



Sant Longowal Institute of Engineering & Technology

(Deemed-to-be-University under MoE, Govt. of India)

LONGOWAL (SANGRUR, PUNJAB)

OFFICE OF DEAN (ACADEMICS)

Ref. No. SLIET/Dean (A) / 2021 / 1421

Dated : 12. November, 2021

From : Dean (Academics)

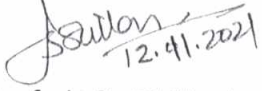
To : Co-ordinator, IQAC, SLIET

Subject : Conduct of Academic Audit for AY 2020-21 – submission of academic audit report (partially) – Department of Food Engineering & Technology – regarding –

This is in continuation of letter bearing Ref. No. SLIET / Dean (A) / 1383 dated 08.11.2021, on the subject cited above.

Head (Food Engineering & Technology Department) vide his letter No. SLIET/FET/894 dated 11.11.2021, has submitted the Academic Audit Report (s) for AY 2019-20 and 2020-21, each containing eleven pages.


Accordingly, the same are being sent to your office, for information and further necessary action, please.


12.11.2021
(Prof. J. S. Dhillon)
Dean (Academics)

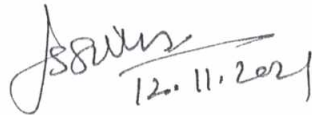
Encl : As above


Sub: Academic Audit Report of Food Engineering and Technology Department – reg.

The academic audit of the Food Engineering and Technology Department was scheduled on 10.11.2021 from 10.30am onwards. The committee members have made the academic audit of our department. Please find enclosed herewith the the academic audit report for the academic year 2019-20 & 2020-21 and 2020-21.


11/11/21
K Prasad
HOD (FET)

Dean (Acad)


12.11.2021

 Letter is being sent to Co-ord. IBA
today.

12.11.2021

SME/FET/894 R.No. Dean (Acad.)
Date 11/11/2021
1191
Dated 11/11/2021

SANT LONGOWAL INSTITUTE OF ENGINEERING & TECHNOLOGY
ACADEMIC AUDIT (2019-20 and 2020-21)
PROFORMA OF ASSESSMENT

1. Name of the Department: Food Engineering and Technology

2. Reviewer (Name, Designation & Address):

Prof. Ashok Kumar, PAU, Ludhiana
 Prof. A. S. Arora, Coordinator (IQAC), SLIET
 Prof. B K Kanungo, Chemistry, SLIET
 Prof. Sanjeev Bansal, M &H, SLIET
 Prof. M B Bera, FET, SLIET
 Prof. Kamlesh Prasad, Head, FET, SLIET

3. Date of Review: 10 November 2021

NOTE:

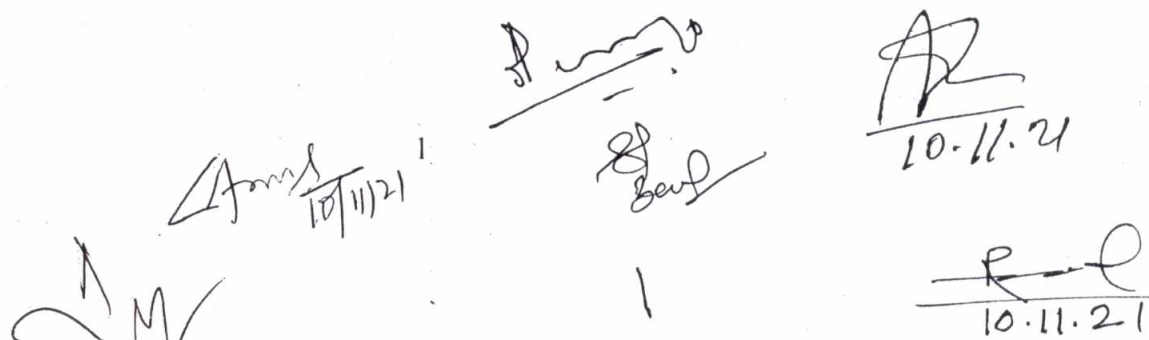
- i. Please grade in the box provided for the following parameters in the range of 1-10 with 10 being the highest.
- ii. Leave 'blank' for 'No Comment'.
- iii. Kindly give your opinion on the strength and weakness of the Department and your suggestions for future growth.

A. ACADEMICS

A.1 ACADEMICS (ICD Program)

| S.N. | ICD Program | Score | | | |
|------|---|-----------------|---------|-------------------|---------|
| | | Self-assessment | | Expert assessment | |
| | | 2019-20 | 2020-21 | 2019-20 | 2020-21 |
| 1. | Curriculum (Structure, Course Syllabi, Flexibility), Theory/practical (contents/ratio). | 9 | 9 | 9 | 9 |
| 2. | Equivalence and Relevance of curriculum at national level | 8 | 8 | 8 | 8 |
| 3. | Formal Academic Load on Students [Teaching, Laboratory/Practical, Projects (minor/major)] | 9 | 9 | 9 | 9 |
| 4. | Evaluation Process (Continuing Evaluation, and End-Term Evaluation) | 10 | 10 | 10 | 10 |
| 5. | Tour/Training/Industrial visits/Internship opportunities provided during the year | 7 | 7 | 7 | 7 |
| 6. | Effectiveness of Assisted Learning, Tutorial System for ICD Students/ Seminars (Refer Course File) | 8 | 8 | 8 | 8 |
| 7. | Faculty Mentoring/Faculty Advisor System for Students/Class of Students | 9 | 9 | 9 | 9 |
| 8. | Practical activities, non-academic and totally related to a specific trade for skill development and <i>developing expertise in a particular group of techniques.</i> | 8 | 8 | 8 | 8 |
| 9. | Linkage of ICD programs to outcome based vocational education (Industry linkage) | 7 | 7 | 7 | 7 |
| 10. | Availability of workshop type lab/laboratory for providing hand on training to the students for skill development | 10 | 10 | 9 | 9 |

Total Score (out of 100) 85 85 84 84



 [Signatures and dates: 10/11/21, 10.11.21, 10.11.21]

