



# K.RAMAKRISHNAN COLLEGE OF ENGINEERING



Permanently Affiliated to Anna University Chennai and Approved by AICTE, New Delhi  
ISO 9001:2015 Certified Institution. Accredited with 'A' grade by NAAC  
Samayapuram, Trichy, Tamilnadu

## EXTERNAL ACADEMIC AUDIT ANALYSIS

ACADEMIC YEAR 2023-24

DATES: 05.04.2024 & 10.04.2024

*J. Pravin Varma*  
15/04/2024  
PRINCIPAL

PRINCIPAL

K Ramakrishnan College of Engineering  
(Autonomous)  
Samayapuram, Tiruchirappalli - 621 112

**K.K. MAKRISHNAN COLLEGE OF ENGINEERING (AL. ONOMOUS)**

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**K. RAMAKRISHNAN COLLEGE OF ENGINEERING  
(Autonomous)**



**Samayapuram, Tiruchirappalli-621 112**

Permanently affiliated to Anna University Chennai, Approved by AICTE New Delhi

ISO 9001:2015, 14001:2015 certified Institution,

Accredited by NBA (MECH, ECE, CSE & EEE) and with "A" grade by NAAC

**ACADEMIC YEAR 2023-24**

**Internal Quality Assurance Cell**

**External Academic Audit – ODD semester**

**Date: 15.04.2024**

S.No.	Department	Comments on SWOC Analysis
1.	B.E. - CSE	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>➤ Academic activities</li> <li>➤ Student Projects</li> <li>➤ Placements</li> <li>➤ Patents</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>➤ Funded projects</li> <li>➤ GPU facilities for AIML projects</li> <li>➤ Course on Ethics and Human values</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>➤ Patents opens path for entrepreneurship</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>➤ Converting projects to products</li> <li>➤ Adopting to frequently changing trends in the field of CS.</li> </ul>
2.	B.E. - ECE	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>➤ Good teamwork and coordination among faculty members is good.</li> <li>➤ More faculty members have Ph.D and almost all have registered for Ph.D.</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>➤ Less placement in public sectors.</li> <li>➤ Placement with higher salary package is less.</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>➤ Social responsible innovation projects can be improved.</li> <li>➤ Start-up and incubation centre.</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>➤ Getting placement in core industry and public sector.</li> <li>➤ Collaboration with other institutes and foreign universities.</li> <li>➤ Getting more fundings from government agencies.</li> <li>➤ Admissions from other states.</li> </ul>
3.	B.E. - EEE	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>➤ All the files are well maintained.</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>➤ Pedagogical training, Student internship training.</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>➤ MSME, IET, PM and CM Schemes.</li> </ul>

		<b>Challenges:</b> <ul style="list-style-type: none"> <li>➤ PG Admissions</li> <li>➤ Core placements with higher package.</li> </ul>
4.	<b>B.E. - MECH</b>	<b>Strengths:</b> <ul style="list-style-type: none"> <li>➤ Higher student faculty ratio</li> <li>➤ Dedicated and sincere faculty members</li> <li>➤ Well prepared documentation for audit and course file.</li> </ul> <b>Weaknesses:</b> <ul style="list-style-type: none"> <li>➤ Less number of students are going for higher studies and publications.</li> <li>➤ Less number of sponsored projects and consultancy.</li> <li>➤ Career guidance cell to be started.</li> </ul> <b>Opportunities:</b> <ul style="list-style-type: none"> <li>➤ Explore the technical support to industries.</li> <li>➤ Enhance the quality of faculty research.</li> </ul> <b>Challenges:</b> <ul style="list-style-type: none"> <li>➤ PG and UG admissions</li> <li>➤ To obtain the sponsored projects and research related equipments.</li> </ul>
5.	<b>B.Tech - IT</b>	<b>Strengths:</b> <ul style="list-style-type: none"> <li>➤ Good record maintenance</li> <li>➤ Faculty work as a team</li> <li>➤ Faculty meeting is conducted by the HOD regularly.</li> <li>➤ Placement percentage is good.</li> </ul> <b>Weaknesses:</b> <ul style="list-style-type: none"> <li>➤ Focus more on unpaid publications and attend international conferences.</li> </ul> <b>Opportunities:</b> <ul style="list-style-type: none"> <li>➤ Faculties must register Ph.D.</li> <li>➤ FDP can be organized for faculty members.</li> <li>➤ Involve the students in societal activities.</li> </ul> <b>Challenges:</b> <ul style="list-style-type: none"> <li>➤ Students and faculties can update and meet industrial expectations</li> <li>➤ Send / encourage students to do internship in reputed industry in india / foreign.</li> </ul>
6.	<b>B.Tech - CSBS</b>	<b>Strengths:</b> <ul style="list-style-type: none"> <li>➤ Dedicated faculty.</li> <li>➤ Good students intake with high cutoff.</li> </ul> <b>Weaknesses:</b> <ul style="list-style-type: none"> <li>➤ Only one lab available for the department.</li> <li>➤ Additional labs have to be established.</li> <li>➤ Research and consultancy can be improved.</li> </ul> <b>Opportunities:</b> <ul style="list-style-type: none"> <li>➤ Open elective courses can be offered by other deaprtments.</li> </ul> <b>Challenges:</b> <ul style="list-style-type: none"> <li>➤ Lab and software resources should be updated every year according to the technological changes.</li> </ul>
7.	<b>B.Tech - AI&amp;DS</b>	<b>Strengths:</b> <ul style="list-style-type: none"> <li>➤ Dedicated faculty members.</li> </ul>

		<ul style="list-style-type: none"> <li>➤ Students with high cut-off.</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>➤ Specialized lab for AIDS can be established.</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>➤ Seed fund can be granted to faculty members to pursue research.</li> <li>➤ GATE/CAT coaching can be provided.</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>➤ Technology changes have to be taught to the students.</li> <li>➤ Curriculum and syllabus has to be continuously updated.</li> </ul>
8.	<b>B.Tech - AI&amp;ML</b>	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>➤ Dedicated faculty members</li> <li>➤ Students with good cut-off marks</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>➤ Specialized lab for AI can be established.</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>➤ Seed fund can be granted to faculty members to pursue research.</li> <li>➤ GATE/CAT coaching can be provided.</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>➤ Technology changes have to be taught to the students.</li> <li>➤ Curriculum and syllabus has to be continuously updated.</li> </ul>
9.	<b>M.B.A - Master of Business Administration</b>	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>➤ Good faculty members (5 Doctrate faculty).</li> <li>➤ Good classroom environment.</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>➤ No separate lab for MBA students.</li> <li>➤ Faculty should focus on research publications.</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>➤ Arrange FDP and workshop for other college faculties.</li> <li>➤ Produce eligible entrepreneurs to the society.</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>➤ Focus on consultancy, Industry-academia interaction.</li> </ul>
10.	<b>Mathematics</b>	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>➤ Co-ordination.</li> <li>➤ Good Ph.D ratio.</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>➤ Publications, patents and funds</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>➤ To learn new mathematical tools like R-Programming and MATLAB.</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>➤ Research funding.</li> </ul>
11.	<b>Physics</b>	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>➤ Faculty Co-ordination and good Ph.D ratio.</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>➤ Publications in high impact factor journals.</li> <li>➤ Funded projects.</li> </ul> <p><b>Opportunities:</b></p>

