Bansilal Ramnath Agarwal Charitable Trust's
VISHWAKARMA INSTITUTE OF INFORMATION TECHNOLOGY
Department of Mechanical Engineering

ACADEMIC AUDIT REPORT – (Academic year – 2021-22)

(Date of Audit – 09/03/2023)

The Academic Audit for the academic year 2021-22 was conducted on 09/03/2023 (Thursday) at 11:00 am onwards. Dr. Rakesh G. Mote, Associate Professor, Mechanical Engineering Department, IIT, Bombay have worked as an Expert for the audit. The academic audit was addressed by Dr. Sandeep S. Kore, Head, and Mechanical Engineering Department.

Points addressed by Head of the Department

1. Dr. Sandeep S. Kore, Head, Mechanical Engineering have covered the following points in his presentation.
   a. Vision and Mission of the Department.
   b. Highlights and staff details of the department which includes NBA Accreditation status, ISO 9001:2015 process, qualification and experience of the faculty members, Faculty research publications, PG and PhD Research center, Industry connect, SUPRA Team ranking at National level, Computing facilitates at the department, TSDP and co-curricular activities at the department.
   c. History of the department which includes Commencement of the UG program, increase in intake, commencement of PG and Ph D Research center.
   d. Department staff details which includes numbers of faculties with Ph D and pursing Ph D, Numbers of Professors, Associate professors and assistant professors and numbers of non-teaching staff .
   e. Curriculum aspects which includes curriculum planning and implementation, use of ICT tolls, Project based learning, flipped classroom, value added courses, internships, industrial visits, MOU with industries.
   f. Feedback evaluation system which includes student faculty feedback, parent feedback, Alumni feedback and employer's feedback etc.
   g. Teaching and learning evaluation which includes faculty details, ICT tools, curruculam coverage, Attendance record and lesson plan, CO-PO mapping, result analysis and evaluation process.
   h. Research innovations and extension which includes VSRPS (Vishwakarma student

research proposal scheme) , VRPS (Vishwakarma research proposal scheme) , Research funded projects (Applied and sanctioned) , FDP/Workshops organized , CATIA training for faculties, faculties publications, patents and copyrights Student activities which includes MESA, SUPRA, awards and recognition received by students at State/National/International levels.

i. Industry sponsored Lab in collaboration with Atlas Copco and Fluid Control Ltd.
j. Faculty empowerment strategies which includes faculty training program, faculty participation in FDP/Workshops/STTP, faculty achievements.
k. Various boards and committees such as IAB (Industry advisor board), DAB (Department advisory board), BOS (Board of studies) etc.
l. Student support and progression such as induction program, earn and learn scheme, batch guardian scheme, entrepreneurship development cell, competitive examination cell, mock placement drive, off campus placement.

2. Prof. Dattatraya Nalawade, Associate Head, Mechanical Engineering have conclude the audit with remarks given by auditor and also delivered the vote of Thanks to him.

Comments/Suggestions from Dr. Rakesh Mote, Academic Expert

1. BOS has adequate representation from the stakeholders. Student feedback on the structure and curriculum should also be taken in the course feedback Appreciated the inclusion of SY/TY toppers in BOS panel for taking feedback on structure and curriculum.
2. Contents and the lecture material supporting the course is properly made available to the students.
3. Fair credit scheme is following as per the stipulated guidelines. Tutorial classes on problem solving can be accommodated for analytical modules.
4. Faculty follows standard methods and aids for the course delivery. Recent trends in the courses can be touched upon by sharing industrial case studies, white papers, research papers, patents, etc.
5. Adequate usage of VOLP, VIERP systems. Encourage students to use NPTEL like modules for additional learning.
6. Majority of the project work is industry project work. Students should be encouraged to take up research projects on campus or other research institutes.
7. Having one insemester examination is welcome change.
8. Students with academic poor performance should be categorized and mentored by faculty/student group.
9. Pursue more collaborations and industry interactions for projects. Scope of existing projects can be broadened to accommodate different research fields.
10. Faculty should be provided more time to attending the seminars, conferences, FDPs. In house events can be organized to promote interdisciplinary activities.
11. Involve UG students in the research, more collaborations, and joint supervisions.
12. Encouraging the faculties to attend the FDP on how to write research proposals. More FDPs or workshops on research themes can be organized on campus.

13. Bright, proactive students can be encouraged to join mentorship program. The success stories, industry interactions, can be showcased to attract quality students.
14. Not enough industry visit/tours. Can be clubbed with certain course modules, short assignments can be given.
15. Highlight the student achievement, including alumni at various platforms
16. Additional computational facility, workstations can be supported.
17. Shared workstations for computation work can be provided.
18. MoUs need to be translated into joint activities, facility development. More MoUs to be pursued with research institutes and core companies.
19. Some basic testing equipment as a central facility will be helpful to fetch consultancy work.
20. More engagements expected with research institutes, IITs, overseas. Internships can be planned as a seed for future collaborations.
21. Recent trends, paper/patent awareness, etc.
22. Research symposium (UG or PG), thematic workshops, open house to promote interdisciplinary work.
23. Increase social media presence (LinkedIn, FB, Twitter, etc.
24. Students should motivated from second year level regarding writing research paper. Workshops on how to write research paper and reading of research paper should be conducted for students.
25. The institute has MoUs and internships/placem ents understanding. Engagements can be extended to research projects, sponsorships, consultancy, lab development, etc
26. The placement data can be analyzed to understand the sector demands, domains needing attention.

SWOC analysis by Academic Expert

Strength:

1. Qualified, Enthusiastic faculty and well-organized administrative activities.
2. Location and good industry connect for UG activities.

Weakness:

1. Unbalanced mix of senior and junior faculties. Posts vacant at Professor/Associate Professor level.
2. Research funding, Consultancy, etc.
3. Quality time for the faculty members for self-development
4. UG Student involvement in research activities.

Opportunities:

1. PhD Center and many faculties pursuing PhDs.
2. Location and connectivity (Proximity to industry hubs, core and IT)
3. New industry demands on machine learning, AI, automation, etc.

Challenges:

1. Competition from other institutes.
2. Lab infrastructure.

Best Practice (s) / Innovations of the Department:

1. Systematic administrative activities, internship programs.
2. Problem based learning (PBL).

Photograph of Academic Audit dated 09/03/2023

Photograph of Student Interaction dated 09/03/2023

Photograph of Faculty Interaction dated 09/03/2023

Members of Staff Present:

1. Dr. S. S. Kore
2. Dr. D. N. Kamble
3. Dr. S.S.Chinchanikar
4. Dr. A. D. Kale
5. Dr. A.P.Kulkarni
6. Dr. P. P. Hujare
7. Dr. S. V. Dravid
8. Mr. D. B. Nalawade
9. Dr. N. H. Ambhore
10. Mr. A.V.Salve
11. Mr. M.N.Jagdale
12. Mr. P.R.Anerao
13. Mr. N. B. Kate
14. Mr. A. R. Dhumal
15. Mr. G. B. Narkhede
16. Dr. S. C. Shamkuvar

Mr. Dattatraya. B. Nalawade
Associate Head
Mechanical Engineering

Dr. Sandeep S. Kore
Head
Mechanical Engineering