A.2 ACADEMICS (UG Program)

| S.N. | UG Program | Score | | | |
|------|---|-----------------|-----------|-------------------|-----------|
| | | Self-assessment | | Expert assessment | |
| | | (2019-20) | (2020-21) | (2019-20) | (2020-21) |
| 1. | Curriculum (Structure, Course Syllabi, Flexibility) | 8 | 9 | 8 | 8 |
| 2. | Status of study material developed by faculty for students | 9 | 9 | 8 | 9 |
| 3. | Relevance of contents of courses taught to the students and scope of improvement (revision of syllabus, addition of new experiments) | 9 | 9 | 9 | 9 |
| 4. | Formal Academic Load on Students [Teaching, Laboratory/Practical, Projects(minor/major)] | 10 | 10 | 9 | 9 |
| 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 | 9 | 9 |
| 6. | Evaluation Process (Continuing Evaluation, and End-Term Evaluation) (i) Theory and tutorial (ii) Practical (case studies) | 9 | 9 | 9 | 9 |
| 7. | Faculty-Student Interaction (Whether any slot is fixed for the students to interact with a teacher, after classes/labs) | 8 | 9 | 8 | 8 |
| 8. | Tour/Training/Industrial visits/Internship opportunities | 8 | 8 | 8 | 8 |
| 9. | Effectiveness of Assisted Learning in Tutorial classes/seminars for Students Faculty Mentoring/Faculty Advisor System for Students/Class of Students | 9 | 9 | 9 | 9 |
| 10 | Placement %age/higher studies options (last three years) | 6 | 6 | 6 | 6 |

Total Score (out of 100) 86 88 83 84

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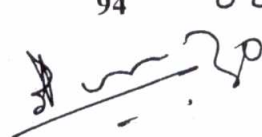
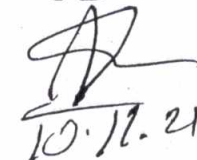
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A.3 ACADEMICS (PG Program)

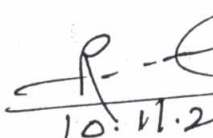
| S. N. | PG Program | Score | | | |
|-------|---|-----------------|---------|-------------------|---------|
| | | Self-assessment | | Expert assessment | |
| | | 2019-20 | 2020-21 | 2019-20 | 2020-21 |
| 1. | Curriculum (Structure, Course Syllabi, Flexibility) | 8 | 10 | 8 | 9 |
| 2. | Formal Academic Load on Students [Teaching, Laboratory/Practical, Projects(minor/major)] | 10 | 10 | 9 | 9 |
| 3. | Evaluation Process (Continuing Evaluation, and End-Term Evaluation) | 9 | 9 | 9 | 9 |
| 4. | Relevance of contents of courses taught to the students and scope of improvement | 9 | 9 | 9 | 9 |
| 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 | 9 | 9 |
| 6. | Technical Societies/ Colloquium for Students i. Departmental Society ii. Student Chapter(s) of Professional Societies | 10 | 10 | 9 | 9 |
| 7. | Tour/Training/Industrial visits/Internship opportunities | 8 | 8 | 8 | 8 |
| 8. | Collaboration with other departments (within institute) | 9 | 9 | 9 | 9 |
| 9. | Faculty Mentoring/Faculty Advisor System for Students/Class of Students | 10 | 10 | 9 | 9 |
| 10. | Monitoring and continuous evaluation of the project work assigned to the students (mechanism) | 9 | 9 | 9 | 9 |

Total Score (out of 100) 92 94 88 89



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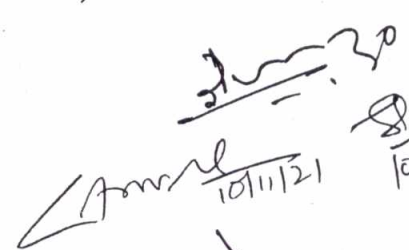


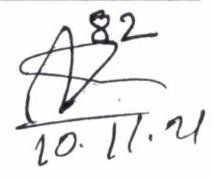
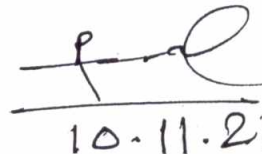
A.4 ACADEMICS (Doctoral (Ph. D) Programme)

| S.N. | Doctoral (Ph. D) Programme | Score | | | |
|---------------------------------|---|-----------------|-----------|-------------------|-----------|
| | | Self-assessment | | Expert assessment | |
| | | 2019-20 | 2020-21 | 2019-20 | 2020-21 |
| 1. | Intake of Ph. D Students | 6 | 9 | 6 | 9 |
| 2. | Admission Process | 10 | 10 | 10 | 10 |
| 3. | Pre-Ph.D Courses and Evaluation Process | 9 | 9 | 9 | 8 |
| 4. | Breadth and Depth of Knowledge of Students | 9 | 9 | 7 | 7 |
| 5. | Seminar/ Presentations and Technical Communication | 9 | 9 | 8 | 8 |
| 6. | Research Facilities available in the Department | 7 | 9 | 7 | 8 |
| 7. | Average No. of Research Students/Faculty | 6 | 9 | 7 | 8 |
| 8. | Average No. of Research Papers of Ph. D Students (Indexed Journals) | 8 | 8 | 8 | 8 |
| 9. | Average Duration to Complete Ph.D (years) | 8 | 8 | 8 | 8 |
| 10. | Participation of Research Scholars in Conferences/Workshops | 9 | 9 | 7 | 8 |
| Total Score (out of 100) | | 81 | 89 | 77 | 82 |

B. RESEARCH

| Sr. No. | Research | Score | | | |
|---------------------------------|---|-----------------|-----------|-------------------|-----------|
| | | Self-assessment | | Expert assessment | |
| | | 2019-20 | 2020-21 | 2019-20 | 2020-21 |
| 1 | Research Ambience in the Department | 9 | 9 | 9 | 9 |
| 2 | Research Awareness among Doctoral Students | 9 | 9 | 8 | 8 |
| 3 | Thrust areas of research in the department | 9 | 9 | 9 | 9 |
| 4 | Quality of Research | 9 | 9 | 9 | 9 |
| 5 | Collaborations with other departments (within the institute) and at National, and international levels. | 9 | 9 | 8 | 8 |
| 6 | Impact and Quality of Publications | 9 | 9 | 9 | 9 |
| 7 | Relevance of Research to Knowledge Generation and Social Relevance | 9 | 9 | 9 | 9 |
| 8 | Student Exposure for Attending Quality Conferences/Symposia | 9 | 9 | 7 | 8 |
| 9 | Inter departmental collaborations | 9 | 9 | 9 | 9 |
| 10 | Industry/externally funded sponsored research (Numbers and amount) | 7 | 8 | 4 | 4 |
| Total Score (out of 100) | | 88 | 89 | 81 | 82 |

