## Program Specification

| Program Name: | Physics |
| :--- | :--- |
| Qualification Level : | Bachelor of Physics (B.Sc.) |
| Department: | Physics |
| College: | Science |
| Institution: | Majmaah University |

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## A. Program Identification and General Information

1. Program Main Location:

Majmaah University Al-Zulfi Campus

2. Branches Offering the Program:

## Al Zulfi Campus

3. Reasons for Establishing the Program:
(Economic, social, cultural, and technological reasons, and national needs and development, etc.)
The urgent need of the market to employ Saudi graduates of physics: in the public and private Ministry of education, Ministry of Higher Educational, Ministry of Industrial, Ministry of petroleum, Electric power stations, water stations, king Abdul-Aziz city for science and technology, difference industry, Laboratory safety, and Ministry of Army.
4. Total Credit Hours for Completing the Program: (138)

| Side | Credit Hours |  |  | Percentag <br> e (\%) |
| :--- | :---: | :---: | :---: | :---: |
|  | Compulsory | Elective | free | 8.69 |
| University |  | 12 |  | 14.49 |
| College | 18 | 2 |  | 74.65 |
| Department | 94 | 9 |  | 2.17 |
| Others |  |  | 3 | 100.00 |
| Total | 112 | 23 | 3 |  |

5. Professional Occupations/Jobs:

1- Continue higher education in physics leading to M.Sc. or PhD.
2- Work in research centers and universities.
3- Work in public and private sectors of education.
4- Work in medical laboratories, running machines, recycling its wastes.
5- Work in industrial sectors.
6- Work in Electric power stations.
7- Work at water stations and petroleum ministry, and geology.
8- Work as a research assistant in king Abdul-Aziz city for science and technology.
9- Work in specialized research centers, quality control labs. and standards and measurements bureau.
10- Work in difference industry/Army.
6. Major Tracks/Pathways (if any):

| Major track/pathway | Credit hours (For each track) | Professional Occupations/Jobs (For each track) |
| :---: | :---: | :---: |
| 1. $\square$ NA |  |  |
| 2. |  |  |
| 3. |  |  |
| 4. |  |  |
| 7. Intermediate Exit Points/Awarded Degree (if any): |  |  |
| Intermediate exit points/awarded degree |  | Credit hours |
| 5. - NA |  |  |
| 1. |  |  |
| 2. |  |  |

## B. Mission, Goals, and Learning Outcomes

## 1. Program Mission:

The physics program prepares qualified national graduates, who are capable of: competing the labor market needs, meeting the requirements of sustainable development, and contributing to research and community service.

## 2. Program Goals:

The goal of the Physics major:
1- Provide the students with a broad fundamental of the physical principles of the universe, to help them develop critical thinking and quantitative reasoning skills.
2- Empower the students to think creatively and critically about scientific problems and experiments.

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

a) The mission of the Institution/College.

|  |  | University Mission <br> The mission of Majmaah University is to offer educational programs with high quality as well as funding all types of research projects and social initiatives that contribute in achieving the sustainable development. We also committed to instill the concept of patriotism and educate students about the culture and heritage of the country. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Educat ion high quality | High Research project services | Contribute in achieving sustainable developmen t | Concept of patriotism | Heritage of the country |
|  | Educational services | $\checkmark$ |  | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $\begin{aligned} & \hline \text { Develop } \\ & \text { high } \\ & \text { scientific } \end{aligned}$ |  | $\checkmark$ | $\checkmark$ |  |  |
|  | Academic qualified | $\checkmark$ | $\checkmark$ | $\checkmark$ |  | $\checkmark$ |
|  | National developme nt | $\checkmark$ | $\checkmark$ |  | $\checkmark$ |  |
|  | Competitor s in the labor market |  |  |  | $\checkmark$ | $\checkmark$ |

b) The mission of the College/ Program.

|  |  | College Mission <br> The College provides educational services to its community according to national and international standards of quality, and to develop highly scientific and academic qualified graduates and successful competitors in the labor market to contribute to the national development |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Educationa 1 services | Develop high scientifi c | Academi <br> c qualified | National developmen t | Competitor $s$ in the labor market |
|  | Qualified graduates | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |  |
|  | Competit ors in the labor market |  |  | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | Requirem ents of sustainabl e |  |  | $\checkmark$ | $\checkmark$ |  |
|  | Developm ent <br> Research |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | Develope d communit y service | $\checkmark$ | $\sqrt{ }$ |  | $\checkmark$ | $\checkmark$ |

c) The mission of the program/ Goals.

## Program Mission

The Physics program prepares qualified national graduates, who are capable of: competing the labor market needs, meeting the requirements of sustainable development, and contributing to research and community service


|  | 1. Enhance the <br> fundamental <br> knowledge in <br> Physics | $\checkmark$ | $\checkmark$ |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 2.Develop and <br> utilize effective <br> skills in Physics <br> 3. Provide <br> foundation for <br> basic scientific <br> research in <br> Physics. <br> 4.Cooperate as <br> individuals or in <br> groups with the <br> society to solve <br> Physics related <br> problems. | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |

## 4. Graduate Attributes:

1- Students will be able to recognize and explain the importance of physics to objects and phenomena in the world round us; they will be able to use this knowledge to make physics interesting and relevant to high school physics students.

2- Students will be able to write down equations and draw diagrams and graphs to represent physical problems or situations, they will be able to solve these equations to make predictions about the physical situation.

3- Students will recognize, that physics is an experimental science, they will be able to plan and carry out experiments, they will be able to present their results to these experiments with a numerical uncertainty.

4- Students will have an in depth understanding of the fields of mechanics, electromagnetism, thermal physics and modern physics. They will be able to use this understanding to solve problems and also to clearly explain concepts to high school level students.

5- Students will recognize the universality and applicability of the laws of physics, such as conservation laws, and will be able to use these laws to approach novel situations and solve problems
5.Program learning Outcomes*

| Knowledge and Understanding |  |
| :---: | :--- |
| $\mathbf{K 1}$ | Recognize the knowledge of fundamental concepts in classical physics <br> (mechanics, electrodynamics, thermodynamics, vibrations, waves and <br> optics) and modern physics (quantum, atomic and molecular, nuclear, <br> elementary particle and solid state physics) |
| $\mathbf{K 2}$ | Recall the appropriate mathematical tools used in physics |
| $\mathbf{K 3}$ | Understand the importance of physics laws and its limitations, their <br> nherent relation and mathematical formulation |
| $\mathbf{K 4}$ |  |
| $\mathbf{K} . .$. |  |
| $\mathbf{S k i l l s}$ |  |
| $\mathbf{S 1}$ | Perform experiments, data acquisition, data analysis and draw results <br> and conclusions |
| $\mathbf{S 2}$ | Develop the skill for analyzing/solving the physics-based problems in <br> the fields of mechanics, electromagnetism, solid state and nuclear |
| $\mathbf{S 3}$ | physics. <br> explain to a general audience the physical principles of mechanics, <br> electromagnetism, solid state and nuclear physics that underlie our |
| $\mathbf{S 4}$ |  |
| $\mathbf{S} . .$. |  |
| $\mathbf{V a l u e s}$ |  |
| $\mathbf{V 1}$ | Work effectively in groups as well as individually |
| $\mathbf{V 2}$ | Be aware of professional and ethical responsibilities |
| $\mathbf{V 3}$ | Think creatively about scientific problems and their solutions, both |
| $\mathbf{V 4}$ | orally and in written |

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


## C. Curriculum

1. Curriculum Structure

| Program Structure | Required/ Elective | No. of courses | Credit <br> Hours | Percentage |
| :---: | :---: | :---: | :---: | :---: |
| Institution Requirements | Required | -- | -- | -- |
|  | Elective | 6 | 12 | 8.70\% |
| College Requirements | Required | 6 | 18 | 13.04\% |
|  | Elective | 1 | 2 | 1.45\% |
| Program Requirements | Required | 32 | 89 | 64.49\% |
|  | Elective | 3 | 9 | 6.52\% |
| Capstone Course/Project | Required | 2 | 5 | 3.62\% |
| Field Experience/ Internship |  | -- | -- | -- |
| Others | Free Course | 1 | 3 | 2.17\% |
| Total |  | 51 | 138 | 100\% |

* Add a table for each track (if any)

