

THIAGARAJAR COLLEGE OF ENGINEERING, MADURAI – 625 015.
ACADEMIC AND ADMINISTRATIVE AUDIT

July 27th, 2024

From: PROF N.C. SHIVAPRAKASH/PROF S. SELVAKUMAR/PROF R. MAHADEVAN
 To: The Chairman/Principal/Registrar/Deans/Heads/Director-IQAC, TCE, Madurai

Subject: AAA – Report and Suggestions for further Improvements:

Observation: V.Good/Good/Satisfactory/To Improve.

I. Students Admission, Graduation, Placement/Higher Studies

Description	Observation
1) Students' Admission – last five years, % of seats filled, Diversity – Social/ Economical/Other States/Other Countries etc.	Very Good Strive for Diversity
2) Students' Scholarships/Management Scholarships/Other Sponsored Scholarships	Very Good
3) Students' Performance in 1 st Yr to 4 th Yr, Graduation, Quality	Good
4) Students' Placements, Higher Studies, Entrepreneurship	Good
5) Students' Performance in GATE/GMAT/CAT/GRE/ TOFEL/IAS/IES/State Govts.	Satisfactory
6) Students' Professional Society Activities, Co/Extra Curricular Activities, Winning Prizes Outside, Project to Paper Publications, Newsletter, Students' participation in Committees/Cells etc.	Very Good
7) Placement & Training, Carrier Guidance, Guidance for Competitive Exams, EDC, Start-Up, Products Incubated, Projects which have own prizes etc.	Good
8) Alumni Association, Membership Details, Alumni Meets, Alumni Contribution	Very Good
SUGGESTIOS/REMARKS FOR FUTHER IMPROVEMENTS: A) Quantify Management Scholarships, Students Benefitted, Quantum of Funds B) Quality of Placements – Highlight; Efforts towards more and better placements C) More Career Guidance Programs; Career Guidance in Higher Studies; Indian Army. D) Focus on Students' guidance on TOFEL, IELTS Examination. E) Special Focus/Special Focus Groups on Students' Performance in GATE, IAS, CAT etc. F) More awareness on Advanced Equipment, Research Facilities, activities in TARC, TVS Center, COE etc for students and/or department faculty members. G) Motivate Students' for publishing Quality Projects/Products. H) Students' Participation in Institute/Department level Committees/Cells I) Give opportunities for Students' Overall Development – Even from 1 st Year. J) Motivate Alumni to update their data; Placement Opportunities in Alumni Enterprises; Alumni Newsletter to all registered WhatsUp and/or mail etc.	

II. Faculty Data

Description	Observation
1) 5 Years Faculty List, FSR, Prof:Asso:Asst., Qualification, Retention	Good; More PhDs; Retention Initiatives
2) Regular Faculty, Visiting/Adjunct/ Contract Faculty Members, Faculty Diversity; Faculty Quality – PhDs/Doing PhDs/MTech; Average Experience; Awards Won Etc	Good. Faculty Diversity
3) Faculty Development Programs, Participation, organized, Conference Publications, Resource Persons	Good. Non-teaching Staff programs-Poor
4) Sponsored Projects, Products Development, Consultancy, Executive Education, University Recognized PhD Guides, Research	Good. Ensure 2 Publications per faculty. Incentive for

Scholars Guided, IPRs, Patents Filed, Patents Awarded -Faculty/Students, Citation Index, Scopus/ Web of Science/ Indian Citation/h-Index etc.	Publications; More SCI Publications
5) Research Seed Money from Management; Major/Mini/Inter Disciplinary Research Projects; Industry Sponsored/College Sponsored Projects; Students' Research Projects, International Projects, Govt/Non-Govt Projects	Good. Improve Inter-Disciplinary Projects; Alumni Sponsored Chairs in Departments.
6) Collaborations/MOUs with Industries/Govt Agencies/Non-Govt Organizations	Good. More active Collaborations
7) Faculty Members' Innovation in Teaching-Learning-Evaluation	Satisfactory; Improve further
8) Performance Appraisal & Impact	To Improve; Streamline; Score Card/KPI; Actions Taken
9) Faculty Awareness on OBE, PEO/PO/COs, Assessments & CQI	To Improve
10) Students' feedback on Faculty; Analysis; Corrective Actions	Satisfactory
11) Students' feedback on Infrastructure, Analysis, Corrective Actions	Satisfactory
12) Faculty Empowerment, Faculty Contribution to Departments/Institutions	Satisfactory To Improve further

