

<b>Program Name:</b>	<b>Physics B. Sc.</b>
<b>Qualification Level:</b>	<b>Bachelor</b>
<b>Department:</b>	<b>Department of Physics</b>
<b>College:</b>	<b>College of Science</b>
<b>Institution:</b>	<b>Qassim University</b>
<b>Academic Year:</b>	<b>1441-1442</b>
<b>Main Location:</b>	
<b>Branches offering the Program:</b>	<ul style="list-style-type: none"> <li>• Main campus - college of Science- Male branch (Al-Muhada)</li> <li>• Main campus - college of Science- Female branch (Al-Muhada)</li> <li>•</li> </ul>

هيئة تقويم التعليم والتدريب  
Education & Training Evaluation Commission



- Main campus - college of Science- Male branch (Al-Muhada)
- Main campus - college of Science- Female branch (Al-Muhada)
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## Annual Program Report

## Table of Contents

<b>A. Implementation of Previous Action Plan .....</b>	<b>3</b>
<b>B. Program Statistics.....</b>	<b>6</b>
1. Students Statistics (in the year concerned).....	6
2 . Cohort Analysis of Current Graduate Batch .....	6
3. Analysis of Program Statistics .....	6
<b>C. Program Learning Outcomes Assessment .....</b>	<b>7</b>
2. Analysis of Program Learning Outcomes Assessment .....	10
<b>D. Summary of Course Reports .....</b>	<b>10</b>
1. Teaching of Planned Courses / Units .....	10
2. Courses with Variations .....	11
3. Result Analysis of Course Reports.....	11
<b>E. Program Activities.....</b>	<b>12</b>
1. Student Counseling and Support .....	12
2. Professional Development Activities for Faculty and Other Staff.....	12
3. Research and Innovation .....	13
4. Community Partnership.....	18
5. Analysis of Program Activities .....	18
<b>F. Program Evaluation .....</b>	<b>20</b>
1. Evaluation of Courses .....	20
2. Students Evaluation of Program Quality.....	25
3. Other Evaluations.....	27
4. Key Performance Indicators (KPIs) .....	29
5. Analysis of Program Evaluation .....	41
<b>G. Difficulties and Challenges Faced Program Management .....</b>	<b>43</b>
<b>H. Program Improvement Plan .....</b>	<b>44</b>
<b>I. Report Approving Authority .....</b>	<b>48</b>
<b>J. Attachments :.....</b>	<b>48</b>

## A. Implementation of Previous Action Plan

Considering the recommendations of previous year annual report, list the planned actions and their status.

Planned Actions	Responsibility of Action	Planned Completion Date	Level of Completion		If Not Completed	
			Completed	Not Completed	Reasons	Proposed Actions
1. Program operational plane should be discussed by departmental board and particular assignments should be allocated to program committees	Head of Quality Assurance committee	30/10/2020	√			
2. The program operational plan should be set in view of program performance indicators.	Head of Quality Assurance committee	30/10/2020	√			
3. Alumni unit should be contacted to provide relevant data.	Head of Quality Assurance committee	30/04/2021		√	Lack of data on program graduates	Formation of effective alumni unit for the college.
4. The head of the Training and Development Unit will be contacted in order to complete at least one workshop on developing staff skill on effective use of online learning resource in teaching and assessment processes.	Head of the Training and Development Unit	30/10/2020	√			
5. Study plan committee should review course report and other reports submitted by course committee for recommendation relevant with	Head of program study plan committee	30/04/2021				
6. Formation of program consultant committee and planning for its activities.	Head of Physics Dept	30/10/2021	√			
7. Online course content including assignments should be reviewed by course committee for improvement of contents and assessment methods.	Head of Quality Assurance committee	30/4/20021	√			
8. Course committee should hold a monthly meeting to review course assignments in terms of their contents and assessment.	Head of Quality Assurance committee	30/04/2021		√		

9. Formation of course subject committee with member form both sections.	Head of Quality Assurance committee	30/12/2020	√			
10.College Deputy for Quality Assurance will be contacted. Possible means to encourage students to complete their Course Evaluation Questionnaire will be discussed	Head of Quality Assurance committee	30/03/2021	√			
11.The head of cultural and social committee should present a plan for extra-curricular activities	Head of program social and cultural committe	30/02/2021	√			
Reformation of course subject committees whereof major tasks are : <ul style="list-style-type: none"> <li>Assessment of teaching and learning process in terms of its effectiveness and compliance with course specifications</li> <li>Review of course assignments</li> <li>Reviewing student results and suggesting possible amendments in case of skew results.</li> </ul>	Head of Physics Dept.	30/10/2020	√			
12.Head of Academic Guidance committee will be consulted regarding the possibility of holding induction program for new students.	Head of the Academic Guidance Committee	30/10/2020	√			
13.The head of the Training and Development Unit will be contacted regarding workshops that target available IT services for students and faculties.	Head of the Training and Development Unit.	30/04/2021	√			

14. The head of the dept. will be contacted regarding possible means/incentives for high-profile participation in community service activities	Head of community services committee.	30/10/2020		√	Due to covid19 pandemic consequences ,community service activities were delayed.	Community services action plan for next year should include remedial action for shortcomings in program activities.
15. College Dean will be addressed to take necessary action regarding recruitment of laboratory technician staff.	Head of Physics Dept.	30/04/2021	√			
16. College Dean will be addressed to take necessary action to allocate necessary fund for running and maintenance of research laboratories.	Head of program laboratories and equipment committee.	30/04/2021	√			
17. The head of the dept. will be contacted regarding possible means/incentives for increasing incentives and funding for scientific research.	Head of Physics Dept.	30/04/2021	√			
18. Concise course text books for each course should be prepared by course instructors.	Head of Physics Dept.	30/04/2021	√			

## B. Program Statistics

### 1. Students Statistics (in the year concerned)

No	Item	Results
1	Number of students who started the program	123
2	Number of students who graduated	Male:12(421) Female: 35(422)
3	Number of students who completed major tracks within the program	N. A.
	a.	
	b.	
	c.	
4	a. Number of students who completed the program in the minimal time	47
5	a. Percentage of students who completed the program in the minimal time (Completion rate)	38.21
6	Number of students who completed an intermediate award specified as an early exit point (if any)	N. A.
7	Percentage of students who completed an intermediate award specified as an early exit point (if any)	N. A.
<b>Comment on any special or unusual factors that might have affected the completion rates:</b> The ratio of student who completed the program in minimal time is relatively small (47/123) due to low passing rates and relatively high rate of withdrawal in primary levels.		

### 2 . Cohort Analysis of Current Graduate Batch

Student Categories		Total cohort enrollment	Withdrawn	Retained till year end	Not passed	Passed	Passing rate
Years							
Three Years Ago	M	56	4	52	15	37	71.15
	F	67	1	66	15	51	77.27
	Total	123	5	118	30	88	74.57
Two Years Ago	M	37	4	33	8	25	75.75
	F	51	2	49	7	42	85.71
	Total	88	6	82	15	67	81.70
Last Year	M	25	1	24	12	12	50
	F	42	2	40	3	37	92.5
	Total	67	3	64	13	49	76.56
Current Year	M	12	0	12	0	12	100
	F	37	0	37	2	35	94.59
	Total	49	0	49	2	47	95.91

\* add more rows for further years ( if needed )

\*\* attach separate cohort analysis report for each branch

### 3. Analysis of Program Statistics

(including strengths, areas for improvement, and priorities for improvement)

<b>Strengths :</b>
<b>Overall:</b> <ul style="list-style-type: none"> <li>High passing rates current year (cohort analysis) indicating improvement of student academic performance over years..</li> <li>Significant increase in numbers of students entering the program over four years.</li> </ul>
<b>Areas for Improvement:</b>
<ul style="list-style-type: none"> <li>Relatively low passing rate for entry level.</li> </ul>
<b>Priorities for Improvement:</b>
<ul style="list-style-type: none"> <li>Academic guidance plans and orientation programs of new students should incorporate actions to improve academic performance of entry level students.</li> </ul>

## C. Program Learning Outcomes Assessment

### 1. Program Learning Outcomes Assessment Results

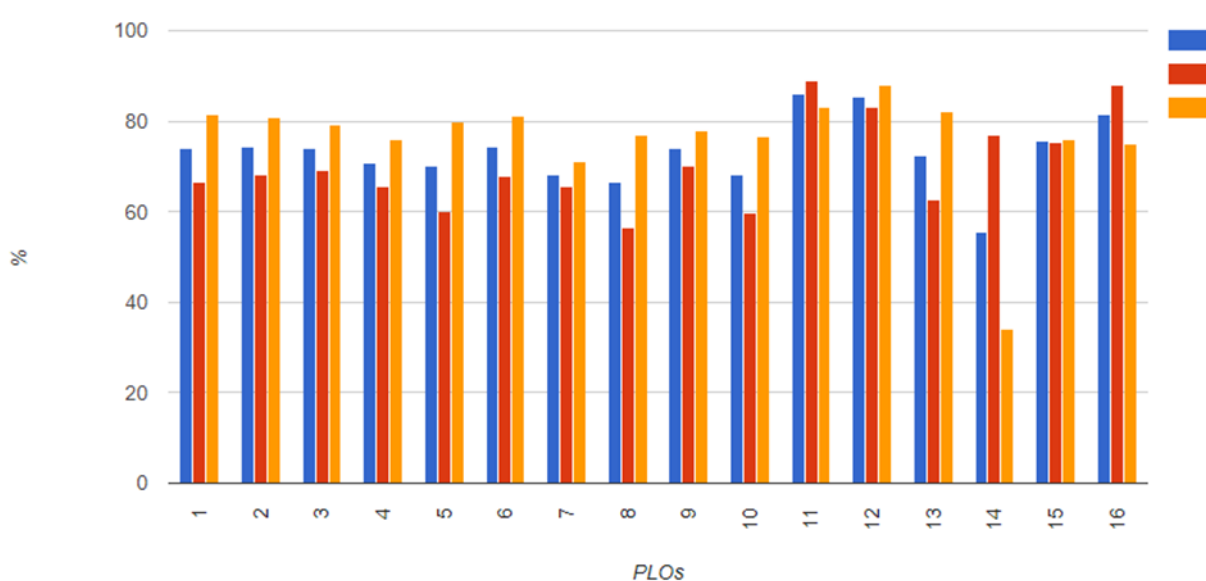
#	Program Learning Outcomes	Assessment Methods (Direct and Indirect)	Performance Target	Results
<b>Knowledge and Understanding</b>				
K1	On successfully completing the program, the student should be able to clearly state and recall fundamental theorems law and facts of physics.	Mid1 exam Mid2 exam Course Work Practical exam Final exam	72.00	Overall: 74.18 Male: 66.54 Female: 81.52
K2	On successfully completing the program, the student should be able to clearly state and recall essential mathematical theorems law and concepts that has particular application in the different fields of physics.	Mid1 exam Mid2 exam Course Work Practical exam Final exam	72.00	Overall: 74.55 Male: 68.176 Female: 80.82
K3	On successfully completing the program, the student should be able to recognize physics laboratory	Mid1 exam Mid2 exam Course Work Practical exam	72.00	Overall: 74.55 Male: 68.176 Female: 79.82