		<ul style="list-style-type: none"> <li>➤ R&amp;D centre.</li> <li>➤ Innovative teaching.</li> </ul> <b>Challenges:</b> <ul style="list-style-type: none"> <li>➤ Research funding.</li> <li>➤ Publications in high impact factor journals.</li> </ul>
12.	<b>Chemistry</b>	<b>Strengths:</b> <ul style="list-style-type: none"> <li>➤ Co-ordination.</li> <li>➤ Good Ph.D ratio.</li> </ul> <b>Weaknesses:</b> <ul style="list-style-type: none"> <li>➤ Research funding.</li> </ul> <b>Opportunities:</b> <ul style="list-style-type: none"> <li>➤ R&amp;D centre.</li> <li>➤ Innovative teaching.</li> </ul> <b>Challenges:</b> <ul style="list-style-type: none"> <li>➤ Research funding.</li> </ul>
13.	<b>English</b>	<b>Strengths:</b> <ul style="list-style-type: none"> <li>➤ Co-ordination.</li> </ul> <b>Weaknesses:</b> <ul style="list-style-type: none"> <li>➤ Research Publication</li> </ul> <b>Opportunities:</b> <ul style="list-style-type: none"> <li>➤ Innovative teaching.</li> </ul> <b>Challenges:</b> <ul style="list-style-type: none"> <li>➤ Research funding.</li> </ul>



Principal

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**ACADEMIC YEAR 2023-24**

**Internal Quality Assurance Cell**

**Internal Academic Audit -Odd Semester**

**Date:28.03.2024**

S.No.	Department	Comments on SWOC Analysis
1.	B.E - CSE	<p><b>Strengths:</b></p> <ul style="list-style-type: none"><li>➤ Dedicated faculty</li><li>➤ File Maintenance</li><li>➤ Giving importance to weak students</li><li>➤ Placement</li></ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"><li>➤ Funded Projects</li><li>➤ Consultancy</li><li>➤ Industry Collaboration</li></ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"><li>➤ Unpaid Journal Publication</li><li>➤ Entrepreneurship</li></ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"><li>➤ Journal Publication</li><li>➤ Funded projects</li><li>➤ Guest Lecture</li></ul>
2.	B.E - ECE	<p><b>Strengths:</b></p> <ul style="list-style-type: none"><li>➤ Good Team work</li><li>➤ Research in different areas</li></ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"><li>➤ Encourage students to participate in co-curricular,NPTEL exams,Online courses.</li></ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"><li>➤ Scope on collaboration activities</li></ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"><li>➤ Creating entrepreneurs.</li></ul>
3.	B.E- EEE	<p><b>Strengths:</b></p> <ul style="list-style-type: none"><li>➤ Good number of faculty participation in various activities.</li><li>➤ Well framed curriculum with multidisciplinary courses.</li><li>➤ Involvement in online courses,publications and core placements.</li></ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"><li>➤ Entrepreneurship development for students</li><li>➤ Students participation in Co-curricular and Extra-curricular activities are moderate.</li></ul>

		<ul style="list-style-type: none"> <li>➤ Innovations in teaching.</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>➤ Centre of Excellence for cutting edge technologies.</li> <li>➤ Start-up for E-Vehicles</li> <li>➤ Core industry career development for students.</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>➤ Student participation in national and international level with financial needs.</li> <li>➤ Research collaborations with industries.</li> <li>➤ PG admissions and full time scholars for pursuing Ph.D.</li> <li>➤ Placement for students in top electrical core companies.</li> </ul>
4.	<b>B.E-MECH</b>	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>➤ Faculty coordination.</li> <li>➤ Laboratory facilities.</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>➤ PG admission.</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>➤ Industrial consultancy to be improved.</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>➤ Placement in core company.</li> </ul>
5.	<b>B.Tech-AI&amp;DS</b>	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>➤ Faculty participation in all extracurricular activities.</li> <li>➤ Japanese Course Registered students have cleared.</li> <li>➤ MOU has signed with International Company (German)</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>➤ Have to focus more on research oriented activity.</li> <li>➤ Faculty outreach is very low.</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>➤ Students has to get internship with stipend.</li> <li>➤ Encourage faculty to register for Ph.D</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>➤ To cope up with new technological updation.</li> <li>➤ Specific certifications is mandatory.</li> </ul>
6.	<b>B.Tech-AI&amp;ML</b>	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>➤ Faculty participation in all the extracurricular activities.</li> <li>➤ Students have completed Japanese and French course.</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>➤ Faculty outreach need to be improved.</li> <li>➤ Focus more on research oriented activity.</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>➤ More placement opportunities for AI.</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>➤ To cope-up with new technological skills.</li> </ul>



7.	<b>B.Tech-CSBS</b>	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>➤ Team work with good coordination.</li> <li>➤ Being open to receive input guidance from others.</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>➤ Placement ,Research &amp; Consultancy.</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>➤ Initiate consultancy &amp; funded project work</li> <li>➤ Get guidance from NBA accredited department for file maintenance / organization.</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>➤ Organizing and identifying files based on check list.</li> </ul>
8.	<b>B.Tech- IT</b>	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>➤ Faculty team work</li> <li>➤ Outreach activities to the society</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>➤ Students need to participate in competitive examinations.</li> <li>➤ Faculty publications.</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>➤ Faculty have to register Ph.D</li> <li>➤ Students must involve in Hackathon &amp; Entrepreneurship activities like product development.</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>➤ Students are need to meet industrial expectation.</li> <li>➤ Global certification.</li> </ul>
9.	<b>Mathematics</b>	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>➤ Well qualified faculty members and more than 70% of the staffs are completed Ph.D</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>➤ Need to do more number of publications, patents and fundings.</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>➤ To learn new mathematical tools like R-programming and MATLAB.</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>➤ To remove fear about subject and to create interest among the students, teach fundamental concepts of mathematics with joy.</li> <li>➤ To publish journals with high impact factors.</li> </ul>
10.	<b>Physics</b>	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>➤ State of art laboratory, highly qualified and well experienced faculty members.</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>➤ Need to receive research funding.</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>➤ To conduct research activities, FDP , workshop &amp;</li> </ul>

		<p>conferences.</p> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>➤ To publish journals in high impact factors &amp; student projects.</li> </ul>
11.	<b>Chemistry</b>	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>➤ Well qualified faculty members and more than 70% of the staffs are completed Ph.D</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>➤ Need to receive research fund.</li> <li>➤ Increase publications and patents.</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>➤ To conduct research programmes.</li> <li>➤ To improve consultancy projects.</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>➤ To create more student projects and convert the projects to scopus publication.</li> </ul>
12.	<b>English</b>	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>➤ Securing 100% results in end semester exam.</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>➤ Need to improve publications, patents and funded projects.</li> <li>➤ NPTEL certifications.</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>➤ Activities through Shelly club, WEC to showcase their hidden talents.</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>➤ Research and Development.</li> </ul>
13.	<b>M.B.A- Master of Business Administration</b>	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>➤ Consistent students admission and academic performance.</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>➤ Need to improve student publication, patent filing and online courses.</li> </ul> <p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>➤ Value Added Courses</li> <li>➤ Innovative thinking</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>➤ To enhance the student skills with the corporate expectation.</li> </ul>

