संत लोंगोवाल अभियांत्रिकी तथा प्रौद्योगिकी संस्थान,
लोंगोवाल, संगरूर, पंजाब – 148106
SANT LONGOWAL INSTITUTE OF ENGINEERING & TECHNOLOGY
(DEEMED TO BE UNIVERSITY) UNDER SECTION 3 OF UGC ACT, 1956
LONGOWAL (SANGRUR, PUNJAB)

DEPARTMENT OF CHEMISTRY

Academic Audit (2020-21)

The review meeting for Academic Audit (2020-21) was held on 25.08.2021 in hybrid mode (online & offline). The following committee members were present:

1. HOD (Chemistry) – Convener
2. J.S Dhillon.Prof. & Dean (Academics) – External member
3. Dr. Ram Pal Chaudhary, Prof. (Chemistry) – Internal member
4. Dr. D.C. Saxena, Prof. (FET) – External member
5. Dr. B.S. Kaith, NIT, Jalandhar– External Expert
6. Dr. Sanjeev Garg, AP, (M&H)- External member

Following deliberations were held during the meeting:

1. Strength & weakness of the Department.
2. Improvement / Corrective measures by department in Academic year 2020-21.
3. Academic Audit Report of the Department for year 2020-21 on the basis of proceedings is finalized.

The Proforma of Audit report is enclosed as Annexure - A

R.No. Dean (Acad.)..... 103
Dated 06/10/21

Dr. Sanjeev Garg, AP

Dr. Ram Pal Chaudhary, Prof

Dr. B.S. Kaith, (online)

Dr. D.C. Saxena, Prof

J.S Dhillon.Prof. & Dean (Academics)

HOD (Chemistry)

SANT LONGOWALINSTITUTE OF ENGINEERING & TECHNOLOGY

ACADEMIC AUDIT (2020 - 2021)

PROFORMA OF ASSESSMENT

1. Name of the Department: Chemistry

2. Reviewer (Name, Designation & Address) :

Dr. J.S. Dhillon, Prof. & Dean (Acad.) – External member

Dr. D.C. Saxena, Prof. – External Member

Dr. Ram Pal Chaudhary, Prof. – Internal member

Dr. Sanjeev Garg, AsP (M&H) – External member

Dr. Dhiraj Sud, Prof. & HOD – Convener

Dr. B.S. Kaith, Prof. (HAG), NIT Jalandhar- External Expert

3. Date of Review: 25.08.2021

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 Program	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	9 (*Core Department)	09
6.	Effectiveness of Assisted Learning, Tutorial System for ICD Students/ Seminars (Refer Course File)	9	09
7.	Faculty Mentoring/Faculty Advisor System for Students/Class of Students	9	09

8.	Practical activities, non-academic and totally related to a specific trade for skill development and *developing expertise in a particular group of techniques.*	8	08
9.	Linkage of ICD programs to outcome based vocational education (Industry linkage)	9 (*At institute level)	09
10.	Availability of workshop type lab/laboratory for providing hand on training to the students for skill development	9	08
	Total Score (out of 100)	93	92

		Score	
	UG Program	Self assessment	Expert assessment
1.	Curriculum (Structure, Course Syllabi, Flexibility)	10	10
2.	Status of study material developed by faculty for students	8	09
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)]	10	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	9	09
6.	Evaluation Process (Continuing Evaluation, and End-Term Evaluation) (i) Theory and tutorial (ii) Practical (case studies)	10	09
7.	Faculty–Student Interaction (Whether any slot is fixed for the students to interact with a teacher, after classes/labs	9	09
8.	Tour/Training/Industrial visits/Internship opportunities	9 (*Core Department)	09
9.	Effectiveness of Assisted Learning in Tutorial classes/seminars for Students		
	Faculty Mentoring/Faculty Advisor System for Students/Class of Students	8	09
10	Placement %age/higher studies options (last three years)	8 (*Core Department)	08
	Total Score (out of 100)	91	91

		Score	
	PG Program (Separate for each program)	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	09
4.	Relevance of contents of courses taught to the students and scope of improvement	9	09
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	9	09
6.	Technical Societies/ Colloquium for Students i. Departmental Society ii. Student Chapter(s) of Professional Societies	9	09
7.	Tour/Training/Industrial visits/Internship opportunities	9	08
8.	Collaboration with other departments (within institute)	7	07
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)	93	91