2. Program Study Plan

| Level | Course <br> Code | Course Title | Required or Elective | Pre-Requisite Courses | Credit <br> Hours | Type of requirements $\xrightarrow[\substack{\text { (Institution, College } \\ \text { or Department) }}]{ }$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { Level } \\ 1 \end{gathered}$ | CSI 101 | Introduction to Computer Science | Required | -- | 3 | College |
|  | $\begin{gathered} \text { MATH } \\ 131 \end{gathered}$ | Basis of Mathematics | Required | -- | 3 | College |
|  | $\begin{gathered} \text { PHYS } \\ 101 \end{gathered}$ | General Physics I | Required | -- | 3 | College |
|  | $\begin{aligned} & \text { PHYS } \\ & 1012 \end{aligned}$ | General Physics I Lab. | Required | --- | 1 | Department |
|  | $\begin{gathered} \text { SENG } \\ 101 \end{gathered}$ | Scientific English | Required | --- | 3 | College |
|  | --- | University Elective | Elective | --- | 2 | University |
|  | --- | College Elective | Elective | --- | 2 | College |
|  |  |  |  |  | 17 |  |
| $\begin{gathered} \text { Level } \\ 2 \end{gathered}$ | $\begin{gathered} \hline \mathrm{BIOL} \\ 101 \end{gathered}$ | General Biology | Required | --- | 3 | College |
|  | $\begin{gathered} \text { PHYS } \\ 1022 \\ \hline \end{gathered}$ | General Physics II | Required | $\begin{aligned} & \text { PHYS } \\ & 1012 \end{aligned}$ | 4 | Department |
|  | $\begin{gathered} \text { PHYS } \\ 1912 \\ \hline--1 \end{gathered}$ | Practical Training | Required | $\begin{gathered} \text { PHYS } \\ 1012 \end{gathered}$ | 2 | Department |
|  | $\begin{gathered} \text { MTHZ } \\ 102 \end{gathered}$ | Calculus | Required | MATH 131 | 3 | Department |
|  | CHEM $101$ | General Chemistry | Required | --- | 3 | College |
|  | --- | University Elective | Elective | ---- | 2 | University |
|  |  |  |  |  | 17 |  |
| $\begin{gathered} \text { Level } \\ 3 \end{gathered}$ | $\begin{aligned} & \text { PHYS } \\ & 2112 \end{aligned}$ | Classical Mechanics I | Required | PHYS 1022 MTHZ 102 | 3 | Department |
|  | $\begin{aligned} & \text { PHYS } \\ & 2022 \\ & \hline \end{aligned}$ | Differential Equations in Physics | Required | MTHZ 102 | 3 | Department |
|  | $\begin{aligned} & \text { PHYS } \\ & 2032 \\ & \hline \end{aligned}$ | General Physics III | Required | $\begin{gathered} \text { PHYS102 } \\ -\quad 2 \end{gathered}$ | 4 | Department |


| Level | Course Code | Course Title | Required or Elective | Pre-Requisite Courses | Credit <br> Hours | Type of requirements(Institution, College <br> or Department) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { PHYS } \\ & 2412 \end{aligned}$ | Thermodynamics | Required | $\begin{gathered} \text { PHYS102 } \\ 2 \end{gathered}$ | 3 | Department |
|  | $\begin{gathered} \text { PHYS } \\ 2042 \end{gathered}$ | Mathematical Physics I | Required | MTHZ 102 | 3 | Department |
|  | ---- | University Elective | Elective | --- | 2 | University |
|  |  |  |  |  | 18 |  |
| $\begin{gathered} \text { Level } \\ 4 \end{gathered}$ | $\begin{gathered} \hline \text { PHYS } \\ 2052 \end{gathered}$ | Mathematical Physics II | Required | $\begin{gathered} \text { PHYS204 } \\ 2 \end{gathered}$ | 3 | Department |
|  | $\begin{gathered} \text { PHYS } \\ 2312 \end{gathered}$ | Waves and Vibrations | Required | $\begin{gathered} -\mathrm{PHYS} 204 \\ \hline \end{gathered}$ | 3 | Department |
|  | $\begin{aligned} & \text { PHYS } \\ & 2212 \end{aligned}$ | Electromagnetism I | Required | $\begin{gathered} \text { PHYS203 } \\ 2 \end{gathered}$ | 3 | Department |
|  | $\begin{aligned} & \text { PHYS } \\ & 2122 \end{aligned}$ | Classical Mechanics II | Required | PHYS211 | 3 | Department |
|  | $\begin{aligned} & \text { PHYS } \\ & 2512 \end{aligned}$ | Modern Physics | Required | $\begin{gathered} -\mathrm{PHYS} 203 \\ 2 \end{gathered}$ | 3 | Department |
|  | $\begin{aligned} & \text { PHYS } \\ & 2062 \end{aligned}$ | Partial Differential Equations in Physics | Required |  | 3 | Department |
|  |  |  |  |  | 18 |  |
| $\begin{gathered} \text { Level } \\ 5 \end{gathered}$ | $\begin{gathered} \hline \text { PHYS } \\ 3922 \end{gathered}$ | Electromagnetism Lab. | Required | $\begin{gathered} \hline \text { PHYS221 } \\ 2 \end{gathered}$ | 2 | Department |
|  | $\begin{aligned} & \text { PHYS } \\ & 3422 \end{aligned}$ | Statistical Physics | Required | $\begin{gathered} \mathrm{PHYS} 241 \\ 2 \end{gathered}$ | 3 | Department |
|  | $\begin{aligned} & \text { PHYS } \\ & 3322 \end{aligned}$ | Optics | Required | $\begin{gathered} \mathrm{PHYS} 231 \\ -\quad 2 \\ -\quad . \end{gathered}$ | 3 | Department |
|  | $\begin{aligned} & \text { PHYS } \\ & 3522 \end{aligned}$ | Quantum Mechanics I | Required | PHYS 2512 PHYS206 2 | 3 | Department |
|  | $\begin{aligned} & \text { PHYS } \\ & 3072 \end{aligned}$ | Mathematical Physics III | Required | $\begin{gathered} \mathrm{PH} \mathrm{YS} 205 \\ 2 \end{gathered}$ | 3 | Department |
|  | $\begin{gathered} \text { PHYS } \\ 3932 \end{gathered}$ | Modern Physics Lab. | Required | $\begin{gathered} \mathrm{PH} \mathrm{HS} 251 \\ 2 \end{gathered}$ | 2 | Department |
|  | --- | University Elective | Elective | --------- | 2 | University |
|  |  |  |  |  | 18 |  |
| $\begin{gathered} \text { Level } \\ 6 \end{gathered}$ | $\begin{aligned} & \hline \text { PHYS } \\ & 3222 \\ & \hline \end{aligned}$ | Electromagnetism II | Required | $\begin{gathered} \text { PHYS221 } \\ -\quad 2 \\ \hline \end{gathered}$ | 3 | Department |
|  | $\begin{aligned} & \text { PHYS } \\ & 3952 \end{aligned}$ | Instrumentation | Required | $\begin{gathered} \text { PHYS251 } \\ 2 \end{gathered}$ | 3 | Department |
|  | $\begin{gathered} \text { PHYS } \\ 3942 \end{gathered}$ | Optics Lab. | Required | $\begin{gathered} \mathrm{PH} \mathrm{YS} 332 \\ 2 \end{gathered}$ | 2 | Department |
|  | $\begin{aligned} & \text { PHYS } \\ & 3812 \end{aligned}$ | Nuclear Physics I | Required | $\begin{gathered} \mathrm{PHYS} 251 \\ -\quad 2 \end{gathered}$ | 3 | Department |
|  | $\begin{aligned} & \text { PHYS } \\ & 3712 \end{aligned}$ | Solid State Physics I | Required | $\begin{gathered} \mathrm{PH} \mathrm{YS} 352 \\ 2 \end{gathered}$ | 3 | Department |
|  | ---- | Department Elective | Elective | ---------------- | 3 | Department |
|  |  |  |  |  | 17 |  |
| $\begin{gathered} \text { Level } \\ 7 \end{gathered}$ | $\begin{aligned} & \hline \text { PHYS } \\ & 4232 \end{aligned}$ | Electronics I | Required | $\begin{gathered} \hline \text { PHYS371 } \\ 2 \end{gathered}$ | 3 | Department |
|  | $\begin{aligned} & \text { PHYS } \\ & -4542 \end{aligned}$ | Atomic and Molecular Physics | Required | $\begin{gathered} \text { PHYS352 } \\ -\quad 2 \\ --------- \end{gathered}$ | 3 | Department |
|  | $\begin{aligned} & \text { PHYS } \\ & 4982 \end{aligned}$ | Project I | Required | $\begin{gathered} \mathrm{PHYS} 352 \\ ---\quad 2 \end{gathered}$ | 2 | Department |
|  | $\begin{aligned} & \text { PHYS } \\ & 4532 \end{aligned}$ | Quantum Mechanics II | Required | $\begin{gathered} \text { PHYS352 } \\ 2 \end{gathered}$ | 3 | Department |
|  | $\begin{gathered} \text { PHYS } \\ 4972 \\ \hline \end{gathered}$ | Solid State Lab. | Required | $\begin{gathered} \mathrm{PHYS} 371 \\ -\quad 2 \end{gathered}$ | 2 | Department |
|  | $\begin{aligned} & \text { PHYS } \\ & 4962 \end{aligned}$ | Nuclear Physics Lab. | Required | $\begin{gathered} \text { PHYS281 } \\ 2 \end{gathered}$ | 2 | Department |
|  | --- | University Elective | Elective | --- | 2 | University |


