



ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES

'UGC AUTONOMOUS'

(Permanently Affiliated to Andhra University, Approved by AICTE, Accredited by NBA & NAAC with 'A' Grade)

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Date: 05-11-2021

From

HOD, ECE
Anil Neerukonda Institute of Technology and Sciences
Sangivalasa

To

Prof. P. Rajesh Kumar
Professor & HOD, ECE
Department of ECE
Andhra University
Visakhapatnam-530022

Sub: Invitation for IQAC external audit member ANITS ECE Department -Reg.

It gives me immense pleasure in inviting you as subject expert for IQAC external audit member for department of Electronics and Communication Engineering (ECE), of Anil Neerukonda Institute of Technology and Sciences (ANITS) at 9:30 AM on 13-11-2021 (Saturday) in ECE department.

I request you to make it convenient to attend the academic audit and offer your valuable suggestions for the development of the department.


Dr. V. Rajya Lakshmi
Prof & HOD, ECE

Head of the Department
Department of E C E
Anil Neerukonda Institute of Technology & Sciences
Sangivalasa - 531 162



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Department of Electronics and Communication Engineering

Format for Academic Audit
(to be filled up by Academic Experts)
Academic year 2020-21

1. Name of the Auditor Prof. P. Rajesh Kumar
Designation Prof & HoD, ECE
Address Department of ECE, Andhra University
Contact no. 9440367694
Email ID Rajeshauce@gmail.com

The days and dates of visit: 13-11-2021



Anil Neerukonda Institute of Technology & Sciences (Autonomous)

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Department of Electronics Communications Engineering

Summary of Academic Audit 2020-2021

| S. No. | Parameters of Evaluation | Max Marks | Marks Awarded |
|--------|--|-----------|---------------|
| 1. | Curricula | 120 | 108 |
| 2. | Academic Facilities | 100 | 81 |
| 3. | Teaching Learning proves | 130 | 105 |
| 4. | Evaluation System | 140 | 107 |
| 5. | Result | 100 | 76 |
| 6. | General Academic Activities | 100 | 80 |
| 7. | Feedback and Corrective Action | 100 | 76 |
| 8. | Faculty Performance / Upgradation | 110 | 75 |
| 9. | Attainment of CO's and PO's of all courses | 100 | 66 |
| 10. | Total | 1000 | 774 |

| Grade | Details | Total Marks scored |
|-------|----------------|--------------------|
| A+ | Excellent | 800 and above |
| A | Good | 700-799 ✓ |
| B | Acceptable | 600-699 |
| C | Not-acceptable | Below 600 |

1. Strengths


- 1) Awareness on OBE by faculty is very good
- 2) Quality of internal question papers/ Assignments are good
- 3) Usage of ICT Tools by faculty is good
- 4) Rubrics for Assignment/ projects evaluation is good.

2. Weaknesses

- 1) Student's participation in outside college (workshops, Seminars etc) is poor
- 2) MoU functionality's not upto the mark & R&D activities

3. Suggestions based on information

- 1) Consistency in higher studies / Gate ranks in number
- 2) organizing international Conference
- 3) Industry institute interaction.


Prof. P. Rajesh Kumar
Professor & HoD, ECE
Andhra University

Dr. P. RAJESH KUMAR
M.E., Ph.D
Professor

Dept. of Electronics & Communication Engg
A.U. College of Engineering (A)
Andhra University
VISAKHAPATNAM - 530 003

