



ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES  
(Affiliated to Andhra University, Accredited by NBA)  
Sangivalasa 531 162, Bheemunipatnam Mandal, Visakhapatnam Dist.  
Phone: 958933-226395, 225084, 225085  
MECHANICAL ENGINEERING DEPARTMENT

Date: 11<sup>th</sup> February 2020

To  
The Principal  
ANITS,  
Sangivalasa.

Sir,

Sub: Submission of External Academic Audit report (2018-19)- Reg:

We are herewith submitting the external audit report for the academic year 2018-19 for your perusal. The external audit team who completed the auditing process consists of the following members.

1. Dr.Balla Srinivasa Prasad, Asso.Proff, Dept.of.Mech.engg, GITAM-Deemed to be University.
2. Dr. V.Ramakrishna, Scientist-E, NSTL, Visakhapatnam.

  
Head of the Department

Encl:- Academic Audit Report.

*Admn. office (Surch)*

*Quint*





## Anil Neerukonda Institute of Technology & Sciences (Autonomous)

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

Sangivalasa-531 162, Bheemunipatnam Mandal, Visakhapatnam District

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### Department of Mechanical Engineering

#### Format for Academic Audit

(To be filled up by Academic Experts)

Academic year 2018-19

- 1. Name of the Auditor** Dr. Balla Srinivasa Prasad  
**Designation** Associate Professor in Mechanical Engg  
**Address** GIT, GITAM Deemed University, Visakhapatnam.  
**Contact no.** 9848321070  
**Email ID** sballa@gitam.edu.in
- 2. Name of the Auditor** Dr. V. RAMAKRISHNA  
**Designation** SCIENTIST - 'E', ALWT PROJECT  
**Address** NSTL (DRDO LAB), VISAKHAPATNAM  
**Contact no.** 9703319880  
**Email ID** ramki40@gmail.com
- 3. The days and dates of visit:** 8<sup>th</sup> Feb 2020.



## Anil Neerukonda Institute of Technology & Sciences (Autonomous)

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### Features of Academic Audit Format

- Academic Audit Format is designed to incorporate the guidelines provided by National Knowledge Commission for various parameters.
- Academic Audit Format is designed to incorporate the most of the parameters related to various stake holders.
- Evaluation is based on nine different parameters indicating academic ambience at the campus at the campus.
- Proper weightage to each parameter as shown below.

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

- Evaluation is more objective rather than subjective.
- Evaluation provides the specific information about the shortcomings.
- Academic Audit Format includes evaluation of system, students and facility.
- Evaluation of faculty includes evaluation by students as well as higher officer.
- Evaluation of students includes internal continuous evaluation, end semester evaluation, curricular and co-curricular and evaluation and placement.
- Evaluation includes infrastructural and other facilities provided by the institute / department for overall development of students.
- Academic Audit Format manual is being prepared to facilitate the institute / department and the auditor to furnish the information and to evaluate respectively.

## Summary

### Grading System:

S. No.	Parameters of Evaluation	Marks Obtained
1.	Curricula	107
2.	Academic Facilities	78
3.	Teaching Learning proves	104
4.	Evaluation System	128
5.	Result	55.78
6.	General Academic Activities	82
7.	Feedback and Corrective Action	70
8.	Faculty Performance / Upgradation	89
9.	Attainment of CO's and PO's of all courses	92
10.	Total	805.78

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

- i) Good curriculum
- ii) Student involvement in various co-curricular activities, Faculty FDPs, Publications.

#### 2. Weaknesses

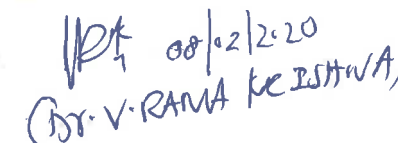
- i) Placements
- ii) Pass percentage
- iii) Consultancy works

#### 3. Suggestions based on information

Need to be improved in the areas of teaching weak stuents, improvement of coding skills & programming skills to get more placements and students participation in competitive examinations for higher studies.

