



Legale Singh Charitable Trusts (Mumbai)

## THAKUR COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous College Affiliated to University of Mumbai, Approved by AICTE & Govt. of Maharashtra)

Institute Accredited by National Assessment and Accreditation Council (NAAC), Bangalore

Programmes Accredited by National Board of Accreditation (NBA), New Delhi

Conferred Autonomous Status by University Grants Commission (UGC) for 10 years w.e.f. 01-07-2019-20

Among Top 200 Colleges in the Country where Ranked 193<sup>rd</sup> in NIR India Ranking 2019 in Engineering College category

\*Permanent Affiliated UG Programmes : • Computer Engineering • Electronics & Telecommunication Engineering • Information Technology (w.e.f. A.Y. 2015-16)

• Electronics Engineering (w.e.f. A.Y. 2017-18)

\*3rd cycle NBA Accredited UG Programmes : • Computer Engineering • Electronics & Telecommunication Engineering • Information Technology (3 years w.e.f. 01-07-2019)

# 1st cycle of NAAC Accreditation : • \*'A' Grade for 5 years (w.e.f. 30-10-2017)

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### Minutes of NAAC- IQAC Committee Meeting held on 28/6/19 at TCET Faculty reading room in library at 12 p.m.

**Purpose of the meeting: To approve previous IQAC minutes of the meeting held on 25<sup>th</sup> January 2019 followed by presentation by IQAC coordinator on the revised annual quality assurance report to be submitted to NAAC for year 2018-19.**

#### Agenda:

- To discuss the Curricular Aspects of the Academic programs and suggest improvements.
- To discuss the innovative processes adopted by the institution in Teaching, Learning and Evaluation.
- To discuss the initiatives of IQAC in sensitizing/promoting Research climate in the Institution.
- To discuss the increase in infrastructure facilities and library facilities as Learning Resources.
- To discuss the contribution of IQAC in enhancing awareness about Student Support services and its progression.
- To discuss improvement strategies adopted by the Institution for Academic and Infrastructure developments (Governance, Leadership and Management).
- To discuss the innovations introduced during this academic year which have created a positive impact on the functioning of the Institution.
- To discuss the action taken by the departments on the actionable points identified in the previous meeting.
- To discuss strategies for implementing future plan of action for the year 2019-20.

#### Welcome to all the members present:

Principal, Dr. B. K. Mishra welcomed all to the IQAC meeting. All the members introduced themselves. The meeting began with the Principal reading out the points of the agenda of the meeting.

The following dignitaries were present for the meeting:

Sr. No.	Name of Externals	Designation
1.	Mr. Sharad Tiwari	Associate consultant, TCS
2.	Dr. S. M. Ganachari	Principal, Thakur Polytechnic
3.	Mr. Neeraj Yadav	Alumni

Sr. No.	Name of Internals	Designation
1	Dr. B. K. Mishra	Chairperson
2	Dr. R. R. Sedamkar	Director of the IQAC
3	Dr. Payel Saha	IQAC coordinator
4	Dr. Deven Shah	Vice Principal
5	Dr. Lochan Jolly	Senior administrative officer
6	Dr. Sanjay Kumar	Faculty member
7	Dr. Vinitkumar Dongre	Faculty member
8	Dr. Rajesh Bansode	Faculty member
9	Dr. Sheetal Rathi	Faculty member
10	Dr. Sandhya Save	Faculty member
11	Dr. Siddesh Siddappa	Faculty member
12	Dr. Seema Jagtap	Faculty member
13	Dr. Vivek Mishra	Faculty member
14	Mr. Vimal Gosar	IQAC member
15	Ms. Purnima Chandrasekar	IQAC member
16	Ms. Ashwini Shanbag	IQAC member
17	Ms. Poorva Waigankar	IQAC member
18	Ms. Neha Chauhan	IQAC member
19	Dr. Rekha Sharma	IQAC member
20	Ms. Vidyadhari R. Singh	IQAC member
21	Mr. Aditi Rathi	Student Member (CMPN)
22	Mr. Vikram Mandal	Student Member (CIVIL)
23	Lance D'Silva	Student Member (FE)

However, the leave of absence was granted to Mr. Sunil Fernandes, Dr. Radha Srinivas and Mr. Sujan Narvekar.