1. Curricula

| S. No. | Sub-Parameter | Marks Assigned | Marks scored |
|---|---|----------------|--------------|
| 1. | Curricula content to provide understanding concepts of (with sufficient practical exposure) | | |
| | Mathematics and basic sciences | 5 | 5 |
| | Basic Engineering subjects | 5 | 5 |
| | Management and Humanities | 6 | 6 |
| | Programme Core | 30 | 26 |
| | Elective Subjects | 6 | 6 |
| | Interdisciplinary elective subjects | 4 | 4 |
| | Open Elective/Emerging subjects in curricula | 4 | 3 |
| | NPTEL courses/MOOCs | 4 | 3 |
| | Communication and computer skills | 5 | 5 |
| | Proficiency in analysis, synthesis, modeling & simulation and problem-solving skills | 5 | 5 |
| | Innovative and creative abilities | 5 | 4 |
| | Human skills and relations, professional ethics, environment | 4 | 4 |
| | Entrepreneurial skills | 4 | 2 |
| | Hands on training and other industrial needs | 4 | 4 |
| Self learning practices | 4 | 4 | |
| 2. | Do the curricula take care of slow and fast learners learning simultaneously ? | 10 | 8 |
| 3. | Revision / Upgradation of the curriculum to incorporate appropriate new knowledge systems (based on no. of BoS/ APMC meeting) | 15 | 15 |
| Total | | 120 | 108 |
| Additional Comments / feedback / observations/ advice which may or may not be based on above points: <p style="margin-left: 40px;">More Number of activities related to entrepreneurial Skill required.</p> | | | |

2. Academic Facilities

| S. No. | Sub-Parameter | Marks Assigned | Marks scored |
|---|---|----------------|--------------|
| 1. | No of class rooms with LCDs | 5 | 5 |
| 2. | No of laboratories and display of Cos and POs | 5 | 5 |
| 3. | No of tutorial rooms | 5 | 4 |
| 4. | Faculty rooms / cabins | 5 | 5 |
| 5. | Equipments available (curricula and cost wise) | 5 | 5 |
| 6. | Computing facilities (including software) | 10 | 8 |
| 7. | Research/Project laboratory | 10 | 7 |
| 8. | Electric power available for 24 x 7 and power backups | 5 | 5 |
| 9. | Audio visual facilities | 5 | 5 |
| 10. | Class rooms furniture (quantity and quality) | 5 | 5 |
| 11. | Laboratories furniture (quantity and quality) | 10 | 8 |
| 12. | No of books e-library, online journals and printed journals related to programme in the central library | 10 | 7 |
| 13. | Department library /life long learning resources | 10 | 4 |
| 14. | Internet and Wi-Fi facility | 5 | 4 |
| 15. | Improvement made in infrastructural facilities during last year | 5 | 4 |
| Total | | 100 | 81 |
| Any additional comments / feedback / observations / advice which may or may not be based on above points: Number of books/resources in Department library is good. More Simulation Software tools may be required. | | | |

3. Teaching – Learning Process

| Sr. No. | Sub-Parameter | Marks Assigned | Marks scored |
|--|---|----------------|--------------|
| 1. | Theory Courses | | |
| | Course File (Syllabus sheet, Course material, content beyond syllabus, MID question papers, Answer sheets, Assignments, External QP, Quizes and Activites) | | |
| | % of subjects for which teaching plan (including books to be referred) is prepared and execution plan submitted at the end of semester (including quality of execution) | 10 | 9 |
| | Quality of teaching plan and notes prepared by faculty | 10 | 9 |
| | Quality of Assignments | 10 | 8 |
| | Case studies/ Mini Projects given as activity for core courses | 10 | 5 |
| | Novel techniques used for effective teaching learning process (including use of A/V aids, development of software/ teaching aids, use or available software, use of available learning resources etc.) | 10 | 7 |
| 2. | Practical | | |
| | Quality of experiments conducted (Do the experiments designed facilitate the students in generating creative thoughts ?) | 10 | 7 |
| | Availability of laboratory manual and its quality | 10 | 9 |
| | Maintenance of laboratory equipments and new addition | 10 | 10 |
| | New experiments designed by UG/PG Students | 10 | 5 |
| 3. | Corrective action taken by department against the students who are absent to the classes regularly | 10 | 9 |
| 4. | Staff development programs for Faculty and / or supporting staff including FDP / STTP etc. | 10 | 9 |
| 5. | Actions taken by department to improve performance of academically weaker students | 10 | 9 |
| 6. | Efforts taken by department to improve overall performance of students including Workshop / Short term course/Hackathons/ Tech fest outside institute etc. | 10 | 9 |
| | Total | 130 | 105 |
| Any additional comments / feedback / observations/ advice which may or may not be based on above points: Teaching Learning process is good implementation of ICT Tools in teaching is good. | | | |