SUGGESTIOS/REMARKS FOR FUTHER IMPROVEMENTS:

- A) Faculty Retention Measures – Initiate; Improve further.
- B) Advise all PhD Qualified faculty members to apply for more research funds, consultancy, quality publications etc.
- C) Industry Personnel contribution in Curriculum design, delivery – Improve.
- D) Motivate faculty members for awards/rewards at State/National level; Executive Positions in Professional Bodies
- E) Ensure minimum 5/7/14 Days FDPs for all faculty members. Minimum 2 Programs for Non-teaching Staff Every Year.
- F) Advise faculty/students to Qualify in NPTEL/SWAYAM/MOOC Courses
- G) Improve the Quality of Publications. More SCI Publications
- H) Have a depository for all faculty/students' publications.
- I) Inter-Disciplinary Works/Projects – Improve
- J) Motivate faculty members for innovations in Teaching/Learning/ Evaluation
- K) Faculty Performance Appraisal – Principal & HODs to counsel faculty for better performance
- L) Implement Fast-Track, Semester Abroad, Semester@Leading Institute, Semester@Industry etc.
- M) Motivate faculty members to strive for attainments of POs/PSOs towards Graduates Attributes for Employability.
- N) Motivate faculty members active contributions at the Institute/Program level.
- O) Motivate faculty members' internships in Industries.

III. Teaching, Learning and Evaluation Process:

Description	Observation
Curriculum Development and/or Implementation; Industry Personnel Contribution in the design of Curriculum and Delivery; Elective/CBCS Implementation; Contemporary Topics	Satisfactory Scope for improvement exists
Cross Cutting Issues – Ethics, Values, Gender, Environment, Sustainability, Society Contribution, Quality, Safety, Business Laws, Constitution, Human Anatomy Etc	Quality, Safety Engg, Human Anatomy etc can be 1-Credit Courses
Relevance of Courses towards Employability/Skill Development; Initiatives of Departments/Programs towards	Plan for Life Skills Programs; English Communication Programs; Global Certifications

Employability/Higher Studies; Value Added Courses, Add-on Courses, Life-Skills Programs, Certificate/Diploma Courses etc.	
Curriculum/TLE - Innovation/Uniqueness;	CDIO – Good; OBE-Satisfactory
TLE-Whether Systemized; Academic Calendar; Co/Extra Curricular Calendar	Systemized. Good in some depts. Some Depts-Not Satisfactory. Teachers' Notes of lesson – To be made available; Co/Extra Curricular Calendars
Real World Examples in Course Files/Course Delivery	Missing; To Improve
Use of LCD Projectors, ICT Tools; NPTEL, SWAYAM & MOOC; Credit Transfer for Online equivalent courses	Focus on NPTEL, Swayam, TCE-MOOC; More Credit Transfer for Swayam/NPTEL etc.
Slow & Advanced Learners, Bridge Courses, blended, flipped, project based learning	Model/Mini-Projects in Non-Lab Courses
Makeup & Remedial Classes; Tutorial Classes, Evidences	Available; To improve further
Quality of Question Papers, Assignments	To Improve further; Relevance to COs/POs, Bloom Taxonomy
Ambience of Labs; Quality of Equipment; Advanced Equipment for research	Satisfactory; Allocate Funds for Continuous Improvements
Labs, cost of labs, quality of equipment, renovations/advanced equipment – last 3 Years	Good; To Improve further
Labs - Research Lab/Project Lab/Skill Development Lab; Industry Sponsored Labs	Available; Focus on more Industry Sponsored Labs/Skills Lab/Global Certification;
Labs Timings; Library Timings.	Lab: Up-to 6-7 PM on rotation basis; Drop at Bus-Stop; Library-On Sunday;
Students/Faculty use of advanced equipment/facilities in TARC, TVS-TCE Facilities etc	To Improve; Associate facilities to Depts. For better Utilization
Industry Internships, Projects at Industries, Industrial visits & Impact	Industry Internships & Year long project at Industries for fast learners
Entrepreneurship Initiatives, Start-up Facilities	Exists; Motivate for Products Development/Incubation
Students Counseling/Mentoring, Psychological Counseling	Available; Have provision for Psychological Counseling
<u>SUGGESTIOS/REMARKS FOR FUTHER IMPROVEMENTS:</u>	
A) Curriculum at 1 st Year – Improve with Innovation; Design Thinking; Models/Prototype Lab; Focus on Students' overall improvements; British English/Cambridge English Certification for 1 st Year; Students Membership in Clubs/NSS/NCC – Improve; Students' participation in more Clubs; More Guest Lecturers towards PO6/PO7/PO8; Activities towards P12-Life Long Learning. B) Curriculum – Contemporary Topics; Seminar Topics/Guest Lecturers on Advanced Topics C) Curriculum – More Innovations; More Inter-Disciplinary Course Options; Subjects/Courses as per Students' Choice D) Courses on Safety Engineering, Quality, Human Anatomy, Indian History, Constitution etc E) Plan for Life Skills Programs like 2/4-Wheeler Driving, Swimming, Yoga, Electrical Appliances Maintenance; Computers/Mobile repairing; 2/4 Wheeler Maintenance etc. F) All Theory Courses (not having relevant labs) – Plan for mini projects/prototypes G) Streamline Mentor-Mentee (program-level) & Psychological counseling at the Institute level. H) Make Industry Internships/Projects at Industry mandatory. I) Focus on Start-Up/Incubation/Innovation/Creativity.	

