SANT LONGOWAL INSTITUTE OF ENGINEERING & TECHNOLOGY
(DEEMED TO BE UNIVERSITY) UNDER SECTION 3 OF UGC ACT, 1956
LONGOWAL (SANGRUR, PUNJAB)

DEPARTMENT OF CHEMISTRY

Ref. No. CHY/ 370   Date 11|11|22

From   :   HOD Chemistry

To   :   Deán (A)

Subject: :   **Performa of Assessment for Academic Audit 2021-22**

With reference to letter no. SLIET/Dean (A)/2022/358 Dated: 19/05/2022. The meeting for Academic Audit 2021-22 was held on 02.09.2022. Please find the attached "Performa of Assessment" for Academic Audit 2021-22.

HOD Chemistry 11/11/22

SANT LONGOWAL INSTITUTE OF ENGINEERING & TECHNOLOGY
(Deemed-To-Be-University)
LONOGOWAL-148106

ACADEMIC AUDIT (2021 - 2022)
PROFORMA OF ASSESSMENT

1. **Name of the Department : CHEMISTRY**

2. **Reviewer (Name, Designation & Address) :**

    1. HOD (Chemistry) – Convener
    2. Dean (Academics) – Member
    3. Prof. H.K. Chopra (Chy) – Member
    4. Prof. S. S. Dhaliwal (Mathematics) – Member
    5. Dr. Mandip Ghai, AsP (M&H) – Member
    6. Prof. Ragini Gupta (MNIT, Jaipur) – External Expert

3. **Date of Review: 02/09/2022**

NOTE:
i.   Please grade in the box provided for the following parameters in the range of 1-10 with 10 being the highest.
ii. Leave 'blank' for 'No Comment'.
iii. Kindly give your opinion on the strength and weakness of the Department and your suggestions for future growth.

A. ACADEMICS

A.1	ICD Programme	Score	
		Self-assessment	Expert assessment
1.	Curriculum (Structure, Course Syllabi, Flexibility), Theory/ practical (contents/ratio).	10	10
2.	Equivalence and Relevance of curriculum at national level	10	10
3.	Formal Academic Load on Students [Teaching, Laboratory/Practical, Projects(minor/major)]	10	10
4.	Evaluation Process (Continuing Evaluation, and End-Term Evaluation)	10	10
5.	Tour/Training/Industrial visits/Internship opportunities provided during the year	10	09
6.	Effectiveness of Assisted Learning, Tutorial System for ICD Students/ Seminars (Refer Course File)	09	09
7.	Faculty Mentoring/Faculty Advisor System for Students/Class of Students	10	10
8.	Practical activities, non-academic and totally related to a specific trade for skill development and *developing expertise in a*	06	06

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	particular group of techniques.		
9.	Linkage of ICD programs to outcome based vocational education (Industry linkage)	10	09
10.	Availability of workshop type lab/laboratory for providing hand on training to the students for skill development	10	10
	Total Score (out of 100)	95	93

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A.2	UG Programme	Score	
		Self-assessment	Expert assessment
1.	Curriculum (Structure, Course syllabi, Flexibility, Choice based credit system)	10	10
2.	Status of study material developed by faculty for students	10	10
3.	Relevance of contents of courses taught to the students and scope of improvement (revision of syllabus, addition of new experiments)	10	10
4.	Formal academic load on students [Teaching, Laboratory/Practical, Projects(minor/major)]	09	09
5.	Modern teaching methods in practice other than the conventional methods E-Assisted Learning (i) Availability of Library Resources (ii) Multi-Media Assisted Teaching	10	10
6.	Evaluation Process (Continuing Evaluation, and End-Term Evaluation) (i) Theory and tutorial (ii) Practical (case studies)	10	10
7.	Faculty–Student Interaction (Whether any slot is fixed for the students to interact with a teacher, after classes/labs	09	09
8.	Tour/Training/Industrial visits/Internship opportunities	10	09
9.	(a) Effectiveness of Assisted Learning in Tutorial classes/seminars for Students	10	10
	(b) Faculty Mentoring/Faculty Advisor System for Students/Class of Students	10	10
10	Placement %age/higher studies options (last three years)	08	07
	Total Score (out of 100)	86	84