- As the chair of the meeting, Dr. B. K. Mishra first shared with the members present in the meeting, the current developments in TCET which were as follows:
  - TCET has been conferred with autonomous status for a period of 10 years w.e.f 2019-20 to 2028-29.
  - TCET has been ranked 193rd in the NIRF India rankings -2019
  - TCET has been awarded re-accreditation status for the UG programs of EXTC, ETRX, IT and CMPN up to 30/06/2022
  - TCET has been awarded “A” grade by NAAC for 5 years w.e.f 30/10/2022
  - The intake in the CMPN department has increased from 120 to 180
  - In the recently held Smart India Hackathon 2019, 2 students groups were conferred winners title while one group was conferred runners up title
- According to Dr. B. K. Mishra, all of the above developments have been possible because of Stakeholder interaction and consequent feedbacks, industry-institute interaction, industrial visits which have acted as support system for the growth of the institution
- Dr. B. K. Mishra further emphasized that in the next academic year some of the goals include applying for NBA accreditation towards the non-accredited courses of MECH,

CIVIL and PG programs as he was of the opinion that today, in order to grow and diversify in technical education, accreditation becomes the need of the hour. Applying for permanent affiliation for all UG, PG and PhD programs is another goal of TCET. This in Dr. B. K. Mishra's opinion will reduce the number of visits to the university for affiliation purpose and a number of administrative work will be saved which in turn can be utilized in strengthening the courses, domains, interactions with the industry, linking industry with the campus etc.

- Dr. B. K. Mishra then requested IQAC director, Dr. R. R. Sedamkar and IQAC coordinator, Dr. Payel Saha to continue with the meeting
- Dr. R. R. Sedamkar started the meeting by briefing everyone about the actions that was required to be taken based on the inputs of the previous IQAC meeting, has been incorporated in the presentation by Dr. Payel Saha who in turn gave a presentation on the same. The presentation included the action taken NAAC criteria wise by the various departments in the last 6 months as was discussed in the meeting of Jan 2019.
- Dr. Payel Saha highlighted the salient features of the various departments as per the NAAC criteria.
- The discussion of the previous IQAC meeting was as follows:
  - Plan the curriculum as per the current trends and requirements
  - Seminars/workshops on trends and technology in the industry or non-technical aspects for holistic development
  - More emphasis to be given for imparting practical knowledge and how theoretical knowledge can be applied in real-life scenario
- On the completion of the presentation, Dr. R. R. Sedamkar mentioned that the discussion of the current meeting should be done agenda wise in the context of autonomy and the actionable points put forth in the previous IQAC meeting need to be approved by the committee.

Detailed discussion on the above agenda is mentioned in the succeeding paragraphs

### **To discuss the Curricular Aspects of the Academic programs and suggest improvements (Criteria I – Curricular Aspects)**

- **Inputs for autonomy curriculum development:** Dr. R. R. Sedamkar requested the external members to suggest improvements in the curricular aspects as far as designing the curriculum from autonomy perspective is concerned. He also clarified that the syllabus of first and second year of engineering will be considered as per the new curriculum while the third and fourth year will continue following the curriculum of Mumbai University with scope of minor modifications if any.
- **Application of ICT for Engineering:** Mr. Sharad Tiwari started off by suggesting that as far as IT domain is concerned the curriculum should offer courses that include mathematics, management and core subjects.
- **Autonomy credit distribution:** Mr. Sharad Tiwari further wished to know how many subjects are offered per semester to which Dr. R. R. Sedamkar explained to him the model curriculum of AICTE which comprises of 159 credits to courses that are compulsory, and audit oriented which will be introduced over a period of time. Over the time, finance, management and communication part will progressively be incorporated in the curriculum

as per the mandate of the Government of India to improve the quality of technical education. Under autonomy, Dr. R. R. Sedamkar was of the opinion that institute will have the flexibility to enhance the curriculum in order to improve the skills of the students. By and large the syllabus will be designed as suggested by the UGC and AICTE and add-ons will be periodically done to improve the skill set and employability of the students.