| Level | Course Code | Course Title | Required or Elective | Pre-Requisite Courses | Credit <br> Hours | Type of requirements$\substack{\text { (Institution, College } \\ \text { or Department) }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { Level } \\ 8 \end{gathered}$ | $\begin{gathered} \hline \text { PHYS } \\ 4242 \end{gathered}$ | Electronics II | Required | $\begin{gathered} \hline \text { PHYS423 } \\ 2 \end{gathered}$ | 3 | Department |
|  | $\begin{gathered} \text { PHYS49 } \\ 92 \end{gathered}$ | Project II | Required | $\begin{gathered} \text { PHYS498 } \\ 2 \end{gathered}$ | 2 | Department |
|  | -------- | University Elective | Elective | -------------- | 2 | University |
|  | --- | Department Elective | Elective | --- | 3 | Department |
|  | --- | Department Elective | Elective | --- | 3 | Department |
|  | --- | Free Elective | Free | --- | 3 | Free |

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


## 3. Course Specifications

Insert hyperlink for all course specifications using NCAAA template https://majmaahmy.sharepoint.com/:f:/g/personal/h_hanafy_mu_edu_sa/EiMOdfW9qcFOm5K6bFIX7jYB w4RcHW9nDluI4nGhL21Yyg? $=2 \mathrm{dxxvr}$

## 4. Program learning Outcomes Mapping Matrix

Align the program learning outcomes with program courses, according to the following desired levels of performance ( $\mathbf{I}=$ Introduced $\mathbf{P}=$ Practiced $\mathbf{M}=$ Mastered )

| $\begin{aligned} & 5 \\ & 0 \\ & \hline 1 \end{aligned}$ | Course | Course Title | Program Learning Outcomes$(I=\text { Introduced } P=\text { Practiced } M=\text { Mastered })$ |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Knowledge |  |  | Skills |  |  | Competence |  |  |  |  |
|  |  |  | K. 1 | K. 2 | K. 3 | S. 1 | S. 2 | S. 3 | C. 1 | C. 2 | C. 3 | C. 4 | C. 5 |
| $\begin{aligned} & \text { To } \\ & \substack{2 \\ 0 \\ \hline} \end{aligned}$ | CSI 101 | Introduction to Computer Science | 1 |  |  | I |  |  | I |  |  |  | I |
|  | MATH 131 | Basis of Mathematics |  | I |  |  | I |  |  | 1 | 1 |  |  |
|  | PHYS 101 | General Physics I | 1 |  |  |  | 1 |  | 1 |  |  | 1 |  |
|  | $\begin{aligned} & \text { PHYS } \\ & 1012 \end{aligned}$ | $\begin{aligned} & \text { General Physics I } \\ & \text { Lab. } \end{aligned}$ | I |  |  | 1 |  |  |  | 1 |  | 1 |  |
|  | SENG 101 | Scientific English | 1 |  |  |  |  |  | 1 |  | I | I |  |
|  | -- | University Elective | 1 |  |  |  |  |  | I | I |  |  |  |
|  | --- | College Elective | 1 |  |  |  |  |  | 1 | I |  | I |  |
| $\begin{aligned} & \text { E } \\ & \stackrel{6}{0} \\ & N \end{aligned}$ | BIOL 101 | General Biology | 1 |  |  |  |  |  | 1 | I | 1 |  |  |
|  | $\begin{aligned} & \text { PHYS } \\ & 1022 \end{aligned}$ | General Physics II |  |  | 1 | 1 | 1 |  | 1 |  |  |  | 1 |
|  | $\begin{aligned} & \text { PHYS } \\ & 1912 \end{aligned}$ | Practical Training |  | I |  | 1 |  | I |  |  |  |  | 1 |
|  | MTHZ 102 | Calculus |  |  | 1 |  | 1 |  | 1 |  | 1 |  |  |
|  | CHEM 101 | General Chemistry | 1 |  |  |  | 1 |  | 1 |  |  | 1 |  |
|  | --- | University Elective |  | 1 |  |  |  | 1 |  |  | 1 | 1 |  |
| $5$ | $\begin{aligned} & \hline \text { PHYS } \\ & 2112 \end{aligned}$ | Classical Mechanics I | 1 |  |  |  | 1 |  | 1 |  | 1 |  |  |


|  | $\begin{aligned} & \text { PHYS } \\ & 2022 \end{aligned}$ | Differential Equations in Physics |  | 1 |  |  | 1 |  |  | 1 |  | 1 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { PHYS } \\ & 2032 \end{aligned}$ | General Physics III | 1 |  |  |  | 1 |  | 1 |  |  | 1 |  |
|  | $\begin{aligned} & \text { PHYS } \\ & 2412 \end{aligned}$ | Thermodynamics |  | 1 |  |  | 1 |  |  | 1 |  |  | 1 |
|  | $\begin{aligned} & \text { PHYS } \\ & 2042 \end{aligned}$ | Mathematical Physics I | 1 |  | 1 |  | 1 |  |  |  | 1 |  |  |
|  | --- | University Elective | I |  |  | I |  |  | 1 |  |  |  | 1 |
| $\begin{aligned} & 5 \\ & \frac{0}{0} \\ & \hline 1 \end{aligned}$ | $\begin{aligned} & \text { PHYS } \\ & 2052 \end{aligned}$ | Mathematical Physics II | P |  |  |  | P |  | P |  |  | P |  |
|  | $\begin{aligned} & \text { PHYS } \\ & 2312 \end{aligned}$ | Waves and Vibrations | 1 | I |  |  | P |  | P |  | P |  |  |
|  | $\begin{gathered} \text { PHYS } \\ 2212 \end{gathered}$ | Electromagnetism | P |  |  |  | P |  |  | P |  |  | P |
|  | $\begin{aligned} & \text { PHYS } \\ & 2122 \end{aligned}$ | Classical Mechanics II | P |  |  |  | P |  | P |  | P |  |  |
|  | $\begin{aligned} & \text { PHYS } \\ & 2512 \end{aligned}$ | Modern Physics | P | P |  |  | P |  | P |  |  | P |  |
|  | $\begin{aligned} & \text { PHYS } \\ & 2062 \end{aligned}$ | Partial Differential Equations in Physics |  |  | P |  | P |  |  | P |  |  | P |
| $\begin{aligned} & 5 \\ & \frac{0}{0} \\ & \frac{0}{2} \end{aligned}$ | $\begin{gathered} \hline \text { PHYS } \\ 3922 \end{gathered}$ | Electromagnetism Lab. | P |  |  | P |  |  | P |  | P |  |  |
|  | $\begin{aligned} & \text { PHYS } \\ & 3422 \end{aligned}$ | Statistical Physics | 1 |  |  |  | P |  | P |  | P |  |  |
|  | $\begin{aligned} & \text { PHYS } \\ & 3322 \end{aligned}$ | Optics |  | P |  |  | P |  |  | P |  |  | P |
|  | $\begin{aligned} & \text { PHYS } \\ & 3522 \end{aligned}$ | Quantum Mechanics I |  | P |  |  | P |  |  | P |  | P |  |
|  | $\begin{aligned} & \text { PHYS } \\ & 3072 \end{aligned}$ | Mathematical Physics III |  |  | P |  | P |  |  | P |  | P |  |
|  | $\begin{aligned} & \text { PHYS } \\ & 3932 \end{aligned}$ | Modern Physics Lab. | P |  |  | P |  |  | P |  |  | P |  |
|  | --- | University Elective | P |  |  |  |  |  | P |  | P |  | P |
| $\begin{aligned} & 5 \\ & \frac{0}{0} \\ & \frac{0}{a} \end{aligned}$ | $\begin{aligned} & \text { PHYS } \\ & 3222 \end{aligned}$ | Electromagnetism |  |  | M |  | M |  |  | P |  | M |  |
|  | $\begin{gathered} \text { PHYS } \\ 3952 \end{gathered}$ | Instrumentation |  |  |  | P |  | P |  | P |  |  | P |
|  | $\begin{gathered} \text { PHYS } \\ 3942 \end{gathered}$ | Optics Lab. | M |  |  | M |  |  | M |  |  | M |  |
|  | $\begin{gathered} \text { PHYS } \\ 3812 \end{gathered}$ | Nuclear Physics I |  |  | P |  | P |  |  | P |  |  | P |
|  | $\begin{aligned} & \text { PHYS } \\ & 3712 \end{aligned}$ | Solid State Physics I | P | P |  |  | P |  | P |  | P |  |  |
|  | --- | Department Elective |  |  | P |  | P |  | P |  |  |  | P |
| $\begin{aligned} & 5 \\ & \vdots \\ & 0 \\ & \hline \end{aligned}$ | $\begin{gathered} \hline \text { PHYS } \\ 4232 \end{gathered}$ | Electronics I | P |  |  | P |  |  |  | P |  | P |  |
|  | $\begin{aligned} & \text { PHYS } \\ & 4542 \end{aligned}$ | Atomic and Molecular Physics |  |  | M |  | M |  | M |  | M |  |  |
|  | $\begin{aligned} & \text { PHYS } \\ & 4982 \end{aligned}$ | Project I |  |  |  | P | P | P | P | P | P | P | P |
|  | $\begin{aligned} & \text { PHYS } \\ & 4532 \end{aligned}$ | Quantum Mechanics II | M |  |  |  | M |  | M |  | M |  | M |
|  | $\begin{aligned} & \text { PHYS } \\ & 4972 \end{aligned}$ | Solid State Lab. | M |  |  | M |  |  | M |  | M |  |  |