4. Examination and Evaluation System

| Sr. No. | Sub-Parameter | Marks Assigned | Marks scored |
|---|---|----------------|--------------|
| 1 | Examination Process | | |
| | Strict execution of academic calendar for all examinations | 5 | 5 |
| | Strict execution of academic calendar for declaration of result including revaluation, redressal etc. | 5 | 5 |
| | Transparency in the processes like internal assessment; scrutiny and declaration of result | 5 | 5 |
| | Appropriate weightage for continuous evaluation and end semester examination. | 5 | 5 |
| | Staff appointed for examination (invigilator, squad, office staff etc). | 5 | 5 |
| | Process of appointment of paper setters/ examiners / evaluators / moderators etc. | 5 | 5 |
| | Process of question paper printing and distribution (including quality and format of question paper) | 5 | 4 |
| 2 | Quality of internal question papers | | |
| | Appropriate coverage of syllabus in class test and labelling of COs on the question paper | 5 | 4 |
| | Difficulty level of the question papers including numerical | 5 | 3 |
| | Innovation in question paper (Volume of repeated questions, correlation of question with competitive examinations) | 5 | 3 |
| 3 | Quality of external question papers | | |
| | Coverage of all COs | 5 | 5 |
| | Difficulty level of the question papers (simple to pass and difficult to serve i.e. take care of average as well as sharp students) | 5 | 3 |
| | Do the questions, test and develop the problem –solving skills and students' proficiency in analysis and design ? | 5 | 2 |
| | Whether the marks assigned to the questions appropriate? Are the model answers submitted by paper setters to Examination Cell | 5 | 3 |
| | Language / Clarity / Variety etc in questions (Majority of the questions should not be just like write short note/ explain / discuss etc. | 5 | 3 |
| 4 | Does the moderation of each question papers completed before paper printing ? | 5 | 5 |
| 6 | Assessment of Project work / Industrial training/ Internship term work | | 4 |
| | Continuous assessment of project works/seminars through rubrics | 5 | 4 |
| 7 | Assessment Process of theory external papers | | |
| | Presence of Process for evaluating external papers | 5 | 4 |
| | Model answers and marking scheme | 5 | 3 |
| | Evaluation quality (% of students applying for revaluation and of change in mark cases) | 5 | 4 |
| | Average experience of evaluators | 5 | 4 |
| | Moderation process | 5 | 4 |
| | Revaluation and recounting of answer sheets within mentioned period | 5 | 4 |
| | Does the Complaint Redressal Committee exist to tackle the cases of lapses associated with examinations ? | 5 | 3 |
| Whether the photocopy of the assessed paper is made | 5 | 3 | |

| | | | |
|---|--|------------|------------|
| | available the students, if requested ? Its duration. | | |
| 8 | Involvement of external faculty member in the examination work as | | |
| | Paper setter | 5 | 3 |
| | Evaluator | 5 | 3 |
| | Examiner for practical / oral examination | 5 | 3 |
| | Total | 140 | 107 |
| Additional comments / feedback / observations/ advice which may or may not be based on above points: | | | |
| Quality of External questions papers may be improved. | | | |

5. Results

| S. No. | Sub-Parameter | Marks Assigned | Marks scored |
|--|---|----------------|--------------|
| 1 | Performance of students in examinations (Without backlogs) | 60 | 43 |
| 2017-21 | % of students passing IV year *0.15 $146/213 \times 100 \times 0.15$ | 10.28 | 10.28 |
| 2018-22 | % of students passing III year *0.15 $127/195 \times 100 \times 0.15$ | 9.77 | 9.77 |
| 2019-23 | % of students passing II year *0.15 $144/203 \times 15$ | 11.35 | 11.35 |
| 20-24 | % of students passing I year *0.15 $133/169 \times 15$ | 11.80 | 11.80 |
| 2 | Overall Performance of students (With backlogs) | 40 | 33 |
| | % of students passing IV year *0.1 $195/213 \times 100 \times 0.1$ | 9.15 | 9.15 |
| | % of students passing III year *0.1 $158/195 \times 100 \times 0.1$ | 8.10 | 8.10 |
| | % of students passing II year *0.1 $156/203 \times 10$ | 7.68 | 7.68 |
| | % of students passing I year *0.1 $133/169 \times 10$ | 7.87 | 7.87 |
| | Total | 100 | 76. |
| Additional comments / feedback/ observations / advice which may or may not be based on above points: Overall performance of students in without backlog need to be improve. | | | |

