

7.2 Best Practices

1. Innovations introduced during academic year (2018-19) which has created a positive impact on the functioning of the institute. Give details

(1) **Bridge Course** was conducted for B.Sc. first year students during July 2, 2018 to July 7, 2018. Students are introduced with different branches of Physics included in three year Physics course. The basic physical concepts students learned at H.S.C. level and are related to first year course are revised.

Three practical sessions for each practical batch are organized. Training of Calculations, Use of Logarithm Table, Plotting of different types of graphs and calculations of slopes is given to students. Students are trained to handle different physical instruments. Students studied least count of different instruments and done measurements of physical quantities with these instruments. Instruments include thermometers, stop watches, different Current and Voltage meters, Multi meters, Vernier Calipers. Micrometer screw, Spherometer, CRO, Travelling microscope and Spectrometers. Programme for practical sessions was as follows:

Batch	Date	Day	Time	Course
GENERAL GROUP + COMP. SCIENCE	18/07/2018	Wednesday	2.00 – 5.20	Use of Log table and Calculations
	25/07/2018	Wednesday	2.00 – 5.20	To plot graphs and calculate slopes
	01/08/2018	Wednesday	2.00 – 5.20	Measurements with different instruments.
ELECTRONICS + INDUSTRIAL CHEMISTRY + GEOLOGY	19/07/2018	Thursday	2.50 – 5.20	Use of Log table and Calculations
	26/07/2018	Thursday	2.50 – 5.20	To plot graphs and calculate slopes
	02/08/2018	Thursday	2.50 – 5.20	Measurements with different instruments.

Interactive session of Dr. Sadik Ali with B.Sc. first year students was organized by Department of Physics on August 13, 2018 in hall no. 5 of Science building from 10.40 am to 12.20 pm. He delivered very knowledgeable, interactive and interesting lecture on mathematical operations used in Physics.

Students have also participated in Science Exhibition Competition organized by our college on 15 Feb 2019. Working as well as dummy models, charts based on Chemical concepts, Life sciences as well as physics and electronics were displayed. A laser light show attracted great attention of the visitors.

The Dept of Physics arranged an outreach programme for physics teachers from Zilla Parishad schools in association with Director of School education. Staff members studied Physics syllabus framed from V to X standard. Teachers developed simple models using easily available

and low cost materials. These models can help in explaining, understanding and verifying basic principles of Mechanics, Heat, Sound and Optics. Some experiments are useful in measurements of physical quantities and their units. As a part of outreach programme , we would like to extend this facility for the teachers teaching to standard VI to VIII in Zilla Parishad schools. In all 75 teachers participated in the workshop. Teachers were distributed in two groups so every teacher got chance to perform every practical individually. First group attended workshop on 15/04/2019 and second group attended on 16/04/2019. Certificates have been given after completion of workshop and feedback was taken from teachers for further improvement.

BEST PRACTICE :

Title of the practice : “ Faculty Enrichment/development Programmes” covering general aspects of teaching and learning as well as subject specific faculty development programme”

Goal: Faculty Development Programmes (FDP) were taken to train and develop teachers in academic , administrative and career development so that they are ready to face the changing educational scenario.

The Relevance: Since Faculty development programs (FDP) are considered as unique aspects of educational pedagogy that can foster knowledge and professional skills in the faculty, these were engaged on a wider level to expand the horizons of teaching and learning. Through these FDP's the institution has offered a wide range of activities that can support the professional and academic growth of faculty members. These included programs that were aimed at improving the performance of faculty members in education, research and administration as well as the improvement in organizational capacities, values and ethics.

The Practice:

Enriching the faculty vitality in key domains of ICT enabled teaching, enrichment of subject knowledge, accuracy in evaluation, preparation of research proposals, new schemes, preparations for inspections, the discharge of administrative duties to the best of one's potential has been focused upon in these FDP's. The list of FDP conducted by the college is as mentioned below.