A.4	**Doctoral (Ph.D) Programmes**	**Score**	
		Self assessment	Expert assessment
1.	Intake of Ph.D Students	7	08
2.	Admission Process	10	10
3.	Pre-Ph.D Courses and Evaluation Process	10	10
4.	Breadth and Depth of Knowledge of Students	8	09
5.	Seminar/ Presentations and Technical Communication	9	09
6.	Research Facilities available in the Department	8	10
7.	Average No. of Research Students/Faculty	9	09
8.	Average No. of Research Papers of Ph. D Students (Indexed Journals)	8	09
9.	Average Duration to Complete Ph.D (years)	9	10
10.	Participation of Research Scholars in Conferences/Workshops	9	09
	Total Score (out of 100)	87	93

RESEARCH

		Score	
		Self assessment	Expert assessment
1.	Research Ambience in the Department	09	10
2.	Research Awareness among Doctoral Students	8	09
3.	Thrust areas of research in the department	9	10
4.	Quality of Research	9	09
5.	Collaborations with other departments (within the institute) and at National, and International levels.	8	10
6.	Impact and Quality of Publications	9	10
7.	Relevance of Research to Knowledge Generation and Social Relevance	9	09
8.	Student Exposure for Attending Quality Conferences/Symposia	9	09
9.	Inter departmental collaborations	8	08
10.	Industry/externally funded sponsored research (Numbers and amount)	4	06
	Total Score (out of 100)	**82**	90

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

		Score	
		Self-assessment	Expert assessment
1	Adequacy of Class Rooms and Multi-Media Facility	10	10
2	Availability of Laboratories	8	10
3	Availability of Conference/Seminar Room, etc	9	10
4	Availability of Seating Space for Faculty and Research Students	8	09
5	Availability of Internet Services in Research Labs and Class Rooms	8	09
6	Departmental Library and E-Resources	7	09
7	Computing Facilities and Software	9	09
8	Adequacy of Offices and Furnishing for Faculty	8	09
9	Faculty- Student Ratio	7	08
10	Support Staff (Technical/Administrative) Adequacy	6	08
	Total Score (out of 100)	80	91

SWOT analysis by the department
Strengths: **Annexure-A**
Weaknesses: **Annexure-A**
Opportunities: To introduce Integrated B.Sc.-M. Sc. Program
Focus on inter-disciplinary research approach
Threats: Inadequate faculty and staff
Inadequate research labs

Suggestions for improvement:

D. **Outcomes**

		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	10	10
2	Average No. of Ph.Ds Awarded per Year	9	10
3	Publications per Faculty in Indexed Journals/Year (Average of last three years)	10	10
4	Average Citations per Faculty/Year (Last-Three Years) (Web of Science/Scopus)	10	09
5	Recognitions; Awards(National/International) to Faculty/Students	10	09
6	Consultancy and Externally Funded Projects	5	07
7	No. of Ph.D. graduates who took Academics as Career (Last 5 Years)	10	10
8	Students offered for higher studies	10	10
9	No. of qualified students NET/GATE/CAT etc (State/Central Civil Services)	7	08
10	Entrepreneurship	5 (*Institute Level)	07
	Total Score (out of 100)	86	90

Comments & Suggestions for Improvement

SANT LONGOWAL

INSTITUTE OF ENGINEERING & TECHNOLOGY

ACADEMIC AUDIT (2020 - 2021)

SUMMARY SHEET

1.	Name of the Department	Chemistry
2.	Name of Reviewer Designation & Address	**From Academia** Dr. J.S. Dhillon, Prof. & Dean (Acad.) – External member Dr. D.C. Saxena, Prof. – External Member Dr. Ram Pal Chaudhary Prof., Registrar – Internal member Dr. Sanjeev Garg, AsP (M&H) – External member Dr. Dhiraj Sud, Prof. & HOD – Convener Dr. B.S. Kaith, Prof.(HAG), NIT Jalandhar- External Expert
3.	Date of Meeting	25.08.2021

Score Summary

Academic				Research (Max Score 100)	Departmental Infrastructure (Max Score 100)	Outcome (Max Score 100)	Total Score (700)
ICD Program (Max Score 100)	UG Program (Max Score 100)	PG Programs (Max Score 100) (Average of all PG programs)	Doctoral Program (Max Score 100)				
92	91	91	93	90	91	90	638

Note: 1. Marks mentioned above is 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

Annexure –A
SWOT Analysis by the Department
Strengths of the Department

- 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 Classrooms 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 of the Department

- 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 chemistry faculty
- Regular technicians for Laboratories
- Regular office assistant/Incharge
- Reading room/common room/computer room for PhD/M.Sc.
- Subscription of Journals and eBooks

Opportunities

- To introduce five-year Integrated B.Sc. -M.Sc. Program.
- 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

Threats

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

Suggestion for Improvement:

- Appointment of regular Faculty in particular Asstt. Prof. 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