K. J. S.  
28/3/24  
IQAC



Dharmaraj  
Principal

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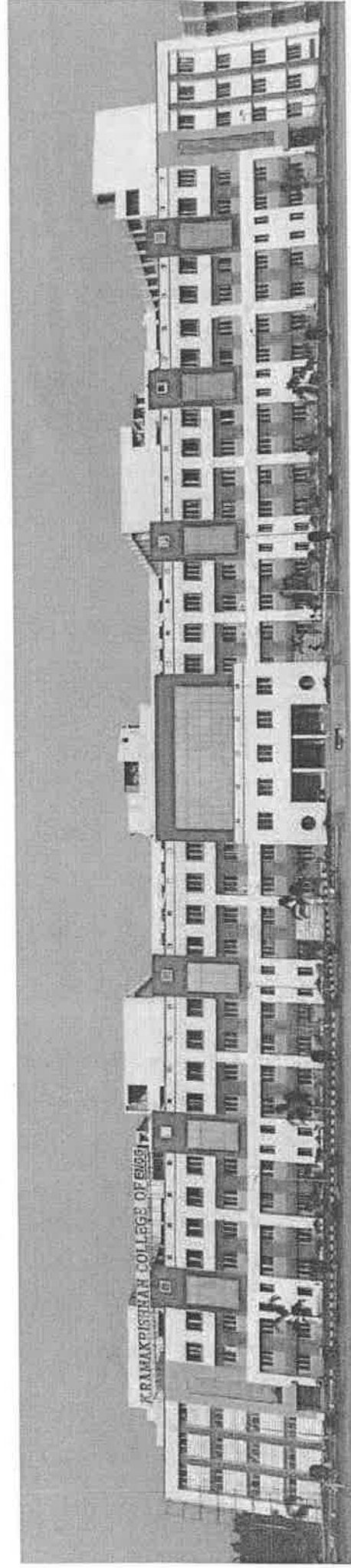
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## ACADEMIC AUDIT AND IMPLEMENTATION ACTIVITIES

Academic Year 2023-2024





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## ACADEMIC AUDIT AND IMPLEMENTATION ACTIVITIES

### Academic Year 2023-2024





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1.	Academic Audit
2.	Schedule of the Academic Audit
3.	Overall Assessment Report with ATR
4.	Academic Audit Mark Analysis Report
5.	Future Plan



# ACADEMIC AUDIT

- To promote **self reflection** among all departments being audited.
- To promote **self improvement measures** among all departments being audited.
- To conduct **quality checks** on different activities undertaken in all departments to meet expected outcomes.
- To promote adoption of **best practices**.



# Scope of Academic Audit

	<b>The audit team will assess the</b>
<b>1.</b>	<b>Design and development activities in curriculum.</b>
<b>2.</b>	<b>Teaching-learning Process.</b>
<b>3.</b>	<b>Student learning assessment process and student engagement programs.</b>
<b>4.</b>	<b>Activities involved in developing learning outcomes.</b>
<b>5.</b>	<b>The quality of resources and general ambience from perspective of meeting the learning outcome.</b>
<b>6.</b>	<b>Assess the quality and quantity of research outcomes.</b>
<b>7.</b>	<b>Opportunities and scope of Improvements in the major functional areas.</b>
<b>8.</b>	<b>Outreach programmes conducted by the college.</b>





# Academic Audits In KRCE

1.	<p>IQAC and Academic Affairs conducts department level academic audit three times every Academic year.</p> <p><b>Internal Audit : 02 (ODD &amp; EVEN SEM) ; External Audit : 01</b></p>
2.	<p>The Audit team will visit and conduct onsite evaluation through check of documents and interaction . The audit report will be prepared based on the academic audit check list. The <b>Audit report analysis</b> is done by the Principal in discussion with Department Heads and IQAC Members. Suggestions and appreciations are recorded.</p>
3.	<p>The suggestions and Appreciations are informed to the <b>department faculty members</b> by the HoD's and action taken report is submitted to IQAC.</p>
4.	<p><b>Consolidated audit summary</b> and <b>Action taken report</b> is presented during IQAC meeting in the presence of Principal, Department Heads &amp; IQAC Committee members.</p>
5.	<p><b>Recommendation of quality enhancements</b> are discussed and initiated during the IQAC meeting.</p>





## Schedule of the External Academic Audit 2022-2023

S.No	Department	Date & Time	Auditor's Name
1.	COMPUTER SCIENCE ENGINEERING	10.04.2024 09.00am-04.00 pm	Dr.S.Sangeetha, Associate Professor, Department of Computer Applications, National Institute of Technology Tiruchirappalli, Tiruchirappalli – 620015
2.	ELECTRONICS AND COMMUNICATION ENGINEERING	05.04.2024 09.00am-04.00 pm	Dr.R.L.Josephine, Assistant Professor, Department of EEE, National Institute of Technology Tiruchirappalli, Tiruchirappalli – 620015.
3.	ELECTRICAL AND ELECTRONICS ENGINEERING	10.04.2024 09.00am-04.00 pm	Dr.S.Senthil Kumar, Professor, Department of EEE, National Institute of Technology Tiruchirappalli, Tiruchirappalli - 620015.



## Schedule of the External Academic Audit (Contn..)

S.No.	Department	Date & Time	Auditor's Name
4.	MECHANICAL ENGINEERING	05.04.2024 09.00 am - 04.00 pm	Dr.S.Suresh, Professor, Department of Mechanical Engineering, National Institute of Technology Tiruchirappalli, Tiruchirappalli – 620015.
5.	INFORMATION TECHNOLOGY	05.04.2024 09.00 am - 04.00 pm	Dr.V.Lavanya, Associate Professor, Department of Management Studies, National Institute of Technology Tiruchirappalli, Tiruchirappalli – 620015.
6.	COMPUTER SCIENCE AND BUSINESS SYSTEMS	10.04.2024 9.00 am -04.00 pm	Dr.E.SIVASANKAR, Associate Professor, Department of CSE, National Institute of Technology, Tiruchirappalli - 620 015
7.	ARTIFICIAL INTELLIGENCE AND DATA SCIENCE	10.04.2024 9.00 am -04.00 pm	Dr.E.SIVASANKAR, Associate Professor, Department of CSE, National Institute of Technology, Tiruchirappalli - 620 015



## Schedule of the External Academic Audit (Contn..)

S.No	Department	Date & Time	Auditor's Name
8.	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING	10.04.2024 09.00 am -04.00 pm	Dr.E.SIVASANKAR, Associate Professor, Department of CSE, National Institute of Technology, Tiruchirappalli - 620 015
9.	MASTER OF BUSINESS ADMINISTRATION	05.04.2024 09.00 am-04.00 pm	Dr. V. Lavanya, Associate Professor, Department of MBA, National Institute of Technology, Tiruchirappalli - 620 015
10.	SCIENCE & HUMANITIES	10.04.2024 09.00 am -04.00 pm	Dr. S.Velmathi, Professor, Department of Chemistry, National Institute of Technology, Tiruchirappalli - 620 015



# **AUDIT ASSESSMENT DETAILS**

## **(Parameters Stipulated by NBA & NAAC)**

<b>CRITERIA 1</b>	<b>Vision, Mission and Program Educational Objectives</b>
<b>CRITERIA 2</b>	<b>Program Curriculum and Teaching Learning Process</b>
<b>CRITERIA 3</b>	<b>Course outcome and Program Outcome</b>
<b>CRITERIA 4</b>	<b>Students Performance</b>
<b>CRITERIA 5</b>	<b>Faculty Information and Contribution</b>
<b>CRITERIA 6</b>	<b>Facilities and Technical Support</b>
	<b>General files</b>



## **Criteria 1 : Vision, Mission and Program Educational Objectives**

- 1. Vision and Mission of the Department and Institute.**
- 2. Program Educational Objectives (PEOs)**
- 3. Where and how the Vision, Mission and PEO's are published and disseminated among stakeholders**
- 4. Process for defining the Vision and Mission of the Department and PEO's of the program**
- 5. Establish consistency of PEOs with Mission of the Department.**



