

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT- TEKKALI**  
**INTERNAL QUALITY ASSURANCE CELL**  
**ACADEMIC AUDIT REPORT**

Name of the Department: **ELECTRONICS AND COMMUNICATION ENGINEERING**

Academic Year : 2023-2024 II Semester (January to June)

Date of Audit : 26-07-2024

<b>I. COs, POs and Curriculum</b>		
<b>S. No</b>	<b>Criterion</b>	<b>Observations</b>
1.	COs and POs assessment	COs and POs attainment calculated as per the procedure established by PAC. (Annexure-1.1)
2.	Stake holders feedback related to curriculum design	Graduate exit survey, alumni survey and Employer survey are conducted as per format.
3.	Action taken on minutes of BoS	Incorporated changes as per the suggestions of BoS, DAC and PAC. (BOS minutes and curriculum changes evidences) (Annexure-1.2)
4.	Percentage of lab component	31.82% (21/66) – AR -20 (Annexure-1.3) 28.2% (11/39) – AR -23 (Annexure-1.4)
5.	Evidence of academic flexibility	Open elective + Core elective courses 10.64% (7/66)-AR-20 (Annexure-1.3) 0 % (7/39)-AR-23 (Annexure-1.4)

**II. Faculty information and their contribution**

<b>S. No</b>	<b>Criterion</b>	<b>Observations</b>
1.	Student Teacher ratio	STR - 1:19.40
2.	Faculty Cadre ratio	FCR - Professors- 8 Associate Professors- 8 Assistant Professors-21
3.	Faculty qualifications	21 out of 37 faculty members are doctorates, and rest of the faculty members are post graduates. (Annexure-2.1)
4.	Faculty experience & retention	(list of faculties, qualifications, total experience, experience at AITAM) (Annexure-2.2)
5.	Faculty contribution in writing: - Books: - Book chapters:	2 (Faculty books list) (Annexure-2.3) (Faculty books proofs) (Annexure-2.4)
6.	Faculty in professional bodies -Faculty contributions	ISTE(Annexure-2.5) IETE(Annexure-2.6)



7.	Faculty as resource persons in workshops / training activities	Nil
8.	International / National level events organized -Conferences: -Workshops/ Seminars: -FDPs:	Number of events organized: Nil  Number of FDPs/Guest Lectures/Seminars organized: Nil
9.	List of conferences/seminars/ workshops/ FDP's/ any exclusive programs attended for enrichment of teaching - learning process	<b>Annexure-2.7</b>

### III. Teaching-Learning Process and Evaluation

S.No	Criterion	Observations
1.	Student performance indices Attendance Exams	Lists of students for Detention and Condonation are maintained. Detained students-5( <b>Annexure-3.1</b> ) Condonation students-31 ( <b>Annexure-3.2</b> ) Results analysis is carried out. ( <b>Annexure-3.3</b> )
2.	Mechanism and activities for slow learners improvement	Slow learners are identified based on performance in Mid-exams. Conducted Make-up classes for slow learners. ( <b>Annexure-3.4</b> )
3.	Student counseling /mentoring mechanism	20 students are allotted to each faculty member to mentor for continuous improvement. (Allotment and sample file scanned) ( <b>Annexure-3.5</b> )
4.	Initiatives taken for innovative projects	No. of Innovative Projects:2 ( <b>Annexure-3.6</b> ) Training programs for students in thrust areas: Embedded System Design, Basics of Python
5.	Review & Evaluation of Student Projects: - Best projects	Project review and evaluation is carried out as per PRC guidelines. Best projects are identified based on PRC recommendations. 3 ( <b>Annexure-3.7</b> )
6.	Monitoring of Teaching-Learning Process - Observation of teaching process in classrooms as per schedule - Tracking of syllabus coverage - Uploading of lecture notes, question papers of mid and semester end examinations in e-learning portal - Verification of evaluated answer papers - Checking the quality of mid examination question papers - Innovative teaching methods presented - Verification of course files -Minutes of class committee meetings and action taken	- Attendance registers are verified once in a month. - Compliance of teaching diary with lesson plan is monitored once in a month. - Track sheets are maintained to review syllabus coverage - uploading of course material, mid and semester end question papers in e-Learning Portal - All Mid answer scripts are verified - Mid question papers as per cognitive levels are verified. - PPT's, NPTEL video lectures are used, - Course files are there for all courses. <b>Annexure-3.8</b> (Sample lesson plan, teaching diary, sample scanned copy of attendance register with signs of faculty member, HoD and Principal, syllabus coverage and number of classes track