Name and signature of Auditor

1.  08/2/2020  
(Dr. B. Srinivasa Prasad)

2.  08/02/2020  
(Dr. V. RAMA KRISHNA)

### 1. Curricula

S. No.	Sub-Parameter	Marks Assigned	Marks scored
1.	<b>Curricula content to provide understanding concepts of (with sufficient practical exposure)</b>		
	Mathematics and basic sciences	5	5
	Basic Engineering subjects	5	5
	Management and Humanities	6	6
	Programme Core	30	30
	Elective Subjects	6	6
	Interdisciplinary elective subjects	4	0
	Open Elective/Emerging subjects in curricula	4	4
	NPTEL courses/MOOCs	4	1
	Communication and computer skills	5	5
	Proficiency in analysis, synthesis, modeling & simulation and problem-solving skills	5	5
	Innovative and creative abilities	5	5
	Human skills and relations, professional ethics, environment	4	4
	Entrepreneurial skills	4	3
	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	12
<b>Total</b>		<b>120</b>	<b>107</b>
<b>Additional Comments / feedback / observations/ advice which may or may not be based on above points:</b>  Advised to improve and motivate students for enrolling NPTEL & other online courses			

## 2. Academic Facilities

S. No.	Sub-Parameter	Marks Assigned	Marks scored
1.	No of class rooms with LCDs	5	3
2.	No of laboratories and display of Cos and POs	5	5
3.	No of tutorial rooms	5	2
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	8
8.	Electric power available for 24 x 7 and power backups	5	5
9.	Audio visual facilities	5	1
10.	Class rooms furniture (quantity and quality)	5	4
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	9
13.	Department library /life long learning resources	10	9
14.	Internet and Wi-Fi facility	5	4
15.	Improvement made in infrastructural facilities during last year	5	2
<b>Total</b>		<b>100</b>	<b>78</b>
<p><b>Any additional comments / feedback / observations / advice which may or may not be based on above points:</b></p> <p>Recommended to provide extra space for student activity club for making Go-Karts, E-Bikes etc. and to improve audio-visual facilities.</p>			

### 3. Teaching – Learning Process

Sr. No.	Sub-Parameter	Marks Assigned	Marks scored
1.	<b>Theory Courses</b>		
	<b>Course File (Syllabus sheet, Course material, content beyond syllabus, MID question papers, Answer sheets, Assignments, External QP, Quizes and Activites)</b>		
	% 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	8
	Quality of teaching plan and notes prepared by faculty	10	8
	Quality of Assignments	10	8
	Case studies/ Mini Projects given as activity for core courses	10	6
	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	9
2.	<b>Practical</b>		
	Quality of experiments conducted (Do the experiments designed facilitate the students in generating creative thoughts ?)	10	8
	Availability of laboratory manual and its quality	10	9
	Maintenance of laboratory equipments and new addition	10	8
	New experiments designed by UG/PG Students	10	6
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	8
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	8
<b>Total</b>		<b>130</b>	<b>104</b>
<b>Any additional comments / feedback / observations/ advice which may or may not be based on above points:</b>  The maintenance of course files is very good. Advised to motivate the students to involve more in practical exposure so as to design/fabricate new working models and also advised to include case studies in more core subjects.			



#### 4. Examination and Evaluation System

Sr. No.	Sub-Parameter	Marks Assigned	Marks scored
<b>1</b>	<b>Examination Process</b>		
	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	5
<b>2</b>	<b>Quality of internal question papers</b>		
	Appropriate coverage of syllabus in class test and labelling of COs on the question paper	5	5
	Difficulty level of the question papers including numerical	5	4
	Innovation in question paper (Volume of repeated questions, correlation of question with competitive examinations)	5	3
<b>3</b>	<b>Quality of external question papers</b>		
	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	4
	Do the questions, test and develop the problem –solving skills and students' proficiency in analysis and design ?	5	4
	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
<b>4</b>	<b>Does the moderation of each question papers completed before paper printing ?</b>	5	5
<b>6</b>	<b>Assessment of Project work / Industrial training/ Internship term work</b>		
	Continuous assessment of project works/seminars through rubrics	5	4
<b>7</b>	<b>Assessment Process of theory external papers</b>		
	Presence of Process for evaluating external papers	5	5
	Model answers and marking scheme	5	5
	Evaluation quality (% of students applying for revaluation and of change in mark cases)	5	4
	Average experience of evaluators	5	5
	Moderation process	5	5
	Revaluation and recounting of answer sheets within mentioned period	5	5

	Does the Complaint Redressal Committee exist to tackle the cases of lapses associated with examinations ?	5	5
	Whether the photocopy of the assessed paper is made available the students, if requested ? Its duration.	5	4
<b>8</b>	<b>Involvement of external faculty member in the examination work as</b>		
	Paper setter	5	5
	Evaluator	5	5
	Examiner for practical / oral examination	5	5
	<b>Total</b>	<b>140</b>	<b>128</b>
<b>Additional comments / feedback / observations/ advice which may or may not be based on above points:</b>			
Overall examination and evaluation process is good.			