## **CRITERIA 1: VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES**

### **Audit Report (Department Wise)**

<b>S.No.</b>	<b>Department</b>	<b>External Audit Member Suggestions</b>	<b>Action Taken</b>
<b>1.</b>	<b>COMPUTER SCIENCE ENGINEERING</b>	<b>NIL</b>	<b>NIL</b>
<b>2.</b>	<b>ELECTRONICS AND COMMUNICATION ENGINEERING</b>	<b>NIL</b>	<b>NIL</b>
<b>3.</b>	<b>ELECTRICAL AND ELECTRONICS ENGINEERING</b>	<b>NIL</b>	<b>NIL</b>
<b>4.</b>	<b>MECHANICAL ENGINEERING</b>	<b>Regularly conduct PAMC meeting and include stakeholders in the meeting.</b>	<b>PAMC meeting to be planned every semester and stakeholders to be added in future meetings.</b>
<b>5.</b>	<b>INFORMATION TECHNOLOGY</b>	<b>The vision need to be modified slightly.</b>	<b>Will be considered.</b>
<b>6.</b>	<b>COMPUTER SCIENCE AND BUSINESS SYSTEMS</b>	<b>The visibility of the Vision, Mission and PEO's statement can be improved.</b>	<b>Statements are to be displayed in foam board.</b>



## Criteria 1: Vision, Mission and Program Educational Objectives Audit Report (Department Wise) (Contn..)

S.No.	Department	External Audit Member Suggestions	Action Taken
7.	ARTIFICIAL INTELLIGENCE AND DATA SCIENCE	The curriculum and syllabus need to be consistently refreshed to align with the latest technological advancements.	2023 Curriculum and syllabus updated to embrace cutting-edge technologies.
8.	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING	The curriculum and syllabus need to be consistently refreshed to align with the latest technological advancements.	2023 Curriculum and syllabus updated to embrace cutting-edge technologies.
9.	MASTER OF BUSINESS ADMINISTRATION	<ol style="list-style-type: none"><li>1. “Prominent” word should be changed in Institutional Vision and mission.</li><li>2. In PEO’s “Post graduates” term can be renamed as “Professional students”</li><li>3. In PO1 replace the term Environmental issues into other issues</li></ol>	Communicated to respective Higher Authority for further action.



## Criteria 1: Vision, Mission and Program Educational Objectives Audit Report (Department Wise) (Contn..)

S.No.	Department	External Audit Member Suggestions	Action Taken
10.	SCIENCE & HUMANITIES (MATHEMATICS)	NIL	NIL
11.	PHYSICS	A uniform format should be followed for the vision and mission of the department.	As per suggestions, a uniform format has been followed for vision and mission statements.
12.	CHEMISTRY	NIL	NIL
13.	ENGLISH	Uniform format should be maintained for vision and mission.	Uniform format is maintained.





## Criteria 2: Program Curriculum and Teaching Learning Process

### Audit Report (Department Wise)

	Criteria 2 : Program Curriculum and Teaching Learning Process
1.	Structure of curriculum
2.	Components of curriculum
3.	Curricular gap analysis
4.	Approval by BoS
5.	Approval by Academic Council and Governing Body
6.	Value Added Courses
7.	NPTEL Courses
8.	Elective and Open Courses
9.	Employability/Entrepreneurship/ Skill development courses
10	Stakeholder feedback on curriculum, design and review of syllabus (From Faculty, Alumni, Employers and students)
11.	Process followed to improve Teaching Learning Process Academic Calendar/Event calendar Work load, Class Timetable, Lesson Plan Log book, Course File, Pedagogical initiatives, Methodologies to support weak students and encourage bright students, Conduct of experiments and assessment (Observation in lab), Student feedback in teaching learning process



## Criteria 2: Program Curriculum and Teaching Learning Process Audit Report (Department Wise)

	Criteria 2 : Program Curriculum and Teaching Learning Process (Contn.)
12.	Quality of End semester examination, internal semester question papers, assignment and evaluation, Periodical Test Question, Scheme of Evaluation, Question Bank, Previous University Questions, Content beyond Syllabus, Continuous Internal Assessment mark, Web portal Entry, Periodical CIA review Analysis, End Semester Result Analysis
13.	Quality of student projects
14.	Initiatives related to industry interaction , industry internship /summer training (Industry supported labs, industry involved program design and curriculum, industrial trainings, industrial/internship training)



## Criteria 2: Program Curriculum and Teaching Learning Process (Contn..)

S.No.	Department	External Audit Member Suggestions	Action Taken
1.	COMPUTER SCIENCE ENGINEERING	<ol style="list-style-type: none"><li>1. Artificial Intelligence and Machine Learning courses can be merged to single course.</li><li>2. More number of students can be encouraged to register for NPTEL courses and also it can be integrated to curriculum.</li><li>3. Open electives to be offered for other departments.</li><li>4. AI and ML based skill courses can be included in Employability/Entrepreneurship/Skill development courses.</li><li>5. Simulations and tutorials can be added in pedagogical initiatives.</li></ol>	<ol style="list-style-type: none"><li>1. Course has been included in the 2023R Curriculum</li><li>2. More students have registered and cleared the NPTEL exams</li><li>3. Through Minor course the students are doing other department courses</li><li>4. Gen AI has been planned</li><li>5. Tutorials included for problematic courses</li></ol>



## Criteria 2: Program Curriculum and Teaching Learning Process (Contn..)

S.No.	Department	External Audit Member Suggestions	Action Taken
2.	ELECTRONICS AND COMMUNICATION ENGINEERING	<ol style="list-style-type: none"><li>1. Structure to be included in curriculum</li><li>2. In 3<sup>rd</sup> semester multidisciplinary courses should be included.</li><li>3. Staff selection commission coaching can be included as elective in career skill development.</li><li>4. Socially responsible innovations should be included as a mandatory subject.</li><li>5. The value-added course and NPTEL course should be selected based on 3 criteria such as Innovations, Entrepreneurship and Placements.</li></ol>	<ol style="list-style-type: none"><li>1. Structure will be included in curriculum</li><li>2. Multidisciplinary courses will be included in the curriculum.</li><li>3. Staff selection commission coaching has been planned to implement in next year.</li><li>4. Socially responsible innovations will be included as a mandatory subject.</li><li>5. The value-added course and NPTEL course will be selected based on the mentioned criteria.</li></ol>



## Criteria 2: Program Curriculum and Teaching Learning Process (Contn..)

S.No.	Department	External Audit Member Suggestions	Action Taken
3.	ELECTRICAL AND ELECTRONICS ENGINEERING	<ol style="list-style-type: none"><li>1. Pedagogical Initiative: Faculty from NITTR may be called to train our faculty.</li><li>2. Assignments: Analysis and problems may be given as assignments instead of theory oriented topic.</li></ol>	<ol style="list-style-type: none"><li>1. Will be considered in future.</li><li>2. Considered and implemented.</li></ol>



## Criteria 2: Program Curriculum and Teaching Learning Process (Contn..)

S.No.	Department	External Audit Member Suggestions	Action Taken
4.	MECHANICAL ENGINEERING	<ol style="list-style-type: none"><li>1. Curriculum feedback from the employers to be considered.</li><li>2. More open electives have to be offered.</li><li>3. Train faculties for usage of modern tools.</li><li>4. Promote industry-oriented projects.</li><li>5. More initiatives for industry interactions.</li></ol>	<ol style="list-style-type: none"><li>1. Feedback to be collected from the employers regarding the framing of curriculum.</li><li>2. More open elective to be planned in the future semester.</li><li>3. Faculties to be trained for smart class usage.</li><li>4. More industrial visits to be planned for all year students.</li><li>5. Students to be motivated for doing industry-oriented projects.</li></ol>