- **Inputs for skill development:** Dr. R.R Sedamkar asked the external members to give feedback on what skills need to be provided to the students from the industry perspective.
- **Industry inputs for developing autonomy curriculum:** Dr. Ganeshari was of the opinion that as far as designing the new curriculum is concerned, it is important to involve industry experts to know the recent trends of the industry. He also suggested giving more weightage to skill development than theoretical concepts. The aim is to develop the students in a manner which is equivalent to a saleable product.
- **Industry relevant visiting faculty:** Mr. Neeraj Yadav was of the opinion that more practical work needs to be given to students as good practical knowledge is the need of the hour. In extension to this point, Mr. Sharad Tiwari suggested that faculty experience, inviting guest lecturers, whether faculty members are good enough to take up the courses, faculty interaction with the industry, are parameter that needs to be considered. Mr. Neeraj Yadav further added that knowledge of the current trends in the industry needs to be imparted to the students.
- **Faculty assessment:** Mr. Sharad Tiwari also suggested having faculty assessment on the lines of student assessment as according to him it is important to check the capability of the faculty members in delivering the content. Grooming students from FE itself and channelizing their thought process in the right direction can help them become industry ready by the time they come to BE.
- **Practical languages linkages in autonomy curriculum:** Students were asked their opinion on which CMPN student, Mr. Adit Rathi was of the opinion that in FE itself, core subjects should be introduced. He gave an example stating that he is being a CMPN student, he would want more computer-oriented subjects to be introduced in FE itself so that while progressing towards SE, advanced topics can be learnt easily.
- **Industry inputs for framing autonomy curriculum:** He opined that the consulting the industries that recruit the students of TCET as to what are their needs and taking their help in designing the syllabus is another way that TCET should go about.
- **IT skills for Mechanical students:** FE student, Mr. Lance D'Silva was of the opinion that even mechanical students should be introduced to programming languages as the industry is not only on the lookout for core knowledge but also some amount of programming knowledge. As understood by his seniors, mechanical students learn programming from courses outside TCET when instead at SE or TE level itself mechanical students should be exposed to programming knowledge. Dr. B. K. Mishra asked what courses he expects for the MECH dept., to which Mr. Lance D'Silva said that subjects that teach object-oriented programming can be introduced.

**To discuss the innovative processes adopted by the institution in Teaching, Learning and Evaluation (Criteria II – Teaching – Learning and Evaluation)**

- Dr. R. R. Sedamkar pointed out that in the presentation given by Dr. Payel Saha, there was no mention of the evaluation process and therefore he briefed everyone about the same
- **Evaluation scheme in autonomy:** Evaluation till now on teaching learning and curriculum aspects was by the faculty and teacher guardian as also the external members. However, now under autonomy, the institute needs to perform an internal evaluation, end-term evaluation and a continuous evaluation.
- **Term work evaluation/assessment in autonomy:** As the term work related activity is compiled over 15 weeks which the students comply only at the end of the semester, hence the introduction of continuous evaluation alongside internal and end-term evaluation. Continuous evaluation will be given slightly more weightage as students feel that other than the term test which is conducted in mid semester, if practical evaluation is also done mid-semester, this will help the students considerably as the practical aspects to the theory knowledge that the industry requires that the students should have, will also be evaluated. Also Dr. R. R. Sedamkar pointed out that due to these students will show more seriousness. So after 3 days of theoretical evaluation through term-test the remaining 3 days can be utilized practical evaluation which is part of term work. All of this is to award 50% of the term work marks in the mid-semester itself to guarantee effectiveness of the same.
- **Evaluation through MCQs:** Mr. Sharad Tiwari asked for more clarity on the evaluation system where he enquired if the mode of evaluation is MCQ or subjective and was of the opinion that evaluation through online MCQ tests could also be a good option of continuous evaluation.
- **Continuous evaluation through practical examination:** Mr. Neeraj Yadav mentioned that there needs to be a continuous evaluation of practical examination to which Dr. R. R. Sedamkar that resources for the same will be needed in large numbers.  
Dr. Deven Shah was of the opinion that a practical examination at least at FE and SE level will ensure some kind of practical learning among students. Dr. R. R. Sedamkar mentioned that if continuous evaluation for practicals are chosen, then assessment marks have also to be finalized.
- **Criteria for term work evaluation:** Dr. Ganeshari mentioned that other sets of criteria also need to be set as far as term work evaluation is concerned like date of performance, date of completion, based on which marks should also be allotted.
- **Cumulative grade points:** Dr. B.K. Mishra believed as we have a cumulative grading system where it has been observed that only 40% of the students are able to secure CGPA 6.75 and above which as per industry requirement is an equivalent 60%. To calibrate the curriculum to meet the industry requirements, TCET has chosen to implement the model curriculum of AICTE which not only will conduct evaluation based on academics but also conduct evaluation based on other parameters like internship, professional activities that sums up the overall holistic development of students. This will ensure students to not only be productive from day one but also have a competitive edge among others. Accommodating a professional career alongside professional skills gives students to make a choice between higher studies and campus placement, placement through competitive exams like GATE and most importantly placement through self-employment. For this,