|  | $\begin{aligned} & \text { PHYS } \\ & 4962 \end{aligned}$ | Nuclear Physics Lab. | M |  |  | M |  |  | M |  |  | M |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | --- | University Elective |  | M |  |  |  |  |  | M |  |  | M |
| $\begin{aligned} & \frac{6}{0} \\ & \frac{\stackrel{y}{2}}{\infty} \end{aligned}$ | PHYS $4242$ | Electronics II |  | M |  | M |  |  |  | M |  | M |  |
|  | PHYS4992 | Project II |  |  |  | M | M | M | M | M | M | M | M |
|  | -- | University Elective |  |  |  |  |  | M |  |  | M | M | M |
|  | --- | Department Elective |  |  | M |  | M |  | M |  |  |  | M |
|  | --- | Department Elective |  | M |  |  | M | M |  |  |  |  | M |
|  | --- | Free Elective |  |  |  |  |  | M | M |  | M |  | M |


| Course code $\&$ No. | Program Learning Outcomes |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Knowledge and understanding |  |  |  | Skills |  |  |  | Values |  |  |
|  | K1 | K2 | K3 | --- | S1 | S2 | S3 | -- | V1 | V2 | - |
| Course .... |  |  |  |  |  |  |  |  |  |  |  |
| Course .... |  |  |  |  |  |  |  |  |  |  |  |
| Course .... |  |  |  |  |  |  |  |  |  |  |  |
| Course .... |  |  |  |  |  |  |  |  |  |  |  |
| Course .... |  |  |  |  |  |  |  |  |  |  |  |
| Course .... |  |  |  |  |  |  |  |  |  |  |  |
| Course .... |  |  |  |  |  |  |  |  |  |  |  |
| Course .... |  |  |  |  |  |  |  |  |  |  |  |
| Course .... |  |  |  |  |  |  |  |  |  |  |  |
| Course .... |  |  |  |  |  |  |  |  |  |  |  |
| Course .... |  |  |  |  |  |  |  |  |  |  |  |
| Course .... |  |  |  |  |  |  |  |  |  |  |  |

* 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.

| Measurable Objectives | Measurable Performance <br> Indicators | Major Strategies |
| :--- | :--- | :--- |
| 1. Enhance the | 1 - Exam results | 1 - Lectures |
| fundamental | 2 - Reports | 2 - Presentations |
| knowledge in Physics | 3 - Assignments |  |
| 4 - Surveys | - Group work |  |
| 4 - Discussions |  |  |
| 2. Develop and utilize | - Following laboratory safety <br> procedures in Labs. | 1 - Laboratory practices |
| effective skills in | 2 - Development and | 2 - Lectures |
| Physics | implementation of logical | 3 - Solving Problems |
|  | experimental procedures | - Assignments |


|  | 3-The analysis and interpretations of data using appropriate theory <br> 4 - Demonstrating effective problem solving techniques <br> 5 - Mathematical Procedures |  |
| :---: | :---: | :---: |
| 3. Provide foundation for basic scientific research in Physics. | 1 - The ability to use software tools to collect required topics <br> 2 - Presentations <br> 3 - Ability to write reports <br> 4 - Literature Surveys | 1 - Practical work <br> 2 - Assignments <br> 3 - Training |
| 4. Cooperate as individuals or in groups with the society to solve Physics related problems. | 1 - Contributing ideas <br> 2 - Students cooperation with their class fellows, teachers and administrative staff. <br> 3 - Correlate physics laws and principles with natural phenomena | 1-Seminars <br> 2 - Individual task <br> 3 - Group task <br> 4 - Scientific visits |

## 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.

| Assessment task | Week <br> Due | Proportion <br> of Total <br> Assessment |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Assessment task (e.g. essay, test, group <br> project, examination, speech, oral presentation, <br> etc.) | Week Due | Proportion <br> of Total <br> Assessment |  |
| 1 | First exam* | $6-7$ | $10 \%$ |  |
| 2 | Second exam* | $11-12$ | $10 \%$ |  |
| 3 | E-exam | One/ <br> semester | $5 \%$ |  |
| 4 | Presentation | Every <br> week | $10 \%$ |  |
| 5 | Homework | End topics | $10 \%$ |  |
| 6 | Quizzes | Every <br> week | $5 \%$ |  |
| 7 | Discussions | At the end | $40 \%$ |  |
| 8 | Final exam* | \begin{tabular}{\|l||}
\hline
\end{tabular} |  |  |