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C. Departmental Infrastructure

| S. No. | Infrastructure | Score | | | |
|---------------------------------|--|-----------------|-----------|-------------------|-----------|
| | | Self-assessment | | Expert assessment | |
| | | (2019-20) | (2020-21) | (2019-20) | (2020-21) |
| 1 | Adequacy of Classrooms and Multi-Media Facility | 8 | 9 | 9 | 9 |
| 2 | Availability of Laboratories | 9 | 9 | 9 | 9 |
| 3 | Availability of Conference/Seminar Room, etc. | 8 | 9 | 9 | 9 |
| 4 | Availability of Seating Space for Faculty and Research Students | 9 | 9 | 10 | 10 |
| 5 | Availability of Internet Services in Research Labs and Class Rooms | 9 | 9 | 10 | 10 |
| 6 | Departmental Library and E-Resources | 8 | 9 | 8 | 9 |
| 7 | Computing Facilities and Software | 8 | 8 | 8 | 8 |
| 8 | Adequacy of Offices and Furnishing for Faculty | 9 | 9 | 10 | 10 |
| 9 | Faculty- Student Ratio | 7 | 7 | 6 | 6 |
| 10 | Support Staff (Technical/Administrative) Adequacy | 8 | 8 | 7 | 7 |
| Total Score (out of 100) | | 83 | 86 | 86 | 87 |

D. Outcomes

| S. no. | | Score | | | |
|---------------------------------|---|-----------------|-----------|-------------------|-------------|
| | | Self-assessment | | Expert assessment | |
| | | 2019-2020 | 2020-2021 | 2019-2020 | 2020-2021 |
| 1 | i. Placements for ICD | 8 | 8 |] 8.0] | 7.5 |
| | ii. Placement of B. Tech | 8 | 8 | | |
| | iii. Placement of master's Student | 8 | 8 | | |
| | iv. Placement of Ph. D Students | 8 | 8 | | |
| 2 | Average No. of Ph. Ds Awarded per Year | 9 | 9 | 8 | 9 |
| 3 | Publications per Faculty in Indexed Journals/Year (Average of last three years) | 9 | 9 | 9 | 9 |
| 4 | Average Citations per Faculty/Year (Last-Three Years) (Web of Science/Scopus) | 9 | 9 | 9 | 9 |
| 5 | Recognitions; Awards (National/International) to Faculty/Students | 9 | 9 | 5 | 6 |
| 6 | Consultancy and Externally Funded Projects | 7 | 7 | 6 | 6 |
| 7 | No. of Ph.D. graduates who took Academics as Career (Last 5 Years) | 8 | 9 | 7 | 7 |
| 8 | Students offered for higher studies | 8 | 9 | 8 | 9 |
| 9 | No. of qualified students NET/GATE/CAT etc (State/Central Civil Services) | 7 | 7 | 5 | 5 |
| 10 | Entrepreneurship | 6 | 6 | 5 | 5 |
| Total Score (out of 100) | | 80 | 82 | 70 | 72.5 |

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General Comments on,

1. Plan of action of the department for the next five years (in view of NEP 2020)

a) Action Plan (Academic Standard)

- Revision of ICD curriculum mapping with National Skill Qualification Framework (NSQF) with trade specific qualification packs (QPs)
- Updating of courses applicable for undergraduate students concerning to the online courses from massive open online courses (MOOCs), Study Webs of Active Learning for Young Aspiring Minds (SWAYAM), National Programme on Technology Enhanced Learning (NPTEL), etc. for the open electives, minor degree and honors degree in Food Technology.
- Development virtual labs on different subjects
- Providing or arranging skill-based training to the students of PG and research scholars for effective utilization of departmental facilities as per the concept of peer learning.
- Efforts will be made to develop the study materials in regional languages.

b) Action Plan (Student monitoring)


- Effective implementation of regular monitoring of undergoing projects at ICD, UG and PG levels
- Stress will be given to go for the industry linked projects at various levels
- The submission of monthly progress report by Research Scholars will be verified by the RPC/DRC members of the department for its effective implementations.
- Strengthening of counselling schemes through the assigned class counsellors, tutor guardian and student mentor schemes.


c) Short term goals

- To make all the equipment/machine functional
- To adopt cluster of nearby villages for technology transfer
- To procure specialized/high end equipment for Labs
- Development of NABL accredited food testing laboratory


d) Long term goals

- To establish School of Food Technology.

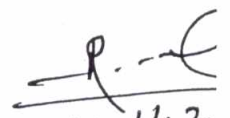

Sandeep
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Anurag
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2. Significant achievements of the department (faculty/Staff/Students)

The degree program has been awarded with NBA accreditation for three years.

Faculty

- Recipient of Young Scientist Award, Prof. Jiwan Singh Sidhu, Dr JS Pruthi Award and Prof. Carl Hosoney Award by AFSTI, Mysuru
- Listed in "World Ranking of Top 2% Scientists" compiled by Stanford University, USA
- Director and Officiating Chairman, Board of Governors NIT Agartala
- Recipient of Eminent Engineer Award, Outstanding Engineering Personality and Fellow to Institution of Engineers (I)
- Seconded Faculty at Department of Food Engineering & Bioprocess Technology, Asian Institute of Technology, Bangkok (Thailand)
- INSA Teachers Award (2020) by Indian National Science Academy, New Delhi
- Awarded BOYSCAST fellowship by DST, New Delhi
- Fellow Award 2018 in "Food Biotechnology" by 'The Biotech Research Society of India

Students

- Students clearing competitive examinations GATE, CAT, SET etc every year and perusing higher studies,
- Students are participating in various events,
- Topped in online NPTEL Certification course on "Fundamentals of Food Process Engineering" conducted by Indian Institute of Technology, Kharagpur,
- Received several Awards in Technical Presentations,
- Publishing Research Articles in Journal,
- Contribution in solving a problem during internship was appreciated (Nestle India Ltd, Moga)

3. Placement record of the department (Last three years)

| Students Progression | 2018-19 | 2019-20 | 2020-21 |
|----------------------|---------|---------|---------|
| Placement (%) | 63.33 | 50.00 | 48.00 |
| Higher studies (%) | 6.67 | 6.82 | 24.00 |
| Total (%) | 70.00 | 56.82 | 72.00 |

Detail list is available on department website: <http://fet.sliet.ac.in/placements/>

2020-21 (UG):

| | |
|---|----|
| No. of placement (in-campus) | 24 |
| No. of placement (Higher Studies) | 12 |
| No. of placement (Total inclusive of Campus, higher studies & other)) | 36 |

2019-20 (UG):

| | |
|---|----|
| No. of placement (in-campus) | 22 |
| No. of placement (Higher Studies) | 3 |
| No. of placement (Total inclusive of Campus, higher studies & other)) | 25 |

2018-19 (UG):

| | |
|---|----|
| No. of placement (in-campus) | 19 |
| No. of placement (Higher Studies) | 2 |
| No. of placement (Total inclusive of Campus, higher studies & other)) | 21 |

7

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.**

All the faculty and staff members are encouraged to regularly attend the training program. Recently many faculty members have enrolled themselves in AICTE approved comprehensive teachers training programs.