7.	Training programs conducted for students - Guest lectures - Add-on courses - Seminars/workshops - Compliance of department academic calendar	No. of guest lectures:3 ( <b>Annexure-3.9</b> ) No. of Add-on courses:2 ( <b>Annexure-3.10</b> ) No. of Seminars/workshops: No major deviations are observed in the compliance of department academic calendar.
8.	MoUs with Industries for internship	No. of MoUs: <b>Annexure-3.11</b>
9.	Students feedback and follow-up action	Online feedback is taken from the students for all courses and review is carried out.
10.	Scope for Self-learning - Certificate courses - Online courses	Monetary encouragement for certification courses
11.	Result analysis and conduct of remedial classes for students with backlogs	Result analysis is carried out after the results of semester end examinations and make-up classes are conducted for students with backlogs.
12.	Placements (%): Industries / organizations:	Placements (%):60 Total _120_ No. of students got selected in various companies ( <b>Annexure-3.12</b> )
13.	Higher studies (%): Institutions:	Higher studies (%):0.005% _1_ students joined for PG programme in various institutes ( <b>Annexure-3.13</b> )
14.	Student development Activities: - co-curricular - extra-curricular activities	No. of technical events in association with student chapters: No. of NSS Activities: No. of Innovations and Startups:

#### IV. Research, Consultancy and Extension

S.No	Criteria	Observations
1.	Faculty publications in journals: Peer reviewed Journals: Thomson Reuters Impact factor Journals:	No. in peer reviewed journals:10 No. in Scopus/SCI indexed journals:10 Faculty publication proofs ( <b>Annexure-4.1</b> )
2.	Publications in conferences: - National - International	No. in Conference publications:
3.	Percentage of faculty contributing in - Research publications:	Percentage of faculty involved in research publications: 70%
4.	PhDs - Registered - Submitted - Awarded	No. registered: Nil No. awarded: 3( <b>Annexure-4.2</b> )
	PhDs guiding /guided:	No. of PhDs guiding: 6( <b>Annexure-4.3</b> ) No. of PhDs guided: Nil

5.	Funded R&D projects and consultancy work	Total amount of funding for R&D and consultancy projects Ongoing: Rs. Nil /- Completed: Rs. Nil /-
6.	Incentives for faculty R&D	Incentives for faculty research publications as per HR policy Annexure (Annexure-4.4)
7.	MOU's with industries/ R&D/ Premier Institutes	Nil
8.	Research centers of excellence Established	recognized as JNTUV research center for the academic years 2022-2023&2023-2024.
9.	Skill development centers established	APSSDC is available in the college

#### V. Infrastructure and Learning Resources

S.No	Criterion	Observations
1.	Infrastructural facilities to improve the teaching learning process Class rooms: Laboratories: e- class rooms: Seminar halls: Faculty rooms:	No. of class rooms: 14 No. of laboratories:11 No. of e-Class rooms:2 No. of seminar halls:1 No. of faculty rooms: 22
2.	Internet facilities for faculty & Students:	Service Provider: Jio Bandwidth: 1GBPS
3.	Technical & administrative staff support	12 members of Lab Technician/ Jr. Technician for supporting various Laboratories in addition to 5 members for supporting administrative activities Annexure-5.1 (list of technicians and administrative staff with qualifications and
4.	Department budget - Sanctioned amount - Amount spent - New equipment added - Maintenance of equipment and consumables registers in labs	Amount sanctioned in Rs. 45,50,000 /- Amount spent in Rs. 45,50,000 /- New equipment added worth Rs. 11,0000 /- Equipment and maintenance registers are maintained for all the Labs---- 17,50,000
5.	Details of computing facilities and software	Total number of Computers: 204 List of Software procured: Nil
6.	Dept News letter / magazine	Department half-yearly Newsletter is in place (Annexure-5.2)
7.	Department level library resources	Number of Titles:262 (Annexure-5.3) Number of Volumes:262 Number of Journals: Number of E-Journals: Number of Video courses:

