Department of Physics \& Electronics

## Self-Assessment Report (SAR)

Submitted to Quality Enhancement Cell (QEC)
Shah Abdul Latif University Khairpur

Program: BS-IV.
By Program Team (PT) Members:

1. Miss. Zubeda Bhatti
2. Mr. Gulzar Ahmed Khoso

## Introduction:

The Department of Physics was established in the year 1988 at Shah Abdul Latif University Khairpur. The Department provides unique opportunity to the students, who want to acquire deep understanding in the field of effective configuration of resources with modern teaching methodologies. It holds major position in the faculty of physical sciences. The Department offers BS IV Year Programme and M.Sc. degree courses. The department also offers physics as minor subject to the students of various departments of Science Faculty.

## Criterion 1: Program Mission, Objective and Outcomes.

Standards 1.1: The program must have documented measurable Objectives that support Faculty / Institution Mission Statements.

Vision Statement of the University:
> To develop human resources and capabilities to meet national development needs through quality teaching, learning and research. (Youth empowerment) is one of the main objectives of the university.

Mission Statement of the University:
> Build national character and put focus on production of quality graduates to contribute in the economic, industrial and social development of the country.

Mission statement of Department:

- Achieving excellence by producing multi-dimensional professionally competent and highly qualified individuals there by importing to them a powerful blend of knowledge based on the theoretical and experimental research.
$\checkmark$ Program Objectives:

1. To provide the theoretical and practical knowledge of Physics this is required for professional development in the field.
2. To produce Skilled and competent man power capable of independent thinking and creativity.
3. To achieve and maintain the highest academic standard in current competitive environment and promote research based teaching and learning methods.

Standard 1-2: The program must have documented outcomes for graduating students. It must be demonstrated that the outcomes support the program objectives and that graduating students are capable of performing these outcomes.

Table: 2. The following Table shows how program outcomes support the Program Outcomes.

| Program Objectives | Program Outcomes |  |  |
| :---: | :---: | :---: | :---: |
|  | 1. | 2. | 3. |
| Providingquality <br> education through <br> formal and informal <br> teaching methods | Qualified and skilled <br> graduates   <br> produced   | Employment inresearch and <br> organizations.$l$ | Student develops ability to apply knowledge of the subject. |
| To promote and help the students to develop sense of responsibility and hard work through informal crier counseling | Working knowledge about the job sector | Confidence building approach towards challenges in the field | Graduates develop motivation to contribute their skills in the field |
| Training and grooming of students through continuous students teacher relationship | Commitment to import knowledge and skills when joining factuality position at universities , collages , research centers and educational institutions | Self-confidence based on the knowledge about effective communication and interpersonal skills. | The graduates are implied in public and private sector, educational and research organization in regional , provincial federal level |

## Survey of Graduating Students:

| Program Objectives |  | Program Outcomes |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | 1 | $\mathbf{2}$ | 3 |  |
| To produce graduates who can execute <br> enthusiastically in education and <br> research. | XXXX | XXX | XXX |  |
| To build up the graduates with a sense <br> of dedication, motivation and hard <br> work so that they can play their role to <br> maintain and uplift the quality culture <br> of life sciences in the country. | XXX | XXX | XXX |  |
| To Guide students for independent and <br> self-motivated in the field of research. | XXXX | XXX | XXX |  |
| X | Relevant \& satisfactory to some extent |  |  |  |
| XX | Relevant \& satisfactory |  |  |  |
| XXX | Very relevant \& satisfactory |  |  |  |
| XXXX | Highly relevant \& highly satisfactory |  |  |  |

Standard 1-3.The result of program's assessment and the extent to which they are used to improve the program must be documented.

## Major Future Improvement Plans:

To enhance the lab: facilities with the modern and sophisticated equipments
*To To impart quality education in the department using audio visual aids and modern tools along with provision of latest literature, journals, books, reviews and access to internet.
Overall enhancement of knowledge and skills of faculty members in relation to the latest global advancements in various discipline through exchange programs, short trainings and collaborative research projects within and outside country.