TCET is planning to accommodate all of it in the curriculum by allotting some credits for the same.

- **Self-Learning:** Another point raised by Dr. B.K. Mishra was providing incentives and platform for students, who wish to give competitive exams, to give weekly mock tests for which they will not rely on classroom teaching but through self-learning. All the above points can help students to improve their overall CGPA other than through academics.
- **Non-Technical subjects in autonomy curriculum:** Dr. Ganeshari suggested introducing non-technical subjects as per interests of students. To this Dr. B.K. Mishra replied that the plan is to start with different clubs like literary clubs, music clubs etc. A plan for the same has already been chalked out within the scope of the curriculum to make provisions for students to have an alternative career.
- **Credit distribution for BE & BE (Hons) degree:** TCET plans to introduce basic BE degree that will be conferred on students on the completion of 164 credits. A further gain of 20 credits will result in students getting conferred with BE Hons.
- Dr. Ganeshari suggested introducing multiple entry/exits for the students wherein a student may temporarily discontinue the course only to return. To this Dr. B.K. Mishra said that right now this cannot be undertaken as AICTE has not given permission for the same.

#### **To discuss the initiatives of IQAC in sensitizing/promoting Research climate in the Institution (Criteria III – Research, Innovation and Extension)**

- **Quality initiatives for promoting research:** As per the new guidelines of NAAC, quality evaluation should be 60% quantitative and 40% qualitative. Supporting the 60% quantitative evaluation, Dr. B. K. Mishra said that a database that comprises of the evaluation based on consolidation of 5 years data needs to be done. This evaluation sheet should be provided to all departments and consolidated at the IQAC level for which the work has already started.
- **Feedback system:** According to Dr. B. K. Mishra, the feedback system of the institute needs to be improved wherein faculty members will ask students to register after which feedback will have to be given by them. To do all of this, QA members can be mobilized to collect the required data.
- **Idea presentations by R&D and IEDC cell:** Dr. R. R. Sedamkar asked the student representatives for their opinion to which Mr. Adit Rathi said that TCET should conduct events like idea presentations that should solely be conducted under R&D cell and EDC cell and not by other professional bodies in order to ensure direct communication between the students and these two cells.
- **Technical paper writing:** Mr. Neeraj Yadav suggested imparting knowledge to students on how to write technical paper to which Dr. B. K. Mishra mentioned organizing MULTICON has resulted in increasing trend among students in writing technical papers. Dr. Ganeshari emphasized on the fact that the quality of the research papers needs to be maintained. Dr. B. K. Mishra reiterated that quality writing will only be ensured once the student has got the practice of writing a technical paper and inculcating in students the practice of writing technical papers can ensure within 2-3 years, such students turning into veteran scientists; as far as

maintaining the quality is concerned, the role of teachers comes into picture, with teachers publishing along with students to ensure quality papers being published.