## Criteria 2: Program Curriculum and Teaching Learning Process (Contn..)

S.No.	Department	External Audit Member Suggestions	Action Taken
5.	INFORMATION TECHNOLOGY	<ol style="list-style-type: none"> <li>Value added course need to be conducted for faculty also.</li> <li>In the NPTEL file, academic year must be mentioned.</li> <li>Prepare academic schedule also with academic calendar.</li> <li>In the time table 40 hours per week must be followed.</li> <li>CIA test timing must be reduced.</li> </ol>	<ol style="list-style-type: none"> <li>Value Added course is planned in the next academic year for the faculty.</li> <li>Academic year is mentioned in NPTEL file.</li> <li>Academic schedule will be prepared from next academic year.</li> <li>40 hours time table and CIA test time reduction will be considered.</li> </ol>
6.	COMPUTER SCIENCE AND BUSINESS SYSTEMS	<ol style="list-style-type: none"> <li>Open courses can be offered by Management Department.</li> <li>Mini projects can be offered as part of a course.</li> </ol>	<ol style="list-style-type: none"> <li>AWS, Azure courses were arranged for students.</li> <li>Planned to implement in upcoming semester.</li> </ol>



## Criteria 2: Program Curriculum and Teaching Learning Process (Contn..)

S.No.	Department	External Audit Member Suggestions	Action Taken
7.	ARTIFICIAL INTELLIGENCE AND DATA SCIENCE	Faculty members can prioritize courses offered on Coursera to enrich their teaching strategies.	Faculties were encouraged to sign up for the new courses on the Coursera platform for the upcoming academic year.
8.	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING	Faculty members can prioritize courses offered on Coursera to enrich their teaching strategies.	Faculties were encouraged to sign up for the new courses on the Coursera platform for the upcoming academic year.





## Criteria 2: Program Curriculum and Teaching Learning Process (Contn..)

S.No	Department	External Audit Member Suggestions	Action Taken
9.	MASTER OF BUSINESS ADMINISTRATION	<ul style="list-style-type: none"> <li>▪ Subject Title to be reframed for SWC, IRLW, OM and Summer Training</li> <li>▪ Digital signature from BOS Members</li> <li>▪ Value added courses during semester holidays</li> <li>▪ Electives to be floated among students</li> <li>▪ Academic calendar consolidation</li> <li>▪ Workload consolidation,</li> <li>▪ Pedagogical initiatives – ICT, Case studies, Activity based learning, supporting weak students- counseling, mentor mentee meetings, Application and real time oriented assignments topics to be improved, Application oriented and case studies can be asked in the continuous internal test question papers.</li> </ul>	<ul style="list-style-type: none"> <li>• Subject Title change will be implemented in the next BOS Meeting</li> <li>• Informed to BOS members</li> <li>• Will be considered in the coming semester holidays</li> <li>• Will be considered in the upcoming semester</li> <li>• Completed</li> <li>• Completed</li> <li>• ICT, Activity based learning, real time oriented assignments topics will be implemented in the current semester</li> </ul>



## Criteria 2: Program Curriculum and Teaching Learning Process(Contrn..)

S.No	Department	External Audit Member Suggestions	Action Taken
10.	SCIENCE & HUMANITIES (MATHEMATICS)	NIL	NIL
11.	PHYSICS	<ol style="list-style-type: none"><li>1. Details of the students who have completed NPTEL courses have to be given.</li><li>2. Slow learners should be taken special care for their improvement.</li><li>3. Make all the students perform the laboratory experiments individually.</li><li>4. Information regarding partiality can be added to student's feedback.</li></ol>	<ol style="list-style-type: none"><li>1. Details of NPTEL completion of students prepared.</li><li>2. Coaching classes and improvement tests have been conducted for slow learners.</li><li>3. Though students are doing many experiments individually, one or two students are combined for few experiments. These few experiments also will be done individually.</li><li>4. In the student feedback questionnaires on teaching-learning process, information regarding partiality will be added.</li></ol>



## Criteria 2: Program Curriculum and Teaching Learning Process(Contn..)

S.No.	Department	External Audit Member Suggestions	Action Taken
12.	CHEMISTRY	Make all the experiments done by the students individually	In this academic year volumetric analysis are already done by the students individually, electrical experiments were conducted by group experiment (3 members in a group). It is planned to conduct electrical experiments individually in the next academic year.
13.	ENGLISH	<ol style="list-style-type: none"><li>1. Details of the students who passed in NPTEL course have to be mentioned.</li><li>2. Information regarding partiality can be added in feed back.</li></ol>	<ol style="list-style-type: none"><li>1. It is mentioned.</li><li>2. It is included.</li></ol>



## **Criteria 3 : Course outcome and Program Outcome**

- 1. PO, PEO and CO**
- 2. CO Mapping with PO**
- 3. Assessment tools (Direct and Indirect)**
- 4. Course data sheet**
- 5. Innovative Teaching Methods**



## Criteria 3: Course outcome and Program Outcome

S.No	Department	External Audit Member Suggestions	Action Taken
1.	COMPUTER SCIENCE ENGINEERING	NIL	NIL
2.	ELECTRONICS AND COMMUNICATION ENGINEERING	NIL	NIL
3.	ELECTRICAL AND ELECTRONICS ENGINEERING	NIL	NIL
4.	MECHANICAL ENGINEERING	Training for faculty members for CO mapping with PO's.	Training to be planned for faculty members for CO mapping with PO's.



## Criteria 3: Course outcome and Program Outcome

S.No.	Department	External Audit Member Suggestions	Action Taken
5.	INFORMATION TECHNOLOGY	NIL	NIL
6.	COMPUTER SCIENCE AND BUSINESS SYSTEMS	NIL	NIL
7.	ARTIFICIAL INTELLIGENCE AND DATA SCIENCE	Faculties can enhance their teaching approach by incorporating additional innovative methods.	Faculties were encouraged to implement some more innovative teaching methodologies for the upcoming academic year.
8.	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING	Faculties can enhance their teaching approach by incorporating additional innovative methods.	Faculties were encouraged to implement some more innovative teaching methodologies for the upcoming academic year.
9.	MASTER OF BUSINESS ADMINISTRATION	NIL	NIL



## Criteria 3: Course outcome and Program Outcome

S.No.	Department	External Audit Member Suggestions	Action Taken
10.	SCIENCE & HUMANITIES (MATHEMATICS)	Assessment tools are more. It can be reduced from 8 to 4. ( 2 – test, 1 – assignment, 1 – activity is advisable )	Requested to the Head of IQAC to reduce the Assessment tools.
	PHYSICS	Assessment tools are more. It can be reduced from 8 to 4. Two tests, one assignment and one activity are advisable.	The academic council will decide. As of now present system is followed.
	CHEMISTRY	Assessment tools are more it can be reduced from 8 to 4 (2 - tests, 1 - assignment, 1 - activity is advisable.	Informed to the higher officials for consideration.
	ENGLISH	Assessment tools are more	It is informed that assessment tools can be reduced.