Standard 1.4: The department must assess its overall performance periodically using quantifiable measures.
Table: 5. Number of student enrolment during last three years and student faculty ratio:

| Program | Year <br> $\mathbf{2 0 2 2}$ | Students/ <br> Faculty Ratio | Year <br> $\mathbf{2 0 2 1}$ | Students/ <br> Faculty Ratio | Year <br> $\mathbf{2 0 2 2}$ | Students/ <br> Faculty Ratio |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BS 4Yr | 213 | $42.6: 1$ | 251 | $50.2: 1$ | 295 | $59: 1$ |
| M.Sc. | 30 | $6: 1$ | 33 | $6.6: 1$ | 46 | $9.2: 1$ |

Table: 7. Number of publications, awards, workshops \& seminars organized by the faculty:

| Publications (HEC recognized only) |  | Research Projects |  | Monograph | Awards | Scholars produced |  | Organized National \& International Conferences |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| National | International | Completed | Ongoing |  |  | M.Phil | Ph.D. |  |
| 16 | 7 | - | - | - | - | 3 | - |  |

Criterion 2: The curriculum must be designed and organized to achieve the program's objectives and outcomes. Also course objectives must be in line with the program outcomes.

## Program:

## BS Degree: (4 Years; 8 Semesters)

| Semester | Course <br> Number <br> Physics <br> Theory/ <br> Practical | Category (Credit Hours) <br> 1 Credit hr= 1 Class hour \& 2-3 Laboratory Hours per week $=1 \mathrm{CrH}$ Ratio 2:1 (Theory: Practical) Total CrHs 18*8=144 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Math \& Basic Science |  | Core Course | Humanities and Social Sciences | Technical |
|  |  | Math | Basic <br> Science. |  |  |  |
| $1^{\text {st }}$ |  | Pure Math |  | Mechanics | English |  |
|  |  | App: Math |  |  | Pakistan Studies |  |
|  | Phy: 310 |  | Chemistry |  |  |  |
| $2^{\text {nd }}$ |  |  |  | Thermodynamics | English |  |
|  |  |  |  |  | Islamic Studies |  |
|  |  | Pure Math |  |  |  |  |
|  | Phy:312 | App: Math |  |  |  |  |
|  |  |  | Chemistry |  |  |  |
| $3^{\text {rd }}$ | 410 | Pure Math |  | Electricity\& Magnetism | English |  |
|  | -- | Computer | Chemistry |  |  |  |
| $4^{\text {th }}$ | Phy: 412 | Pure Math |  | Modern Physics | English |  |
|  |  |  | Chemistry |  |  |  |
| $5^{\text {th }}$ | Phy: 500 |  |  | M.M physics I |  |  |
|  | 501 |  |  | E.M theory I |  |  |
|  | 502 |  |  | Classical Mechanics |  |  |
|  | 506 |  |  | Basic electronics |  |  |
|  | 507 |  |  | Physics Practical |  |  |
|  |  |  |  |  |  |  |
| $6^{\text {th }}$ | Phy: 508 |  |  | M.M physics II |  |  |
|  | 509 |  |  | E.M theory 2 |  |  |
|  | 510 |  |  |  |  |  |
|  | 511 |  |  |  |  |  |
|  | 512 |  |  | Q. Mechanics I |  |  |
|  |  |  |  | Electronics 2 |  |  |
|  |  |  |  | Practical |  |  |
| $7^{\text {th }}$ | Phy: 600 |  |  | Solid State |  |  |
|  | 602 |  |  | Atomic \& Molecular physics |  |  |
|  | 604 |  |  | Communication system |  |  |
|  | 606 |  |  | Nuclear Physics |  |  |
|  | 607 |  |  | Practical |  |  |
| $8^{\text {th }}$ | Phy: 608 |  |  | Computational Physics |  |  |
|  | 610 |  |  | Q. Mechanics II |  |  |
|  | 612 |  |  | Digital Electronics |  |  |
|  | 613 |  |  | Statistical Mechanics |  |  |
|  | 614 |  |  | Practical |  |  |
|  | 816 |  |  | Comp: Viva voce |  |  |
| Total: | 153 |  |  |  |  |  |
| Minimum Requirement | 76 |  |  |  |  |  |

Standard: 2.1: The curriculum must be consistent and support the program's documented objectives.
Standard: 2.2. Theoretical background, problems analysis and solution design must be stressed within the program's core material.

Standard: 2.3: The curriculum must satisfy the core requirements for the program, as specified by the respective accreditation body. Examples of such requirements are given in Table A.1, Appendix A.

Standard 2-4: The curriculum must satisfy the major requirements for the program as specified by HEC, the respective accreditation body / councils. Examples of such requirements are given in Table A.1, Appendix A.
Standard 2-5: The curriculum must satisfy general education, arts, and professional and other discipline requirements for the program, as specified by the respective accreditation body / council. Examples of such requirements are given in Table A.1, Appendix A.