## D. Student Admission and Support:

```
1. Student Admission Requirements
    \checkmark ~ T h e ~ E x e c u t i v e ~ P r i n c i p l e s ~ o f ~ M a j m a a h ~ U n i v e r s i t y ~
    \checkmark ~ A p p r o v e d ~ b y ~ t h e ~ d e c r e e ~ o f ~ t h e ~ u n i v e r s i t y ~ c o u n c i l , ~ o n ~ i t s ~ s i x t h ~ s e s s i o n , ~ h e l d ~ o n
        1/3/1342 H
    \checkmark ~ R e q u i r e m e n t s ~ o f ~ A d m i s s i o n ~
    \checkmark ~ H e ~ s h o u l d ~ h a v e ~ o b t a i n e d ~ a ~ g e n e r a l ~ h i g h ~ s c h o o l ~ c e r t i f i c a t e ~ o r ~ i t s ~ e q u i v a l e n t ~ f r o m ~ w i t h i n ~
        or without the Kingdom of Saudi Arabia.
    \checkmark
    \checkmark ~ H i s ~ h i g h ~ s c h o o l ~ c e r t i f i c a t e ~ o r ~ i t s ~ e q u i v a l e n t ~ s h o u l d ~ n o t ~ b e ~ o l d e r ~ t h a n ~ f i v e ~ y e a r s . ~ T h e ~
        University Council may make some exceptions if convincing reasons are provided.
    \checkmark ~ H e ~ s h o u l d ~ b e ~ o f ~ a ~ g o o d ~ c o n d u c t .
    \checkmark ~ H e ~ s h o u l d ~ s u c c e s s f u l l y ~ p a s s ~ a n y ~ t e s t ~ o r ~ i n t e r v i e w ~ a s s i g n e d ~ b y ~ t h e ~ U n i v e r s i t y ~ C o u n c i l . ~
    \checkmark ~ H e ~ s h o u l d ~ b e ~ m e d i c a l l y ~ f i t .
    \checkmark ~ H e ~ s h o u l d ~ p r o v i d e ~ a ~ p e r m i s s i o n ~ f o r ~ s t u d y ~ f r o m ~ h i s ~ r e f e r e n c e , ~ i f ~ h e ~ w o r k s ~ i n ~
        government or private sector.
    \checkmark ~ H e ~ s h o u l d ~ s a t i s f y ~ a n y ~ o t h e r ~ c o n d i t i o n s ~ t h e ~ U n i v e r s i t y ~ C o u n c i l ~ d e t e r m i n e s , ~ a n n o u n c e d ~
        during application.
    \checkmark ~ H e ~ s h o u l d ~ n o t ~ b e ~ d i s m i s s e d ~ f r o m ~ a n y ~ o t h e r ~ u n i v e r s i t y ~ f o r ~ d i s c i p l i n a r y ~ o r ~ a c a d e m i c ~
        reasons. If that became clear after his, his acceptance shall be deemed cancelled from
        the day of his admission.
    \checkmark ~ A ~ s t u d e n t ~ d i s m i s s e d ~ f r o m ~ t h e ~ u n i v e r s i t y ~ f o r ~ a c a d e m i c ~ r e a s o n s ~ m a y ~ b e ~ e n r o l l e d ~ i n ~ s o m e
        programs that do not award a Bachelor Degree, as
    \checkmark ~ d e c i d e d ~ b y ~ t h e ~ U n i v e r s i t y ~ C o u n c i l , ~ o r ~ w h o e v e r ~ i t ~ d e l e g a t e s . ~ T h i s ~ s h a l l ~ n o t ~ b e ~ a l l o w e d ~
        for the transitional program.
    \checkmark ~ T h o s e ~ w h o ~ a l r e a d y ~ h a d ~ o b t a i n e d ~ a ~ b a c h e l o r ' s ~ d e g r e e , ~ o r ~ i t s ~ e q u i v a l e n t ~ s h a l l ~ n o t ~ b e
        admitted to obtain another Bachelor degree. The University Rector has the right for
        exceptions.
    \checkmark ~ A ~ s t u d e n t ~ r e g i s t e r e d ~ f o r ~ a n o t h e r ~ u n i v e r s i t y ~ d e g r e e ~ o r ~ b e l o w , ~ s h a l l ~ n o t ~ b e ~ a d m i t t e d ,
        either in the selfsame university or another.
2. Guidance and Orientation Programs for New Students
The Vice Dean of Student Affairs is considered the first and most important service center for
the College male & female students. The Vice Dean is providing its services through the
Student Activities, Student Fund and full supervision & follow-up of these services so that the
students can live in campus environment that suits their aspirations helping them to progress
and succeed in their university.
1- The committees for student's orientation in any department.
2 - The meeting with new students.
```


## 3. Student Counseling Services

(academic, career, psychological and social )
Sponsored by the Vice Dean of Student Affairs
1- The committees for academic advisor in the departments by faculty members in the male and female sections.

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-Provide counselling to the students.
5- Awareness of academic difficulties and study skills
6- Follow-up students who are struggling to study and help them acquire the skills necessary to increase their educational attainment

7 -The availability of full information about the department and its members, and their contact information (website).

8 - Develop every day skills of college students
9 - Consolidate ethical and behavioral values among students
10 - Raise students' awareness and strength their sense of belonging to their nation
11- Develop students' talents and tap them to serve their community
12- Provide care to students through material and moral support
13 - Provide cultural, scientific, social and sports services to students

## 4. Special Support

(low achievers, disabled, gifted and talented)
Sponsored by Vice Dean of Student Affairs
The committees of student's affairs
-Raise the awareness of students whom are low achievers, disabled and strengthen their sense of belonging to their department
-Provide care to students through material and moral support
-Develop students' talents and benefit from them to serve their community
-Providing cultural, scientific, social and sports services to students

## E. Teaching and Administrative Staff

1. Needed Teaching and Administrative Staff

| Academic Rank | Specialty |  | Special <br> Requirements / <br> Skills (if any ) | Required Numbers |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | General | Specific |  | M | F | T |
| Professors | Physics | Nuclear |  | 1 | 1 | 2 |
|  |  | Solid |  | 1 | 1 | 2 |
|  |  | Theoretical |  | 1 | 1 | 2 |
|  |  | Experimental |  | 1 | 0 | 1 |
|  |  | Medical Physics |  | 1 | 1 | 2 |
|  |  | Astronomy |  | 1 | 0 | 1 |
| Associate <br> Professors | Physics | Nuclear |  | 2 | 2 | 4 |
|  |  | Solid |  | 2 | 2 | 4 |
|  |  | Theoretical |  | 2 | 2 | 4 |
|  |  | Experimental |  | 1 | 1 | 2 |
|  |  | Medical Physics |  | 1 | 1 | 2 |
|  |  | Astronomy |  | 1 | 1 | 2 |
| Assistant <br> Professors | Physics | Nuclear |  | 2 | 2 | 4 |
|  |  | Solid |  | 2 | 2 | 4 |
|  |  | Theoretical |  | 2 | 2 | 4 |
|  |  | Experimental |  | 2 | 2 | 4 |
|  |  | Medical Physics |  | 1 | 1 | 2 |
|  |  | Astronomy |  | 1 | 1 | 2 |
| Lecturers | Physics | Physics |  | 4 | 4 | 8 |
| Teaching Assistants | Physics | Physics |  | 6 | 6 | 12 |
| Technicians and Laboratory Assistants | Physics | Physics |  | 7 | 7 | 14 |
| Administrative and Supportive Staff |  |  |  | 2 | 2 | 4 |
| Others ( specify ) |  |  |  | 2 | 3 | 5 |


| Academic Rank | Specialty |  | Special <br> Requirements / <br> Skills (if any ) |  |  | Required Numbers |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | General | Specific |  | F | T |  |  |
| Professors |  |  |  |  |  |  |  |


| Academic Rank | Specialty |  | Special <br> Requirements / <br> Skills (if any ) | Required Numbers |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | General | Specific |  | M | F | T |
| Associate <br> Professors |  |  |  |  |  |  |
| Assistant <br> Professors |  |  |  |  |  |  |
| Lecturers |  |  |  |  |  |  |
| Teaching Assistants |  |  |  |  |  |  |
| Technicians and Laboratory Assistants |  |  |  |  |  |  |
| Administrative and Supportive Staff |  |  |  |  |  |  |
| Others ( specify ) |  |  |  |  |  |  |

## 2. Professional Development

### 2.1 Orientation of New Teaching Staff

Describe briefly the process used for orientation of new, visiting and part-time teaching staff

1. Introduce the department's program and described its courses.
2. Introduce the internal regulations of the university and the higher education.
3. Organize workshops to introduce the college.
4. The department announcements on the university's website for available vacancies.
5. Forming a committee to study the resumes of the applicants and choose the best.
6. Place a personal interview with the applicant through the internet.
7. 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.
a. Forming several academic committees in the department such as: course timetables committee, scientific research committee, quality committee.
b. Activate the recommendations of these committees by discussing it in the department's council and the present the recommendations of these committees.

### 2.2 Professional Development for Teaching Staff

Describe briefly the plan and arrangements for academic and professional development of teaching staff (e.g.,
teaching \& learning strategies, learning outcomes assessment, professional development, etc.)
a. 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?
4. Launch the talks and seminars in the department and the university.
5. Invite specialist professors to deliver some lectures in the department.

## F. Learning Resources, Facilities, and Equipment

## 1. Learning Resources.

Mechanism for providing and quality assurance of learning resources (textbooks, references and other resource materials, including electronic and web-based resources, etc.)
The staff members may send a request for the provisional of any needed textbook / reference book to the library through the Head of Department.

## 2. Facilities and Equipment

(Library, laboratories, medical facilities, classrooms, etc.).

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

## G. Program Management and Regulations

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



- Internal assessment at the end of semester.


