

Key Indicator - 7.2 Best Practices (30)

Metric No.		Weightage
7.2.1 Q1M	<p>Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual.</p> <p>1. Title of the Practice: Academic and Research Innovations</p> <p>2. Objectives of the Practice</p> <p>Department of Chemical Sciences at IKG Punjab Technical University has introduced Choice Based Credit System both at Master and bachelor level and focusing on enhancing the capabilities of the students of the Chemical sciences. It also provides an opportunity to the enrolled student for flexibility in designing their own degrees. We have also introduced mandatory dissertation work at Master level for providing students an opportunity to have hands on training related to the research. The department of chemical Sciences has also introduced Green Chemistry/environmental sciences course in its curriculum to develop Environment Consciousness among the students. We have also introduced the commination English and Mudli Punjabi course at Bachelor level for improvement of communication skills among the students. We have mandatory computer for chemist course at Master level to make the students of chemistry computer friendly.</p> <p>3. Context</p> <p>The innovations in curriculum, pedagogical techniques, learners' centric and research-oriented environment provides the fulfilment of different objective of the chemical Sciences more efficient and helps students in nurturing their talents more efficiently. Nurturing of the student's talent in best possible way is to provide the industry driven curriculum and industry motivated research exposure. University has adopted several innovative mechanisms in teaching learning to meet the expectations of students like choice-based credit system, flexi learning, Industry Integration and Research Orientation.</p> <p>4. The Practice</p> <p>Teaching Methods</p> <p>i. Choice based credit system/ flexible credit system:</p> <p>The Department of Chemical Sciences offer the Master and bachelor's courses as per CBCS pattern with inclusion of interdisciplinary courses to provide an opportunity to the student to acquire a more holistic perspective and inter-disciplinary understanding of the subject to make him/her industry efficient. Students have the freedom to choose open elective courses from a pool of courses offered by Department. This help in improving creativity and logical thinking among the students. The student's academic performance is assessed as the aggregate of the continuous evaluation and the end semester examinations.</p>	30

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Moreover, Industrial experts/Scientist are the members of the Board of study in Chemical Sciences for inclusion of their suggestions to improve course as per the requirement of industry.

ii. Student Involvement in Innovation and Research

Department of Chemical Sciences at IKGPTU encourages students towards research and

innovation practices. Apart from Doctorate & PG, UG students are also encouraged and given opportunity to get involved in research efforts. The /M.Sc. dissertations are made research driven and scientific papers have come out of this work as an outcome.

The students are encouraged to participate in seminars and conferences and present their work. Students also take part in international conferences and workshops to present their work.

5. Evidence of Success

Interdisciplinary Study and Placements in reputed industries and organizations: Interdisciplinary study at Doctoral and Master level allows the students to learn as per the need of the Industry and Research Institutions. The Students of Chemical Sciences were placed in reputed Institutions/industry both with in India and Abroad for Industrial/Research work and higher degrees. We have also made research MoU with Research Industry for the promotion of the research at Chemical Sciences. Success in Research can be further visualized while considering the research publication of a more than 50 research publications with h_{index} of 13 for last five years.

6. Problems encountered, and resources required

The appropriate number of the Faculty at Chemical Sciences was initial a big problem which was compensated by appointment of new faculty members. We were not having appropriate research Infrastructure at Chemical sciences which was much compensated by additions of IR spectrophotometer, Fluorescence Spectrophotometer, Rotavapor etc. More budget has already been allocated for purchase of more research Instrument for promotion of research and Teaching at IKGPTU.

Provide web link to:

- Best practices in the Institutional web site-NIL
- Any other relevant information-NIL


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