## Minimum Requirements for Each Program

(Program Semester Credit Hours)

| Program | Math \& Basic <br> Science | Engineering <br> Topics | General <br> Education | Others |
| :--- | :---: | :---: | :---: | :---: |
| BS 4-Years | $\mathbf{1 8}$ | $\mathbf{1 8}$ | - | - |
|  |  |  |  |  |

Standard 2-6: Information technology component of the curriculum must be integrated throughout the program.

## Has the IT program been included in the course: Yes $\checkmark$ No.

Standard 2-7: Oral and written communication skills of the student must be developed and applied in the program.

## Is there any oral/written communication skills have been included in the program:

Yes $\checkmark$ No.

## Criterion 3: LABORATORIES AND COMPUTING FACILITIES

Standards: 3-1. Laboratories and computing facilities must be adequately available and accessible to faculty members and students to support teaching and research activities.

## Laboratory Facilities/Provision:

At present there is only one laboratory established in the department.

## Lab 1:

a) Courses being taught BS, MSc.
b) Software available No
c) All major apparatus/equipments available No
d) Proper safety regulations No

Standard: 3/2 Laboratory manuals/ documentation instruction for experiments must be available and readily accessible to faculty and students.
(1) None
(2) Available for students
(3) Available for Faculty
(4) Both $\sqrt{ }$

Standard: 3/3 There must be adequate support personnel for instruction and maintaining the program. $\sqrt{ }$ YES Standard: 3/4 The University computing infrastructure and facilities must be adequate to support program's objectives Computing Facilities.

NO computing facility in the department for the students.
Criterion 4: STUDENT SUPPORT AND ADVISING: Students must have adequate support to complete the program in a timely manner and must have ample opportunity to interact with their instructors and receive timely advice about program requirements and career alternatives.

Standard: 4:1. Courses must be offered with sufficient frequency and number for students to complete the program in timely manner.

Table: 9. Shows classes/week of Major Courses offered in 4 -Year program.

| Major Courses offered: BS. 4 Year Program, M.Sc. (Prev) @ the Ratio of 4:3 |  |  |
| :---: | :---: | :---: |
| Course offered/Year | Classes/week /CrHs | Practical/week/CrHs |
| BS.I. $1^{\text {st }}$ Semester | 18 | 18 |
| BS.I. ${ }^{\text {nd }}$ Semester | 18 | 18 |
| BS. II. $1^{\text {st }}$ Semester | 18 | 18 |
| BS. II. ${ }^{\text {nd }}$ Semester | 18 | 18 |
| BS. III.1 ${ }^{\text {st }}$ Semester | 18 | 18 |
| BS. III. $2^{\text {nd }}$ Semester | 18 | 18 |
| BS. IV. $1^{\text {st }}$ Semester | 18 | 18 |
| BS. IV. $2^{\text {nd }}$ Semester | 18 | 18 |
| M.Sc. (Prev) 1 ${ }^{\text {st }}$ Semester | 18 | 18 |
| M.Sc. (Prv) ${ }^{\text {nd }}$ Semester | 18 | 18 |
| M.Sc. Final ${ }^{\text {st }}$ Semester | 18 | 18 |
| M.Sc. Final ${ }^{\text {nd }}$ Semester | 18 | 18 |

The above mentioned classes are strictly followed throughout the academic year. The core courses, optional can be easily completed under the favorable environment.

The compulsory courses managed by the Botany department, however, other compulsory disciplines and optional subjects are managed by the related departments. The details of the compulsory subjects other than the offered by the Botany department are following.