## Criteria 4 : Students Performance

- |    |   |
|----|---|
| 1. | a) Students Strength  |
|    | b) Student Profile  |
|    | c) Students participation in co- curricular activities      |
|    | d) Students participation in extracurricular activities     |
|    | e) Mini project/Projects                                    |
|    | f) Industrial/Field Visit/ Field work/In-plant Training     |
|    | g) Participation in competitive examinations                |
|    | h) Internships, Online courses                              |
| 2. | Achievements and awards                                     |
| 3. | Students receiving financial assistance from the Management |
| 4. | Graduation details  |
| 5. | Placement details   |
| 6. | Pursuing higher studies after graduation                    |





## Criteria 4 : Students Performance (Contn..)

7.	Students Drop-out details
8.	Students as Entrepreneurs
9.	Students Scholarships
10.	Student Publications
11.	a) Patent applied/published /granted
	b) Students participation in other states



## Criteria 4: Students Performance

### Academic Audit Report (Department Wise)

S.No.	Department	External Audit Member Suggestions	Action Taken
1.	COMPUTER SCIENCE ENGINEERING	<ol style="list-style-type: none"><li>1. Students are to be encouraged to write competitive exams.</li><li>2. Students are to be encouraged to pursue higher studies.</li><li>3. Students who have filed patents can be motivated to become Entrepreneurs.</li></ol>	<ol style="list-style-type: none"><li>1. Students have attended GATE exam preparation programmes</li><li>2. Master's degree student count has been increased</li><li>3. In progress</li></ol>
2.	ELECTRONICS AND COMMUNICATION ENGINEERING	<ol style="list-style-type: none"><li>1. Minimum of atleast 10 projects may be related to socially responsible innovative projects.</li><li>2. Internship to be done in central government sectors and research institutes.</li><li>3. Participation in competitive exams should be encouraged.</li><li>4. More students should pursue higher studies in IIT's, NIT's, foreign university, CEG, IIM's to be encouraged.</li><li>5. Students as Entrepreneur to be improved.</li></ol>	<ol style="list-style-type: none"><li>1. Students will be encouraged to do socially responsible innovative project.</li><li>2. Students will be instructed to do internship in government sectors and research institutes.</li><li>3. Students will be motivated to Participate in competitive exams.</li><li>4. Students will be encouraged to do higher studies in IIT's, NIT's, foreign university, CEG, IIM's.</li><li>5. Students Entrepreneurship will be improved.</li></ol>



## Criteria 4: Students Performance

S.No.	Department	External Audit Member Suggestions	Action Taken
3.	ELECTRICAL AND ELECTRONICS ENGINEERING	NIL	NIL
4.	MECHANICAL ENGINEERING	Motivation of students regarding higher education.	More awareness program was conducted regarding the higher studies and competitive exams.
5.	INFORMATION TECHNOLOGY	Maintain separate files for co-curricular and extra curricular activities.	Co-curricular and Extra Curricular files are separated.
6.	COMPUTER SCIENCE AND BUSINESS SYSTEMS	<ol style="list-style-type: none"><li>1. Industry visit can be planned for atleast 3 to 5 days.</li><li>2. Conference publications by students can be encouraged.</li></ol>	<ol style="list-style-type: none"><li>1. Considered for upcoming semester.</li><li>2. Students were encouraged and published papers in conference.</li></ol>



## Criteria 4: Students Performance

S.No.	Department	External Audit Member Suggestions	Action Taken
7.	ARTIFICIAL INTELLIGENCE AND DATA SCIENCE	<ol style="list-style-type: none"><li>1. Extend the duration of industrial visits to core companies beyond two days to facilitate deeper engagement and learning experiences.</li><li>2. Students can be motivated to have more conference publications and also motivating them to explore opportunities for participation in events held in different states.</li><li>3. Department can offer GATE/CAT coaching to students, which proves beneficial for their pursuit of higher education and beyond.</li></ol>	<ol style="list-style-type: none"><li>1. For the next academic year, we will request the management to consider extending the duration of industrial visits to core companies beyond the current two-day limit.</li><li>2. Students were encouraged to increase their conference publications and participate in the events held in other states.</li><li>3. In the future we plan for GATE/CAT coaching sessions.</li></ol>



## Criteria 4: Students Performance

S.No.	Department	External Audit Member Suggestions	Action Taken
8.	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING	<ol style="list-style-type: none"><li>1. Extend the duration of industrial visits to core companies beyond two days to facilitate deeper engagement and learning experiences.</li><li>2. Students can be motivated to have more conference publications and also motivating them to explore opportunities for participation in events held in different states.</li><li>3. Department can offer GATE/CAT coaching to students, which proves beneficial for their pursuit of higher education and beyond.</li></ol>	<ol style="list-style-type: none"><li>1. For the next academic year, we will request the management to consider extending the duration of industrial visits to core companies beyond the current two-day limit.</li><li>2. Students were encouraged to increase their conference publications and participate in the events held in other states.</li><li>3. In the future we plan for GATE/CAT coaching sessions.</li></ol>



## Criteria 4: Students Performance

S.No.	Department	External Audit Member Suggestions	Action Taken
9.	MASTER OF BUSINESS ADMINISTRATION	<ol style="list-style-type: none"><li>1. Students profile – inclusion of Parents mail id, and Profession for company connect for placement.</li><li>2. External participants via clubs and committees can be improved, and for department regular functional activities students committees can utilized.</li><li>3. Achievements – Proficiency awards, best paper presentation awards, best outgoing students award.</li></ol>	<ol style="list-style-type: none"><li>1. Will be followed in the next academic year.</li><li>2. Clubs and Committees are formed.</li><li>3. Implemented.</li></ol>



## Criteria 4: Students Performance

S.No.	Department	External Audit Member Suggestions	Action Taken
10.	SCIENCE & HUMANITIES (MATHEMATICS)	Encourage the students to have more Publications and Patents	Students were encouraged and give some ideas to publish Journals and Patents.
11.	PHYSICS	Student publication must be initiated.	Will guide and motivate the students to publish the papers in conferences and seminars.
12.	CHEMISTRY	NIL	NIL
13.	ENGLISH	NIL	NIL



## Criteria 5: Faculty Information and Contribution

**1. a) Faculty Strength , Student Faculty Ratio, Faculty Profile**

**b) List of Ph.D. holders**

**c) List of staff Pursuing Ph.D.**

**d) Faculty Recruitment**

**e) Recruitment of Supporting Staff**

**f) Visiting Professor**

**g) Competency in Academic**

**h) Faculty awards and achievements**

**i) Publications in Journals(SCI & Scopus)**

**j) Publications in Conference**

**k) Publication in Books/Chapters**

**l) Google Scholar Citations and h index**

**m) Ph.D Guidance and DC members**

**n) On-going Research Projects**

**o) Research funds received**

**2. Consultancy**

**3. Patents**





## **Criteria 5: Faculty Information and Contribution**

- |            |   |
|------------|---|
| <b>4.</b>  | <b>MoU Details</b>  |
| <b>5.</b>  | <b>Seed Money for research</b>  |
| <b>6.</b>  | <b>Seminar / Conference/ Workshops /FDP/STTP/ Hands on Training Organized</b>   |
| <b>7.</b>  | <b>Events organized in the department with geo tagged photos</b>  |
| <b>8.</b>  | <b>Number of workshops/seminars conducted on Research methodology, Intellectual Property Rights(IPR), entrepreneurship, skill development</b>                   |
| <b>9.</b>  | <b>Collaborative activities with other institutions/ research establishments/industry for research and academic development of faculty members and students</b> |
| <b>10</b>  | <b>Faculty Participation in FDP/STTP/Seminar/Workshop</b>   |
| <b>11.</b> | <b>Sponsorship offered by Management for attending Conference/FDP/STTP/ Seminar/Workshop</b>  |
|            | <b>Faculty as resource person</b>   |