5. **Effective/Continuous monitoring of faculty/staff in delivery the course contents (at departmental level) for enhancing the teaching-learning process.**

The various ways of monitoring the faculty/ staff mentioned below:

- Class counsellor-student meeting
- Students feedback form
- Course counsellor-student meeting
- Feedback received by HOD

At the end of the semester, feedback is taken from students based on faculty punctuality, presentations, ability to clear doubts, availability of teachers beyond class hours etc. This helps the faculty understand the problems faced by the students during lecture hours and gives faculties an insight into their teaching methods so that the teaching-learning process can be strengthened.

Lecture classes are monitored by senior faculty members and the HOD. Constructive comments are given to improve the quality of the teaching and learning process.

Once the feedback is collected, it is analyzed by the DAAC and the necessary decision is made competent authority. The faculty members who have below-average feedback and comments for the improvement, if any, in the feedback would be:

- Counsellor and motivated by the HOD to improve their skills and abilities.
- Requested to attend FDPs for improving the knowledge of faculty

6. **Technical Societies/ Colloquium for Students**

(i) Departmental Society

Department of Food Engineering and Technology, SLIET Longowal has AFST(I) Longowal Chapter. In association with AFST(I) Longowal Chapter, Department celebrated the "World Food Day" on Oct 16, 2019 in the Seminar Hall of Food and Chemical Block. Various competitions like poster making, quiz, debate, food craft and product development were organized under different themes.

(ii) Student Chapter(s) of Professional Societies

A student self-help group is formed and on the concept of peer learning they are mentoring the slow learner students. Further, towards over all grooming, the students are encouraged to participate in a greater number of Academic co-curricular and Extra co-curricular activities. Also, the students are continuously motivated to go for the industrial, institutional or internship during vacations

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7. Scope of improvement in the presenting teaching –learning process

| | |
|--|---|
| Improvement in Teaching learning process | <ul style="list-style-type: none"> • Use of anti-plagiarism software to check the assignments |
| Research and Professional Practices | <ul style="list-style-type: none"> • Collaborative research with different universities • Publishing research articles in SCI/Scopus journal • Attending different conferences and seminar |
| Graduation Outcomes | <ul style="list-style-type: none"> • Interaction with industry to get placement • To improve Entrepreneurship ability • To enrol in higher degree with GATE/GRE |
| Outreach and Inclusivity | <ul style="list-style-type: none"> • To increase outreach program annually • To visit different institutions lab • To work with different institutions faculty. |

8. The skill and expertise of the faculty/Technical staff in the department (specific)

To better align with the today's research scenarior, different specific research groups in the department are focusing the department research output.

| Expertise | Name of the faculty |
|--|---|
| Functional food products | Dr. P. S. Panesar, Professor Dr. K. Prasad, Professor & HOD Dr. Vikas Nanda, Professor Dr. C. S. Riar, Professor Dr. Pradyuman Kumar, Professor Mr. Ashwani Kumar, Asst. Prof. |
| Value addition of dairy and agro industry products ad by-products | Dr. Vikas Nanda, Professor Dr. Pradyuman Kumar, Professor Dr. C. S. Saini, Professor Dr. Navdeep Jindal, Assoc. Prof |
| Processing of cereal, pulses, oilseed, millets, and bakery product | Dr. D. C. Saxena, Professor Dr. C. S. Riar, Professor Dr. Sukhcharn Singh, Professor Dr. C. S. Saini, Professor. Dr. Navdeep Jindal, Assoc. Prof Mr. Ashwani Kumar, Asst. Prof. |
| Food product quality control and analysis | Dr. M. B. Bera, Professor Dr. D. C. Saxena, Professor Dr. P. S. Panesar, Professor Dr. K. Prasad, Professor& HOD Dr. Vikas Nanda, Professor Dr. C. S. Riar, Professor Dr. Sukhcharn Singh, Professor Dr. Pradyuman Kumar, Professor Dr. C. S. Saini Professor Mr. Ashwani Kumar, Asst. Prof. |
| Postharvest technology of fruits and vegetables | Dr. K. Prasad, Professor& HOD Dr. Sukhcharn Singh, Professor Dr. C. S. Saini, Professor Dr. Navdeep Jindal, Assoc. Prof. |

Handwritten signatures and dates:

- Signature: 10/11/21
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9. **Strengthening laboratory infrastructure (adding of new equipment's and use of present facility for optimum use)**

- Currently, Department has twelve laboratories. All the laboratories are equipped adequately to perform the experiment of ICD, UG, PG and Project work. Minor repair and maintenance of equipment's are taken up as and when required. Major repair of equipment's is carried out by the suppliers under AMC or by the experts present locally or at nearby places.