#### VI. Student information, Support and Progression

S.No	Criterion	Observation
1.	Add-on courses:	List of add-on courses:



2.	Student publications: Dept. student clubs:	No. of student publications: 10 (Annexure-6.1) No. of club activities for students:
N		
4.	Industrial visits and internships	No. of GATE classes: 1 (Annexure-6.2) No. of CRT classes: Nil No. of Industrial visits: Total number of industries offering internships: Annexure-6.3

### VII. Governance, Leadership and Management

S. No	Criterion	Observations
1.	Teaching and non-teaching staff attended for skill development programs	No. of teaching staff: No. of Non-Teaching staff:
2.	MoUs with premier Institutions for knowledge exchange	No. of MoUs: (If any)
3.	Display of Vision, Mission and other Quality objectives at prominent places	Display of Vision: Yes Display of Mission: Yes Display of PEOs, POs, PSOs and COs: Yes
4.	Staff and student attendance monitoring system -Biometric -Attendance registers	Generation of Daily, Weekly and Monthly attendance reports
5.	Financial support/leaves qualification/skill up- gradation:	for Faculty members are sanctioned with Registration fees, TA and Academic leave for attending Conferences and Workshops
6.	Risk evaluation/safety measures:	Maintaining Fire extinguishers at prominent places

### VIII Strengths, Weaknesses and Areas of Improvement

#### Strengths

① The outcome-based teaching method focused on employment and entrepreneurship.

② Good laboratory infrastructure with state of art hardware and software tools.

#### Weaknesses:

① Students, being from rural areas are struggling to meet national and global standards in technical education and facing language barriers (English language)

#### Suggestions for improvement:

② Students innovative projects

① Industry tie-ups and joint research

② Department can strive to receive grants for research/consultancy projects from bodies like UGC, AICTE, DTE, CERB, DOE

Sig. of Department Coordinator K. Chidambaram

Sig. of Academic Auditors

1.

2.

Sig. of HOD

Sig. of IQAC Coordinator

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT- TEKKALI**  
**INTERNAL QUALITY ASSURANCE CELL**  
**ACADEMIC AUDIT REPORT**

Name of the Department: **ELECTRONICS AND COMMUNICATION ENGINEERING**

Academic Year : 2023-2024 I Semester (July to December)

Date of Audit : 27-01-2024

<b>I. COs, POs and Curriculum</b>		
<b>S. No</b>	<b>Criterion</b>	<b>Observations</b>
1.	COs and POs assessment	COs and POs attainment calculated as per the procedure established by PAC. (Annexure-1.1)
2.	Stake holders feedback related to curriculum design	Graduate exit survey, alumni survey and Employer survey are conducted as per format.
3.	Action taken on minutes of BoS	Incorporated changes as per the suggestions of BoS, DAC and PAC. (BOS minutes and curriculum changes evidences) (Annexure-1.2)
4.	Percentage of lab component	31.82% (21/66) – AR -20 (Annexure-1.3) 28.2% (11/39) – AR -23 (Annexure-1.4)
5.	Evidence of academic flexibility	Open elective + Core elective courses 10.64% (7/66)-AR-20 (Annexure-1.3) 0 % (7/39)-AR-23 (Annexure-1.4)
<b>II. Faculty information and their contribution</b>		
<b>S. No</b>	<b>Criterion</b>	<b>Observations</b>
1.	Student Teacher ratio	STR - 1:19.40 (Annexure-2.1)
2.	Faculty Cadre ratio	FCR - Professors- 8 Associate Professors- 8 Assistant Professors-21
3.	Faculty qualifications	21 out of 37 faculty members are doctorates, and rest of the faculty members are post graduates. (Annexure-2.2)
4.	Faculty experience & retention	(list of faculties, qualifications, total experience, experience at AITAM) (Annexure-2.3)
5.	Faculty contribution in writing: - Books: - Book chapters:	2 (Faculty books list) (Annexure-2.4) (Faculty books proofs) (Annexure-2.5)
6.	Faculty in professional bodies -Faculty contributions	ISTE(Annexure-2.6) IETE(Annexure-2.7)