	apparatus and appropriately describe their functions.	Final exam		
K4	On successfully completing the program, the students should be able to describe the procedure to carry out a variety of experiment pertinent to different fields of physics.	Mid1 exam Mid2 exam Course Work Practical exam Final exam	70.00	Overall: 70.66 Male: 65.5 Female:75.833
K..				
<b>Skills</b>				
S1	On successfully completing the program, the student should be able to prove fundamental theorems of physics.	Mid1 exam Mid2 exam Course Work Practical exam Final exam	75.00	Overall: 70.026 Male: 60.211 Female:79.842
S2	On successfully completing the program, the students should be able to apply essential mathematical concepts and laws to explain and interpret physics related facts and phenomena.	Mid1 exam Mid2 exam Course Work Practical exam Final exam	70.00	Overall: 74.743 Male: 67.75 Female:81.211
S3	On successfully completing the program, the student should be able to experimentally investigate some properties and phenomena related to some physical systems and to appropriately analyze and interpret their results.	Mid1 exam Mid2 exam Course Work Practical exam Final exam	70.00	Overall: 68.222 Male: 65.444 Female:71.00
S4	On successfully completing the program, the student should be able to carry out a rather complex investigation employing various mathematical, computational and experimental techniques.	Mid1 exam Mid2 exam Course Work Practical exam Final exam	70.00	Overall:66.667 Male: 65.417 Female:76.917
S5	On successfully completing the program, the student should be able to communicate effectively both orally and in writing, selecting and using forms of presentation appropriate for differing physics-related contexts and audiences.	Graduation project assessment Practical exam	70.00	Overall: 74.045 Male: 70.091 Female:78.00
S6	On successfully completing the program, the student should be able to routinely use the most appropriate information and communications technology in gathering, interpreting and communicating physics-related information and ideas	Mid1 exam Mid2 exam Course Work Practical exam Final exam	73.00	Overall: 68.167 Male: 56.667 Female:76.667
S7	On successfully completing the program, the student should be able to identify relevant statistical and/or computational techniques and apply them creatively in interpreting information and proposing	Mid1 exam Mid2 exam Course Work Practical exam Final exam	70.00	Overall: 85 Male: 89 Female:83



	appropriate solutions to physics related problems.			
S8	On successfully completing the program, the student should be able to adequately present a report on some physics-related scientific investigation and hold a relevant seminar or a discussion form.	Course Work	73.00	Overall: 85.8 Male: 83.02 Female:88.00
<b>Values</b>				
V1	On successfully completing the program, the student should be able to demonstrate commitment to a study or research work plan.	Assessment of research project. Assessment of practical experiment report.	70.00	Overall: 72.400 Male: 62.600 Female:82.2
V2	On successfully completing the program, the student should be able to manifest credibility and transparency in presenting the results and finding of an investigation.	Assessment of research project. Assessment of practical experiment report.	73.00	Overall: 55.5 Male: 77.00 Female:34.00
V3	On successfully completing the program, the student should be able to effectively participate in teamwork.	Assessment of research project. Assessment of practical experiment report.	70.00	Overall: 75.583 75.167 76.00
V4	On successful completion of the program, students are able to take the initiative in identifying issues requiring attention and in addressing them appropriately on an individual or on a team basis.		73.00	Overall: 81.5 Male: 88.00 Female:75.00

### Comments on the Program Learning Outcome Assessment results.



**Comments:**

1- There is some variation between performances of female and male section.

\* Include the results of measured learning outcomes during the year of the report according to the program plan for measuring learning outcomes

\*\* Attach a separate report on the program learning outcomes assessment results for male and female sections and for each branch (if any)

**2. Analysis of Program Learning Outcomes Assessment**

(including strengths, Areas for Improvement, and priorities for improvement)

**Strengths :****Overall:**

PLO1, PLO2, PLO3, PLO6, PLO9, PLO11, PLO12, PLO15, PLO16.

**Male section:**

PLO11, PLO12, PLO14, PLO15, PLO16.

**Female section:**

PLO1, PLO2, PLO3, PLO4, PLO5, PLO6, PLO8, PLO9, PLO10, PLO11, PLO12, PLO13, PLO15, PLO16.

**Areas for Improvement:****Overall:**

PLO4, PLO5, PLO7, PLO8, PLO10, PLO13, PLO14.

**Male section:**

PLO1, PLO2, PLO4, PLO5, PLO7, PLO9, PLO10

- 1- CLO/PLO mapping for phys293, phys339, phys479 and phys489 should be reviewed.
- 2- Student performance assessment procedures should be unified for male and female sections.
- 3- Instructor of capstone courses should regard CLO in connection with assessment processes.

**Priorities for Improvement:****Male section:**

PLO6

- 1- CLO/PLO mapping for phys293, phys339, phys479 and phys489 should be reviewed.
- 2- Student performance assessment procedures should be unified for male and female sections.

**Female section:**

1- PLO14.

**D. Summary of Course Reports****1. Teaching of Planned Courses / Units**

List the courses / units that were planned and not taught during the academic year, indicating the reasons and compensating actions.

Course	Units/Topics	Reasons	Compensating Actions
None.			

Course	Units/Topics	Reasons	Compensating Actions

## 2. Courses with Variations

List courses with marked variations in results that are stated in the course reports, including: (completion rate, grade distribution, student results, etc.), and giving reasons for these variations and actions taken for improvement.

Course Name & Code	variation	Reasons for variation	Actions taken
Phys100	<ul style="list-style-type: none"> <li>Student success rate is relatively low.</li> <li>Some course topics were not completed.</li> </ul>	<ul style="list-style-type: none"> <li>Due to some technical faults in online teaching system.</li> <li>As a result of covid19 pandemic, practical lesson could not be held properly.</li> </ul>	<ul style="list-style-type: none"> <li>Preparation of course content to suite both online and direct attendance subject delivery.</li> <li>Employment of modern technology tools to enhance online instruction.</li> <li>Extension of classwork and homework activities.</li> <li>Submission of course contents by instructor in appropriate timing.</li> </ul>

## 3. Result Analysis of Course Reports

(including strengths, Areas for Improvement:, and priorities for improvement)

### Strengths :

High success rates in advanced level  
Grade distribution is normal

<b>Areas for Improvement:</b>
<b>Priorities for Improvement:</b>

## E. Program Activities

### 1. Student Counseling and Support

Activities Implemented	Brief Description*
Orientation day	Orientation program for new students held by the college deanship on 23/01/1442
Student counseling workshop	Counseling workshop on university rules and systems for student held by the deanship of student affairs of Qassim University on 02/07/1442 H
Student counseling workshop	Workshop on academic difficulties and possible solutions, held by the deanship of student affairs of Qassim University on 16/07/1442 H
Student counseling workshop	Workshop on student positive attitudes towards their specialization, held by the deanship of student affairs of Qassim University on 16/07/1442 H
Student counseling workshop	Workshop on how to start university life and achieve excellence, held by the deanship of student affairs of Qassim University on 06/09/2020
Allocation of academic guidance responsibilities.	Academic guidance for program students were allocated on the first week of the academic term 421
<b>Comment on Student Counseling and Support**</b>	
<p>It is clearly seen that the deanship for admission and registrations together with the deanship of student affairs provide sufficient academic guidance program on various aspects concerning students' academic affairs. Moreover, the college of science deanship provides sufficient orientation for newly enrolled students whether in physics B.Sc. or other programs of the college. All that has saved the program a lot of effort on counseling affairs, albeit, the program has an essential role to play which is that, the academic guide responsibilities for all program students are allocated to program staff members.</p>	

\* including action time, number of participants, results and any other statistics.

\*\* including performance evaluation on these activities

### 2. Professional Development Activities for Faculty and Other Staff

Activities Implemented	Brief Description*
Training Course	The use of artificial intelligence techniques to monitor Exams 2020/11/23
Training Course	Effective strategies in learning the English language for male and female employees. October 31, 2021
Training Course	

Training Course	Women's Leadership Excellence 1442/6/11 H
Training Course	Risk management 1442/6/13
Professional development workshop	A single day online workshop on proper use of assessment tools provided by black board online instructional software packages held on 16-04-1442 H
Professional development workshop	A single day workshop held by Qassim university deanship for quality and development on 02-04-1442 H on online student assessment tool.
Conference	The first conference for leader of academic programs held in 10-12 Nov. 2020 On strategies– King Abdul Aziz University
Conference	The first conference for leader of academic programs held in 10-12 Nov. 2020 On future skills – King Abdul Aziz University
Professional development workshop	A single day workshop held by Qassim university deanship for quality and development on 02-03-1442 H on building online contents and online classes using black board held on
Professional development workshop	A single day workshop held by Qassim university deanship for quality and development on 08-04-1442 H on Building online tests and exporting importing previous tests using black board.
	A single day workshop held by Qassim university deanship for quality and development on 08-06-1442 H on online tests online class management and attendance monitoring using black board.
<b>Comment on Professional Development Activities for Faculty and Other Staff **</b>	

\* including action time, number of participants, results and any other statistics.