A.3	PG Programme (Separate for each programme)	Score	
		Self-assessment	Expert assessment
1.	Curriculum (Structure, Course Syllabi, Flexibility)	10	10
2.	Formal Academic Load on Students [Teaching, Laboratory/Practical, Projects(minor/major)]	10	10
3.	Evaluation Process (Continuing Evaluation, and End-Term Evaluation)	10	10
4.	Relevance of contents of courses taught to the students and scope of improvement	10	10
5.	Modern teaching methods in practice other than the conventional method E-Assisted Learning i. Availability of Library Resources and Major Search Engines (like Scopus, Web of Science) ii. Multi-Media Assisted Teaching	10	10

		Self-assessment	Expert assessment
6.	Technical Societies/ Colloquium for Students i. Departmental Society ii. Student Chapter(s) of Professional Societies	10	10
7.	Tour/Training/Industrial visits/Internship opportunities	10	10
8.	Collaboration with other departments (within institute)	08	08
9.	Faculty Mentoring/Faculty Advisor System for Students/Class of Students	10	10
10.	Monitoring and continuous evaluation of the project work assigned to the students (mechanism)	10	10
	Total Score (out of 100)	98	98

A.4	Doctoral (Ph.D.) Programmes	Score	
		Self-assessment	Expert assessment
1.	Intake of Ph.D. Students	10	09
2.	Admission Process	10	10
3.	Pre-Ph.D. Courses and Evaluation Process	10	10
4.	Breadth and Depth of Knowledge of Students	09	09
5.	Seminar/ Presentations and Technical Communication	10	10
6.	Research Facilities available in the Department	08	08
7.	Average No. of Research Students/Faculty	09	09
8.	Average No. of Research Papers of Ph. D. Students (Indexed Journals)	10	09
9.	Average Duration to Complete Ph.D. (years)	09	09
10.	Participation of Research Scholars in Conferences/Workshops	10	10
	Total Score (out of 100)	95	93

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B.   RESEARCH

B.1 Research and Industrial collaboration	Score	
	Self-assessment	Expert assessment
Research Ambience in the Department	09	10
Research Awareness among Doctoral Students	09	09
Thrust areas of research in the department	10	10
Quality of Research	10	10
Collaborations with other departments (within the institute) and at National, and International levels.	10	09
Impact and Quality of Publications	10	08
Relevance of Research to Knowledge Generation and Social Relevance	10	10
Student Exposure for Attending Quality Conferences/Symposia	10	10
Inter departmental collaborations	10	09
Industry/externally funded sponsored research (Numbers and amount)	02	03
Total Score (out of 100)	90	88

General Comments on,

1. Plan of action of the department for the next five years (in view of NEP 2020)
2. Significant achievements of the department (faculty/Staff/Students)
3. Placement record of the department (Last three years)
4. Scope for training of faculty/staff for further strengthening the teaching-learning process for strengthening the curriculum with the addition of new courses having relevance at National and International levels.
5. Effective/Continuous monitoring of faculty/staff in delivery the course contents (at departmental level) for enhancing the teaching-learning process.
6. Technical Societies/ Colloquium for Students
   (i)   Departmental Society
   (ii)   Student Chapter(s) of Professional Societies
7. Scope of improvement in the presenting teaching –learning process
8. The skill and expertise of the faculty/Technical staff in the department (specific)
9. Strengthening laboratory infrastructure (adding of new equipment's and use of present facility for optimum use)
10. Any other point

C. Departmental Infrastructure

C.1	Departmental resources	Score	
		Self-assessment	Expert assessment
1	Adequacy of Class Rooms and Multi-Media Facility	10	10
2	Availability of Laboratories	09	09
3	Availability of Conference/Seminar Room, etc	10	10
4	Availability of Seating Space for Faculty and Research Students	09	09
5	Availability of Internet Services in Research Labs and Class Rooms	10	10
6	Departmental Library and E-Resources	09	09
7	Computing Facilities and Software	09	09
8	Adequacy of Offices and Furnishing for Faculty	09	09
9	Faculty- Student Ratio	06	05
10	Support Staff (Technical/Administrative) Adequacy	09	10
	Total Score (out of 100)	90	90

SWOT analysis by the department :

Strengths:
Dedicated and Flexible faculty and Staff
➢ Well equipment laboratories and Well-designed Lab Manuals for all courses
➢ Development of Video Lectures/ Power Point Presentation / Resource Material and question banks
➢ Continue review of the syllabi and curriculum by the subject experts
➢ Smart Class rooms and focus on Modern methods of Teaching
➢ Internship in-house facilities
➢ Industrial exposure to student through educational tour and internship
➢ Dissertation work in M.Sc.
➢ Result of M.Sc. upto 100% and opted for higher studies and placement
➢ SLIET Chemical Society and Chemistry Alumni Association
➢ Research Profile - Publications in high impact factor journals and citation Index
➢ Intra and interdepartmental and inter Universities /organizations collaborative research efforts
➢ Books authored and Book Chapters by faculties
➢ Research and Academic Awards and achievements of the faculty
➢ Consultancy Projects and Patent Filed by the Faculty