7. Student's Feedback and Corrective Action

| Sr. No. | Sub-Parameter | Marks Assigned | Marks scored |
|---------|---|----------------|--------------|
| 1 | Feed back during the semester | | |
| | Frequency of obtaining student's feedback (Meetings of CRCs etc) | 20 | 18 |
| | Corrective action taken at the departmental level | 20 | 16 |
| 2 | Suggestion box | | |
| | Availability of suggestion box | 5 | 4 |
| | How frequently suggestion box is opened ?(Maximum marks for opening twice in a month) | 5 | 3 |
| | Corrective action taken for suggestions at the departmental level | 10 | 8 |
| 3 | Exit feed back | | |
| | Attainment of POs for the academic year | 10 | 6 |
| | Corrective Action of attainment of POs | 10 | 6 |
| 4 | Survey on outcome of the course / individual class using web tools | 20 | 15 |
| | % of total courses for which survey is done * 20 | | |
| | | | |
| | Total | 100 | 76 |
| | Additional comments / feedback/ observations / advice which may or may not be based on above points: Correction action taken for suggestion / Co-po need to be improved. | | |

8. Faculty Performance

| Sr. No. | Sub-Parameter | Marks Assigned | Marks scored |
|---|---|----------------|--------------|
| 1 | Feedback from students (Department index on 15 points) | 20 | 20 |
| 2 | Performance appraisal | 20 | 19 |
| 3 | % of faculty received "outstanding" remark *0.2 | | |
| | % of faculty received "Excellent" remark *0.15 | | |
| | % of faculty received "positively good" remark *0.1 | | |
| 3 | Qualification enhancement of faculty | 5 | 5 |
| 4 | Overall performance of department faculty members , based on research paper published in journals, conferences and seminar. | 15 | 10 |
| 5 | MODROB/ TAPEC/ RPS and other sponsored projects received by the department | 5 | 2 |
| 6 | Participation of faculty as resource person outside the Institution | 10 | 4 |
| 7 | Performance of faculty, based on books publication, patent filed and awards. | 10 | 5 |
| 8 | Performance of faculty, based on consultancy and internal revenue generation (IRG) | 10 | 0 |
| 10 | Innovative ideas implemented by the faculty for overall development of students both in co-curricular (quality circle, hobby club etc) and extra curricular | 10 | 7 |
| 11 | Whether guided PG/ Research scholars | 5 | 3 |
| | Total | 110 | 75 |
| Additional comments / feedback/ observations / advice which may or may not be based on above points: R/D activities need to be improved. Consultancy projects need to be improved. | | | |

9. COs and POs of the Programme

| Sr. No. | Sub-Parameter | Marks Assigned | Marks scored |
|---|---|----------------|--------------|
| 1 | Framing of COs to all the courses including theory, laboratory, project, Seminar, Industrial Training | 15 | 10 |
| 2 | Documentation of Justification table for CO-PO articulation table for all courses | 15 | 10 |
| 3 | Calculation of CO-PO attainment for all courses in the programme | 20 | 18 |
| 4 | Calculation of POs by indirect attainment (with reasonable sample size) | 20 | 11 |
| 5 | Reasons for non-attainment of COs and POs if any | 15 | 8 |
| 6 | Corrective measures for non-attainment of COs and POs | 15 | 10 |
| Total | | 100 | 66 |
| Additional comments / feedback/ observations / advice which may or may not be based on above points: Overall awareness on NBA process & Co-po attainment is good. | | | |