\*\* including performance evaluation on these activities

### 3. Research and Innovation

Activities Implemented	Brief Description* (publication)
Publication	Faisal S. Al mashary, Jorlandio F. Felix, Sukarno O. Ferreira, Daniele de Souza, Yara G. Gobato, Jasbinder Chauhan, Natalia Alexeeva, Mohamed Henini, Abdulrahman M. Albadri, Ahmed Y. Alyamani. "Investigation of the structural, optical and electrical properties of indium-doped TiO <sub>2</sub> thin films grown by Pulsed Laser Deposition technique on low and high index GaAs planes." Materials Science and Engineering: B 259 (2020): 114578. .
Publication	Sultan Alhassan, Daniele de Souza, Amra Alhassni, Amjad Almunyif, Saud Alotaibi, A. Almalki, M. Alhuwayz, Igor P. Kazakov, Alexey V. Klekovkin, Vladimir I. Tsekosh, Igor A. Likhachev, Elkhani M. Pashaev, Sergio Souto, Yara Galvao Gobato, N. Al Saqri, Helder Vinicius Avanco Galeti, Faisal Al mashary, Hind Albalawi, Norah Alwadai, Mohamed Henini. "Investigation of the effect of substrate orientation on the structural, electrical and optical properties of n-type GaAs <sub>1-x</sub> Bix layers grown by Molecular Beam Epitaxy." Journal of Alloys and Compounds 885 (2021): 161019

Publication	-Saleh Alashrah, Yassine El-Ghoul, Faisal Muteb Almutairi, Mohammed Ahmed Ali Omer”Development, Characterization and Valuable Use of Novel Dosimeter Film Based on PVA Polymer Doped Nitro Blue Tetrazolium Dye and AgNO <sub>3</sub> for the Accurate Detection of Low X-ray Doses” <i>Polymers</i> 2021, 13(18), 3140; <a href="https://doi.org/10.3390/polym13183140">https://doi.org/10.3390/polym13183140</a>
	-Saleh Alashrah, Yassine El-Ghoul, Mohammed Ahmed Ali Omer” Synthesis and Characterization of a New Nanocomposite Film Based on Polyvinyl Alcohol Polymer and Nitro Blue Tetrazolium Dye as a Low Radiation Dosimeter in Medical Diagnostics “ <i>Polymers</i> 2021, 13(11), 1815; <a href="https://doi.org/10.3390/polym13111815">https://doi.org/10.3390/polym13111815</a>
Publication	Hossam Donya, TA Taha, A Alruwaili, IBI Tomsah, M Ibrahim ,Micro-structure and optical spectroscopy of PVA/iron oxide polymer nanocomposites, <i>Journal of Materials Research and Technology</i> 9 (4), (2020/7/1), 9189-9194.
Publication	IEA Ikram M. Ahmed , Yahia F. Tahir, Ibrahim I. Tomsah , Ibrahim E. Ali ,Identification of A Liverwort Fossil on Pottery from A Church Excavation in Northern Sudan: Evidence for Moist Paleoenvironment, <i>Science Journal of University of Zakho</i> 8 (No.3) (2020) , 92-96.
Publication	C Briki, P de Rango, S Belkhiria, MH Dhaou, A Jemni, Measurements of expansion of LaNi <sub>5</sub> compacted powder during hydrogen absorption/desorption cycles and their influences on the reactor wall  <i>International Journal of Hydrogen Energy</i> 44 (26), 13647-13654
Publication	N Bouaziz, Y Ben Torkia, F Aouaini, A Nakbi, H Dhaou, AB Lamine, Statistical physics modeling of hydrogen absorption onto LaNi <sub>4.6</sub> Al <sub>0.4</sub> : Stereographic and energetic interpretations , <i>Separation Science and Technology</i> 54 (16), 2589-2608.
Publication	Adnan Younis and Aicha Loucif. Defects mediated enhanced catalytic and humidity sensing performance in ceria nanorods. <i>Journal of Ceramics International</i> . Available online 17 February 2021.
	-Defects mediated enhanced catalytic and humidity sensing performance in ceria nanorods. <i>Ceramics International</i> 1/6/2021  - Optical characteristics of Cu <sub>1-x</sub> Fe <sub>x</sub> O thin films prepared via electrophoretic deposition technique <i>Physica B: Condensed Matter</i> 10/10/2020
Publication	S Belkhiria, C Briki, MH Dhaou, A Jemni, Experimental study of a metal–hydrogen reactor's behavior under the action of an external

	magnetostatic field during absorption and desorption. International Journal of Hydrogen Energy 45 (7), 4673-4684.
Publication	A.I. Arbab, Coupling of a biquaternionic Dirac field to a bosonic field, Theo. Math. Phys., 203, 231 (2020).
Publication	Natural Radioactivity Levels and Heavy Metal Contents in Selected Domestic Food Products in Qassim Province, Saudi Arabia, Journal of Computational and Theoretical Nanoscience 16 (11), 4469-4473, 11/2019
Publication	"Influence of gamma ray on optical and structural properties of commercial glass enriched with copper oxide" Inorganic Chemistry Communications Volume 124, 108388, Accepted 1 December 2020, Available online 7 December 2020.
Publication	Shatha A. Al-Shuayfani, Aicha Loucif , Malek Gassoumi , Maged N. Shadad, Mabrook S. Amer. Optical characteristics of $Cu_{1-x}Fe_xO$ thin films prepared via electrophoretic deposition technique. Journal of Physica B 600 (2021) 412614.
Publication	Improvement in Electrical and 2DEG Properties of $Al_{0.26}Ga_{0.74}N/GaN/Si$ HEMTs © F. Jabli 1,2 , S. Dhouibi 3,5 , M. Gassoumi 2,4,
Publication	Khalda T. Osman "Stopping Powers of Alpha particles in Biological Human Body Substances (Water, Tissue, Muscles and Bones)" INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (IJNRD), Volume 5 Issue 11, December-2020. <a href="http://www.ijnrd.org/viewpaperforall.php?paper=IJNRD2011040">http://www.ijnrd.org/viewpaperforall.php?paper=IJNRD2011040</a>
Publication	Khalda T. Osman " Mass Stopping Power and range of Alpha particles in Adipose Tissue(ICRU-44)", International Journal of Scientific Engineering and Applied Science (IJSEAS) Volume-6, Issue-10, October 2020,pp31-42, <a href="http://ijseas.com/index.php/issue-archive-2/volume-6/issue10/">http://ijseas.com/index.php/issue-archive-2/volume-6/issue10/</a>
Publication	Khalda T. Osman "Mass Stopping Powers of Alpha particles in eye lens and its compositions (H,C,N,O,Na,P,S,Cl)" International Journal of Novel Research in Physics Chemistry & Mathematics (IJNRPCM), Vol 7 Issue 3 September 2020-December 2020 <a href="https://www.noveltyjournals.com/issue/IJNRPCM/Issue-3-September-2020-December-2020">https://www.noveltyjournals.com/issue/IJNRPCM/Issue-3-September-2020-December-2020</a>



Publication	Khalda T. Osman "Stopping Powers of Protons in Biological Human Body Substances (Water, Tissue, Muscles and Bones)", International Journal of Novel Research in Physics Chemistry & Mathematics (IJNRPCM), Vol 7 Issue 1 January 2020-April 2020, <a href="https://www.noveltyjournals.com/issue/IJNRPCM/Issue-1-January-2020-April-2020">https://www.noveltyjournals.com/issue/IJNRPCM/Issue-1-January-2020-April-2020</a>
Publication	Khalda T. Osman and (Seham Alwhaidany, Hureyah Alrashedy, Anhar Alqani, Renad Al-Harbi, Kholud Al-Jafan) Assessment of natural radioactivity levels and other related radiation quantities in white rice from different countries consumed in Qassim, Saudi Arabia, Journal of Natural Sciences and Mathematics, college of Science, Qassim University 2020
Publication	Khalda T. Osman, Rana S., Abeer A., Moram A., WAAD M " Natural Radioactivity Level in Agricultural Soil for $^{226}\text{Ra}$ , $^{232}\text{Th}$ and $^{40}\text{K}$ ", Electronic Interdisciplinary Miscellaneous Journal (EIMJ) Vol 20- Januray 2020, <a href="https://www.eimj.org/uploade/images/photo/Natural_Radioactivity_Level_in_Agricultural_Soil..pdf">https://www.eimj.org/uploade/images/photo/Natural_Radioactivity_Level_in_Agricultural_Soil..pdf</a> Amna E.Elhag, Khalda T. Osman "Applications of Laplace Transform in Successive Radioactive Decay of Nucleus" International Journal of Novel Research in Physics Chemistry & Mathematics Vol. 8, Issue 3, pp: (1-3), December 2021,
Publication	New Anomaly at Low Temperature for Heat Capacity Sonia Bouzgarrou, Open Access Library Journal 2020, Volume 7, e6477 ISSN Online: 2333-9721 ISSN Print: 2333-9705
Publication	First principles probes of electronic and optical behaviours of zinc doped cuprous oxide for catalysis applications.) Journal of Physics and Chemistry of Solids-2020
Publication	Al-Salem, Lulua, and Roshdi Seoudi. "Influence of ascorbic acid as modifier on the particle size and the optical properties of ZnO nanoparticles." Journal of Materials Science: Materials in Electronics 31.24 (2020): 22642-22651.
Publication	Statistical Analysis of the Measured Radon Concentration in Zamzam Water in Saudi Arabia, Kingdom, Comparative studies to: Different Ground Water Samples in the Kingdom and Other Countries. (12/02/2021)
Publication	F. Jabli, S. Dhouibi and M. Gassoumi "Improvement in Electrical and 2DEG Properties of $\text{Al}_{0.26}\text{Ga}_{0.74}\text{InGaInSi}$ HEMTs" ISSN 1063-7826, Semiconductors, 2021, Vol.55, No. 3, pp379-383



Publication	O.I. Sallam , A. Alhodaib, S. Abd El Aal b,c , F.M. Ezz-Eldin “Influence of gamma ray on optical and structural properties of commercial glass enriched with copper oxide” Inorganic Chemistry Communications Volume 124, February 2021, 108388
Publication	<b>Elanod Al Oafey</b> “First principles probes of electronic and optical behaviors of zinc doped cuprous oxide for catalysis applications” Journal of Physics and Chemistry of Solids, November 2020
Conferences	Dr Aisha Loucif has attended the conference under the title:  The international conference on "Vision of Solar Energy in the Kingdom of Saudi Arabia: Applications and Challenges". It held virtually in Qassim University. 9-10 December, 2020
Conferences	Ms kaltham Basheer Aljaloud has attended the conference under the title:  the introductory meeting, Towards future strategy to empower women's academic leaders in Saudi Universities – Deanship of Scientific Research at Prince Sattam Bin Abdulaziz University. (2020)
Supervision of M.Sc. theseis	<b>Dr Zenab yehya</b> Theoretical Study of Natural Convection Flow in a Conical Channel- Application on the Dispersion of Pollutants in the Atmosphere.18/05/2021
Supervision of M.Sc. theseis	<b>Dr Aicha Loucif</b> -Experimental Investigation of the Structural, Morphological and Optical Properties of Cu1-xFexO Thin Films 14-05-2020 -Study of annealing effect on AlGaIn physical properties.11-05-2020
Supervision of M.Sc. theseis	<b>Dr Suzan Abdel Aal</b> - Physical Properties of (ZrO2/Al2O3 ) Ceramic Materials for Medical application 3-05-2021 - Electrical and optical properties of TiO2-MgO composite material exposed to ionizing radiation 21-05-2021 -Effect of Ionizing Radiation on the Physical Properties of HDPE used in Medical Applications 30-052021

Supervision of M.Sc. theses	<b>Dr Amor Bchetnia</b> -Study of annealing effect on the physical properties of AlGaIn epitaxial layers. 11-05-2020 -Study of physical properties of BGaN and AlGaIn epitaxial layers.19-05-2021 -Study of interfacial and microstructural state in GaN/Al <sub>2</sub> O <sub>3</sub> heterostructure.4-04-2021 -Study of impurities diffusion in III-V semiconductors.21-04-2021
<b>Comment on Research and Innovation **</b>	1- Most program staff member are largely engaged in research activities (particularly, publication and research supervision) 2- Increasing contribution of female section staff members to publication as compared to previous years. 3- Relatively low rate of participation in scientific conference activities.