### **To discuss the increase in infrastructure facilities and library facilities as Learning Resources (Criteria IV – Infrastructure and Learning Resources)**

#### **Infrastructure development:**

- Dr. B. K. Mishra highlighted the increase in infrastructural facilities by addition of two more floors to the existing infrastructure with the strengthening of the building going on currently.
- A huge seminar room is going to be developed in the first floor and all classrooms are likely to be shifted to the sixth and seventh floor. Till fourth floor there is likely to be no classrooms.
- Mr. Sharad Tiwari enquired if any facility for recreation is being made to which Dr. B. K. Mishra said that plans are on the anvil to start with army training.

### **To discuss the contribution of IQAC in enhancing awareness about Student Support services and its progression (Criteria V – Student Support and Progression)**

- **Industry experts / Scientist from BARC as visiting faculty:** Deviating from the standard way of teaching is the need of the hour according to Mr. Sharad Tiwari. He gave the example of his student life when scientists from BARC taught him and his batch. He stressed on the fact that the teaching that they received then was not mere a teaching process but engaging the students to develop a thought process.
- **Specialization courses in autonomy:** TCET should make arrangements to call from such organizations and if need arises utilize weekends as per the convenience of such experts. To this Dr. R. R. Sedamkar said that HODs have been intimated to identify specialized/super-specialized courses that will require the interaction with industry/research organization experts. Adjunct professor posts may also be created for the same.
- **Technical paper writing for FE students:** Dr. R. R. Sedamkar asked the student representatives if they were happy with the student support services offered by TCET to which Mr. Lance D'Silva appreciated the exposure given to FE students to technical paper writing.
- Mr. Adit Rathi suggested calling resource persons from external sources as guest lecturers for certain special topics pertaining to the curriculum.
- **Students support development:** Dr. R. R. Sedamkar asked Dr. Lochan Jolly, Dean (Student & Staff Welfare) on her suggestions as far as student progression is concerned. Dr. Jolly highlighted that different messages regarding the various activities are progressively passed on to all students through the CRs whatsapp group with the General Secretary of the Student council being the Point of Contact. Suggestions are also received from the same channel in order to ensure prompt action.

- **SMS support for students:** Dr. B. K. Mishra mentioned that a database of faculty members and students has been created and a SMS system is going to be integrated so that important information is disseminated through this common platform.

**To discuss improvement strategies adopted by the Institution for Academic and Infrastructure developments (Criteria VI - Governance, Leadership and Management)**

- **Exam Section connected digitally at remote place:** Dr. Deven Shah mentioned that in support of autonomy, a separate exam section building is going to be developed to which general access to faculty members and students will be restricted. Only authorized members will have access with the entire system going to get connected digitally.
- **Evaluation through MCQs:** Dr. B. K. Mishra also stated that in future, evaluation through MCQs will be initiated wherein 20-30% weightage will be given for the same.

**To discuss the innovations introduced during this academic year which have created a positive impact on the functioning of the Institution (Criteria VII – Institutional Values and Best Practices)**

**Innovative practices taken by departments during Jan- May 2019:**

- Dr. R. R. Sedamkar requested the Heads of the various departments to highlight the innovations introduced and its equivalent impact briefly
- Dr. Vivek Mishra, FE In-Charge mentioned about club tests, result prediction model which according to him could be shown as the USP of our evaluation system. To this Dr. B. K. Mishra said that a knowledge management tool of the same could be created.
- Dr. Sandhya Save, HOD ETRX mentioned about the online internship under IETE has been offered for its members which many students grabbed upon.
- Dr. Siddhesh Siddapa, HOD MECH mentioned about plagiarism checking of BE projects other than the research papers that has been introduced. Students have been encouraged to write atleast one technical paper compulsorily. Students have been encouraged to take problem statements from Smart India Hackathon.
- Dr. Sheetal Rathi, HOD CMPN mentioned that three faculty members have completed their PhD degree which has only encouraged an increase in the research culture among faculties. These three faculty members have identified certain research gaps which they shared with other faculty members of the department. Further, alumni connect has been strengthened by calling alumni to mentor the students in their projects which yielded good results.
- Dr. Seema Jagtap, HOD CIVIL mentioned that several infrastructural projects are going on the aim of which is to use several advanced techniques and reduce the carbon footprint.
- Dr. Rajesh Bansode, HOD IT mentioned the introduction of real-time assignments as an alternative to the conventional passive assignment writing. Secondly on the completion of project, students have been asked to create charts that exhibit the entire flow of the project along with the graduate attributes achieved.
- Dr. Vinitkumar Dongre, HOD EXTC mentioned that the help of industry people for project guidance has been taken. Problem statement for TE students have been taken from Smart India Hackathon.