IV. Course Files/Course HandOuts/Lab Manuals/Students' Projects/Project Lab

Description	Observation
Lesson Plan	Available
Notes of Lesson/Faculty Reference Materials	In some departments, Not readily available ; Faculty Members advised to maintain; Preferably handwritten /PPT
Internal Question Papers/Assignments Vs COs & Bloom Taxonomy	Please ensure. Advise Faculty to map COs to Assignments.
Evidence for Internal Marks - Transparency	Transparent
Assessment of COs & CQI	CQI at Test-wise, COs level Missing
Course HandOuts	Plan for the same
List of Experiments with POs Attained.	Experiments Vs PO – Mark the same
Faculty/Student/Master Reading-Reference Manual	1 Lab Manual can have Experiments Standard Input and Output Values!
Students' Lab Records Corrections – Whether OK	Not Ok in some departments. Each individual Experiment should have Date of Correction. Index Page to have distributed Dates
Quality of Project Models, Relevance to POs; Quality of Project Reports	Project Reports Quality can be Improved.
Whether any Project to Paper Publication; Prizes won;	Exists; But motivate for more !
Project Evaluation – Transparency & Assessments of POs;	Transparent. Have Rubrics for Project Assessments of POs
Assessment of Individual & Team-Work;	Have Rubrics.
Projects Labs	Display Working Project Models
SUGGESTIOS/REMARKS FOR FUTHER IMPROVEMENTS:	
1) Real-world Examples in Course Files; Especially in Mathematics; Physics; Chemistry 2) Coverage/Discussion on Contemporary Topics in all subjects; in all Course files 3) All Internal Question Papers/Assignments – COs and Bloom Taxonomy; COs Assessments/Attainments; Testwise/CO-Wise Corrective Actions 4) Consolidate COs Corrective Actions towards POs Attainments & Corrective Actions. 5) Lab Manuals – Experiments Vs POs Attained. 6) Project Reports – VM of Institute; VMPEOPOPSO of Programs(1 st 2/3 Pages) POs Attainments at Abstract/Synapsis; Conclusion Chapter – POs Attained along with justification. 7) List of Projects to Paper, Projects Vs Products	

INSTITUTE LEVEL

V. Infrastructure (Institute/Departments)

Description	Observation
Number of Class Rooms, Labs, Projects Labs, R&D Labs/PG Labs, eClass Rooms, Seminar Halls, Tutorial Rooms	Available; Good; Plan for More Industry Sponsored Labs; Skills Development Lab in all programs