| 4-Year BS: Program |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Subject: | Managed by: | Theory: $\mathrm{CrHs} /$ Class. |  | Practical: $\mathrm{CrHs} / \mathrm{Class}$. |  |
| English | English Dept | B.S I | $1^{\text {st }}$ Semester | BS.I | $1^{\text {st }}$ Semester |
|  |  |  | 3 |  | -- |
|  |  |  | $2^{\text {nd }}$ Semester |  | $2^{\text {nd }}$ Semester |
|  |  |  | 3 |  | -- |
|  |  | B.S II | $1^{\text {st }}$ Semester | BS.II | $1^{\text {st }}$ Semester |
|  |  |  | 3 |  | -- |
|  |  |  | $2^{\text {nd }}$ Semester |  | $2^{\text {nd }}$ Semester |
|  |  |  | 3 |  |  |
| Chemistry | Chemistery Deptt | B.S I | $1^{\text {st }}$ Semester | BS.I | $1^{\text {st }}$ Semester |
|  |  |  | 03 |  | 3 |
|  |  |  | $2^{\text {nd }}$ semester |  | $2^{\text {nd }}$ Semester |
|  |  |  | 03 |  | 3 |
|  |  | B.S II | $1^{\text {st }}$ Semester | BS.II | $1^{\text {st }}$ Semester |
|  |  |  | 03 |  | 3 |
|  |  |  | $2^{\text {nd }}$ Semester |  | $2^{\text {nd }}$ Semester |
|  |  |  | 03 |  | 3 |
| Math | Mathematics Deptt | B.S I | $1^{\text {st }}$ Semester | BS.I | $1^{\text {st }}$ Semester |
|  |  |  | 03 |  | 3 |
|  |  |  | $2{ }^{\text {nd }}$ Semester |  | $2{ }^{\text {nd }}$ Semester |
|  |  |  | 03 |  | 3 |
|  |  | B.S II | $1^{\text {st }}$ Semester | BS.II | $1^{\text {st }}$ Semester |
|  |  |  | 03 |  | 3 |
|  |  |  | $2^{\text {nd }}$ Semester |  | $2^{\text {nd }}$ Semester |
|  |  |  | 03 |  | 3 |
| Computer | Computer Deptt | B.S II | $1^{\text {st }}$ Semester | BS.I | $1^{\text {st }}$ Semester |
|  |  |  | 03 |  | -- |
|  |  |  | $2^{\text {nd }}$ Semester |  | $2{ }^{\text {nd }}$ Semester |
|  |  |  | 03 |  | -- |
|  |  |  |  |  | $1^{\text {st }}$ Semester |
|  |  |  |  | BS.II | -- |
|  |  |  |  |  | $2^{\text {nd }}$ Semester |
|  |  |  |  |  | -- |
| Ist: St: | Islamic Studies Deptt |  |  | BS.I | $1{ }^{\text {st }}$ Semester |
|  |  |  |  |  |  |
|  |  |  |  |  | $2^{\text {nd }}$ Semester |
|  |  |  |  |  | -- |
|  |  | B.S I |  | BS.II | $1{ }^{\text {st }}$ Semester |
|  |  |  |  |  | -- |
|  |  |  | $2^{\text {nd }}$ Semester |  | $2^{\text {nd }}$ Semester |
|  |  |  | 03 |  | -- |
| Pak: Studies | Pak: Studies Deptt | B.S I | $1^{\text {nd }}$ Semester |  |  |
|  |  |  | 03 |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

Standard: 4:2. Courses in the major are must be structured to ensure effective interaction between students and faculty and teaching and teaching assistance?
(1) Well structured $\sqrt{ }$

Standard: 4:3. Guidance on how to complete the program must be available to all students and access to academic advising must be available to make course decisions and career choices.

Are students informed about program requirements?
(1) No
(2) $\sqrt{ }$ To some extent
(3) Fully

## Does there student advising system exist and how effective it is?

(1) No
(2) $\sqrt{ }$ To some extent
(3) completely

Have students access to professional counseling?
(1) No
(2) $\sqrt{ }$ To some extent
(3) Full

Do the students have interact with practitioners and to have membership in technical \& professional societies?
(1) No $\sqrt{ }$
(2) To some extent
(3) Full

Criterion 5: The processes by which major functions are delivered must be in place, controlled, periodically reviewed, evaluated and continuously improved. To meet this criterion a set of standards must be satisfied.

Standard 5:1. The process by which students are admitted to the program must be based on quantitative and qualitative criteria and Cleary documented.

## Program/credit transfer: NA

## Transfer of a student from outside the university: NA

Admission Criteria: The admission policy is constituted by the "Admission Committee" consists of Deans, and senior faculty members of the university. The departments have no any role. The departments follow policy made by them which is also mentioned in "Prospectus of the university". However, the admission criteria are evaluated but not regularly.