## H. Program Quality Assurance

|  | Program Quality Assurance System Povide online link to quality assurance manual |
| :---: | :---: |
|  | tps://www.mu.edu.sa/en/deanships/deanship-quality-and-skills-development |
|  | Program Quality Monitoring Procedures |
|  | - Polls for the enrolled students and those who graduated from the program <br> - Alumni surveys <br> - Establishing an internet open forum to get student feedback |
|  | Arrangements to Monitor Quality of Courses Taught by other Departments. |
|  | 1- Survey's to evaluate the different courses. <br> 2- Survey's to evaluate the faculty member by the student. <br> 3- Internal workshops in the department |
|  | Arrangements Used to Ensure the Consistency between Main Campus and Branches cluding male and female sections) |
|  | Arrangements to Apply the Institutional Regulations Governing the Educational and esearch Partnerships (if any). |
|  | Assessment Plan for Program Learning Outcomes (PLOs), and Mechanisms of Using Results in the Development Processes |
|  | - Polls for the enrolled students and those who graduated from the program <br> - Alumni surveys <br> - Establishing an internet open forum to get student feedback <br> - Asking for external evaluation from external referees <br> - Polls for the employers to know suitability of these graduates to the job, and how good their scientific knowledge is. <br> - Reports from Qiyas () <br> - Reports from the quality assurance deanship Majmaah University. |

## 7. Program Evaluation Matrix

| Evaluation Areas/Aspects | Evaluation Sources/References | Evaluation Methods | Evaluation Time |
| :---: | :---: | :---: | :---: |
| Leadership | program leaders | Surveys | End of Academic year |
| Effectiveness of teaching \& assessment | students, graduates, alumni | Surveys | End of Academic Semester |
| Learning resources, | independent reviewers | Surveys | End of Academic year |
| Partnerships | program leaders | Surveys | End of Academic year |
| Achievements | program leaders | Surveys | End of Academic year |
| Scientific Research | program leaders | Surveys | End of Academic year |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

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

## 8. Program KPIs*

The period to achieve the target (2019) year.

| NCAAA Standards المعيار | $\begin{array}{r} \text { KPI } \\ \text { Cod } \\ \text { ent } \end{array}$ | NCAAA or MU KPI المؤشر | . | $\begin{gathered} \text { Target } \\ \text { الالمنتهاء } \\ \text { المتوي } \end{gathered}$ |  |  | External Benchmar المرجتوي الاداء |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | S1.1 | 1. <br> Stakeholde <br> r <br> evaluation ratings of the Mission Statement, Objectives and plan of the <br> program. <br> 1. تقييم معرفة <br> المصلحة (هيئة <br> تـريس ، طلاب <br> ، خريجين ، <br> جهات توظيف) | Male | 82\% | 80\% |  |  | 80\% |
|  |  |  | Female | 82\% | 79\% |  |  | 80\% |
|  |  |  | Over all | 82\% | 79.5 $\%$ |  |  | 80\% |
|  |  |  | $\begin{aligned} & \text { commen } \\ & \mathrm{t} \end{aligned}$ | - Stakeholder evaluation collected from staff, administrations and students for both sections except student in girl section only <br> - The result is almost the same for two sections <br> - The mission and goals form will review and reevaluation |  |  |  |  |




| NCAAA Standard المعـي | $\begin{array}{r} \text { KPI } \\ \text { Cod } \\ \text { e } \end{array}$ | NCAAA or MU KPI | 䔍 | Target مستوي الالمستهـوف |  |  | External Benchma <br> مستوي الاداء <br> المرجعي <br> الخارجي |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 3. <br> Students overall evaluation on the quality of their learning experienc es at the institution | Male | 4 | 4 | + | 4.5 | 4.2 |
|  |  |  | Female | -- | -- |  |  |  |
|  |  |  | Over <br> all | 4 | 4 |  |  | 4.2 |
|  | S3.1 |  | comme nt | - There is no student in girl section this section group was closed from 2 years ago. |  |  |  |  |



| NCAAA Standard المعيار | $\begin{array}{r} \text { KPI } \\ \text { Cod } \\ \text { ent } \end{array}$ | NCAAA or MU KPI المؤشُ | . |  |  | Internal Benchmar (المرجتوي الاداء k الاختي | External Benchmar مستوي الاداء الخارجئي |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | S4. 1 | 7. Proportion of <br> achievement of the learning outcomes of the program in the independent standard tests such as the tests of the Medical Specialties Authority or the National Center for Measuremen $t$ and <br> Evaluation. | Male | 50\% | 3.6\% |  |  | 50\% |
|  |  |  | Female | -- | -- |  |  | -- |
|  |  |  | Over all | 50\% | 3.6\% |  |  | 50\% |
|  |  |  | $\underset{t}{\text { commen }}$ | - There is no student in girl section because this section joined from 2 years only this mean no graduate <br> - The result above from Qiyas center which they are include Education girl section with Science boy section <br> - Students need to refresh those physics Knowledge and Skills before the exam by training like KAFAYAT |  |  |  |  |
|  |  | 8. Students overall rating on the quality of their courses. (Average rating of students on a five point scale on overall evaluation of courses.) <br> 8. تقدير الطلاب <br> العام لجودة <br> المقررات <br> (متوسط تقايرات الطلاب على مقياس تقايري من خمس نقاط للتقييم الكلي للمقررات) | Male | 4 | 3.5 |  |  | 4 |
|  |  |  | Female |  |  |  |  |  |
|  |  |  | Over all | 4 | 3.5 |  |  | 4 |
|  | S4.2 |  | commen <br> t | - All courses are evaluated every year. <br> - There is no student in girl section this section group was closed from 2 years ago. <br> - There is an improvement like more exams with small degree in the student mark distribution <br> - More practical and training in the class |  |  |  |  |


|  | $\begin{aligned} & \text { S4 } \\ & .3 \end{aligned}$ | 9. Ratio of students to teaching staff. . 9 <br> الطلاب لهيئة (التّريس (بدوام كامل) (او ما يعادلده) |  | $\begin{array}{\|l\|l\|} \hline \begin{array}{l} \text { Staff } \\ \text { numbe } \\ \text { rs } \end{array} \\ \hline \end{array}$ | Student number | $\begin{array}{\|l\|l\|} \hline \text { Staff } \\ \text { numbe } \\ \text { rs } \end{array}$ | $\begin{aligned} & \text { Student } \\ & \text { number } \\ & \text { sumb } \end{aligned}$ | $\begin{aligned} & \text { Staff } \\ & \text { numbe } \\ & \text { rs } \end{aligned}$ | $\begin{aligned} & \text { Student } \\ & \text { number } \end{aligned}$ | $\begin{array}{\|l\|l\|} \hline \begin{array}{l} \text { Staff } \\ \text { numbe } \\ \text { rs } \end{array} \\ \hline \end{array}$ | $\begin{aligned} & \text { Student } \\ & \text { number } \\ & \mathrm{s} \end{aligned}$ | $\begin{aligned} & \text { Staff } \\ & \text { numb } \\ & \text { ers } \end{aligned}$ | $\begin{array}{\|l\|l} \hline \text { Studen } \\ \mathrm{t} \\ \text { numbe } \\ \text { rs } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Male | 15 | 80 | 15 | 80 |  |  |  |  | 15 | 100 |
|  |  |  | Femal e | 8 | -- | 8 | -- |  |  |  |  | 8 | 25 |
|  |  |  | Over <br> all | 23 | 80 | 23 | 80 |  |  |  |  | 23 | 125 |
|  |  |  | comm ent | - There is a need to hire new staff in some specialties like nuclear physics, health physics, radiation etc. <br> - The staff teach some physics course in another programs (e.g. mathematics, Chemistry, ................) <br> - The number of students recorded here in physics students only. <br> - The program has especial character so needs a more staff with different subject. <br> - There are four faculty members assigned to the University by other work within the University |  |  |  |  |  |  |  |  |  |
|  |  | 10. <br> Proportio n of teaching staff with verified doctoral qualificati ons. $\qquad$ <br> أعضاء هيئة التتريس الذين يحملون مؤهلات دكتّوراه عصادقاق |  | $\begin{aligned} & \begin{array}{l} \text { otatal } \\ \text { Staff } \end{array} \text { al } \end{aligned}$ | $\begin{aligned} & \text { Staff } \\ & \text { Php } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { Total } \\ \text { Staff } \end{array}$ | $\begin{aligned} & \text { Staff } \\ & \text { PhD } \end{aligned}$ | $\begin{aligned} & \text { Total } \\ & \text { Staff } \end{aligned}$ | $\begin{aligned} & \text { Staff } \\ & \text { PhD } \end{aligned}$ | $\begin{array}{\|l\|l\|} \hline \text { Total } \\ \text { Staff } \end{array}$ | $\begin{aligned} & \text { Staff } \\ & \text { PhD } \end{aligned}$ | $\begin{aligned} & \text { Total } \\ & \text { Staff } \end{aligned}$ | $\begin{aligned} & \text { Staff } \\ & \text { PhD } \end{aligned}$ |
|  |  |  | Male | 19 | 16 | 19 | 16 |  |  |  |  | 20 | 17 |
|  |  |  | Femal <br> e | 5 | 3 | 5 | 3 |  |  |  |  | 5 | 3 |
|  |  |  | Over <br> all | 24 | 19 | 24 | 19 |  |  |  |  | 25 | 20 |
|  | $\begin{aligned} & \text { S4 } \\ & .4 \end{aligned}$ |  | comm <br> ent | - Only few staff have not PhD, they are Saudi lecturers. |  |  |  |  |  |  |  |  |  |
|  | $\begin{aligned} & \text { S4 } \\ & .5 \end{aligned}$ | 11. <br> Percentag e of |  | $\begin{aligned} & \hline \text { Total } \\ & \text { Stude } \end{aligned}$ $\begin{array}{\|l\|l\|} \hline \text { Stude } \\ \text { nt } \end{array}$ <br> nt | Studen t Succes ses |  | Studen t Succes ses | Total Stude nt | Studen t Succes ses | Total Stude nt | Studen t Succes ses | Total Sude nt | Studen t Succes ses |