- Dr. R. R. Sedamkar said that as per the new guidelines of IQAC, a report of all these achievements need to be uploaded by end of the year whose impact needs to be measured quantitatively.

**Following are the actionable points which has been suggested by the dignitaries in coming academic year 2019-20.**

- **Action plan for next IQAC meeting:** In conclusion to the meeting, Dr. R. R. Sedamkar asked external members for any suggestions that can be implemented as future plan.
- **Faculty technical upgradation through FDPs/MOOCs/Online certifications:** Mr. Sharad Tiwari enquired if any programs are conducted for faculty upgradation. To this Dr. R. R. Sedamkar responded that Faculty Development Program is conducted twice a year other than which faculties also enroll for NPTEL, MOOCs etc. for which the scores allotted are minimum which is being worked on getting increased. He said that faculty members have to earn credits by means of becoming moderator for MOOCs online courses which can be further imparted to students.
- **Electives at TE, BE level:** Mr. Neeraj Yadav suggested offering a greater number of electives to TE and BE students to which Dr. B. K. Mishra mentioned that the new curriculum is purely choice-based in which at least 4 electives per domain may be introduced.
- **Recreational facilities to students:** Mr. Sharad Tiwari enquired if any recreational activities are being given to students to which Dr. R. R. Sedamkar said that in the form of physical activity, credits will be allotted to students for the same.
- Dr. Ganeshari suggested introducing virtual reality for some of the tough courses.
- **Extended Lab. Timings:** Mr. Adit Rathi suggested increasing lab access timings after college hours. Dr. B.K. Mishra said as per the new curriculum, students will become free after 4 pm after which students can access the labs. Dr. R. R. Sedamkar said that for students who wish to access even after 6 pm, TCET has the incubation/extension center for the same.
- **Online credit transfer facility:** Dr. R. R. Sedamkar asked the student representatives if online credit transfer is permissible to the students to which he got an affirmative response.

The meeting was concluded by Dr. R. R. Sedamkar suggesting to IQAC team to hold some seminars, workshops, conferences for improving the quality amongst the stakeholders. A separate domain for IQAC in MULTICON could be the first step in this direction.

**The plan of action for the next academic year 2019-20 has been framed as follows:**

1. To organize Workshops/training programs/seminar by IQAC
2. To improve industry-institute interaction by inviting guest lecturers from the industry
3. To encourage quality research by encouraging the faculty members to publish their research articles in peer reviewed journals
4. To encourage faculty members to apply for minor/major research grants

5. To monitor the functioning of various cells and departments through regular QA audits
6. To ensure continuous evaluation in practical examination through a mid-semester and end semester conduct
7. To ensure timely submission of AQAR 2018-19 to NAAC

Since there were no other points for discussion, the meeting ended with vote of thanks.

<b>Prepared By</b>	<b>Checked By</b>	<b>Verified By</b>	<b>Approved By</b>
Sd/- <b>Ms. Purnima Chandrasekar</b> <b>Mrs. Hetal Amrutia</b> <b>IQAC Members</b>	Sd/- <b>Dr. Payel Saha</b> <b>IQAC Co-Ordinator</b>	Sd/- <b>Dr. R.R. Sedamkar</b> <b>IQAC- Director</b>	Sd/- <b>Dr. B.K. Mishra</b> <b>IQAC- Chairperson</b>