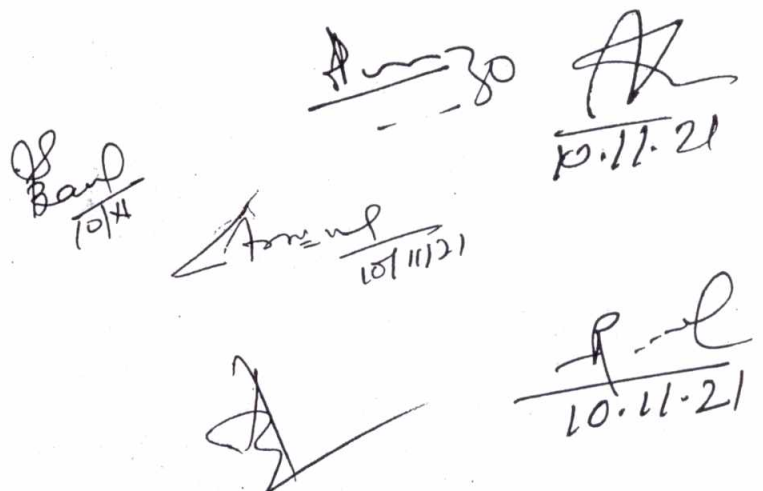
10. Any other point (n/a)

SWOT analysis by the department:

| | |
|--|--|
| <p>Strength</p> <ul style="list-style-type: none"> • Qualified Faculties • Laboratory facilities • Trained Technical staff • Research Publications • Library | <p>Weakness</p> <ul style="list-style-type: none"> • Inadequate Student faculty ratio • Fair Industry- department interaction • Low Industry funded project • Placement |
| <p>Opportunities</p> <ul style="list-style-type: none"> • Collaborative projects with industry • Frequent interaction with industry persons • Outreach program for the students and faculty members • Signed MOUs with Institutes further enhanced academic and research capabilities | <p>Threats</p> <ul style="list-style-type: none"> • Emergence of many institute/universities offering similar degree in the region |

Comments & Suggestions for Improvement

- Consultancy work by the faculty members need accelerated.
- Submission of Research projects for external funding need accelerated
- Concentrated efforts need for galvanizing Industry institute partnership.
- More efforts need to be done to encourage students' participation in national level competitive examinations including UPSC.



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SANT LONGOWAL INSTITUTE OF ENGINEERING & TECHNOLOGY
ACADEMIC AUDIT (2019-20 and 2020-21)

SUMMARY SHEET

| | | | |
|----|---|--|---------------|
| 1. | Name of the Department | Food Engineering and Technology | |
| 2. | Name of Reviewer Designation & Address | From Academia | From Industry |
| 3. | Date of Meeting | Prof. Ashok Kumar, PAU, Ludhiana 10.11.2021 | |

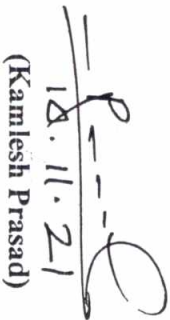
| Score Summary | | | | | | | | | | | | | | | |
|-----------------------------------|----------------------------------|-----------------------------------|---------------------------------|---|--------------------|--------------------|--------------------|--------------------|-------------------------------|----------------------|---------------|----|------|-----|-------|
| 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) | Research | | Departmental | | Outcome (Max Score 100) | Total Score (700) | | | | | |
| | | | | | (Max Score 100) | (Max Score 100) | (Max Score 100) | (Max Score 100) | | 2019- 2020 | 2020- 2021 | | | | |
| 2019- 2020 | 2020- 2021 | 2019- 2020 | 2020- 2021 | 2019- 2020 | 2020- 2021 | 2019- 2020 | 2020- 2021 | 2019- 2020 | 2020- 2021 | 2019- 2020 | 2020- 2021 | | | | |
| 84 | 84 | 83 | 84 | 88 | 89 | 77 | 82 | 81 | 82 | 86 | 87 | 70 | 72.5 | 569 | 580.5 |

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.

Signature of committee members:

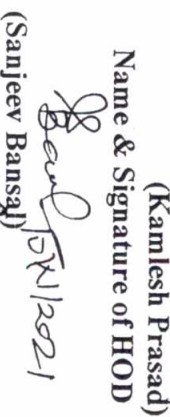

(M B Bera)

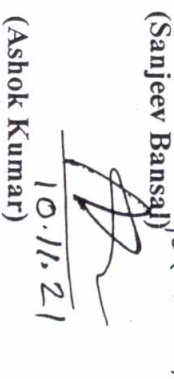

(B K Kanungo)


(Kamlesh Prasad)


(A.S. Arora)

Name & Signature of HOD


(Kamlesh Prasad)


(Sanjeev Bansal)


(Ashok Kumar)

SANT LONGOWAL INSTITUTE OF ENGINEERING & TECHNOLOGY
ACADEMIC AUDIT (2020-21)
PROFORMA OF ASSESSMENT

1. Name of the Department: Food Engineering and Technology

2. Reviewer (Name, Designation & Address):

Prof. Ashok Kumar, PAU, Ludhiana
 Prof. A. S. Arora, Coordinator (IQAC), SLIET
 Prof. B K Kanungo, Chemistry, SLIET
 Prof. Sanjeev Bansal, M &H, SLIET
 Prof. M B Bera, FET, SLIET
 Prof. Kamlesh Prasad, Head, FET, SLIET

3. Date of Review:

10 November 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 ACADEMICS (ICD Program)

| S.N. | ICD Program | Score | |
|---------------------------------|---|-----------------|-------------------|
| | | Self-assessment | Expert assessment |
| | | 2020-21 | 2020-21 |
| 1. | Curriculum (Structure, Course Syllabi, Flexibility), Theory/practical (contents/ratio). | 9 | 9 |
| 2. | Equivalence and Relevance of curriculum at national level | 8 | 8 |
| 3. | Formal Academic Load on Students [Teaching, Laboratory/Practical, Projects (minor/major)] | 9 | 9 |
| 4. | Evaluation Process (Continuing Evaluation, and End-Term Evaluation) | 10 | 10 |
| 5. | Tour/Training/Industrial visits/Internship opportunities provided during the year | 7 | 7 |
| 6. | Effectiveness of Assisted Learning, Tutorial System for ICD Students/ Seminars (Refer Course File) | 8 | 8 |
| 7. | Faculty Mentoring/Faculty Advisor System for Students/Class of Students | 9 | 9 |
| 8. | Practical activities, non-academic and totally related to a specific trade for skill development and <i>developing expertise in a particular group of techniques.</i> | 8 | 8 |
| 9. | Linkage of ICD programs to outcome based vocational education (Industry linkage) | 7 | 7 |
| 10. | Availability of workshop type lab/laboratory for providing hand on training to the students for skill development | 10 | 9 |
| Total Score (out of 100) | | 85 | 84 |