## Criteria 5: Faculty Information and Contribution Audit Report (Department Wise)

S.No.	Department	External Audit Member Suggestions	Action Taken
1.	COMPUTER SCIENCE ENGINEERING	<ol style="list-style-type: none"><li>1. To focus more on publishing in SCI journals.</li><li>2. Ph.D Guidance and DC members have to be strengthened.</li><li>3. To focus more on government funded research projects and research funds.</li><li>4. Collaborations based on patents and also outcomes of Innovation labs can be initiated.</li></ol>	<ol style="list-style-type: none"><li>1. Faculty members journals are accepted</li><li>2. In progress</li><li>3. Applied for the funded projects in the current Academic year</li><li>4. In progress</li></ol>



## Criteria 5: Faculty Information and Contribution

### Audit Report (Department Wise)

S.No.	Department	External Audit Member Suggestions	Action Taken
2.	ELECTRONICS AND COMMUNICATION ENGINEERING	<ol style="list-style-type: none"><li>1. In the staff recruitment file, photocopy of interview marks to be included.</li><li>2. To collaborate with IIT Madras Research Park. Other institute collaboration also to be incorporated.</li></ol>	<ol style="list-style-type: none"><li>1. Photocopy of interview marks will be included in the staff recruitment file.</li><li>2. Collaboration with institutions will be incorporated in next year.</li></ol>
3.	ELECTRICAL AND ELECTRONICS ENGINEERING	NIL	NIL
4.	MECHANICAL ENGINEERING	<ol style="list-style-type: none"><li>1. Motivate faculties to complete Ph.D.</li><li>2. Promote faculty as resource person.</li></ol>	<ol style="list-style-type: none"><li>1. Faculties those who are doing Ph.D. were motivated to complete it soon.</li><li>2. Faculties were encouraged to act as a resource person.</li></ol>



## Criteria 5: Faculty Information and Contribution

### Audit Report (Department Wise)

S.No	Department	External Audit Member Suggestions	Action Taken
5.	INFORMATION TECHNOLOGY	<ol style="list-style-type: none"><li>1. Arrange visiting professors from reputed institutions.</li><li>2. Focus on faculty publications in reputed journals.</li><li>3. FDP and workshops may be organized for faculty also.</li></ol>	<ol style="list-style-type: none"><li>1. Will search for visiting professors.</li><li>2. Faculty is preparing papers for publishing papers in journal.</li><li>3. FDP will be organized.</li></ol>
6.	COMPUTER SCIENCE AND BUSINESS SYSTEMS	<ol style="list-style-type: none"><li>1. Research and consultancy can be improved.</li><li>2. Faculty outreach activities can be improved.</li></ol>	<ol style="list-style-type: none"><li>1. Two proposal were applied.</li><li>2. Outreach activities are planned in June month.</li></ol>



## Criteria 5: Faculty Information and Contribution

### Audit Report (Department Wise)

S.No	Department	External Audit Member Suggestions	Action Taken
7.	ARTIFICIAL INTELLIGENCE AND DATA SCIENCE	<ol style="list-style-type: none"><li>1. Encourage faculty members to pursue doctoral degrees.</li><li>2. Faculty members can prioritize being the first or second author on publications, as it carries greater significance.</li><li>3. Departments can invite visiting professors from industry, NITs or other prestigious institutions to enrich our academic environment.</li><li>4. Faculty members can seek seed funding to support their research endeavors.</li></ol>	<ol style="list-style-type: none"><li>1. Faculty members were motivated to enroll in Ph.D programs in upcoming academic years.</li><li>2. Faculty members were encouraged to aim for primary and secondary authorship in upcoming publications.</li><li>3. In the future, we plan to welcome visiting professors to enhance our advanced course offerings.</li><li>4. Faculties were encouraged to utilize the seed funding for research-oriented activities.</li></ol>



## Criteria 5: Faculty Information and Contribution

### Audit Report (Department Wise)

S.No.	Department	External Audit Member Suggestions	Action Taken
8.	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING	<ol style="list-style-type: none"><li>1. Encourage faculty members to pursue doctoral degrees.</li><li>2. Faculty members can prioritize being the first or second author on publications, as it carries greater significance.</li><li>3. Departments can invite visiting professors from industry, NITs or other prestigious institutions to enrich our academic environment.</li><li>4. Faculty members can seek seed funding to support their research endeavors.</li></ol>	<ol style="list-style-type: none"><li>1. Faculty members were motivated to enroll in Ph.D programs in upcoming academic years.</li><li>2. Faculty members were encouraged to aim for primary and secondary authorship in upcoming publications.</li><li>3. In the future, we plan to welcome visiting professors to enhance our advanced course offerings.</li><li>4. Faculties were encouraged to utilize the seed funding for research-oriented activities.</li></ol>



## Criteria 5: Faculty Information and Contribution

### Audit Report (Department Wise)

S.No.	Department	External Audit Member Suggestions	Action Taken
9.	MASTER OF BUSINESS ADMINISTRATION	<ol style="list-style-type: none"><li>1. List of staff pursuing Ph.D to be improved.</li><li>2. Update left faculty details.</li><li>3. Visiting professor can update and include in the college website.</li><li>4. Publication and attending conferences by faculty member to encouraged.</li><li>5. Collaborative activities related to academics to be initiated.</li></ol>	<ol style="list-style-type: none"><li>1. Yet to register</li><li>2. Implemented</li><li>3. Yet to be done</li><li>4. Work in progress</li><li>5. Yet to initiate</li></ol>



## Criteria 5: Faculty Information and Contribution

### Audit Report (Department Wise)

S.No.	Department	External Audit Member Suggestions	Action Taken
10.	SCIENCE & HUMANITIES (MATHEMATICS)	<ol style="list-style-type: none"><li>1. Research funds need to be improved.</li><li>2. Invite the visiting professors from the topmost universities.</li><li>3. Motivate the faculties to work more for publications and Patents.</li><li>4. Motivate faculties to do some Consultancy works.</li><li>5. Encourage faculties to reach out for guest lecture opportunities.</li><li>6. Organize more IPR related workshops.</li></ol>	<ol style="list-style-type: none"><li>1. Faculty members were instructed to spend more time for research works and motivated to publish a greater number of publications in SCI Journals and patents.</li><li>2. Encourage them to apply funds in NBHM, TNSCST, etc.,</li><li>3. Inform to the Department Consultancy team and ask them to search for consultancy with their ideas.</li></ol>





## Criteria 5: Faculty Information and Contribution

### Audit Report (Department Wise)

S.No.	Department	External Audit Member Suggestions	Action Taken
11.	PHYSICS	<ol style="list-style-type: none"><li>1. Need to improve research funds</li><li>2. Attention is required for consultancy.</li><li>3. For events organized, photos can be taken along with the details of the program in the banner.</li><li>4. More attention can be paid to conducting workshop seminars on research methodology.</li></ol>	<ol style="list-style-type: none"><li>1. In this year five proposals have been submitted for funding.</li><li>2. Started working on consultancy projects.</li><li>3. Photos have been taken during the program with date, venue, etc.</li><li>4. Attention will be given to conducting workshops, and seminars on research methodology.</li></ol>
12.	CHEMISTRY	It is suggested to apply Research funds minor projects and also suggested to get seed money to do research.	Research proposals have been applied to the various funding agencies by the faculty members.