Standard 5:2. The process by which students are registered in the program and monitoring of students progress to ensure timely completion of the program must be documented this process must be periodically evaluated to ensure that it is meeting its objectives:

## How frequently admission criteria are evaluated?

(1) None
(2) Not regularly
(3) Every Year $\sqrt{ }$

Are the evaluated results used to improve the results?
(1) No
2) To some extent
(3) Yes $\sqrt{ }$

Is there any policy regarding program /credit transfer?
(1) No
(2) To some extent
(3) Well defined $\sqrt{ }$

## Is there any mechanism of student's registration in the program?

(1) No
(2) To some extent
(3) Well defined $\sqrt{ }$

## How frequently process of registration is monitored?

(1) None 2) within 1 year (3) After 1 year (4) When needed $\sqrt{ }$

Are the evaluation results used to improve the results?
(1) No
2) To some extent
(3) Yes $\sqrt{ }$

Standard 5:3. The process of recruiting and retaining highly qualified faculty members must be in place and clearly documented. Also processes and procedures for faculty evaluation, promotion must be consistent with institution mission statement. These processes must be periodically evaluated to ensure that it is meeting with its objectives.
(T) Shah Abdul Latif University strictly follows the policy of "Equal Opportunity" regardless religion, race, faith, cast \& creed, gender regarding recruiting faculty including admissions, educational programs and employment.
(G) The University applies standard operating methodology for evaluation, such as Annual Confidential Report (ACR), required research papers, teaching experience and all other conditions as directed by the HEC. Thus

This process ensures the objectives of the program mission.
Standard 5:4: The process and procedures used to ensure that teaching and delivery of course material to the students emphasizes active learning and that course learning outcomes are met. The process must be periodically evaluated to ensure that it is meeting its objectives.
(8) It is strictly observed that the time table is followed by the faculty. However, Weaknesses \& Strengths have been observed through the student feedback for the "Course Evaluation". The department needs to improve in various aspects.

Standard 5:5: The process that ensures that graduates have completed the requirements of the program must be based on standards, effective and clearly documented procedures. This process must be periodically evaluated to ensure that it is meeting its objectives.

The process for the degrees of M.Phil/Ph.D. has been well designed by the Board of Advanced Studies \& Research (BASR) followed by the HEC directions. Details are as under.

| Degree | GPA/Class/GRE | Interview |  |
| :--- | :--- | :---: | :---: |
| BS-4Year/M.Sc.(prev) | Pre-Admission Test <br> (NTS) Type | X |  |

This process must be periodically evaluated to ensure that it is meeting its objectives. $\sqrt{ }$ (Yes)
The department ensures that the graduates actively participate in laboratory work, punctual in the classes, maintaining attendance over $75 \%$.

Criterion: 6. Faculty. Faculty members must be current and active in their discipline and have the necessary technical depth and breadth to support the program. There must be enough faculty members to provide continuity and stability, to cover the curriculum adequately and effectively. To meet this criterion the following standards must be satisfied.

Standard: 6: 1. There must be enough full time faculty who are committed to the program to provide adequate coverage of the program areas / courses with continuity and stability. The interest of all faculty members must be sufficient to teach all courses, plan, modify and update courses. The majority must hold a Ph.D. degree in the discipline.

| Table: 10. Program areas and number of faculty in each area. |  |  |  |
| :---: | :---: | :---: | :---: |
| Program Areas of <br> specialization | Courses in the area. | Number of faculty <br> members in each area | Number of <br> faculty with <br> Ph.D. degree |
| Solid State Physics |  | 02 | 01 |
| Computational <br> physics |  | 01 |  |
| Nuclear Physics |  | 01 |  |
| Electronics |  | 01 |  |
| E.M Theory |  | 01 |  |
| Total | $\mathbf{0 6}$ | $\mathbf{0 1}$ |  |

* One visiting professor


## Faculty Resume:

Note: Faculty resumes are well documented as per policy/criteria of HEC. Names of the faculty members and field of specialization are as under.

| Name: | Position | Qualification | Field of specialization |
| :--- | :---: | :---: | :---: |
| Dr. Farman Ali Mangi | Prof/Chairman | Ph.D. | Radio Physics |


| Dr. Deedar Ali Jamro | Professor | PhD | Radio Physics |
| :---: | :---: | :---: | :---: |
| Mr. Gulzar Ahmed Khoso | Assist: Professor | M.Sc.: Physics M Phil | Nuclear Physics |
| Miss Zubeda Bhatti | Assist: Professor | M.Sc.: Physics M.Phil | Computational Physics |

Standard 6:2. All faculty members must remain current in the discipline and sufficient time must be provided for scholarly activities and professional development. Also, effective programs for faculty development must be in place.