### 5. Results

S. No.	Sub-Parameter	Marks Assigned	Marks scored
1	<b>Performance of students in examinations (Without backlogs)</b>	<b>60</b>	
	% of students passing IV year *0.15		8.4
	% of students passing III year *0.15		6.9
	% of students passing II year *0.15		8.04
	% of students passing I year *0.15		7.44
2	<b>Overall Performance of students (With backlogs)</b>	<b>40</b>	
	% of students passing IV year *0.1		7.9
	% of students passing III year *0.1		5.9
	% of students passing II year *0.1		6.3
	% of students passing I year *0.1		4.9
	<b>Total</b>	<b>100</b>	<b>55.78</b>
<b>Additional comments / feedback/ observations / advice which may or may not be based on above points:</b>  Improvement is necessary in the overall performance of students.			



### 7. Student's Feedback and Corrective Action

Sr. No.	Sub-Parameter	Marks Assigned	Marks scored
<b>1</b>	<b>Feed back during the semester</b>		
	Frequency of obtaining student's feedback (Meetings of CRCs etc)	20	18
	Corrective action taken at the departmental level	20	18
<b>2</b>	<b>Suggestion box</b>		
	Availability of suggestion box	5	5
	How frequently suggestion box is opened ?(Maximum marks for opening twice in a month )	5	4
	Corrective action taken for suggestions at the departmental level	10	8
<b>3</b>	<b>Exit feed back</b>		
	Attainment of POs for the academic year	10	9
	Corrective Action of attainment of POs	10	8
<b>4</b>	Survey on outcome of the course / individual class using web tools	20	0
	% of total courses for which survey is done * 20		
	<b>Total</b>	<b>100</b>	<b>70</b>
	<b>Additional comments / feedback/ observations / advice which may or may not be based on above points:</b>		
	Feedback system & corrective measures are good. Need to conduct course outcome survey.		

### 8. Faculty Performance

Sr. No.	Sub-Parameter	Marks Assigned	Marks scored
1	Feedback from students (Department index on 15 points)	20	18
2	Performance appraisal	20	16
3	% of faculty received “ <b>outstanding</b> ” remark *0.2		
	% of faculty received “ <b>Excellent</b> ” remark *0.15		
	% of faculty received “ <b>positively good</b> ” 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	15
5	MODROB/ TAPEC/ RPS and other sponsored projects received by the department	5	5
6	Participation of faculty as resource person outside the Institution	10	8
7	Performance of faculty, based on books publication, patent filed and awards.	10	8
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	10
11	Whether guided PG/ Research scholars	5	4
	<b>Total</b>	<b>110</b>	<b>89</b>
<b>Additional comments / feedback/ observations / advice which may or may not be based on above points:</b>  Needs improvement in establishing consultancy works.			

### 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	14
2	Documentation of Justification table for CO-PO articulation table for all courses	15	14
3	Calculation of CO-PO attainment for all courses in the programme	20	20
4	Calculation of POs by indirect attainment ( with reasonable sample size)	20	20
5	Reasons for non-attainment of COs and POs if any	15	14
6	Corrective measures for non-attainment of COs and POs	15	10
<b>Total</b>		<b>100</b>	<b>92</b>
<b>Additional comments / feedback/ observations / advice which may or may not be based on above points:</b>  It is advised to improve in the area of corrective measures to be taken for <del>non</del> attainment of COs& Pos.			

1. *[Signature]* 8/2/2020  
(Dr. B. Srinivasa Prasad)

2. *[Signature]* 08/02/2020  
(Dr. V. RAMA KRISHNA)

10/10/10

Year	Month	Day	Event	Notes
1910	10	10	...	...
1910	10	11	...	...
1910	10	12	...	...
1910	10	13	...	...
1910	10	14	...	...
1910	10	15	...	...
1910	10	16	...	...
1910	10	17	...	...
1910	10	18	...	...
1910	10	19	...	...
1910	10	20	...	...
1910	10	21	...	...
1910	10	22	...	...
1910	10	23	...	...
1910	10	24	...	...
1910	10	25	...	...
1910	10	26	...	...
1910	10	27	...	...
1910	10	28	...	...
1910	10	29	...	...
1910	10	30	...	...
1910	10	31	...	...

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