Sr. no.	Title of the quality initiative	Date	Duration in days	Number of participants /beneficiaries
1	Training session on “Technological advances and Challenges in teaching		One day	33

	and learning – LMS-MOODLE”	10 th April 2018		
2	Teacher orientation on “Teaching innovations” Speakers: Dr.Razaullah khan- Responsibilities of a teacher. Dr.Sadikali Shaikh – Google classroom and Google apps for education (GAPE). Dr.Sanaullah Khan –Use of Multimedia in teaching MrMateen Pervez-Smart TV as a teaching aid. Dr.Ashfaque Khan – Massive online open course.	5 th Sept 2018	One day	54
3	Training session on “Transformation of leadership in education” by Dr.N.V.Kebeer, Social entrepreneur, Corporate coach, educationist.	16 th Feb 2019	One day	40
4	Lecture on “Quality enhancement and accreditation” Dr.Akbar Ali Khan . Former V.C Telangana University	16 th March 2019	One day	50
5	Faculty enrichment in Life Sciences. Dr.Asadullah Khan , Prof and Coordinator, DST PURSE,DBT-BUILDER programme , AMU, Aligarh.	24 th March 2019	One day	16

Evidence of success:

The involvement and wholehearted participation of the teachers in these FDP’s spoke volumes about the success of the programme. Dr. N.V.Kebeer had an interactive session with the faculty and the response was very spontaneous. Dr. Asadullah Khan spoke at length on different aspects of Gene cloning , PCR, Gene library and this was followed by a question and answer session in which the faculty participated and also enquired about the research schemes, DBT star college proposal etc. The feedback analysis also reflects on the success of these programmes.

Problems encountered and resources required:

The success of the FDP depends largely on the availability of good resource persons, and the expenditure that will be incurred have to be considered before inviting them for the FDP. The air connectivity in small cities is another hurdle that has to be crossed before the invite may be accepted. Availability of funds and the time slot are therefore the two main areas that require attention.

BEST PRACTICE II:

Title of the practice : “Skill /soft skill development programmes for students”.

Goal:

To sharpen the Linguistic, Entrepreneurial and Scientific analytical skills of students through three of the skill development courses engaged by the College. The goal is to develop enterprising, competent, trained and capable youth to satisfy the global demand for skilled workforce.

The Relevance:

There has been a skill oriented demand-supply mismatch over the years which becomes obvious as the economy grows and needs more trained workforce than is available at a given time. The idea is therefore to promote skill based education in an integrated and holistic manner along with general education so as to ensure an outreach that culminates in greater mobility in the sphere of available jobs. It also provides an opportunity for the institution to have a greater contact with the industry ,employers and their requirements in the respective sphere of work. This is needed for the skill oriented course to have credibility and acceptability with the employer.

The Practice:

Skills based education is different from the other courses with respect to the curriculum, duration of the course , teaching pedagogy , screening of students ,assessment criteria etc. Thus the first step towards the induction of the programme was to notify the students with respect to the course and carry out a screening test to select the prospective students. Since skills-based education is still an evolving but growing field, therefore institutions are encouraged to exercise constant inventiveness and come up some innovative models. In this regard the Entrepreneurship development programme was carried out under an MoU with MCED. The training methodology includes lecture cum demonstrations, case studies, group discussion, field visits and classroom

lectures. The title of the course, duration , number of beneficiaries have all been tabulated as below.

Sr. no.	Title of the quality initiative	Date	Duration in days	Number of participants /beneficiaries
1	Soft skill development programme	18.09.2018 to 07.02.2019	50 contact hours	40
2	Instrument handling course	20.07.2018 to 16.02.2019	Every Friday and Saturday between 4 to 6 p.m. (72 contact hours)	25
3	Ten weeks Entrepreneurship skill development programme	19 th September 2019	10 weeks /40 hours	40

Evidence of success: Industries expect language fluency, depth of subject knowledge , team work, interpersonal behaviour all of which were sharpened through the skill development courses. Some of the sessions of personality grooming and development of communication skills taken through the Career counselling and guidance cell have also helped the students to have industry preparedness. Students have been selected through campus placements and have performed well in pool campuses also. The feedback received is very encouraging and some more courses are being planned out for future considerations.

Problems encountered and resources required:

The lack of funds in managing such courses are a huge roadblock for institutions. The Semester examination schedule is also such that students do not find the time over and above the schedule of lectures and practicals. The timetable for the regular course has no provisions for skill courses and therefore these have to be taken only after the completion of the regular schedule. Thus if additional funds are provided , the students can be taken for outbound programmes, field trips , industry visits to understand the cutting edge of the skill development course.