## Faculty Survey:

## Are all faculty members current in their disciplines?

(a) Up to $20 \%$ (b) Up to $50 \%$
(c) Up to $75 \%$
(d) $\sqrt{ }$ Over $\mathbf{8 0 \%}$

Is there sufficient time for faculty members for scholarly activities and professional development?
(a) No
(b) To some extent
(c) Full $\sqrt{ }$
I.Participation in seminars, conferences at National/International levels.
II.Research proposals for funding and linkage with other Institutions.
III.Taking classes, involved in research and reading new books in the relevant field.
IV.Publications in HEC recognized journals or journals having impact factors.
V.Organize workshops, seminars and conferences.
VI.The department arranges lectures from eminent scholars on various topics of the subject for its students and faculty at National level.
III.Prepare their resume in line with HEC guidelines.

Faculty Development Program: NA.
Standard 6:3. All faculty members should be motivated and have job satisfaction to excel in their profession.
The following criteria are under practice in order to satisfy the faculty members in their profession.
I. Fair, timely selection, appointment / promotion as per HEC policy.
II. Providing Tenure Track salary package
III. Excellent working environment.

Faculty Survey:
Criterion: 7. Institutional Facilities. Institutional facilities, including library, clean rooms and offices must be adequate to support the objectives of the program. To satisfy this criterion, the following standards must be met.

Standard 7:1. The Institution must have the infrastructure to support new trends in learning such as E-learning.
Standard 7:2. The library must possess an up-to-date technical collection relevant to the program and must be adequately staffed with professional personnel.

Standard 7:3. Class rooms must be adequately equipped and offices must be adequate to enable faculty to carry out their responsibility.

## Details of facilities available in the department:

| Item | Position | Remarks |
| :--- | :---: | :--- |
|  <br> Books/Journals | Yes, good numbers of <br> books are available | Need some more books of M.Sc. level including <br> National and international research journals. |
| Computing <br> Laboratory | X | One Computing lab is needed for students and <br> research scholars. |
| Laboratory | One incomplete lab is <br> available | Three more labs are required well equipped with <br> apparatus, multimedia and computers. |
| Class Rooms | Three class rooms <br> available | Need three more class rooms with multimedia <br> facility. |
| Girls Common Room | X | Need one room with wash room facility. |
| Boys Common Room | X | Need one room with wash room facility. |
| Faculty offices | Limited | More offices with wash room facility required. |
| Internet \& Digital <br> Library Facility | X | Facility required. |
| Computers | Few computers <br> available only for <br> office work | Facility is required for teaching faculty and <br> research scholars. |

Criterion: 8. Institutional Support. The institution's support and the financial resources for the program must be sufficient to provide an environment in which the program can achieve its objectives and retain its strength.
Standard 8:1. There must be sufficient support and financial resources to attract and retain high quality faculty and provide the means for them to maintain competence as teacher and scholars.
Standard 8:2. There must be an adequate number of high quality graduate students, research assistants and Ph.D. students.

Table: 11. The number of students in each program:

| Program | Year <br> 20017/18 | Students/ <br> Faculty <br> Ratio | Year <br> 2019/20 | Students/ <br> Faculty Ratio | Year <br> 2021/22 | Students/ <br> Faculty Ratio |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BS 4Yr |  |  |  |  |  |  |

Standard 8-3: Financial resources must be provided to acquire and maintain library holding, laboratories and computing facilities.

The University provides resources to maintain library \& laboratories.
(1) No
(2) To some extent
(3) Full $\sqrt{ }$