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A.2 ACADEMICS (UG Program)

| S.N. | UG Program | Score | |
|------|---|------------------------------|--------------------------------|
| | | Self-assessment (2020-21) | Expert assessment (2020-21) |
| 1. | Curriculum (Structure, Course Syllabi, Flexibility) | 9 | 8 |
| 2. | Status of study material developed by faculty for students | 9 | 9 |
| 3. | Relevance of contents of courses taught to the students and scope of improvement (revision of syllabus, addition of new experiments) | 9 | 9 |
| 4. | Formal Academic Load on Students [Teaching, Laboratory/Practical, Projects(minor/major)] | 10 | 9 |
| 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 | 9 |
| 6. | Evaluation Process (Continuing Evaluation, and End-Term Evaluation) (i) Theory and tutorial (ii) Practical (case studies) | 9 | 9 |
| 7. | Faculty-Student Interaction (Whether any slot is fixed for the students to interact with a teacher, after classes/labs) | 9 | 8 |
| 8. | Tour/Training/Industrial visits/Internship opportunities | 8 | 8 |
| 9. | Effectiveness of Assisted Learning in Tutorial classes/seminars for Students Faculty Mentoring/Faculty Advisor System for Students/Class of Students | 9 | 9 |
| 10 | Placement %age/higher studies options (last three years) | 6 | 6 |

Total Score (out of 100)

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A.3 ACADEMICS (PG Program)

| S. N. | PG Program | Score | |
|-------|---|-----------------|-------------------|
| | | Self-assessment | Expert assessment |
| | | 2020-21 | 2020-21 |
| 1. | Curriculum (Structure, Course Syllabi, Flexibility) | 10 | 9 |
| 2. | Formal Academic Load on Students [Teaching, Laboratory/Practical, Projects(minor/major)] | 10 | 9 |
| 3. | Evaluation Process (Continuing Evaluation, and End-Term Evaluation) | 9 | 9 |
| 4. | Relevance of contents of courses taught to the students and scope of improvement | 9 | 9 |
| 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 | 9 |
| 6. | Technical Societies/ Colloquium for Students i. Departmental Society ii. Student Chapter(s) of Professional Societies | 10 | 9 |
| 7. | Tour/Training/Industrial visits/Internship opportunities | 8 | 8 |
| 8. | Collaboration with other departments (within institute) | 9 | 9 |
| 9. | Faculty Mentoring/Faculty Advisor System for Students/Class of Students | 10 | 9 |
| 10. | Monitoring and continuous evaluation of the project work assigned to the students (mechanism) | 9 | 9 |

Total Score (out of 100)

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A.4 ACADEMICS (Doctoral (Ph. D) Programme)

| S.N. | Doctoral (Ph. D) Programme | Score | |
|---------------------------------|---|-----------------|-------------------|
| | | Self-assessment | Expert assessment |
| | | 2020-21 | 2020-21 |
| 1. | Intake of Ph. D Students | 9 | 9 |
| 2. | Admission Process | 10 | 10 |
| 3. | Pre-Ph.D Courses and Evaluation Process | 9 | 8 |
| 4. | Breadth and Depth of Knowledge of Students | 9 | 7 |
| 5. | Seminar/ Presentations and Technical Communication | 9 | 8 |
| 6. | Research Facilities available in the Department | 9 | 8 |
| 7. | Average No. of Research Students/Faculty | 9 | 8 |
| 8. | Average No. of Research Papers of Ph. D Students (Indexed Journals) | 8 | 8 |
| 9. | Average Duration to Complete Ph.D (years) | 8 | 8 |
| 10. | Participation of Research Scholars in Conferences/Workshops | 9 | 8 |
| Total Score (out of 100) | | 89 | 82 |

B. RESEARCH

| Sr. No. | Research | Score | |
|---------------------------------|---|-----------------|-------------------|
| | | Self-assessment | Expert assessment |
| | | 2020-21 | 2020-21 |
| 1 | Research Ambience in the Department | 9 | 9 |
| 2 | Research Awareness among Doctoral Students | 9 | 8 |
| 3 | Thrust areas of research in the department | 9 | 9 |
| 4 | Quality of Research | 9 | 9 |
| 5 | Collaborations with other departments (within the institute) and at National, and international levels. | 9 | 8 |
| 6 | Impact and Quality of Publications | 9 | 9 |
| 7 | Relevance of Research to Knowledge Generation and Social Relevance | 9 | 9 |
| 8 | Student Exposure for Attending Quality Conferences/Symposia | 9 | 8 |
| 9 | Inter departmental collaborations | 9 | 9 |
| 10 | Industry/externally funded sponsored research (Numbers and amount) | 8 | 4 |
| Total Score (out of 100) | | 89 | 82 |

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C. Departmental Infrastructure

| S. No. | Infrastructure | Score | |
|---------------------------------|--|------------------------------|--------------------------------|
| | | Self-assessment (2020-21) | Expert assessment (2020-21) |
| 1 | Adequacy of Classrooms and Multi-Media Facility | 9 | 9 |
| 2 | Availability of Laboratories | 9 | 9 |
| 3 | Availability of Conference/Seminar Room, etc. | 9 | 9 |
| 4 | Availability of Seating Space for Faculty and Research Students | 9 | 10 |
| 5 | Availability of Internet Services in Research Labs and Class Rooms | 9 | 10 |
| 6 | Departmental Library and E-Resources | 9 | 9 |
| 7 | Computing Facilities and Software | 8 | 8 |
| 8 | Adequacy of Offices and Furnishing for Faculty | 9 | 10 |
| 9 | Faculty- Student Ratio | 7 | 6 |
| 10 | Support Staff (Technical/Administrative) Adequacy | 8 | 7 |
| Total Score (out of 100) | | 86 | 87 |

D. Outcomes

| S. no. | | Score | |
|---------------------------------|---|------------------------------|--------------------------------|
| | | Self-assessment 2020-2021 | Expert assessment 2020-2021 |
| 1 | i. Placements for ICD | 8 | 8 |
| | ii. Placement of B. Tech | 8 | 7 |
| | iii. Placement of master's Student | 8 | 7 |
| | iv. Placement of Ph. D Students | 8 | 7.5 |
| 2 | Average No. of Ph. Ds Awarded per Year | 9 | 8 |
| 3 | Publications per Faculty in Indexed Journals/Year (Average of last three years) | 9 | 9 |
| 4 | Average Citations per Faculty/Year (Last-Three Years) (Web of Science/Scopus) | 9 | 9 |
| 5 | Recognitions; Awards (National/International) to Faculty/Students | 9 | 6 |
| 6 | Consultancy and Externally Funded Projects | 7 | 6 |
| 7 | No. of Ph.D. graduates who took Academics as Career (Last 5 Years) | 9 | 7 |
| 8 | Students offered for higher studies | 9 | 9 |
| 9 | No. of qualified students NET/GATE/CAT etc (State/Central Civil Services) | 7 | 5 |
| 10 | Entrepreneurship | 6 | 5 |
| Total Score (out of 100) | | 82 | 72.5 |