7.	Faculty as resource persons in workshops / training activities	Nil
8.	International / National level events organized -Conferences: -Workshops/ Seminars: -FDPs:	Number of events organized: Nil  Number of FDPs/Guest Lectures/Seminars organized: 2 ( <b>Annexure-2.8</b> )
9.	List of conferences/seminars/ workshops/ FDP's/ any exclusive programs attended for enrichment of teaching - learning process	<b>Annexure-2.9</b>

### III. Teaching-Learning Process and Evaluation

S.No	Criterion	Observations
1.	Student performance indices Attendance Exams	Lists of students for Detention and Condonation are maintained. Detained students-5( <b>Annexure-3.1</b> ) Condonation students-31 ( <b>Annexure-3.2</b> ) Results analysis is carried out. ( <b>Annexure-3.3</b> )
2.	Mechanism and activities for slow learners improvement	Slow learners are identified based on performance in Mid-exams. Conducted Make-up classes for slow learners. ( <b>Annexure-3.4</b> )
3.	Student counseling /mentoring mechanism	20 students are allotted to each faculty member to mentor for continuous improvement. (Allotment and sample file scanned) ( <b>Annexure-3.5</b> )
4.	Initiatives taken for innovative projects	No. of Innovative Projects:2 ( <b>Annexure-3.6</b> ) Training programs for students in thrust areas: Embedded System Design, Basics of Python
5.	Review & Evaluation of Student Projects: - Best projects	Project review and evaluation is carried out as per PRC guidelines. Best projects are identified based on PRC recommendations. 3 ( <b>Annexure-3.7</b> )
6.	Monitoring of Teaching-Learning Process - Observation of teaching process in classrooms as per schedule - Tracking of syllabus coverage - Uploading of lecture notes, question papers of mid and semester end examinations in e-learning portal - Verification of evaluated answer papers - Checking the quality of mid examination question papers - Innovative teaching methods presented - Verification of course files -Minutes of class committee meetings and action taken	- Attendance registers are verified once in a month. - Compliance of teaching diary with lesson plan is monitored once in a month. - Track sheets are maintained to review syllabus coverage - uploading of course material, mid and semester end question papers in e-Learning Portal - All Mid answer scripts are verified - Mid question papers as per cognitive levels are verified. - PPT's, NPTEL video lectures are used, - Course files are there for all courses. <b>Annexure-3.8</b> (Sample lesson plan, teaching diary, sample scanned copy of attendance register with signs of faculty member, HoD and Principal, syllabus coverage and number of classes track



7.	Training programs conducted for students - Guest lectures - Add-on courses - Seminars/workshops - Compliance of department academic calendar	No. of guest lectures:3 (Annexure-3.9) No. of Add-on courses:2 (Annexure-3.10) No. of Seminars/workshops: No major deviations are observed in the compliance of department academic calendar.
8.	MoUs with Industries for internship	No. of MoUs: Annexure-3.11
9.	Students feedback and follow-up action	Online feedback is taken from the students for all courses and review is carried out.
10.	Scope for Self-learning - Certificate courses - Online courses	Monetary encouragement for certification courses
11.	Result analysis and conduct of remedial classes for students with backlogs	Result analysis is carried out after the results of semester end examinations and make-up classes are conducted for students with backlogs.
12.	Placements (%): Industries / organizations:	Placements (%): 60 Total _120_ No. of students got selected in various companies (Annexure-3.12)
13.	Higher studies (%): Institutions:	Higher studies (%):0.005% _1_ students joined for PG programme in various institutes (Annexure-3.13)
14.	Student development Activities: - co-curricular - extra-curricular activities	No. of technical events in association with student chapters: No. of NSS Activities: No. of Innovations and Startups:

#### IV. Research, Consultancy and Extension

S.No	Criteria	Observations
1.	Faculty publications in journals: Peer reviewed Journals: Thomson Reuters Impact factor Journals:	No. in peer reviewed journals:10 No. in Scopus/SCI indexed journals:10 Faculty publication proofs (Annexure-4.1)
2.	Publications in conferences: - National - International	No. in Conference publications:
3.	Percentage of faculty contributing in - Research publications:	Percentage of faculty involved in research publications: 70%
4.	PhDs - Registered - Submitted - Awarded	No. registered: Nil No. awarded: 3(Annexure-4.2)
	PhDs guiding /guided:	No. of PhDs guiding: 6(Annexure-4.3) No. of PhDs guided: Nil