## Teacher Evaluation Form <br> (To be filled by the student)

DEPARTMENT: Physics \& Electronics
A: Strongly Agree
B: Agree

C: Uncertain
D: Disagree
Year of Study: $\underline{2015}$
E: Strongly Disagree

| Teacher: |  | A | B | C | D | E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | The teacher is prepared for each class | 65\% | 29\% | 2\% | 4\% | 0\% |
| 2. | The teacher demonstrates knowledge of the subject properly | 54\% | 38\% | 4\% | 1\% | 4\% |
| 3. | The teacher has completed the whole course | 53\% | 41\% | 4\% | 0\% | 2\% |
| 4. | The teacher provides additional material apart from the textbook | 41\% | 46\% | 5\% | 5\% | 4\% |
| 5. | The teacher gives citations regarding current situations with reference to Pakistani context. | 33\% | 51\% | 8\% | 7\% | 1\% |
| 6. | The teacher communicates the subject matter effectively | 44\% | 48\% | 1\% | 6\% | 1\% |
| 7. | The teacher shows respect towards students and encourages class participation | 59\% | 41\% | 0\% | 0\% | 0\% |
| 8. | The teacher maintains an environment that is conducive to learning | 51\% | 45\% | 4\% | 0\% | 1\% |
| 9. | The teacher is punctual \& regular. | 62\% | 31\% | 5\% | 1\% | 1\% |
| 10. | The teacher is fair in examination | 51\% | 42\% | 4\% | 0\% | 4\% |
| 11. | The teacher returns the checked scripts etc. with his suggestions to the students. | 34\% | 46\% | 7\% | 9\% | 4\% |
| 12. | The teacher was available for consultations after class hours. | 41\% | 54\% | 4\% | 1\% | 0\% |
| Course: |  |  |  |  |  |  |
| 13. | The matter presented in the course has increased the knowledge of the subject | 41\% | 52\% | 5\% | 2\% | 0\% |
| 14. | The syllabus clearly states course objectives requirements, procedures and grading criteria | 40\% | 55\% | 1\% | 2\% | 1\% |
| 15. | The subject integrates theoretical course concepts with real world. | 45\% | 51\% | 2\% | 2\% | 0\% |
| 16. | The assignments and exams taken by the teacher were according to course and syllabi. | 53\% | 46\% | 0\% | 1\% | 0\% |

## Survey of Graduating Students

DEPARTMENT: Physics \& Electronics
Year of Study: $\underline{2015}$
A: Very satisfied $\quad$ B: Satisfied $\quad$ C: Uncertain $\quad$ D: Dissatisfied E: Very dissatisfied

| $\mathrm{S} \#$ | Question | Percentage/Status |  |  |  |  |
| :---: | :--- | :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ | $\mathbf{D}$ | $\mathbf{E}$ |  |
| 1. | The work in the program is too heavy and induces a lot of <br> pressure. | $28 \%$ | $52 \%$ | $14 \%$ | $7 \%$ | $0 \%$ |
| 2. | The program is effective in enhancing team-working <br> abilities. | $34 \%$ | $52 \%$ | $10 \%$ | $3 \%$ | $0 \%$ |
| 3. | The program is effective in developing analytical and <br> problem solving skills. | $38 \%$ | $41 \%$ | $21 \%$ | $0 \%$ | $0 \%$ |
| 4. | The program is effective in developing written <br> communication skills. | $38 \%$ | $62 \%$ | $0 \%$ | $0 \%$ | $0 \%$ |
| 5. | The program is effective in developing planning abilities. | $28 \%$ | $45 \%$ | $10 \%$ | $3 \%$ | $14 \%$ |
| 6. | The objectives of the program have been fully achieved | $31 \%$ | $38 \%$ | $24 \%$ | $3 \%$ | $3 \%$ |
| 7. | Faculty was able to meet the program objectives | $31 \%$ | $38 \%$ | $28 \%$ | $3 \%$ | $0 \%$ |
| 8. | Environment was conducive for learning | $21 \%$ | $55 \%$ | $3 \%$ | $10 \%$ | $10 \%$ |
| 9. | Whether the Infrastructure of the department was good. | $21 \%$ | $45 \%$ | $10 \%$ | $17 \%$ | $7 \%$ |
| 10. | Whether the program was comprised of Co-curricular <br> and extra-curricular activities | $21 \%$ | $41 \%$ | $21 \%$ | $14 \%$ | $3 \%$ |
| 11. | Whether scholarships/ grants were available to students <br> in case of hardship | $28 \%$ | $21 \%$ | $24 \%$ | $21 \%$ | $7 \%$ |

Answer question, if applicable.
The internship experience is effective in enhancing.

| S \# | Question | Percentage/Status |  |  |  |  |
| :---: | :--- | :---: | :---: | :---: | :---: | :---: |
|  |  | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ | $\mathbf{D}$ | $\mathbf{E}$ |
| A. | Ability to work in teams. | $38 \%$ | $52 \%$ | $7 \%$ | $3 \%$ | $0 \%$ |
| B. | Independent thinking. | $28 \%$ | $59 \%$ | $10 \%$ | $3 \%$ | $0 \%$ |
| C. | Appreciation of ethical Values. | $31 \%$ | $55 \%$ | $14 \%$ | $0 \%$ | $0 \%$ |
| D. | Professional development. | $34 \%$ | $48 \%$ | $0 \%$ | $14 \%$ | $3 \%$ |
| E. | Time management skills. | $17 \%$ | $62 \%$ | $10 \%$ | $3 \%$ | $7 \%$ |
| F. | Judgment. | $31 \%$ | $48 \%$ | $7 \%$ | $3 \%$ | $10 \%$ |
| G. | Discipline. | $41 \%$ | $41 \%$ | $7 \%$ | $7 \%$ | $3 \%$ |
| H. | The link between theory and practice. | $41 \%$ | $55 \%$ | $0 \%$ | $3 \%$ | $0 \%$ |