\* including action time, number of participants, results and any other statistics.

\*\* including performance evaluation on these activities

#### 4. Community Partnership

Activities Implemented	Brief Description *
<b>Comment on Community Partnership **</b>	
Program community services activities were planned but relegated due to covid19 ramifications.	

\* including action time, number of participants, results and any other statistics.

\*\* including performance evaluation on these activities

#### 5. Analysis of Program Activities

(including strengths, Areas for Improvement:, and priorities for improvement)

<b>Strengths :</b>
1- Remarkable contribution to research activities including scientific publication and research supervision. 2- Significant improvement in female section contribution to research activities.
<b>Areas for Improvement:</b>
<b>Overall:</b> 1- Program teaching and technical staff should be encouraged to participate in professional development program. 2- Professional development activities should focus on teaching strategies, preparation of online course content and academic guidance.

- 3- Professional development activities should include specialized workshop on scientific and technical issues relevant to current and potential program research activities and trends.
- 4- Program academic guidance should focus on providing appropriate guidance services.
- 5- Policies and plans for providing incentives for outstanding scientific research activities should be set forth.

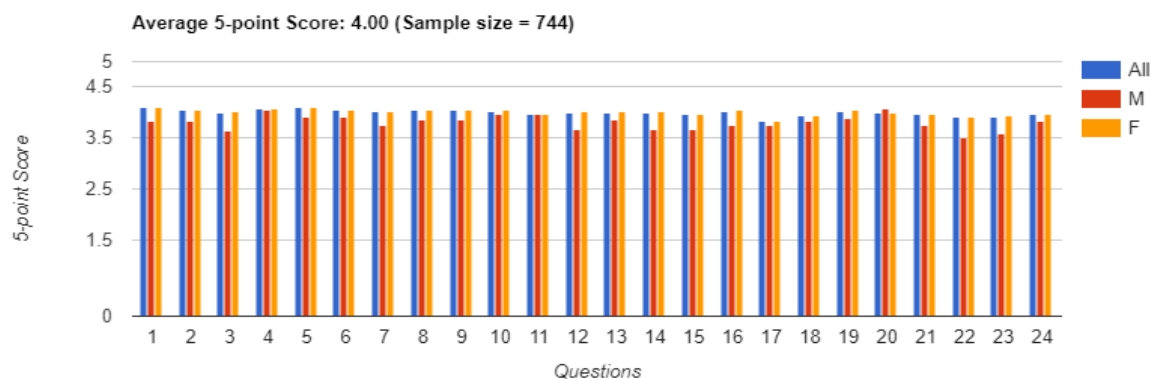
**Priorities for Improvement:****Overall :**

- 1- Encouraging program staff to participate in program development programs.
- 2- Incorporation of research techniques in development activities.

## F. Program Evaluation

### 1. Evaluation of Courses

Student course evaluation was conducted at the 13<sup>th</sup> week of each semester. Below is a representation for the results of overall student course evaluation questionnaire



### Recommendation for Improvement per Individual Course:

Course Code	Course Title	Student Evaluation (Yes-No)	Other Evaluations (specify)	Developmental Recommendations
Phys 101	General Physics I	Yes		<ul style="list-style-type: none"> <li>Preparation of course content to suite both online and direct attendance subject delivery.</li> <li>Employment of modern technology tools to enhance online instruction.</li> <li>Extension of classwork and homework activities.</li> </ul>
Phys 202	General Physics II	Yes		<ul style="list-style-type: none"> <li>Completion of course text book</li> <li>Course content (being some extend lengthy) should be modified to suit course contact hours in the study plan</li> <li>Allocation of extra-curricular activities</li> </ul>
Phys 203	Mathematical Physics I	Yes		<ul style="list-style-type: none"> <li>Using Arabic text</li> <li>Invoke an extra recitation or tutorial session</li> </ul>

Phys 211	Classical Mechanics I	Yes		<ul style="list-style-type: none"> <li>• Visual and interactive education program</li> <li>• Invoke an extra recitation or tutorial session</li> </ul>
Phys 212	Classical Mechanics II	Yes		<ul style="list-style-type: none"> <li>• Improve the exam style</li> <li>• Solve more critical thinking problems with students</li> <li>• Each student present one presentation per semester</li> <li>• Mandatory advising for students with low grades and increase in course homework and class work.</li> <li>• Request an increase in resources available in both Arabic and English</li> <li>• Seminars on Different topics</li> <li>• Pre-recorded lectures</li> </ul>
Phys 213	Astronomical Physics	Yes		<ul style="list-style-type: none"> <li>• Employ a teaching assistant to help in solving the exercise sheets</li> <li>• In the next term it is planned to focus on the different missed skills</li> <li>• Deficiency of educational aids.</li> <li>• Teaching online contributes with poor outcomes.</li> </ul>
Phys 221	Electromagnetism I	Yes		<ul style="list-style-type: none"> <li>• Completion of course text book</li> <li>• Course content (being relatively lengthy) should be modified to suit course contact hours in the study plan</li> <li>• Allocation of extra-curricular activities</li> </ul>
Phys 231	Vibration and Waves	Yes		<ul style="list-style-type: none"> <li>• Completion of course text book.</li> <li>• Implementing more extensive classwork activities (6 quizzes per semester).</li> </ul>
Phys 234	Health Physics	Yes		<ul style="list-style-type: none"> <li>• Employment of modern technology tools to enhance online instruction</li> <li>• Allocation of extra-curricular activities</li> </ul>

				<ul style="list-style-type: none"> <li>Implementing more extensive classwork activities.</li> </ul>
Phys 235	Physical Optics	Yes		<ul style="list-style-type: none"> <li>Modern experiments should be added related to objective of the laboratory</li> </ul>
Phys 243	Thermodynamics	Yes		<ul style="list-style-type: none"> <li>Preparation of course content for both online and in-person attendance subject delivery.</li> <li>Completion of course text book</li> <li>Extension of classwork and homework activities.</li> <li>Utilizing modern technology tools to improve online instruction.</li> <li>Extension of classwork and homework activities.</li> </ul>
Phys 302	Mathematical Physics II	Yes		<ul style="list-style-type: none"> <li>The course contents must be periodically reviewed by the instructors and the undergraduate committee to include new materials of relevance and enhance teaching method.</li> <li>Employ a teaching assistant to help in solving the exercise sheets</li> <li>Teaching online contributes with poor outcomes.</li> </ul>
Phys 303	Mathematical Physics III	Yes		Adding computer lab session
Phys 321	Electromagnetism II	Yes		<ul style="list-style-type: none"> <li>A concise textbook should be prepared by the department that contains full content of the assigned syllabus.</li> <li>An appended booklet containing ample number of solved problems should be prepared by the department to help students acquire enough problem solving abilities.</li> </ul>
Phys 329	Electromagnetism Lab	Yes		<ul style="list-style-type: none"> <li>Laboratories should be preferably equipped with data show projector and personal computer.</li> </ul>

				<ul style="list-style-type: none"> <li>● Provide software for computer simulation of electromagnetic important phenomenon (understanding Faraday and Lenz's law)</li> <li>● Upgrade the experiments with a new and modern equipment.</li> <li>● - the repartition of the student number in the lab should be more optimized (no more than 12 students)</li> </ul>
Phys 333	Laser physics	Yes		<ul style="list-style-type: none"> <li>● Completion of course text book.</li> <li>● Implementing more extensive classwork activities</li> </ul>
Phys 339	Optics Lab	Yes		<ul style="list-style-type: none"> <li>● Provision of sufficient amount of modern laboratory equipment</li> <li>● Employment of adequately qualified laboratory technician staff</li> <li>● Enrichment of course content with extra-experiment relevant to course objective (Fresnel biprism, machanzendar interferometer, etc...)</li> </ul>
Phys 342	Statistical Physics	Yes		<ul style="list-style-type: none"> <li>● Preparation of course content to suite both online and direct attendance subject delivery.</li> <li>● Employment of modern technology tools to enhance online instruction.</li> <li>● Extension of classwork and homework activities.</li> </ul>
Phys 350	Modern Physics	Yes		<ul style="list-style-type: none"> <li>● Preparation of course content to suite both online and direct attendance subject delivery.</li> <li>● Employment of modern technology tools to enhance online instruction.</li> <li>● Extension of classwork, quizzes and homework activities.</li> </ul>
Phys 357	Quantum Mechanics	Yes		<ul style="list-style-type: none"> <li>● Completion of course text book.</li> <li>● Implementing more extensive classwork activities</li> </ul>

Phys 359	Modern Physics Lab	Yes		<ul style="list-style-type: none"> <li>Modern experiments should be added related to objective of the laboratory</li> </ul>
Phys 361	Biophysics	Yes		<ul style="list-style-type: none"> <li>Employment of modern technology tools to enhance online instruction.</li> </ul>
Phys 422	Electronics	Yes		<ul style="list-style-type: none"> <li>Preparation of course content to suite both online and direct attendance subject delivery.</li> <li>Employment of modern technology tools to enhance online instruction.</li> <li>Extension of classwork, quizzes and homework activities.</li> </ul>
Phys 455	Physics of Atomic and Molecules	Yes		Avoiding redundancy in some course contents.
Phys 457	Quantum Mechanics II	Yes		<ul style="list-style-type: none"> <li>Making necessary amendment in course assessment process.</li> <li>Solve more critical thinking problems with students</li> <li>Enrichment of course related learning resources with available in both Arabic and English</li> <li>Enrichment of course class and home work.</li> </ul>
Phys 471	Solid State Physics I	Yes		<ul style="list-style-type: none"> <li>Course title should be changed to Condensed Matter Physics</li> <li>Incorporating the concept of reciprocal lattice into course content.</li> </ul>
Phys 473	Semiconductor physics	Yes		<ul style="list-style-type: none"> <li>Increases the credit and add lab to course</li> </ul>
Phys 479	Solid State Physics Lab	Yes		<ul style="list-style-type: none"> <li>Upgrade and develop the experiments technique for meeting the future solid state physics challenges.</li> <li>Provide personal computer equipped with new software for experiment confrontation with theory.</li> <li>Equip the laboratory by a dark corner or room for some manipulation.</li> </ul>