|  | S4.7 | 13. Proportion of graduates from undergraduate programs who within six months of graduation are: (a)employed (b)v enrolled in further study (c) not seeking employment or further study <br> 13. نسبة الخريجين من <br> برامج البكالوريوس الأين <br> في مدة 6 أشهر من التخرج <br> (أ) - توظفوا <br> (ب) - سجلوا في دراسة <br> (ج) (ج) لم يجثوا عن توظيف | Male | $\begin{aligned} & \hline 30 \% \\ & 10 \% \\ & 60 \% \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 20 \% \\ & 10 \% \\ & 70 \% \\ & \hline \end{aligned}$ | $\begin{gathered} 50 \% \\ 0 \% \\ 50 \% \\ \hline \end{gathered}$ | $\begin{aligned} & \hline 30 \% \\ & 20 \% \\ & 50 \% \\ & \hline \end{aligned}$ | $\begin{array}{\|l} \hline 30 \% \\ 10 \% \\ 60 \% \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Female | -- | -- |  |  |  |
|  |  |  | Over all | 30\% | 20\% | 50\% | 30\% |  |
|  |  |  |  | 10\% | 10\% | 0\% | 20\% | 10\% |
|  |  |  |  | 60\% | 70\% | 50\% | 50\% | 60\% |
|  |  |  | comment |  | The nu accept The nu study year is start. | r of r of pected maste | ed is din f crease ram |  |


|  |  |  | - There is no student in girl section <br> this section group was closed from <br> 2 years ago. |
| :--- | :--- | :--- | :--- | :--- |




|  | icular activities. <br> 21. نسبة <br> الطلاب <br> المشاركين <br> في الأنشطة <br> اللاصفية. | com ment | In the extracurricular activities students are shared in the Physics Club, Free day, visiting some factories, visiting schools, hospital, Astronomical Observatory, and also shared in the sporting and academy council |
| :---: | :---: | :---: | :---: |


| NCAAA Standards المـيـار | $\begin{gathered} \text { KPI } \\ \text { Code } \end{gathered}$ | NCAAA or MU <br> KPI <br> لمؤشر |  | $\begin{array}{r} \hline \text { Actual } \\ \\ \text { مستوالالادلو } \\ \text { الفطي } \\ 1439- \\ 1440 \end{array}$ | Internal Benchmark <br> مستوي الاداء المرجعي الداظلي | External Benchmark المرجتوي الخادرجي |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Standard 6 Learning Resources <br> المعيار 6 مصادر التُطم | S6.1 | 22. <br> Stakeholder evaluation of library and media center. | 4.2 | 4.3 | 4.3 | 4 | 4.5 |
|  | S6.2 | 23. <br> Stakeholder evaluation of the digital library. المكتبة الريّينمية. لذدمات | 4.2 | 4 | 4 | 4 | 4.3 |
|  | Comment |  | The students and staff take benefit from the digital library (journals, books, etc). however, some other publisher should be added like IOP Publishing etc. |  |  |  |  |


| NCAAA Standards المعيار | $\begin{gathered} \text { KPI } \\ \text { Code } \end{gathered}$ | NCAAA or MU KPI المؤشر |  | $\begin{array}{r} \hline \text { Actual } \\ \\ \text { مستواء } \\ \text { الفطلي } \\ 1439 \\ 1440 \end{array}$ | Internal Benchmark (المرجتوي الاداء | External Benchmark الخستوجي الاداء | New Target مستوي |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Standard 7 <br> Information technology (IT) <br> 7 المعيار تقتية المعلومات | S7.1 | 24. Stakeholder evaluation of the IT services. (IT availability - Security - Maintenance Accessibility - Support systems - Software and up-dates - Age of hardware | 4.2 | 3.75 | 3.75 | 4.3 | 4.3 |


|  |  | 24. تقييم المستفيدين لخدمات <br> تقتية المطومات (توفر الخدمة - الأمن - الصيانة - الاع الفني - الأجهزة - البرامج. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Comment | An important effort should be done to improve the IT services. |  |  |  |  |
|  | S7.2 | 25. Stakeholder evaluation of e learning services. 25. تقييم المستفيدين من خدمات التُطليم الالكتروني | 4.3 | 4.1 | 4.1 | 4.4 | 4.5 |
|  |  | Comment | Even though there is overall satisfaction on the e-learning services, further effort should be done. |  |  |  |  |



|  |  | particip ating in | Fema le | 8 | 3 | 8 | 3 |  |  |  |  | 8 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | onal develop | Over <br> all | 27 | 19 | 27 | 19 |  |  |  |  | 28 | 25 |
|  |  | ment activitie s during the past year. | com ment |  | ost al lopm | $\begin{aligned} & \text { memb } \\ & \text { nt acti } \end{aligned}$ | bers $p$ tivities. | ticip | ate act | ively t | pro | essio |  |
| NCA <br> AA <br> Stand <br> ards <br> المعيار | $\begin{aligned} & \text { KP } \\ & \text { I } \\ & \text { Co } \\ & \text { de } \end{aligned}$ | NCAA <br> A or <br> MU <br> KPI <br> المؤشر |  | $\begin{aligned} & \text { Targ } \\ & \text { الاداء } \end{aligned}$ | المستوي | Actua <br> الاداء 1439 | \|l الفعنوي -1440 |  | $\begin{aligned} & \hline \text { nal } \\ & \text { hmar } \\ & \text { مستوي } \\ & \text { الالخلئي } \end{aligned}$ | Exter Bench k الاداء | $\begin{aligned} & \text { nal } \\ & \text { hmar } \\ & \text { الخرجتوي } \\ & \text { الخمئي } \end{aligned}$ | New Targe الاداء |  |
|  |  |  |  | $\begin{aligned} & \text { Staff } \\ & \text { num } \\ & \text { ber } \end{aligned}$ | Staf <br> f <br> publ <br> ic | $\begin{aligned} & \text { Staff } \\ & \text { num } \\ & \text { ber } \end{aligned}$ | Staf <br> f <br> publ <br> ic$\|$ | $\begin{array}{\|l\|l} \hline \text { Staff } \\ \text { num } \\ \text { ber } \end{array}$ | Staf <br> f <br> publ <br> ic | $\begin{array}{\|l\|} \hline \begin{array}{l} \text { Staff } \\ \text { num } \\ \text { ber } \end{array} \\ \hline \end{array}$ |  | $\begin{aligned} & \hline \text { Staff } \\ & \text { num } \\ & \text { ber } \end{aligned}$ | Staf <br> f <br> publ <br> ic |
|  |  | publicat ions in | Male | 19 | 27 | 19 | 30 |  |  |  |  | 20 | 35 |
|  |  | the previou | Fema le | 8 | 5 | 2 | 3 | - |  | - |  | 8 | 5 |
|  |  | s year per full time | Over all | 27 | 32 | 31 | 33 |  |  |  |  | 28 | 41 |
| Stand ard 10 Resea rch $\text { الثبمثي } 10$ | $\begin{array}{\|l\|l} \text { S1 } \\ 0.1 \end{array}$ |  | com ment | The <br> staff <br> depa <br> Man | depart memb rtment peop | nent h r. It is at the le have | as mor <br> is the r <br> level <br> Q1 | e than <br> ranked <br> of Maj <br> nd a h | one I <br> among <br> maah <br> igh im | I pub the th Univer pact fa | licati hree rsity. actor | for <br> blic |  |