## Student Course Evaluation Questionnaire

## (To be filled by each student at the time of Course Completion)

## DEPARTMENT: Physics \& Electronics

Year of Study: $\underline{2015}$

## CORE QUESTIONS

| S \# | Course Content and Organization | Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | The course objectives were clear. | 48\% | 48\% | 0\% | 4\% | 0\% |
| 2. | The Course workload was manageable. | 36\% | 56\% | 4\% | 4\% | 0\% |
| 3. | The Course was well organized (e.g. timely access to materials, notification of changes, etc.) | 48\% | 36\% | 12\% | 4\% | 0\% |
| Student Contribution |  | 81\%< | $\begin{gathered} \mathbf{8 0} \\ \% \end{gathered}$ | 60\% | 40\% | 20\%> |
| 4. | Approximate level of your own attendance during the whole Course. | 36\% | 52\% | 8\% | 0\% | 4\% |
| 5. | I participated actively in the Course. | 20\% | 60\% | 16\% | 4\% | 0\% |
| 6. | I think I have made progress in this Course. | 20\% | 48\% | 28\% | 4\% | 0\% |
| Learning Environment and Teaching Methods |  | Strongly Agree | Agree | Uncertain | Disagree | Strongly <br> Disagree |
| 7. | I think the Course was well structured to achieve the learning outcomes. | 40\% | 56\% | 4\% | 0\% | 0\% |
| 8. | The learning and teaching methods encouraged participation. | 28\% | 68\% | 4\% | 0\% | 0\% |
| 9. | The overall environment in the class was academic \& friendly. | 40\% | 60\% | 0\% | 0\% | 0\% |
| 10. | Classrooms environment were satisfactory. | 32\% | 52\% | 4\% | 12\% | 0\% |
| Learning Resources |  | Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
| 11. | Learn materials provided by teacher were relevant and useful. | 36\% | 56\% | 4\% | 4\% | 0\% |
| 12. | Recommended reading Books etc. were relevant and appropriate | 32\% | 56\% | 8\% | 4\% | 0\% |
| 13. | The provision of learning resources in the library was adequate and appropriate. | 24\% | 32\% | 16\% | 20\% | 8\% |
| 14. | The provision of learning resources on the Web was adequate and appropriate (if relevant) | 12\% | 36\% | 36\% | 12\% | 4\% |
| Quality of Delivery |  | Strongly Agree | Agree | Uncertain | Disagree | Strongly <br> Disagree |
| 15. | The Course stimulated my interest and thought on the subject area Teaching techniques of the teacher were interesting and conducive. | 44\% | 48\% | 4\% | 4\% | 0\% |
| 16. | The pace of the Course was appropriate | 36\% | 56\% | 0\% | 8\% | 0\% |
| 17. | Ideas and concepts were presented by the teacher were clear. | 60\% | 32\% | 4\% | 4\% | 0\% |
| Assessment |  | Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
| 18. | The methods of assessment were reasonable. | 52\% | 44\% | 0\% | 4\% | 0\% |
| 19. | Feedback on assessment was timely. | 40\% | 52\% | 4\% | 4\% | 0\% |
| 20. | Feedback on assessment was helpful. | 32\% | 60\% | 8\% | 0\% | 0\% |
| Additional Core Questions Instructor / Teaching Assistant Evaluation |  | Strongly Agree | Agree | Uncertain | Disagree | Strongly <br> Disagree |
| 21. | I understood the lectures. | 52\% | 40\% | 4\% | 4\% | 0\% |

22. The material was well organized and presented.
responsive to student needs and 24. Had the teacher been regular throughout the
practical

| 25. | The material in the practical's was useful. | $44 \%$ | $52 \%$ | $4 \%$ | $0 \%$ | $0 \%$ |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: |
| 26. | Strongly <br> Agree <br> problems. | Agree | Uncertain | Disagree | Strongly <br> Disagree |  |

PT Members
(1) Miss Zubeda BhattiSignature

(2) Mr. Gulzar Ahmed Khoso

Signature

Chairman Comments

Prof. Dr.Farman Ali Mangi


Signature Chairman