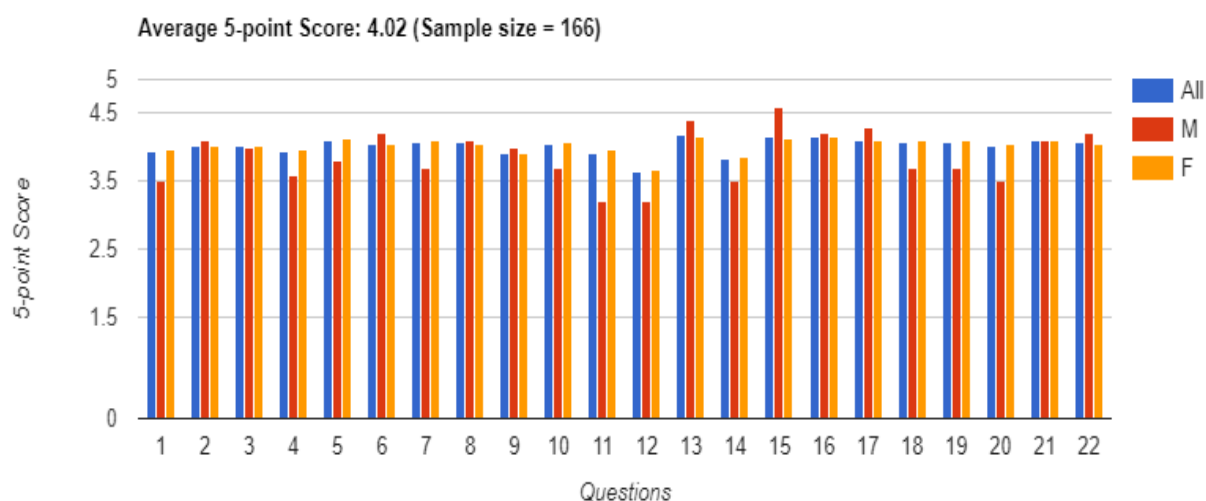


Phys 481	Nuclear Physics I	Yes		<ul style="list-style-type: none"> <li>• The problem of deficiency in Arabic text books should be addressed</li> <li>• The student poor English should also be taken into account.</li> <li>• Lack of support staff for teachers (demonstrators, secretariat for typing notes and assistant for computer-based learning)</li> <li>• Teaching online contributes with poor outcomes.</li> </ul>
Phys 485	Radiation Physics	Yes		<ul style="list-style-type: none"> <li>• Require an arrangement between theoretical theory and rapid development in this technological field.</li> </ul>
Phys 489	Nuclear Physics Lab	Yes		<ul style="list-style-type: none"> <li>• Modern experiments should be added related to objective of the laboratory</li> </ul>
Phys 499	Project	Yes		Allocating 4 credit hours instead of 3 in order to allow further opportunity for developing student skill in research and investigation
Phys 234	Health Physics	Yes		<ul style="list-style-type: none"> <li>• Planning and prepare for course containing factors convenient, in both online or direct attendance</li> <li>• Using modern technology tools to reinforce and help the students understand through online lectures</li> <li>• Expansion of classwork and homework activities.</li> </ul>

#### Priorities for Improvement:

- 1- Reviewing course learning resources by course committees and suggesting improvements.
- 2- Employment of modern technology tools to enhance online instruction.
- 3- Expansion of classwork and homework activities.
- 4- Preparation of electronic course text in order to suite both online and direct attendance subject delivery.

## 2. Students Evaluation of Program Quality



<b>Evaluation Date : Nov. 12. 2021</b>	<b>Number of Participants:166</b>
<b>Students Feedback</b>	<b>Program Response</b>
<b>Strengths:</b> Male Branch: <ol style="list-style-type: none"> <li>1- Most students agree that the instructors were available for consultation and advice when needed.</li> <li>2- Most students agree that the instructors were enthusiastic about the program.</li> <li>3- Most students agree that adequate facilities were available for religious observances.,</li> <li>4- Most students agree that what they have learned in this program will be valuable for their future.</li> </ol> Female Branch: <ol style="list-style-type: none"> <li>1- Most students agree that the instructors were available for consultation and advice when needed..</li> <li>2- Most students agree that the instructors in the program had thorough knowledge of the content of the courses they taught.</li> <li>3- Most students agree that the instructors were enthusiastic about the program</li> <li>4- Adequate facilities were available for religious observances.</li> <li>5- Most students agree that what they have learned in this program will be valuable for their future.</li> <li>6- Most students agree that the program has helped them to develop sufficient interest to want to continue to keep up to date with new developments in their field of study.</li> </ol>	

7- Most students agree that the program has improved their ability to work effectively in groups	
<p>Areas for Improvement:</p> <p>Male Branch:</p> <ol style="list-style-type: none"> <li>1- Adequate academic and career counselling should be provided for students throughout the program.</li> <li>2- Adequate facilities for extra curricular activities should be provided for students throughout the program</li> <li>3- The program should focus on developing student basic skills in using technology to investigate issues and communicate results.</li> </ol>	<ol style="list-style-type: none"> <li>1- Program proposed counselling work shops on academic career were planned but unfortunately not held due to lock down. The program intends to hold at least two workshops in career awareness and opportunities.</li> <li>2- of facilities for extra-curricular activities is almost an institutional issue that should be dealt with on the college level.</li> <li>3- In response to requirement of job market, the program has proposed a policy to orient its graduating students to conduct graduation research projects in topics with close connection to modern computational and experimental techniques. Besides, the program has its policy to direct student to register elective courses such as computational physics and semiconductor physics.</li> </ol>

\* Attach report on the students evaluation of program quality

### 3. Other Evaluations

(e.g. Evaluations by independent reviewer, program advisory committee, and stakeholders (e.g., faculty members, alumni, and employers))

<b>Evaluation method :</b> Graduate evaluation of the program quality for graduates of the academic year 1441- 1442 <a href="#">An (3.S3.7c)</a>	<b>Date:</b> Feb. 19. 2022	<b>Number of Participants :</b> 9 Male 16 Female
Summary of Evaluator Review		Program Response
<p><b>Strengths:</b></p> <ol style="list-style-type: none"> <li>1- Graduates are satisfied with skills they have learnt in the program.</li> <li>2- Program staff use modern technology in teaching and assessment processes .</li> <li>3- Program teaching staff interact adequately with the student through the internet.</li> <li>4- Class rooms are comfortable and adequate for learning.</li> </ol>		<ol style="list-style-type: none"> <li>1- The program strategy is directed towards establishing for further improvement on learning experience.</li> <li>2- Program management plans to further improve the quality of electronic course contents and to utilize online assessment</li> <li>3- Program student and teaching staff have an adequate means of contact through the QU Black Board system.</li> </ol>

	4- Plans for further improvement of class rooms and laboratories are underway.
<b>Points for Improvements::</b> <ol style="list-style-type: none"> <li>1- Staff member response to student question</li> <li>2- Availability and quality of learning resources in the library</li> <li>3- Provision of health services</li> <li>4- Overall graduate satisfaction with learning experience</li> <li>5- Variety of program course topics.</li> </ol>	<ol style="list-style-type: none"> <li>1- Program management should provide a plan to follow up staff commitment to office hours.</li> <li>2- Program has a plan to review the availability and quality of learning resources.</li> <li>3- College administration should plan to provide adequate health services in college building.</li> <li>4- The program action plan delineates all aspects related to program quality.</li> <li>5- The program suggested study plan incorporates new topics relate to recent development in the field of physics.</li> </ol>
<b>Suggestions for improvement</b> <ol style="list-style-type: none"> <li>1- Students should be allowed to visit research and industrial institutions in order to increase their awareness with progress in scientific and technical aspects related to the various fields of physics.</li> <li>2- Teaching strategies should be oriented to discussion student should be given the opportunities to express their point of views on different scientific aspects.</li> <li>3- Provision of sufficient learning resources in the library.</li> <li>4- Provision of adequate medical units in college buildings (male and female branches).</li> </ol>	<ul style="list-style-type: none"> <li>• Program management recognizes these suggestion as being vital for enriching the student learning experience and raising student skills that will qualify them meet current and potential job market requirements, in addition to facilitating a convenient learning environment for student and teaching staff.</li> <li>• These suggestions are included in program action plan for the academic year 1442-1443 H</li> </ul>

\* Attach independent reviewer's report and stakeholders' survey reports ( if any)

#### 4. Key Performance Indicators (KPIs)

List the results of the program key performance indicators (including the key performance indicators required by the National Center for Academic Accreditation and evaluation)

No	KPI	Target Benchmark	Actual Value	Internal Benchmark	Analysis	New Target Benchmark
1	KPI-P-01: Percentage of achieved indicators of the program operational plan objectives	80%	76.9%	N/A	<b>Comment:</b> <b>Overall:</b> Targeted benchmark was not reached for this KPI. Therefore, the targeted benchmark value was left unchanged and should be monitored over the next year.	80%
2	KPI-P-02: Students' Evaluation of quality of learning experience in the program.	M: 4.47 F: 4.31	M: 3.88 F: 4.03	M: 4.34 F: 4.18	<b>Comment:</b> <b>Male section (M):</b> Targeted benchmark was not reached for this KPI. Therefore, the targeted benchmark value was left unchanged and should be monitored over the next year. <b>Female section (F):</b> Targeted benchmark was not reached for this KPI. Therefore, the targeted benchmark value was left unchanged and should be monitored over the next year. <b>Strengths:</b> <b>Overall:</b> Normal practice (no apparent points of strength) <b>Male section:</b> Q 15 Most student think that what they have learned in this program will be valuable for their future. <b>Female section:</b> Normal practice (no apparent points of strength) <b>Areas for Improvement (Male/Female Sections)</b> <b>Overall:</b> Normal practice <b>Male section:</b> Q1. Availability of adequate academic and career counselling for students throughout the program. Q11. Availability of sufficient computing facilities for student needs. Q12. Provision of adequate facilities for extra curricular activities (including sporting and recreational activities). Q20. Development of student basic skills in using technology to investigate	M: 3.88 F: 4.034

