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Indian Institute of Technology Jodhpur

Department of Electrical Engineering

October 12-13. 2022

Review Period: July 2015 to 31 July 2022

Evaluation Sheet for Internal Review of the department

Committee Members

1. Prof. H.P. Khincha

2. Prof. Swades De

3. Prof. Nandita DasGupta

Committee may provide a single combined report.

Note:

1. In column 2, please provide description of the committee's assessment.

2. In column 3, Please choose one of the progress indicators from the below

Excellent

Very good

Good

Average

Below Average

Due to the nature of some specific questions, it may not require any progress indicator.

3. Please use additional pages if required.

4. Please sign on every page and submit to the Director IIT Jodhpur

Sr. No	Item	Evaluation
1.	Opinion and suggestions about the curriculum of different academic programs (B.Tech/M.Sc/M.Tech) offered by the department and their relevance • To enable better research outcome, MS by Research can be initiated (possibly by re-naming the currently existing 3-year part-time M.Tech), which may also give an exit route for the non-performing PhD students • Industry sponsored M.Tech/MS program can be started	Very good
2.	Comments about the teaching learning process adopted by the department. Your suggestions and advice for the same • Mini project as elective instead of a course • Faculty colloquium to make students aware of the research projects undertaken by the department • Periodic introduction of new electives • Have transparent load allocation meetings. Each faculty member should be taking a mix of core courses and electives so that the teaching load is evenly distributed	Very good
3.	Provide your overall evaluation about outcome of the programmes and performance of the graduated students in the profession. Any suggestions will be welcome • The research students are motivated and looking forward to do well • Too early to comment as IITJ is relatively new with only a few graduating batches so far	Very good
4.	Provide your assessment about the doctoral programmes (PhD & MTech-PhD) of the department. Please indicate your suggestions for improving the same. • Departmental computing facility with accessible printers are needed	Very good

Sandhita Dasgupta HP Khuntia

	• More accessibility for centralised characterization facility like XRD • More flexibility in the regulations regarding Ph.D program (e.g. minimum duration of Ph.D) can be discussed. • Encourage students to participate in international conferences • Provide contingency funds	
5.	Your feedback about laboratory facilities including research infrastructure and facilities in the department • Teaching lab facilities are good and very well planned • Some research lab facilities are very good to excellent • AIOT facility has fantastic potential to grow into an impactful resource for modern technology development in the country • Keep the lab technical staff members involved and interested in the lab facility development and engage with the faculty members on experimental research, as this work force is "constant" whereas the PhD/Masters/Bachelors students are fleeting resources (however good they may be) • Faculty load assignment may be counted for lab facility development may help in keeping the teaching labs up to date	**Excellent**
6.	Provide committee's assessment of academic research of the department. In particular, provide your input about (i) Quality of the research activities pursued by the department, (ii) Number and quality of publications Your suggestions and advice will be of immense value • Quality of the research is very good • A list of top journals/conferences should be prepared and faculty/research scholars should be encouraged to publish in them	**Very good**
7.	Provide committee's assessment of different sponsored research and consultancies undertaken by the departmental faculty members. • The level of funding is quite impressive • Many labs are coming up with excellent facilities	**Excellent**
8.	Provide committee's assessment of industry interface and industry linked research activities by the department.	**Excellent**

Sandita Das Gupta HP Khuntia

	• There is already some collaboration with different industries, e.g., GE and TCS • Can be further improved by inviting people from industry for periodic visits/ soliciting industry-sponsored fellowship program	
9.	Provide committee's assessment about outreach, continuing education/executive education programmes of the department. Please indicate committee's suggestions for improving the same. • There is one executive M.Tech program. Apart from that did not see much evidence of a structured outreach program • Short-term courses for academics as well as industries with targeted participants can be carried out. • Local level/ neighborhood impact through teaching and technology enhancement would be helpful to earn confidence	**Good**
10.	Please indicate committee's assessment about the departments linkage with the peer groups in the country and abroad. Please assess the extent of inter-disciplinary connect with other departments in the institute. Committees suggestions for improvement in these aspects will be of immense value • Interdisciplinary aspects of engagement on the various verticals may be addressed, though there is a high connect through the IoT vertical of faculty research • Saw some collaboration with other IITs, but it can be strengthened further	**Very good**
11.	Provide committees assessment about faculty of the department: 1. Coverage of different areas of relevance for the department in the faculty 2. Quality of the faculty of the department Suggestions about the areas for future growth of faculty strength will be highly appreciated. • Faculty members are all excited on their respective research and very active in developing respective research facilities • Encourage the faculty members to apply for different post-doctoral fellowships like AvH, Fullbright, etc. • Actively nominate young faculty for various professional awards	**Very good**