Quality of Lab Equipment, Advanced/Research Equipment, Continuous Improvement of Labs Resources, Infrastructure etc.	Available; Good Plan for Advanced/Research Equipment/Software/Modern Labs like AI/Robotics/Drones/MAC etc
Library – Books/Journals, eBooks/eJournals, Rare Books, Digital Databases, Standard Books, Lib Automation, Study Cabins, Digital Library, Ambience.	Good. Ambience/Furniture can be modernized.
Computing & ICT Tools; Internet – Speed, Security, Wifi Availability; Video Conference Facilities	Good. Plan for 2 GB Speed via Airtel/Jio
Maintenance of Infrastructure – Buildings, Greenery, Students’ Toilets; Neatness and Cleanliness;	To Improve further. Students/Faculty Toilets in College Campus, Hostels, Guest House-Ensure Cleanliness, Regular Cleaning etc.
Resources for Disabled Students – Lifts, Ramps, Toilets, Exam Support System etc	Available
Other Infrastructure – Transport, Hostels, Mess, Canteen, Sports, Gym, Yoga etc.	Available.
Environmental Consciousness; Green Audit; Energy Audit; Greenery; Plantation; Alternate Energy Sources; LED Bulbs	Available.
<u>SUGGESTIOS/REMARKS FOR FUTHER IMPROVEMENTS:</u> <ol style="list-style-type: none"> 1) Advise Heads to plan for Continuous Improvement of Lab facilities; 2) Advise Heads to plan for more Industry Sponsored Labs, Skills Development Labs etc. 3) Plan for High Speed Internet (as there are 4500 students in the Campus). 4) Hostel Rooms – Modernize/Renovate. 5) Solar Power Capacity Can be Improved to meet Institute’s Power Requirements. 6) Green Energy Generation and % of Meeting Institute Requirements. 	

VI. GOVERNANCE/LEADERSHIP/FINANCE/BUDGETING Etc.

Description	Observation
Vision/Mission/Values/Leadership	Available; Good
GB, Academic Council, BOS, Finance Committee, Grievances Redressal, Women Empowerment, Various Committees, Members, Minutes etc.	Available; Students’ Participation in Various Committees - Improve
Decentralization and Delegation	Visible
Financial Powers – Delegation etc.	Visible
Faculty Selection and Promotions; Transparency, Minutes	Available;
AICTE Scale of Pay;	Implemented for Aided Stream. SF Stream – Please improve.
HR Policies & Awareness	Awareness - Improve
Faculty/Staff/Students-Incentives/Rewards;	Available; Improve further
Consistency of data at Institute/Program level; AICTE/University/NBA/NAAC/AISHE	Yes.

Institute level budgeting; % towards Salary, Library, Faculty Development, Students' Development, Sports/Games, Placements etc. Transparency	Available; To be streamlined! Funds to be allocated and utilized as per budgets.
Feedback from Stake-holders on Curriculum, Infrastructure, Development – Final Yr Students, Parents/Industry/Alumni etc. Frequency; Corrective Actions	Available; Consolidate Inputs; Maintain Action Taken Reports
IQAC and Its Contribution towards Quality Education, Minutes, Corrective Actions, NBA/NAAC Compliance Reports/AQAR	Good. Involve Alumni, Students etc.
Quality Initiatives - NBA, NAAC, NIRF, Atal Innovation, Govt Skill Development Initiatives, FDPs on Quality, Pedagogy, Research etc.	Initiated; Good; Atal Innovation - Plan
Best Practices, Implementation & Impact	Visible; Highlight at Websites
Institute/Department SWOT, Strategic Plans- Curriculum, TL, Examination, R&D, ICT, Library, HR, Students Admission, Industry Interaction etc; Deployment; Review in Strategic Bodies.	Available; Place at Website.
eGovernance – Planning & Development, Administration, Finance & Accounting, Students Admission and Support, Examination etc.	Practiced!
Perspective Plans/Growth/Future Plans – Next 3/5/10 Years.	Place it at Website
Growth & Excellence since Inception, Institute's Uniqueness/Distinctiveness	Visible; Highlight; Display at prominent places.
<u>SUGGESTIOS/REMARKS FOR FUTHER IMPROVEMENTS:</u> <ol style="list-style-type: none"> 1) Make Scale of Pay as per AICTE 6th/7th Pay; DA Can be planned. 2) Faculty Incentives/Rewards:: Plan for Unique Incentives/Rewards 3) Institute Perspective Plans/Growth Plans – Next five/ten Years 4) Students' Memberships in various committees. 5) Transparent HR Policies Hand Book.. 6) % of Various Budgetary Components. 7) Strategic Plans/Perspective Plans – At the Website. 	


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