					<p>issues and communicate results.</p> <p><b>Priorities for Improvement:</b>  <b>Male section:</b></p> <ol style="list-style-type: none"> <li>1- Provision of sufficient computing facilities (hardware and software packages) for student needs.</li> <li>2- Provision of adequate facilities for extra curricular activities (including sporting and recreational activities).</li> </ol>	
3	KPI-P-03: Students' evaluation of the quality of the courses	<p>M: 4.22 F: 4.44</p>	<p>M: 3.87 F: 4.01</p>	<p>M: 4.10 F: 4.31</p>	<p><b>Comment:</b>  <b>Male section (M):</b> Targeted benchmark was not reached for this KPI. Therefore, the targeted benchmark value was left unchanged and should be monitored over the next year.  <b>Female section (F):</b> Targeted benchmark was not reached for this KPI. Therefore, the targeted benchmark value was left unchanged and should be monitored over the next year. However, no significant variation in program performance between program sections is observed over last four years.  <b>Strengths:</b>  <b>Overall:</b></p> <p>With reference to collective report on the student course evaluation questionnaires for the academic years 1441-1442. It is clearly observed that the program has achieved ~ 4.0 in almost all aspects of the standard.</p> <p><b>Areas for Improvement:</b>  <b>Male section (M):</b></p> <p>With reference to collective report on the student course evaluation questionnaires for the academic years 1441-1442, we can pinpoint some questions where the male section achievement lies in the range (3.5-3.9) as source</p>	<p>M: 4.10 F: 4.31</p>

					<p>for potential improvement (namely Q3, Q22 and Q23).</p> <ol style="list-style-type: none"> <li>1- Reviewing course reference material in terms of clarity and relevance with course topics.</li> <li>2- Teaching staff time tables (including office hours) should be made clear to students.</li> <li>3- Teaching strategies and assessment methods should incorporate development of student team work abilities (this aspect is particularly applicable to many practical physics courses).</li> <li>4- Development of student communication abilities should be targeted by course instructors</li> </ol> <p><b>Priorities for Improvement:</b>  <b>Male section (M):</b>  Reviewing course reference material in terms of clarity and relevance with course topics</p>	
4	KPI-P-04: Completion rate	M: 66.7.% F: 20%	M:50% F: 23%	M: 55.55 F:20.00	<p><b>Comment:</b>  <b>Male section (M):</b>  Targeted benchmark as determined according to last year report is not reached for this KPI, hence decremented by 3% and should be monitored over the next year.  <b>Female section (F):</b>  Targeted benchmark is reached for this KPI, hence incremented to reach the current value of 23%  <b>Overall:</b>  A marked difference between performance of the two program sections is observed, this is direct consequence of variation in admission rates to program sections.</p>	M: 65.00 F: 23.0%

					<p><b><u>Strengths:</u></b>  <b>Male section:</b>  Even though, admission rates in this section are relatively small for last three year resulting in relatively high graduation rates, the practice seems normal as compared to external benchmark value.</p> <p><b><u>Areas of Improvement:</u></b>  <b>Female section:</b>  Program statistics reveals low values in this standard for current and last three years as well. This observation may attributed to mass admission in female section. Any improvement necessitates</p> <ol style="list-style-type: none"> <li>1- Revision of admission policy, so that a lower number of student with qualitatively higher academic abilities should be enrolled.</li> <li>2- Enhancement of program staffing and resources to accommodate high number of students.</li> <li>3- Program guidance plan for under achieving students.</li> </ol> <p><b><u>Priorities for Improvement:</u></b>  <b>Female section:</b>  Decrementing the rates of admission.</p>	
5	KPI-P-05: First-year students retention rate	M: 78.65 F: 87.26	M:66.6 F: 85.42	M: 66.62 F: 85.42	<p><b><u>Comment:</u></b>  <b>Male section (M):</b> Targeted benchmark was not reached for this KPI. Therefore, a new benchmark value was set by decrementing the actual benchmark value by 3%  <b>Female section (F):</b> Targeted benchmark was not reached for this KPI. Therefore, a new benchmark value was set by decrementing the actual benchmark value by 3%</p>	M: 64.6 F: 83.20
6	KPI-P-06: Students' performance in the professional and/or national examinations	M:75% F:75%	M: 5.2% F:72.6%	M:72% F:74%	<p><b><u>Comment:</u></b>  Male section (M): Targeted benchmark was reached for this KPI. Therefore, a new benchmark value was set by incrementing the actual benchmark value by 3%.</p>	M:77.25% F:75%



					Female section (F): Targeted benchmark was not reached for this KPI. Therefore, current target benchmark value is left unchanged.	
7	KPI-P-07: Graduates' employability and enrolment in postgraduate programs	<p><b>Male:</b> 69.84% employed</p> <p>10% enrolled in graduate studies</p> <p><b>Female:</b> 6.79% employed</p> <p>10% enrolled in graduate studies</p>	<p><b>Male:</b> 55.5% employed</p> <p>0.0% enrolled in graduate studies</p> <p><b>Female:</b> 6.9% employed</p> <p>0.0% enrolled in graduate studies</p>	<p><b>Male:</b> 66.66% employed</p> <p><b>9%</b> enrolled in graduate studies</p> <p><b>Female:</b> 12% employed 0% enrolled in graduate studies</p>	<p><b>Comment:</b> <b>Male section (M):</b></p> <p>Targeted benchmark is not reached for employment KPI. Therefore, a new target benchmark value was set by decrementing the target by 3%</p> <p>Target benchmark for graduate program enrollment is not reached therefore, left unchanged.</p> <p><b>Female section (F):</b></p> <p>Targeted benchmark was not reached for employment KPI. Therefore, a new target benchmark value was set by decrementing the current target value by 3%</p> <p>Target benchmark for graduate program enrollment was not reached therefore, left unchanged.</p> <p>The continuous decline in this criterion for last three years is was a primary concern of the program management and was subjected to extensive investigation and debate. In conclusion, the program Strategic plan has incorporated the changing employment issue on the national level and recommendation to resolve this situation were made by different program related bodies the most important suggested actions can be summarized as:</p> <ol style="list-style-type: none"> <li>1- Program study plan and student graduation project should be directed towards technology related topic.</li> <li>2- Program graduate should be supported</li> </ol>	<p><b>Male:</b> 69.84% employed</p> <p>10% enrolled in graduate studies</p> <p><b>Female:</b> 67.9% employed</p> <p>10% enrolled in graduate studies</p>

					<p>by extended training in special topics that could help them compete in the job market.</p> <p>Supporting skill development (English language.) should be improved.</p>	
8	KPI-P-08: Average number of students in the class	<p>M: 11.84 F: 25.57</p>	<p>M: 18.59 F: 35.91</p>	<p>M: 11.84 F: 27.35</p>	<p><b>Comment:</b>  <b>Male section (M):</b> Targeted benchmark was reached for this KPI. Therefore, a new benchmark value was set by decrementing the actual benchmark value by 3%.  <b>Female section (F):</b> Targeted benchmark was not reached for this KPI. Therefore, the targeted benchmark value was left unchanged and should be monitored over the next year</p> <p><b>Strengths:</b>  <b>Male section:</b>  Improvement in standard over four years from very low number (5 in 1439-1440) to relatively optimum values (~18 in current year).</p> <p><b>Areas for Improvement:</b>  <b>Overall:</b>  large variation in standard between the two program section.</p> <p><b>Male section (M):</b>  Relatively high numbers of students in class</p> <p><b>Priorities for Improvement:</b>  <b>Female section (M):</b>  Admission rates should be revised in order to optimize the number of student in program with available resources.</p>	<p>M: 11.84 F: 27.35</p>
9	KPI-P-09: Employers' evaluation of the program graduates proficiency	<p>M: 4.18 F: 4.34</p>	<p>M: 3.95 F: 4.32</p>	<p>M: 4.06 F: 4.30</p>	<p><b>Comment:</b>  <b>Male section (M):</b> Targeted benchmark was not reached for this KPI. albeit, left unchanged according to recommendation of program quality committee.  <b>Female section (F):</b> Targeted benchmark almost reached for this KPI. Therefore, the targeted benchmark value was</p>	<p>M: 4.18 F: 4.34</p>

					left unchanged and should be monitored over the next year	
10	KPI-P-10: Students' satisfaction with the offered services	M: 4.22 F: 4.28	M: 3.55 F: 3.98	M: 4.10 F: 4.16	<p><b>Comment:</b> Referring to report on the result of parts of student experience questionnaire comprising seven questions relevant to the field of guidance, recreational, library and other services offered to program students for the academic year 1441-1442 questions except for Q1 for which the results achieved was 3.15</p> <p><b>Male section (M):</b> Targeted benchmark was not reached for this KPI. Therefore, the targeted benchmark value was decremented by 3% and should be monitored over the next year.</p> <p><b>Female section (F):</b> Targeted benchmark was not reached for this KPI. Therefore, the targeted benchmark value was decremented by 3% and should be monitored over the next year.</p> <p><b>Strengths:</b> <b>Female Section:</b> Q1: Classrooms (including lecture rooms, laboratories etc.) are attractive and comfortable. Q2: Student computing facilities are sufficient for my needs. Q3: The library staff are helpful to me when I need assistance. Q7: Adequate facilities are available at this institution for religious observances.</p> <p><b>Male section:</b> Overall report results shows normal practice where program performance lies in the range (3.5 – 3.9) points in the 5- scale score in all seven aspects with apparently no specific points of strengths.</p>	M: 4.10 F: 4.16
					<p><b>Areas for Improvement</b> <b>Male Section</b></p>	

					<p>Q1: Classrooms (including lecture rooms, laboratories etc.) are attractive and comfortable.</p> <p>Q6: Adequate facilities are available for extra curricular activities (including sporting and recreational activities).</p> <p><b>Female Section</b></p> <p>Q6: Adequate facilities are available for extra curricular activities (including sporting and recreational activities).</p>	
					<p><b>Priorities for Improvement (Male Section)</b></p> <ol style="list-style-type: none"> <li>1- Improvement of lecture rooms and laboratories.</li> <li>2- Provision of adequate facilities for extra curricular activities (including sporting and recreational activities).</li> </ol>	
11	KPI-P-11: Ratio of students to teaching staff	M: 15 F: 20	M: 14.3 F: 21.4	M: 12 F: 16	<p><b>Comment:</b></p> <p><b>Male section (M):</b> Targeted benchmark was reached for this KPI. Therefore, a new benchmark value was set by decrementing the actual benchmark value by 3%.</p> <p><b>Female section (F):</b> Targeted benchmark was reached for this KPI. Therefore, a new benchmark value was set by decrementing the actual benchmark value by 3%.</p> <p><b>Strengths:</b></p> <p><b>Male section (M):</b> The ratio of 14 student per full time staff is considered optimum from an educational point of view.</p> <p><b>Areas of Improvement:</b></p> <p><b>Female section (F):</b> The number of teaching staff in this section should be augmented by hiring at least extra staff with adequate qualification.</p> <p><b>Priorities for Improvement:</b> Recruitment of extra staff in female section</p>	M: 13.87 F: 20.75