Weaknesses:
➢ Department lacks proper lab infrastructure and Additional Laboratories with proper infrastructure for UG, PG and Ph.D students
➢ Augmentation of sophisticated instrumentation facility
➢ Improvement of student teacher ratio
➢ Chemical waste disposal unit
➢ Lab Space for PhD/M.Sc. Research students
➢ Specified grant of chemicals for PhD/M.Sc.
➢ Regular Physical faculty
➢ Regular technicians for Laboratories
➢ Regular office assistant/Incharge
➢ Reading room/common room/computer room for PhD/M.Sc.
➢ Subscription of Journals and eBooks

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Opportunities:
- To introduce five year Integrated B.Sc. -M.Sc. Programe.
- For further strengthening of research, efforts will be taken towards development of sophisticated instrumentation laboratory
- Interdisciplinary approach in emerging research areas
- Initiate industry –academic collaborative research
- Emphasis will be on publishing research work in high impact factor journals/Consultancy works/Research Funding

Challenges:
Inadequate Faculty in Physical Chemistry, Technical Staff, Inadequacy of Research & PG, UG and ICD Laboratories ,Faculty/ Student Ratio

Suggestions for improvement:
- Appointment of regular Faculty in particular Asstt. Professor in Physical Chemistry
- Filling of vacant Posts of Technician (02) in Department
- Appointment of Regular Office Staff
- Improvement in Teacher/ student ratio
- Augmentation of teaching and research Labs
- Requirement of reading room/common room either at Department level/Science block
- Interdepartmental collaboration efforts at UG ,PG and Ph.D level
- Improvement in central library resources such as subscription of SciFinder etc.
- Chemical disposal unit may be integrated one for chemistry/chemical and food department
- Nitrogen Plant at the Institute Level

D. Outcomes

D.1	Placement/ higher studies/ Publications/ Consultancy, Ph.D. awarded etc.	Score	
		Self-assessment	Expert assessment
1	i. Placements for ICD ii. Placement of B.Tech iii. Placement of Masters Student iv. Placement of Ph.D. Students	08	08
2	Average No. of Ph.Ds Awarded per Year	08	08
3	Publications per Faculty in Indexed Journals/Year (Average of last three years)	10	09
4	Average Citations per Faculty/Year (Last-Three Years) (Web of Science/Scopus)	10	09
5	Recognitions; Awards(National/International) to Faculty/Students	10	10
6	Consultancy and Externally Funded Projects	04	05
7	No. of Ph.D. graduates who took Academics as Career (Last 5 Years)	10	09
8	Students offered for higher studies	10	10
9	No. of qualified students NET/GATE/CAT etc (State/Central Civil Services)	10	10
10	Entrepreneurship	06	05
	Total Score (out of 100)	86	83

Comments & Suggestions for Improvement

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LONOGOWAL-148106

ACADEMIC AUDIT (2021- 2022)
SUMMARY SHEET

1.	Name of the Department	Chemistry	
2.	Name of Reviewer Designation & Address	**From Academia**	**From Industry**
		Prof. Ragini Gupta Professor Department of Chemistry	
3.	Date of Meeting	02/09/22	

<table>
<tr><th colspan="8">Score Summary</th></tr>
<tr><th colspan="4">Academics (A)</th><th>Research (Max Score 100)</th><th>Departmental Infrastructure (Max Score 100)</th><th>Outcome (Max Score 100)</th><th>Total Score (700)</th></tr>
<tr><th>ICD Programme (Max Score 100)</th><th>UG Programme (Max Score 100)</th><th>PG Programmme (Max Score 100) (Average of all PG programs)</th><th>Doctoral Programmme (Max Score 100)</th><th></th><th></th><th></th><th></th></tr>
<tr><td>(A.1)</td><td>(A.2)</td><td>(A.3)</td><td>(A.4)</td><td>(B)</td><td>(C)</td><td>(D)</td><td>(A+B+C+D)</td></tr>
<tr><td>93</td><td>84</td><td>98</td><td>93</td><td>88</td><td>90</td><td>83</td><td>629</td></tr>
</table>

Note: 1. Marks mentioned above are the average of the marks given by the experts.

2. If marks have not been allotted for some attributes by the experts, total score can be scaled to maximum marks.

Name & Signature of HOD