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General Comments on,

1. Plan of action of the department for the next five years (in view of NEP 2020)

a) **Action Plan (Academic Standard)**

- Revision of ICD curriculum mapping with National Skill Qualification Framework (NSQF) with trade specific qualification packs (QPs)
- Updating of courses applicable for undergraduate students concerning to the online courses from massive open online courses (MOOCs), Study Webs of Active Learning for Young Aspiring Minds (SWAYAM), National Programme on Technology Enhanced Learning (NPTEL), etc. for the open electives, minor degree and honors degree in Food Technology.
- Development virtual labs on different subjects
- Providing or arranging skill-based training to the students of PG and research scholars for effective utilization of departmental facilities as per the concept of peer learning.
- Efforts will be made to develop the study materials in regional languages.

b) **Action Plan (Student monitoring)**

- Effective implementation of regular monitoring of undergoing projects at ICD, UG and PG levels
- Stress will be given to go for the industry linked projects at various levels
- The submission of monthly progress report by Research Scholars will be verified by the RPC/DRC members of the department for its effective implementations.
- Strengthening of counselling schemes through the assigned class counsellors, tutor guardian and student mentor schemes.

c) **Short term goals**

- To make all the equipment/machine functional
- To adopt cluster of nearby villages for technology transfer
- To procure specialized/high end equipment for Labs
- Development of NABL accredited food testing laboratory

d) **Long term goals**

- To establish School of Food Technology.

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2. Significant achievements of the department (faculty/Staff/Students)

The degree program has been awarded with NBA accreditation for three years.

Faculty

- Recipient of Young Scientist Award, Prof. Jiwan Singh Sidhu, Dr JS Pruthi Award and Prof. Carl Hoseneby Award by AFSTI, Mysuru
- Listed in "World Ranking of Top 2% Scientists" compiled by Stanford University, USA
- Director and Officiating Chairman, Board of Governors NIT Agartala
- Recipient of Eminent Engineer Award, Outstanding Engineering Personality and Fellow to Institution of Engineers (I)
- Seconded Faculty at Department of Food Engineering & Bioprocess Technology, Asian Institute of Technology, Bangkok (Thailand)
- INSA Teachers Award (2020) by Indian National Science Academy, New Delhi
- Awarded BOYSCAST fellowship by DST, New Delhi
- Fellow Award 2018 in "Food Biotechnology" by 'The Biotech Research Society of India

Students

- Students clearing competitive examinations GATE, CAT, SET etc every year and perusing higher studies,
- Students are participating in various events,
- Topped in online NPTEL Certification course on "Fundamentals of Food Process Engineering" conducted by Indian Institute of Technology, Kharagpur,
- Received several Awards in Technical Presentations,
- Publishing Research Articles in Journal,
- Contribution in solving a problem during internship was appreciated (Nestle India Ltd, Moga)

3. Placement record of the department (Last three years)

| Students Progression | 2018-19 | 2019-20 | 2020-21 |
|----------------------|---------|---------|---------|
| Placement (%) | 63.33 | 50.00 | 48.00 |
| Higher studies (%) | 6.67 | 6.82 | 24.00 |
| Total (%) | 70.00 | 56.82 | 72.00 |

Detail list is available on department website: <http://fet.sliet.ac.in/placements/>

2020-21 (UG):

| | |
|---|----|
| No. of placement (in-campus) | 24 |
| No. of placement (Higher Studies) | 12 |
| No. of placement (Total inclusive of Campus, higher studies & other)) | 36 |

2019-20 (UG):

| | |
|---|----|
| No. of placement (in-campus) | 22 |
| No. of placement (Higher Studies) | 3 |
| No. of placement (Total inclusive of Campus, higher studies & other)) | 25 |

2018-19 (UG):

| | |
|---|----|
| No. of placement (in-campus) | 19 |
| No. of placement (Higher Studies) | 2 |
| No. of placement (Total inclusive of Campus, higher studies & other)) | 21 |

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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.**

All the faculty and staff members are encouraged to regularly attend the training program. Recently many faculty members have enrolled themselves in AICTE approved comprehensive teachers training programs.

5. **Effective/Continuous monitoring of faculty/staff in delivery the course contents (at departmental level) for enhancing the teaching-learning process.**

The various ways of monitoring the faculty/ staff mentioned below:

- Class counsellor-student meeting
- Students feedback form
- Course counsellor-student meeting
- Feedback received by HOD

At the end of the semester, feedback is taken from students based on faculty punctuality, presentations, ability to clear doubts, availability of teachers beyond class hours etc. This helps the faculty understand the problems faced by the students during lecture hours and gives faculties an insight into their teaching methods so that the teaching-learning process can be strengthened.

Lecture classes are monitored by senior faculty members and the HOD. Constructive comments are given to improve the quality of the teaching and learning process.

Once the feedback is collected, it is analyzed by the DAAC and the necessary decision is made competent authority. The faculty members who have below-average feedback and comments for the improvement, if any, in the feedback would be:

- Counselling and motivated by the HOD to improve their skills and abilities.
- Requested to attend FDPs for improving the knowledge of faculty

6. **Technical Societies/ Colloquium for Students**

- (i) Departmental Society

Department of Food Engineering and Technology, SLIET Longowal has AFST(I) Longowal Chapter. In association with AFST(I) Longowal Chapter, Department celebrated the "World Food Day" on Oct 16, 2019 in the Seminar Hall of Food and Chemical Block. Various competitions like poster making, quiz, debate, food craft and product development were organized under different themes.