12	KPI-P-12: Percentage of teaching staff distribution	<p><u>Male:</u> Prof: 25% Assoc. Prof.: 25% Assist. Prof.: 40% Lecturer: 10%</p> <p><u>Female:</u> Prof: 25% Assoc. Prof.: 25% Assist. Prof.: 40% Lecturer: 10%</p>	<p><u>Male:</u> Prof: 23.53% Assoc. Prof.: 29.45% Assist. Prof.: 41.18% Lecturer: 5.88%</p> <p><u>Female:</u> Prof: 0% Assoc. Prof.: 0% Assist. Prof.: 80% Lecturer: 20%</p>	<p><u>Male:</u> Prof: 26.7% Assoc. Prof.: 20% Assist. Prof.: 26.7% Lecturer: 6.67%</p> <p><u>Female:</u> Prof: 0% Assoc. Prof.: 0% Assist. Prof.: 80% Lecturer: 20%</p>	<p><b>Comment:</b> <b>Male section (M):</b> Targeted benchmark was reached for this KPI. Therefore, a new benchmark value was set by decrementing the actual benchmark value by 3% . <b>Female section (F):</b> Targeted benchmark was not reached for this KPI. Therefore, the targeted benchmark value was left unchanged and should be monitored over the next year. <b>Strengths:</b> <b>Male section:</b> Appreciable ratio of staff member occupy Professor and associate professor positions. <b>Areas of Improvement:</b> <b>Female section (F):</b> Staff members are distributed between Assistant professor and lecturer position. Current situation can be amended by recruiting extra staff members already occupying higher academic ranks or encouraging current staff to acquire promotion to higher rank by facilitating means of scientific research for them. <b>Priorities for Improvement:</b> <b>Female section (F):</b> 1- Recruitment of extra staff in female section holding professor and associate professor position 2- Providing research laboratories in female section and/or re- planning the use of current research facilities to allow appropriate access for female staff.</p>	<p><u>Male:</u> Prof: 28% Assoc. Prof.: 28% Assist. Prof.: 37% Lecturer: 7%</p> <p><u>Female:</u> Prof: 25% Assoc. Prof.: 25% Assist. Prof.: 40% Lecturer: 10%</p>
13	KPI-P-13: Proportion of teaching staff leaving the program	<p><b>M:</b> 5.6% left 93.4% stayed <b>F:</b> 6% left 94% stayed</p>	<p><b>M:</b> 15.88% left 84.22% stayed <b>F:</b> 6% left 94% stayed</p>	<p><b>M:</b> 5.6% left 93.4% stayed <b>F:</b> 6% left 94% stayed</p>	<p><b>Comment:</b> <b>Male section (M):</b> Targeted benchmark was <b>not reached</b> for this KPI. Therefore, the new target benchmark value was left unchanged and should be monitored over the next year. <b>Female section (F):</b> Targeted benchmark was <b>reached</b> for this KPI.</p>	<p><b>M M:</b> 5.6% left 93.4% stayed <b>F:</b> 5% left 95% stayed</p>

					Therefore, a new target benchmark value was set by incrementing the actual benchmark by 1%	
14	KPI-P-14: Percentage of publications of faculty members	M: 66.65 F: 58.33	M: 54 F: 23	M: 64.71 F: 36.84	<p><b>Comment:</b>  <b>Male section (M):</b> Targeted benchmark was not reached for this KPI. Therefore, the targeted benchmark value was left unchanged and should be monitored over the next year.  <b>Female section (F):</b> Targeted benchmark was not reached for this KPI. Therefore, the targeted benchmark value was left unchanged and should be monitored over the next</p>	M: 66.65 F: 58.33
15	KPI-P-15: Rate of published research per faculty member	M: 4.79 F: 2.44	M: 7.69 F: 0.47	M: 4.82 F: 2.37	<p><b>Comment:</b>  <b>Male section (M):</b> Targeted benchmark was reached for this criterion. Therefore, a new benchmark value was set by incrementing the actual benchmark value by 3.0% ..  <b>Female section (F):</b> Targeted benchmark was not reached for this KPI. Therefore, the targeted benchmark value was left unchanged and should be monitored over the next year. Decrementing by 3% is inappropriate since the benchmark selected value is as low as 2.44.</p> <p><b>Strengths:</b>  <b>Male section:</b>  Target benchmark is exceeded by over 60% for this standard, the practice is being followed consistently.</p> <p><b>Areas of Improvement:</b>  <b>Female section:</b>  Rate of publication as low as 0.47, program research plan should focus on enhancing research facilities for female staff by:</p> <ol style="list-style-type: none"> <li>1- Providing research laboratories in female section and/or re- planning the use of current research facilities to allow appropriate access for female staff.</li> </ol>	M: 7.92 F: 2.44

					<p>2- Encouraging staff to join specialized research groups.</p> <p><b>Priorities for Improvement:</b>  <b>Female section (F):</b>  Providing research laboratories in female section and/or re- planning the use of current research facilities to allow appropriate access for female.</p>	
16	KPI-P-16: Citations rate in refereed journals per faculty member	M: 100.0 F: 21.68	M: 397.19 F: 26.35	M: 314.18 F: 21.05	<p><b>Comment:</b>  <b>Male section (M):</b> Targeted benchmark was reached for this KPI. Therefore, a new benchmark value was set by incrementing the actual benchmark value by 3% .  <b>Female section (F):</b> Targeted benchmark was not reached for this KPI. Therefore, the targeted benchmark value was left unchanged and should be monitored over the next year.</p> <p><b>Strengths:</b>  <b>Male section:</b>  Target benchmark is exceeded by over 197% for this standard, the practice is being followed consistently.</p> <p><b>Areas of Improvement:</b>  <b>Female section:</b>  Relatively low citation rate, program research plan should focus on enhancing research facilities for female section</p> <p>1- Providing research laboratories in female section and/or re- planning the use of current research facilities to allow appropriate access for female staff.</p> <p>2- Encouraging staff to join specialized research groups.</p> <p><b>Priorities for Improvement:</b>  <b>Female Section</b>  Providing research laboratories in female section and/or re- planning the use of current research facilities to allow appropriate access for female staff</p>	M: 415 F: 27.14

17	KPI-P-17: Satisfaction of beneficiaries with the learning resources	M: 4.39 F: 4.30	M: 3.69 F: 4.00	M: 4.27 F: 4.17	<p><b><u>Comment:</u></b>  <b>Male section (M):</b> Targeted benchmark was not reached for this KPI. Therefore, the targeted benchmark value was left unchanged and should be monitored over the next year.  <b>Female section (F):</b> Targeted benchmark was not reached for this KPI. Therefore, the targeted benchmark value was left unchanged and should be monitored over the next year.</p> <p><b><u>Areas for Improvement</u></b>  <b>Male Section:</b>  Q1: Student computing facilities should be provided sufficiently to meet student current and potential needs.  Q2: The library staff should undergo some training in connection with service provision.  Q3: Materials available in library should be reviewed and updated according to student needs..  Q4: Library working hours should be extended in order to facilitate better access to learning resource.</p> <p><b>Female Section:</b>  Q1: Student computing facilities should be provided sufficiently to meet student current and potential needs.  Q2: The library staff should undergo some training in connection with service provision.  Q3: Materials available in library should be reviewed and updated. according to student needs..  Q4: : Library working hours should be extended in order to facilitate better access to learning resource.</p> <p><b><u>Priorities for Improvement:</u></b>  <b>Male Section</b>  1- Student computing facilities should be provided sufficiently to meet student current and potential needs.</p>	M: 4.39 F: 4.30
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					2- Materials available in library should be reviewed and updated according to student needs	
<b>Comments on the Program KPIs and Benchmarks results :</b> KPI's and benchmarks results indicate increasing rate of scientific publication and citation for both male and female section even though particular indicators (KPI-P-15 and KPI-P-16) fall below target for female branch. Improvement in current situation is a priority for program research plan which should include research collaboration between the two sections of the program. Concerning male branch, the drop in indicator related to retention rate, student satisfaction with offered services necessitates effective planning for orientation, academic guidance in addition to teaching processes for students at levels 1 and 2.						

## 5. Analysis of Program Evaluation

### Strengths:

#### Male branch:

- 1- Most students agree that the instructors were available for consultation and advice when needed.
- 2- Most students agree that the instructors were enthusiastic about the program.
- 3- Most students agree that adequate facilities were available for religious observances.,
- 4- Most students agree that what they have learned in this program will be valuable for their future.
- 5- The ratio of students to teaching staff reached target benchmark
- 6- Improved rate of published research per faculty member over last three years.
- 7- Improved citations rate in refereed journals per faculty member over last three year.
- 8- Beneficiaries are satisfied with the learning resources

#### Female branch:

- 1- Most students agree that the instructors were available for consultation and advice when needed..
- 2- Most students agree that the instructors in the program had thorough knowledge of the content of the courses they taught.
- 3- Most students agree that the instructors were enthusiastic about the program
- 4- Adequate facilities are available for religious observances.
- 5- Most students agree that what they have learned in this program will be valuable for their future.
- 6- Most students agree that the program has helped them to develop sufficient interest to want to continue to keep up to date with new developments in their field of study.
- 7- Most students agree that the program has improved their ability to work effectively in groups
- 8- Students' are fairly satisfied with their learning experience in the program
- 9- Students' are fairly satisfied with the quality of the courses
- 10- First-year students retention rate is optimum.
- 11- Relatively high proportion of teaching staff who stayed with the program.
- 12- Beneficiaries are satisfied with the learning resources

**Areas for Improvement:****Male branch:**

There is a room for improvement with respect to the following aspects:

- 1- Provision of sufficient computing facilities (hardware and software packages) for student needs
- 2- Adequate academic and career counselling should be provided for students throughout the program.
- 3- Adequate facilities for extra curricular activities should be provided for students throughout the program
- 4- The program should focus on developing student basic skills in using technology to investigate issues and communicate results.
- 5- Course instructors should focus on developing student skills.
- 6- Provision of adequate course learning resources.