|  |  | g staff <br> with <br> colleagu <br> e, <br> single) <br> الزد 32 <br> الططلابية <br> (مشتركة <br> مع أعضاء <br> هئة <br> مع زميل، <br> مستّقل) |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 33. <br> Researc | Male | $\begin{aligned} & \hline 6000 \\ & \text { SAR } \end{aligned}$ |  | $\begin{aligned} & 300 \\ & \text { SAF } \end{aligned}$ |  | ? |  |  | $\begin{aligned} & 10000 \\ & \text { SAR } \end{aligned}$ |  | $\begin{aligned} & \hline 10000 \\ & \text { SAR } \end{aligned}$ |  |
|  |  | h <br> income from | $\begin{aligned} & \hline \begin{array}{l} \text { Fema } \\ \text { le } \end{array} \\ & \hline \end{aligned}$ | $\begin{aligned} & 2000 \\ & \text { SAR } \\ & \hline \end{aligned}$ |  | $\begin{aligned} & 100 \\ & \text { SAF } \end{aligned}$ |  |  |  |  |  |  | $\begin{aligned} & 4000 \\ & \text { SAR } \end{aligned}$ |  |
|  |  | external sources in the | $\begin{array}{\|l} \hline \begin{array}{l} \text { Over } \\ \text { all } \end{array} \\ \hline \end{array}$ | $\begin{aligned} & \hline 8000 \\ & \text { SAR } \\ & \hline \end{aligned}$ |  | $\begin{aligned} & 400 \\ & \text { SAF } \end{aligned}$ |  |  |  |  | $\begin{aligned} & 10000 \\ & \text { SAR } \end{aligned}$ |  | $\begin{aligned} & 14000 \\ & \text { SAR } \\ & \hline \end{aligned}$ |  |
|  | $\begin{aligned} & \text { S1 } \\ & 0.6 \end{aligned}$ | past <br> year as <br> a <br> proport <br> ion of <br> the <br> number <br> of full <br> time <br> teachin <br> g staff <br> member <br> 33 <br> رونادر <br> خالـنةّ <br> السابقة <br> أعضبة لعدد | $\begin{array}{\|l\|} \hline \begin{array}{l} \text { com } \\ \text { ment } \end{array} \end{array}$ | The A unit Natio The oppo | comp it sho nal P duty of rtunit | ition ld be ogran som to pa | on N <br> dedi <br> ms. <br> e act <br> artici | ation ve sta ate to | 1 Pro o hel <br> ff sho <br> Natio | staf <br> uld re nal P | s is stil ff whe <br> reduce <br> Progra | very <br> o giv ns. | diffic <br> ying <br> e them | cult. <br> the |
| NCA <br> AA <br> Stan <br> dard <br> s <br>  | $\begin{aligned} & \text { KP } \\ & \text { I } \\ & \text { Co } \\ & \text { de } \end{aligned}$ | NCAAA or KPI | MU <br> المؤشر |  |  |  | Actu <br> الاداء <br> 1439 | الفستوي | Inter Benc rk الاداء |  |  |  | New Targ الاداء | الجسينوي |
| Stan <br> dard <br> 11 <br> Com | $\begin{array}{\|l\|l} \text { S1 } \\ 1.1 \end{array}$ | 34. Propor of full time teaching an |  |  | $\begin{aligned} & \text { Staff } \\ & \text { num } \\ & \text { ber } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { Staf } \\ \text { f } \\ \text { shar } \\ \text { ed } \end{array}$ | $\begin{aligned} & \text { Staff } \\ & \text { num } \\ & \text { her } \end{aligned}$ |  | $\begin{array}{\|l\|l\|} \hline \text { Staff } \\ \text { num } \\ \text { ber } \end{array}$ |  | Staff <br> num <br> ber |  | $\begin{aligned} & \hline \text { Staff } \\ & \text { num } \\ & \text { ber } \end{aligned}$ | $\begin{array}{\|l\|l} \hline \text { Staf } \\ \text { f } \\ \text { shar } \\ \text { ed } \\ \hline \end{array}$ |
| $\begin{aligned} & \text { Com } \\ & \text { muni } \end{aligned}$ |  |  |  | Male | 19 | 10 | 19 | 6 |  |  |  |  | 19 | 10 |


|  |  | engaged in community service activities. <br> 34. نسبة أعضاء <br> هيئة التتريس وغير هم من الموظفين <br> الآين شاركوا في أنشطة لخدمة المجنمع. | Fema le | 8 | 4 | 8 | 2 |  |  | 8 | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Over <br> all | 27 | 14 | 27 | 9 |  |  | 27 | 14 |
|  |  |  | com ment |  |  |  |  |  |  |  |  |
|  | $\begin{array}{\|l} \hline \text { S1 } \\ 1.2 \end{array}$ | 35. Number of community education programs provided by the program. <br> 35. عدد برامج التثقّقف المجتمعي لمقامة من البرناميج | Male | 4 |  | 3 |  | 5 | 6 | 5 |  |
|  |  |  | $\begin{aligned} & \text { Fema } \\ & \text { le } \\ & \hline \end{aligned}$ | 4 |  | 2 |  |  |  | 5 |  |
|  |  |  | Over <br> all | 8 |  | 5 |  | 5 | 6 | 10 |  |
|  |  |  | com ment |  |  |  |  |  |  |  |  |

## Strengths:

- Stakeholder evaluation collected from staff, administrations and students for both sections except student in girl section only
- The result is almost the same for two sections
- All courses are evaluated every year.
- Only few staff have not PhD, they are Saudi lecturers.
- The number of employed is acceptable.
- The number of enrolled in further study is expected to increase next year is the master program will start.
- The students are satisfied on the counselling.
- The students are likely satisfied on the student services. However, some improvement should be performed
- Almost all staff published an indexed paper.
- Only few members should take more care to publish paper in ISI or Scopus database.
- The published papers have a high level of citations.
- Some papers are classified as hot papers.
- The department has more than one ISI publication for each staff member. It is the ranked among the three best department at the level of Majmaah University.
- Many people have Q1 and a high impact factor publication.
- In the extracurricular activities students are shared in the Physics Club, Free day, visiting some factories, visiting schools, hospital, Astronomical Observatory, and also shared in the sporting and academy council
- The students and staff take benefit from the digital library (journals, books, etc). however, some other publisher should be added like IOP Publishing etc.
- Even though there is overall satisfaction on the e-learning services, further effort should be done.
- There are four faculty members assigned to the University by other work within the University


## Areas for Improvement:

- There is no student in girl section this section group was closed from 2 years ago.
- Students need to refresh those physics Knowledge and Skills before the exam by training like KAFAYAT
- There is an improvement like more exams with small degree in the student mark distribution
- The mission and goals form will review and reevaluation
- This KPI will prepare and evaluate
- The result above from Qiyas center which they are include Education girl section with Science boy section
- More practical and training in the class
- The percentage of student who complete at in minimum time is $11.35 \%$ is small
- This ratio because the students' enrollment in the program are very poor in English and mathematics.
- There is an improvement like more exams with small degree in the student mark distribution
- More practical and training in the class
- The competition on National Programs is still very difficult.
- A unit should be dedicated to help staff when applying to National Programs.
- The duty of some active staff should reduce to give them the opportunity to participate to National Programs.
- The participation of the students in publications should be more encouraged for all sides (students and supervisors)
- The university should encourage more participation in the conference.
- It should be find a more better solution for the foreign faculty also to participate in the international conference.
- Even though there is overall satisfaction on the e-learning services, further effort should be done


## Priorities for Improvement:

- There is no student in girl section this section group was closed from 2 years ago.
- Students need to refresh those physics Knowledge and Skills before the exam by training like KAFAYAT
- There is an improvement like more exams with small degree in the student mark distribution
- More practical and training in the class
- The percentage of student who complete at in minimum time is $11.35 \%$ is small
- This ratio because the students' enrollment in the program are very poor in English and mathematics

| No | KPIs <br> Code | KPIs | Target | Measurement Methods | Measurement Time |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |
| 5 |  |  |  |  |  |
| ...... |  |  |  |  |  |

* including KPIs required by NCAAA
I. Specification Approval Data

| Council / Committee | PHYSICS DEPARTMENT COUNCLING MEETING |
| :---: | :---: |
| Reference No. | (7) |
| Date | $1 / 4 / 1441$ |