- (ii) Student Chapter(s) of Professional Societies

A student self-help group is formed and on the concept of peer learning they are mentoring the slow learner students. Further, towards over all grooming, the students are encouraged to participate in a greater number of Academic co-curricular and Extra co-curricular activities. Also, the students are continuously motivated to go for the industrial, institutional or internship during vacations

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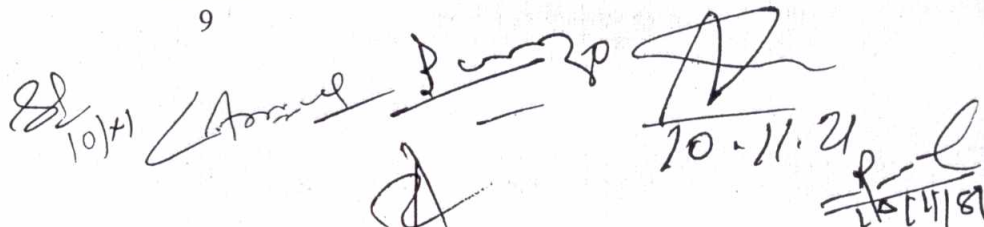
7. Scope of improvement in the presenting teaching –learning process

| | |
|--|---|
| Improvement in Teaching learning process | <ul style="list-style-type: none"> • Use of anti-plagiarism software to check the assignments |
| Research and Professional Practices | <ul style="list-style-type: none"> • Collaborative research with different universities • Publishing research articles in SCI/Scopus journal • Attending different conferences and seminar |
| Graduation Outcomes | <ul style="list-style-type: none"> • Interaction with industry to get placement • To improve Entrepreneurship ability • To enrol in higher degree with GATE/GRE |
| Outreach and Inclusivity | <ul style="list-style-type: none"> • To increase outreach program annually • To visit different institutions lab • To work with different institutions faculty. |

8. The skill and expertise of the faculty/Technical staff in the department (specific)

To better align with the today's research scenario, different specific research groups in the department are focusing the department research output.

| Expertise | Name of the faculty |
|--|---|
| Functional food products | Dr. P. S. Panesar, Professor Dr. K. Prasad, Professor & HOD Dr. Vikas Nanda, Professor Dr. C. S. Riar, Professor Dr. Pradyuman Kumar, Professor Mr. Ashwani Kumar, Asst. Prof. |
| Value addition of dairy and agro industry products ad by-products | Dr. Vikas Nanda, Professor Dr. Pradyuman Kumar, Professor Dr. C. S. Saini, Professor Dr. Navdeep Jindal, Assoc. Prof |
| Processing of cereal, pulses, oilseed, millets, and bakery product | Dr. D. C. Saxena, Professor Dr. C. S. Riar, Professor Dr. Sukhcharn Singh, Professor Dr. C. S. Saini, Professor. Dr. Navdeep Jindal, Assoc. Prof Mr. Ashwani Kumar, Asst. Prof. |
| Food product quality control and analysis | Dr. M. B. Bera, Professor Dr. D. C. Saxena, Professor Dr. P. S. Panesar, Professor Dr. K. Prasad, Professor & HOD Dr. Vikas Nanda, Professor. Dr. C. S. Riar, Professor Dr. Sukhcharn Singh, Professor Dr. Pradyuman Kumar, Professor Dr. C. S. Saini Professor Mr. Ashwani Kumar, Asst. Prof. |
| Postharvest technology of fruits and vegetables | Dr. K. Prasad, Professor & HOD Dr. Sukhcharn Singh, Professor Dr. C. S. Saini, Professor Dr. Navdeep Jindal, Assoc. Prof. |



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9. **Strengthening laboratory infrastructure (adding of new equipment's and use of present facility for optimum use)**

- Currently, Department has twelve laboratories. All the laboratories are equipped adequately to perform the experiment of ICD, UG, PG and Project work. Minor repair and maintenance of equipment's are taken up as and when required. Major repair of equipment's is carried out by the suppliers under AMC or by the experts present locally or at nearby places.

10. Any other point (n/a)

SWOT analysis by the department:

| | |
|--|--|
| <p>Strength</p> <ul style="list-style-type: none"> • Qualified Faculties • Laboratory facilities • Trained Technical staff • Research Publications • Library | <p>Weakness</p> <ul style="list-style-type: none"> • Inadequate Student faculty ratio • Fair Industry- department interaction • Low Industry funded project • Placement |
| <p>Opportunities</p> <ul style="list-style-type: none"> • Collaborative projects with industry • Frequent interaction with industry persons • Outreach program for the students and faculty members • Signed MOUs with Institutes further enhanced academic and research capabilities | <p>Threats</p> <ul style="list-style-type: none"> • Emergence of many institute/universities offering similar degree in the region |

Comments & Suggestions for Improvement

- Consultancy work by the faculty members need accelerated.
- Submission of Research projects for external funding need accelerated
- Concentrated efforts need for galvanizing Industry institute partnership.
- More efforts need to be done to encourage students' participation in national level competitive examinations including UPSC.

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SANT LONGOWAL INSTITUTE OF ENGINEERING & TECHNOLOGY
ACADEMIC AUDIT (2019-20 and 2020-21)


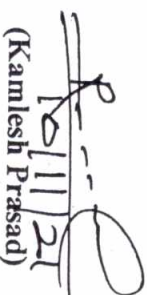
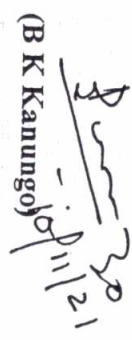

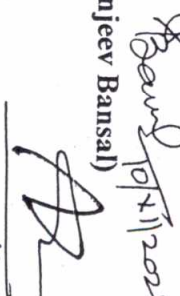

SUMMARY SHEET

| | | |
|--|--|---------------|
| 1. Name of the Department | Food Engineering and Technology | |
| 2. Name of Reviewer Designation & Address | From Academia | From Industry |
| 3. Date of Meeting | Prof. Ashok Kumar, PAU, Ludhiana 10.11.2021 | |

| Score Summary | | | | | | |
|-----------------------------------|----------------------------------|--|---|--------------------------------|--|----------------------|
| ICD Program (Max Score 100) | Academic | | | Research | | Total Score (700) |
| | UG Program (Max Score 100) | PG Programs (Max Score 100) (Average of all PG programs) | Doctoral Program (Max Score 100) | Research (Max Score 100) | Departmental Infrastructure (Max Score 100) | |
| 2020-2021 | 2020-2021 | 2020-2021 | 2020-2021 | 2020-2021 | 2020-2021 | 2020-2021 |
| 84 | 84 | 89 | 82 | 82 | 87 | 72.5 |
| | | | | | | 580.5 |

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.

Signature of committee members:

| | |
|---|---|
|  (M B Bera) |  (Kamlesh Prasad) |
|  (B K Kanungo) |  (A. S. Arora) |
|  (Sanjeev Bansal) |  (Ashok Kumar) |