**Female branch:**

There is a room for improvement with respect to the following aspects:

- 1- Citations rate in refereed journals per faculty member
- 2- Rate of published research per faculty member lies far below target.
- 3- Ratio of students to teaching staff is relatively high.
- 4- Percentage of teaching staff distribution shows lack of staff members with professor and associate professor ranks.
- 5- Average number of students in class is relatively high.

**Priorities for Improvement:****Male branch:**

- 1- Provision of sufficient computing facilities (hardware and software packages) for student needs.
- 2- Provision of adequate facilities for extracurricular activities (including sporting and recreational activities).
- 3- Reviewing course reference material in terms of clarity and relevance with course topics.
- 4- Materials available in library should be reviewed and updated according to student needs

**Female branch:**

- 1- Admission rates should be revised in order to optimize the number of student in program with available resources.
- 2- Recruitment of extra staff with professor and associate professor position.
- 3- Providing research laboratories in female section and/or re- planning the use of current research facilities to allow appropriate access for female staff.

## G. Difficulties and Challenges Faced Program Management

Difficulties and Challenges	Implications on the Program	Actions Taken
Low academic level of most of the students admitted to the program.	Students face difficulties to cope with the requirements for successfully completing the program.	<ul style="list-style-type: none"> <li>• Change of admissions policies regarding acceptable students grades from pre-college education.</li> <li>• Revision to teaching and assessment strategies for introductory level courses.</li> </ul>
Shortage in the number of faculties and teaching assistants.	Extra teaching load allocated to faculty members which affects their productivity.	Incrementing the number of faculty members, lecturers and lab technicians.
Lack of financial and administrative independence that allows for managing the college immediate needs.	Waste of time and hindering the educational process by having to go through unnecessary routine paperwork for any simple immediate requirement.	Addressing the University admin in order to explore possible solutions.
Shortage in modern textbooks (in Arabic) for most of the courses taught.	Students encounter difficulties learning some skills in an adequate manner.	<ul style="list-style-type: none"> <li>• Modern textbooks (available in Arabic) should be listed by course instructors and the Deanship of Library Affairs should be addressed in order to ensure availability in the central library.</li> <li>• Supporting the ongoing effort of program faculty to author and translate modern course textbooks.</li> </ul>

Shortage in the number of adequately qualified laboratory technician staff in the male section.	Instructor's effort to develop required experimental skills is scattered by inadequate laboratory apparatus preparation.	5- Addressing the college dean to employ qualified personnel to fill this gap. 6- Providing adequate training for current laboratory technician staff.
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\*Internal and external difficulties and challenges

## H. Program Improvement Plan





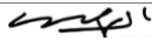



No.	Priorities for Improvement	Actions	Action Responsibility	Date		Achievement Indicators	Target Benchmark
				Start	End		
1	Provision of sufficient computing facilities (hardware and software resources) for student needs.	Latest versions of software packages should be provided in computer laboratories (e. g. Maple, Wolfram Mathematica, MATLAB, Python, C++)	Head of program laboratories and equipment committee.	30/09/2021	30/04/2022	<b>1. KPI-P-02</b> Students' Evaluation of quality of learning experience in the program.  <b>2. KPI-P-10</b> Student satisfaction with the services	<b>1. M:</b> 4.47 <b>F:</b> 4.31 <b>2. M:</b> 4.10 <b>F:</b> 4.15
2	Provision of adequate facilities for extracurricular activities (including sporting and recreational activities).	College dean should be addressed to provide sporting and other extra-curricular facilities.	Head of program Cultural and Social Committee.	30/09/2021	30/10/2022	<b>1. KPI-P-02</b> Students' Evaluation of quality of learning experience in the program.  <b>2. KPI-P-10</b> Student satisfaction with the services	<b>1. M:</b> 4.47 <b>F:</b> 4.31 <b>2. M:</b> 4.10 <b>F:</b> 4.15
3	Reviewing course text books reference materials in	Course instructors should	Course instructors	30/09/2021	30/04/2022	<b>1. KPI-P-17</b>	<b>1. M:</b> 4.39

	terms of clarity and relevance with course topics.	report on course text, reference and electronic material and should suggest and implement improvement.				Satisfaction of beneficiaries with learning resources <b>2. KPI-P-3</b> Students' evaluation of the quality of their courses	F: 4.30 <b>2. M:</b> 4.22 F: 4.44
<b>4</b>	Materials available in library should be reviewed and updated according to student needs	The head of study plans committee should provide a relevant report and suggest new material accordingly.	Head of Program study plans committee.	30/09/2021	30/10/2022	<b>KPI-P-17</b> Satisfaction of beneficiaries with learning resources	<b>4.0 M:</b> 4.39 F: 4.30
<b>5</b>	Admission rates should be revised in order to optimize the number of student in program with available resources	The college of science dean should be addressed to modify number of students planned to enroll to the Program.	Head of Physics Department.	30/09/2021	30/4/20022	<b>1. KPI-P-8</b> Average number of students in the class <b>2. KPI-P-11</b> Ratio of students to teaching staff	<b>1. M:</b> 7.94 F: 25.57 <b>2. M:</b> 13.87 F: 20.75
<b>6</b>	Employment of extra staff in female section holding professor and associate professor position	The college of science dean should be addressed to recruit 2 professors and 2 associate professors in female branch.	Head of Physics Department	30/09/2021	30/4/20022	<b>KPI-P-11</b> Ratio of students to teaching staff.	M: 13.87 F: 20.75
<b>7</b>	Providing research laboratories in female section and/or re- planning the use of current research facilities to allow appropriate access for female staff.	Program research committee should provide 1. Equipment orders 2. Maintenance orders 3. Plan for management of research units.	Head of program research and postgraduate studies committee.	30/09/2021	30/4/20022	<b>1. KPI-P-14</b> Percentage of publications of faculty members <b>2. KPI-P-15</b> Rate of published research per faculty member	<b>1. F:</b> 2.37 <b>2. F:</b> 2.37 <b>3. F:</b> 27.14

						<b>3. KPI-P-16</b> Citations rate in refereed journals per faculty member	
<b>8</b>	Classwork and homework assignments should be regularly reviewed regarding their effectiveness in improving the knowledge and skills targeted by the program	Course committee should hold a monthly meeting to review course assignments in terms of their contents and assessment.	Head of Quality Assurance committee	30/09/2021	30/04/2022	<b>KPI-P-3</b> Students' evaluation of the quality of their courses.	M: 4.22 F: 4.44
<b>9</b>	The teaching and learning process should include extra-curricular activities that will help provide the student with required trends and abilities.	The teaching and learning process should include extra-curricular activities that will help provide the student with required trends and abilities.	The head of cultural and social committee should present a plan for extra-curricular activities	30/09/2021	30/02/2022	<b>KPI-P-10</b> Student satisfaction with the services	M: 4.10 F: 4.15
<b>10</b>	The program should focus on developing student basic skills in using technology to investigate issues and communicate results.	Reformation of course subject committees whereof major tasks are : <b>1.</b> Assessment of teaching and learning process in terms of its effectiveness and compliance with course specifications . <b>2.</b> Review of course assignments <b>3.</b> Reviewing student results and suggesting possible amendments in case of skew results.	Head of Physics Dept.	30/09/2021	30/10/2022	<b>1. KPI-P-02</b> Students' Evaluation of quality of learning experience in the program. <b>2. KPI-P-03</b> Students' evaluation of the quality of their courses .	<b>1.</b> M: 4.47 F: 4.31 <b>2.</b> M: 4.22 F: 4.44
<b>11</b>	Preparation of electronic course text in order to suite both online and direct attendance subject delivery.	Online course content including assignments should be reviewed by course committee for improvement of contents and assessment method.	The head of the dept. will be contacted regarding possible means/incentives for high-profile participation in community service activities	30/09/2021	30/10/2022	<b>1. KPI-P-17</b> Satisfaction of beneficiaries with learning resources <b>2. KPI-P-3</b>	<b>1.</b> M: 4.39 F: 4.30 <b>2.</b> M: 4.22 F: 4.44

						Students' evaluation of the quality of their courses	
12	Employment of adequately qualified laboratory technician staff	College Dean will be addressed to take necessary action regarding recruitment of laboratory technician staff.	Head of Physics Dept.	30/09/2021	30/10/2022	KPI-P-10: Student satisfaction with the services	M: 4.10 F: 4.15
13	Provision of maintenance and operation of current research laboratory equipment with necessary fund to be facilitated.	College Dean will be addressed to take necessary action to allocate necessary fund for running and maintenance of research laboratories	Head of program laboratories and equipment committee.	30/09/2021	30/10/2022	<b>1. KPI-P-14</b> Percentage of publications of faculty members <b>2. KPI-P-15</b> Rate of published research per faculty member <b>3. KPI-P-16</b> Citations rate in refereed journals per faculty member	<b>1. M:</b> 4.22 <b>F:</b> 4.442. <b>2. M:</b> 65.00 % <b>F:</b> 23.0% <b>3. M:</b> 78.65 <b>F:</b> 87.26
14	Provision of adequate medical facilities in college buildings.	College dean should be addressed to provide necessary medical units in collage buildings	Head of program safety and security committee	30/09/2021	30/10/2022	KPI-P-10: Student satisfaction with the services	M: 4.10 F: 4.15
15	Students should be allowed to contact research and industrial institutions in order to increase their awareness with progress in scientific and technical aspects related to the various fields of physics.	1- Organizing a scientific visits to a research institution (e. g KACST) for students in advanced levels of the program	Head of program social and cultural committee	30/09/2021	30/10/2022	KPI-P-02 Students' Evaluation of quality of learning experience in the program	<b>1. M:</b> 4.47 <b>F:</b> 4.31

## I. Report Approving Authority

Council / Committee	QUALITY ASSURANCE AND ACADEMIC ACREDITATION COMMITTEE
	Dr. Ahmed Faisal Elhag 
	Dr. Moha Hussain Dhau 
	Prof Arbab Salih 
	Prof. Hamad Reibey 
	Mr. Abbasharr Sagier 
	Dr. Zeinab Yahya 
	Dr. Reihann Shargiah 
	Dr. Suzzan Abed AAl 
Reference No.	
Date	<b>MAR. 09. 2022</b>

## J. Attachments :

- A separate cohort analysis report for male and female sections and for each branch
- A report on the program learning outcomes assessment results for male and female sections and for each branch (if any)
- A report on the students evaluation of program quality
- Independent reviewer's report and other survey reports (if any)