5.	Funded R&D projects and consultancy work	Total amount of funding for R&D and consultancy projects Ongoing: Rs. ___ Nil ___/- Completed: Rs. ___ Nil ___/-
6.	Incentives for faculty R&D	Incentives for faculty research publications as per HR policy Annexure (Annexure-4.4)
7.	MOU's with industries/ R&D/ Premier Institutes	Nil
8.	Research centers of excellence Established	recognized as JNTUV research center for the academic years 2022-2023&2023-2024.
9.	Skill development centers established	APSSDC is available in the college

#### V. Infrastructure and Learning Resources

S.No	Criterion	Observations
1.	Infrastructural facilities to improve the teaching learning process Class rooms: Laboratories: e- class rooms: Seminar halls: Faculty rooms:	No. of class rooms: 14 No. of laboratories:11 No. of e-Class rooms:2 No. of seminar halls:1 No. of faculty rooms: 22
2.	Internet facilities for faculty & Students:	<b>Service Provider:</b> Jio <b>Bandwidth:</b> 1GBPS
3.	Technical & administrative staff support	12 members of Lab Technician/ Jr. Technician for supporting various Laboratories in addition to 5 members for supporting administrative activities <b>Annexure-5.1</b> (list of technicians and administrative staff with qualifications and
4.	Department budget - Sanctioned amount - Amount spent - New equipment added - Maintenance of equipment and consumables registers in labs	Amount sanctioned in Rs. _45,50,000___/- Amount spent in Rs. _45,50,000___/- New equipment added worth Rs. 11,0000___/- Equipment and maintenance registers are maintained for all the Labs---- 17,50,000
5.	Details of computing facilities and software	Total number of Computers: 271(Annexure-5.2)  List of Software procured: Nil
6.	Dept News letter / magazine	Department half-yearly Newsletter is in place (Annexure-5.3)
7.	Department level library resources	Number of Titles:262 (Annexure-5.4) Number of Volumes:262 Number of Journals: Number of E-Journals: Number of Video courses:

#### VI. Student information, Support and Progression

S.No	Criterion	Observation
1.	Add-on courses:	List of add-on courses:



2.	Student publications: Dept. student clubs:	No. of student publications: 10 (Annexure-6.1) No. of club activities for students:
N		
4.	Industrial visits and internships	No. of GATE classes: Nil No. of CRT classes: Nil No. of Industrial visits: Total number of industries offering internships: Annexure-6.2

### VII. Governance, Leadership and Management

S. No	Criterion	Observations
1.	Teaching and non-teaching staff attended for skill development programs	No. of teaching staff: No. of Non-Teaching staff:
2.	MoUs with premier Institutions for knowledge exchange	No. of MoUs: (If any)
3.	Display of Vision, Mission and other Quality objectives at prominent places	Display of Vision: Yes Display of Mission: Yes Display of PEOs, POs, PSOs and COs: Yes
4.	Staff and student attendance monitoring system -Biometric -Attendance registers	Generation of Daily, Weekly and Monthly attendance reports
5.	Financial support/leaves qualification/skill up- gradation:	Faculty members are sanctioned with Registration fees, TA and Academic leave for attending Conferences and Workshops
6.	Risk evaluation/safety measures:	Maintaining Fire extinguishers at prominent places

### VIII Strengths, Weaknesses and Areas of Improvement

#### Strengths

- ① Qualified, experienced and dedicated teaching faculty with good retention ratios.
- ② Effective use of ICT in teaching learning process.

#### Weaknesses:

- ① Students not pursuing higher education
- ② Revenue generation through Consultancy

#### Suggestions for improvement:

- ① Quality publications shall be increased
- ② Motivate the students to undertake inter-disciplinary and sponsored projects

Sig. of Department Coordinator

Sig. of Academic Auditors

1.

2.

Sig. of HOD

Sig. of IQAC Coordinator