## Criteria 5: Faculty Information and Contribution

### Audit Report (Department Wise)

S.No.	Department	External Audit Member Suggestions	Action Taken
13.	ENGLISH	<ol style="list-style-type: none"><li>1. No. of Ph.D holders can be improved</li><li>2. Awards can be received</li><li>3. Need to improve research funds</li><li>4. Event information organized in the department has to be displayed in the geo tag photo</li><li>5. More attention is required regarding workshops/seminars conducted on Research methodology, Intellectual Property Rights(IPR), entrepreneurship, skill development.</li></ol>	<ol style="list-style-type: none"><li>1. Staff members are insisted to do Ph.D.</li><li>2. Staff members are encouraged to receive awards.</li><li>3. It is insisted to improve research funds.</li><li>4. Faculty members are informed to display the event information in the geo tag photo.</li><li>5. More attention is paid.</li></ol>



## Criteria 6: Facilities and Technical Support

1.

**Department infrastructure details (Labs and classrooms)**

**Computing facility details**

**Equipment's Purchase & maintenance**

**Safety measures in Laboratories**

**Project laboratory/facilities**

**Lab Manual**

**Lab Master Record**

**Student Lab Record Note**

**Department infrastructure details (Labs and classrooms)**

**Computing facility details**



## Criteria 6 : : Facilities and Technical Support Audit Report (Department Wise)

S.No.	Department	External Audit Member Suggestions	Action Taken
1.	COMPUTER SCIENCE ENGINEERING	GPUs can be procured for Laboratories or Clouds based computing units can be purchased.	Requested the Management for the arrangement of GPU facility
2.	ELECTRONICS AND COMMUNICATION ENGINEERING	NIL	NIL
3.	ELECTRICAL AND ELECTRONICS ENGINEERING	NIL	NIL
4.	MECHANICAL ENGINEERING	NIL	NIL
5.	INFORMATION TECHNOLOGY	NIL	NIL
6.	COMPUTER SCIENCE AND BUSINESS SYSTEMS	Specialized lab in Business systems can be established.	Will be implemented in next curriculum.
7.	ARTIFICIAL INTELLIGENCE AND DATA SCIENCE	Set up specialized AI laboratories equipped with GPUs to facilitate research-driven projects.	In the future we will be presenting a proposal to the management for the establishment of a research laboratory with GPUs.



## Criteria 6 : : Facilities and Technical Support Audit Report (Department Wise)

S.No.	Department	External Audit Member Suggestions	Action Taken
8.	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING	Set up specialized AI laboratories equipped with GPUs to facilitate research-driven projects.	In the future we will be presenting a proposal to the management for the establishment of a research laboratory with GPUs.
9.	MASTER OF BUSINESS ADMINISTRATION	Department of Faculty Meeting – circulars to be added and to be done in files.	Implemented
9.	MASTER OF BUSINESS ADMINISTRATION	<ol style="list-style-type: none"><li>1. Department of Faculty Meeting – circulars to be added and to be done in files.</li><li>2. Separate lab for communication e-reading, personal growth lab to be initiated.</li></ol>	<ol style="list-style-type: none"><li>1. Implemented</li><li>2. Will be initiated</li></ol>



## Criteria 6 : : Facilities and Technical Support Audit Report (Department Wise)

S.No	Department	External Audit Member Suggestions	Action Taken
10.	SCIENCE & HUMANITIES (MATHEMATICS)	NIL	NIL
11.	PHYSICS	NIL	NIL
12.	CHEMISTRY	NIL	NIL
13.	ENGLISH	NIL	NIL



## Audited GENERAL FILES

- |     |  |
|-----|--|
| 1.  | Academic Audit and action taken report   |
| 2.  | Department Faculty meeting               |
| 3.  | Class committee meeting                  |
| 4.  | Course committee meeting                 |
| 5.  | Circle meeting                           |
| 6.  | Parents -Teachers meeting                |
| 7.  | Department meeting with Principal        |
| 8.  | Book requirement meeting                 |
| 9.  | General Feedback from Eminent Person     |
| 10. | Feedback on infrastructure/facility      |
| 11. | Student Exit Survey                      |
| 12. | Alumni Survey                            |
| 13. | Budget                                   |
| 14. | Alumni Details                           |
| 15. | ISO audit details                        |
| 16. | National / International Days Celebrated |

**General File Documents are  
updated and maintained  
properly till date according to  
Audit report**



# Academic Audit Mark Analysis Report

CRITERIA	PROGRAM LEVEL CRITERIA	MARKS AWARDED FOR EVALUATION ( KRCE)	NBA NORMS TIER-I	NBA NORMS TIER-II
Criteria 1	Vision, Mission and Program Educational Objectives	50	50	60
Criteria 2	Program Curriculum and Teaching Learning Process	100	100	120
Criteria 3	Course outcome and Program Outcome	100	175	120
Criteria 4	Students Performance	100	100	150
Criteria 5	Faculty Information and Contribution	200	200	200
Criteria 6	Facilities and Technical Support	80	80	80
	General files VERIFICATION done for Continuous Improvement	100	75	50
	Total Marks	730	780	780



**K.RAMAKRISHNAN COLLEGE OF ENGINEERING (AUTONOMOUS)**  
**EXTERNAL ACADEMIC AUDIT REPORT ODD SEM (2023-24)**

[illegible]



## FUTURE PLANS (Department Wise)

S.No	Department	External Audit Member Suggestions
1.	COMPUTER SCIENCE ENGINEERING	<ul style="list-style-type: none"><li>• To acquire government research funds.</li><li>• To continue the current best practices adopted.</li></ul>
2.	ELECTRONICS AND COMMUNICATION ENGINEERING	<ul style="list-style-type: none"><li>• Inclusion of social responsible innovation projects in curriculum.</li><li>• Starup and Incubation centre.</li><li>• Providing SSC training to the students for placement in public sector.</li></ul>
3.	ELECTRICAL AND ELECTRONICS ENGINEERING	<ul style="list-style-type: none"><li>• To create Centre of Excellence (CoE) in Automation</li></ul>
4.	MECHANICAL ENGINEERING	<ul style="list-style-type: none"><li>• All the faculties have to complete Ph.D.</li><li>• Modern equipments to be purchased to promote the consultancy services.</li></ul>
5.	INFORMATION TECHNOLOGY	<ul style="list-style-type: none"><li>• Encourage the students to become Entrepreneur.</li><li>• Motivate the students to publish papers and patent.</li></ul>



## **FUTURE PLANS** **(Department Wise)**

<b>S.No</b>	<b>Department</b>	<b>External Audit Member Suggestions</b>
<b>6.</b>	<b>COMPUTER SCIENCE AND BUSINESS SYSTEMS</b>	<ul style="list-style-type: none"><li>• Laboratory and software resources should be updated every year.</li></ul>
<b>7.</b>	<b>ARTIFICIAL INTELLIGENCE AND DATA SCIENCE</b>	<ul style="list-style-type: none"><li>• To attract students with high cut-off to join the department.</li><li>• To get placements for students with high CTC.</li></ul>
<b>8.</b>	<b>ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING</b>	<ul style="list-style-type: none"><li>• To attract students with high cut-off to join the department.</li><li>• To get placements for students with high CTC.</li></ul>
<b>9.</b>	<b>MASTER OF BUSINESS ADMINISTRATION</b>	<ul style="list-style-type: none"><li>• Separate laboratory (Computer Laboratory, Communication Laboratory, Personal Growth (HR) laboratory) is essential for MBA students.</li><li>• Separate classroom for e-reading, group discussion, etc.</li></ul>

THANK  
YOU!

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