for male and female students the leaders of both sections participate in institutional governance and be fully involved in strategic planning, decision making, and senior administration with effective and continuing communication between sections. Strategic planning ensures equitable distribution of resources and facilities to meet the requirements of program delivery, research, and associated services in each section and quality evaluations consider performance at each section as well as for the institution as a whole.

- Male and female sections are represented in the membership of relevant committees and councils and participate fully in decision making through processes that are consistent with bylaws and regulations of the Higher Council of Education.
- An effective communication between members from each section on these committees and councils was established, and individuals in the different sections carrying out related activities were fully involved in planning, evaluations and decision making.

- Planning processes and mechanisms for performance evaluation lead to comparable standards in each section while taking account of differing needs.
- Quality indicators, evaluations and reports show results for both sections indicating similarities and differences as well as overall performance.

2. Procedures to Monitor Quality of Courses Taught by other Departments

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

4. Assessment Plan for Program Learning Outcomes (PLOs),

(Assessment Plan)
https://www.jazanu.edu.sa/en/colleges/sci/physics-department/department-manual

- Courses and programs are evaluated and reported on annually and reports include information about the effectiveness of planned strategies and the extent to which intended learning outcomes are being achieved.
- When changes are made as a result of evaluations details of those changes and the reasons for them will be retained in course and program portfolios.
- Quality indicators that include learning outcome measures were established for all courses and programs.
- Records of student completion rates are kept for all courses and for programs as a whole and included among quality indicators.
- Reports on programs are reviewed annually by program coordinator and quality committees.
- Edugate Systems is established for central recording and analysis of course completion and program progression and completion rates and student course and program evaluations, with summaries and comparative data distributed automatically to departments, colleges, senior administrators and relevant committees at least once each year.
- Appropriate actions are taken to solve evaluations problems (if any) to make improvements, either within the program or through institutional action as appropriate.
- In addition to annual evaluations a comprehensive reassessment of the program will be conducted at least once every five years. Policies and procedures for conducting these reassessments are published within the program.
- Program reviews should involve experienced people from relevant industries and professions, and experienced faculty from other institutions.

In program reviews opinions about the quality of the program including the extent to which intended learning outcomes are achieved will be sought from students and graduates through surveys and interviews, discussions with faculty, and other stakeholders such as employers.

5. Program Evaluation Matrix

Evaluation Areas/Aspects	Evaluation Sources/References	Evaluation Methods	Evaluation Time
effectiveness of teaching & assessment	Students, Faculty	Surveys, question tracking results	2 years
leadership,	Graduates, Alumni, Employer	Surveys	2 years
Safety awareness	Students, Faculty	Quiz in Safety,	2 years
learning resources	Program coordinators	Indirect	2 years

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

6. Program KPIs*

The period to achieve the target (__3__) year(s).

No.	KPIs Code	KPIs	Targeted Level	Measurement Methods	Measurement Time
1	**1**	KPI-P-1	Percentage of achieved indicators of the program operational plan objectives	M = 75%, F = 75% A = 75%	Percentage of the operational plan objectives of the program that achieved to the total number of indicators targeted for these objectives in the same year
2	**2**	KPI-P-2	Students' Evaluation of quality of learning experience in the program.	M = 4.0, F = 3.6 A = 3.8	The average ratings of all questions in program evaluation survey (PES)
3	**3**	KPI-P-3	Students' evaluation of the quality of the courses.	M = 4.2, F = 4.0 A = 4.1	The students' satisfaction with courses is assessed through surveys every semester. There is a mechanism to collect the surveys from students online and get the results directly.
4	**4**	KPI-P-4	Completion rate	M = 80%, F = 80% A = 80%	Proportion of undergraduate students who completed the program in minimum time in each cohort
5	**5**	KPI-P-5	First-year students retention rate	M = 85%, F = 85% A = 85%	The percentage of first-year students who continue at the program the next year to the total number of first-year students in the same year
6	**6**	KPI-P-6	Students' performance in the professional and/or national examinations	Not applicable (NA)	

No.	KPIs Code	KPIs	Targeted Level	Measurement Methods	Measurement Time
7	**7**	KPI-P-7	Graduates' employability and enrolment in postgraduate programs	*Employed*: M = 60%, F = 60% A = 60% *Postgraduate*: M = 20%, F = 20% A = 20%	The percentage of graduates from the program who within a year of graduation were: (a) employed , (b) enrolled in postgraduate programs during the first year of their graduation to the total number of graduates in the same year
8	**8**	KPI-P-8	Average number of students in the class	M = 15, F = 25 A = 20	The number of students in the class obtained from last absence records in the end of the semester
9	**9**	KPI-P-9	Employers' evaluation of the program graduates proficiency	M = 3.5, F = 3.5 A = 3.5	The average of overall rating of employers for the proficiency of the program graduates on a five-point scale in an annual survey
10	**10**	KPI-P-10	Students' satisfaction with the offered services	M = 3.5, F = 3.5 A = 3.5	The average of students' satisfaction rate with the various services offered by the program on a five-point scale in an annual survey
11	**11**	KPI-P-11	Ratio of students to teaching staff	M = 10:1, F = 12:1 A = 11:1	Ratio of the total number of students to the total number of full-time and full-time equivalent teaching staff in the program
12	**12**	KPI-P-12	Percentage of teaching staff distribution	*Gender*: Male = 55%, Female = 45% *Academic*: PhD = 70% BA&MA = 30%	The percentage of teaching staff distribution based on: (a) gender, (b) branches, and (c) academic ranking
13	**13**	KPI-P-13	Proportion of teaching staff leaving the program	M = 5%, F = 5% A = 5%	The proportion of teaching staff leaving the program annually for reasons other than age retirement to the total number of teaching staff
14	**14**	KPI-P-14	Percentage of publications of faculty members	M = 50%, F = 50% A = 50%	The percentage of full-time faculty members who published at least one research during the year to total faculty members in the program
15	**15**	KPI-P-15	Rate of published research per faculty member	M = 2, F = 2 A = 2	Total number of refereed and/or published research to the total number of full-time or equivalent faculty members during the year
16	**16**	KPI-P-16	Citations rate in refereed journals per faculty member	M = 10, F = 10 A = 10	Total number of citations in refereed journals from published research for full-time or equivalent faculty members to the total research published
17	**17**	KPI-P-17	Satisfaction of beneficiaries with the	M = 4.0, F = 3.5 A = 3.75	The average of beneficiaries' satisfaction rate with the adequacy and diversity of learning resources

No.	KPIs Code	KPIs	Targeted Level	Measurement Methods	Measurement Time
			learning resources		(references, journals, databases… etc.) on a five-point scale in an annual survey

*including KPIs required by NCAAA

H. Specification Approval Data:

COUNCIL / COMMITTEE	DEPARTMENT BOARD
REFERENCE NO.	PHYS2304
DATE	28/2/2023