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H P Khanuja

	• Form a group of mentors, who can help the younger faculty to apply for projects/fellowships, etc.	
12.	Based on Vision, Mission and Goals identified by the department comment about the committee's overall assessment of the progress made so far. • The faculty and facility growth rates are excellent • One word of caution is to possibly stagger the faculty recruitment, to ensure that learnings from the current faculty recruitment and performance can be used in subsequent recruitments	**Excellent**
13.	Overall assessment by the committee and suggestions • Sufficient real estate space available to grow, which is a big plus • Can think of expanding the innovation centre into a Research Park • Companies may be incubated there and some established companies can also set up a shop there with a mandate that they have to interact with the IIT in form of student projects/internships • To ensure the quality of internship of the students, the problem definition should be jointly defined by the faculty supervisor, industry mentor, and the student, and the necessary agreements should be in place on the expected outcome • Faculty need to be alert on maintaining teaching quality, which may be measured by retaining student interest • Faculty members need to have a balance among publication research (scholarship), technology development-oriented and industrial projects (societal impact), and teaching (training and preparing next generation) • Efforts should be given to ensure that the faculty research creates industry impact • Efforts should be given to keep a balance of the faculty in doing core research (R) and product development (D) • Promotion policy: deep thinkers, systems developers, systems integrators – how to differentiate? • The possibility of introducing teaching professors for the basic courses with large class size may be explored • For retaining the UG students' learning interest in the initial ($1^{st}/2^{nd}$) years, thoughts may be given on managing large classes by breaking into smaller sections (with, for example, up to 60 students per section) • The faculty members should not be allowed to be individualistic; time-to-time joint efforts at the department level/ institute level/ country level are expected	**Very good**

Sandita DasGupta HP Khincha

	• Thoughts may be given and action may be taken on offloading the faculty members from project finance management activities • Efforts should be given on having an efficient Sponsored Research and Industrial Consultancy office managed by professionals • There should be campus-wide stable and high-speed WiFi and overall network connectivity, which would help in distributing the computation load and the student/researchers' convenience	
14.	Any other aspect committee wish to note/highlight • Improvement needed on medical care facility and truly caring caregivers (doctors and nurses) • General computational facility needed for the MTech and PhD students • Research students face funding crunch for initial accessories and stationery purchase; some efforts to sort this out may be of help; particularly the PhD students may be made aware of availing their contingency grants • The faculty members may be encouraged to facilitate the research and project students with their basic lab facilities (computing resources, basic printing, etc.) through their respective funded projects, which will take care of the resource provisioning to the students "in distributed manner," instead of expecting the department/ institute to manage these requirements "centrally" • Good academic stationery shop with competitive prices is necessary • Continuous efforts are required, e.g., through student-teacher interactions, to research students excited about what they are doing and make them feel part of the institute's growth process • Common research space for the research/project students will help in idea fertilization and learning from good practices • Continuous efforts needed to keep the students motivated in the core EE areas; currently 70-80% of the UG students are not interested in the core EE areas • Besides having structured research opportunities through design credits and minor projects, the 1st/2nd year UG students may be motivated by the faculty instructors by giving exposure to their respective research projects and encouraging to participate in their research project activities • Faculty colloquiums and talks by Industry representatives may help in generating student interest in the core EE areas	**Very good**

(Swades De)

Nandita DasGupta

H. P. Khincha