



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

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

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### Department of Chemical Engineering

**Academic and Administrative Audit  
(to be filled up by Academic Experts)  
Academic year 2020-21**

**1. Name of the Auditor:**

Prof. M.V.V. Chandana Lakshmi

Designation: Professor, Department of Chemical Engineering

Address: Andhra University College of Engineering, AU

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**2. The days and dates of visit:**

29th January, 2022

*M.V.V. Ch. Lakshmi*

## Summary

### Grading System:

S. No.	Parameters of Evaluation	Marks scored
1.	Curricula	98
2.	Academic Facilities	84
3.	Teaching Learning process	104
4.	Evaluation System	133
5.	Result	69.14
6.	General Academic Activities	58
7.	Feedback and Corrective Action	81
8.	Faculty Performance / Upgradation	42
9.	Attainment of CO's and PO's of all courses	91
10.	Total	760.14

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

- Curriculum and examination, evaluation systems are strong
- Placements are good in number

#### 2. Weaknesses

- Research is very less
- No higher education aspiring students

#### 3. Suggestions based on information

Overall teaching learning process is good.  
Faculty publications and research is of primary concern.  
Assignments level can be improved

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Signature of Auditor

### 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	4
	Programme Core	30	30
	Elective Subjects	6	6
	Interdisciplinary elective subjects	4	2
	Open Elective/Emerging subjects in curricula	4	4
	NPTEL courses/MOOCs	4	3
	Communication and computer skills	5	5
	Proficiency in analysis, synthesis, modeling & simulation and problem-solving skills	5	4
	Innovative and creative abilities	5	2
	Human skills and relations, professional ethics, environment	4	2
	Entrepreneurial skills	4	2
	Hands on training and other industrial needs	4	2
	Self learning practices	4	2
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
Total		120	98
<b>Additional Comments / feedback / observations/ advice which may or may not be based on above points:</b> <ol style="list-style-type: none"> <li>1. Students are doing online courses for summer training in NPTEL and Coursera.</li> <li>2. Skill oriented courses can be introduced for pharmaceutical industries and software companies.</li> </ol>			

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## 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	5
4.	Faculty rooms / cabins	5	5
5.	Equipments available (curricula and cost wise)	5	4
6.	Computing facilities (including software)	10	7
7.	Research/Project laboratory	10	7
8.	Electric power available for 24 x 7 and power backups	5	5
9.	Audio visual facilities	5	3
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	8
13.	Department library /life long learning resources	10	8
14.	Internet and Wi-Fi facility	5	5
15.	Improvement made in infrastructural facilities during last year	5	4
<b>Total</b>		<b>100</b>	<b>84</b>
<b>Any additional comments / feedback / observations / advice which may or may not be based on above points:</b> <ol style="list-style-type: none"> <li>1. Research laboratory facilities are limited</li> <li>2. Models and mini projects are well displayed in project lab</li> </ol>			

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### 3. Teaching – Learning Process

Sr. No.	Sub-Parameter	Marks Assigned	Marks scored
<b>1.</b>	<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	10
	Quality of teaching plan and notes prepared by faculty	10	10
	Quality of Assignments	10	7
	Case studies/ Mini Projects given as activity for core courses	10	10
	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
<b>2.</b>	<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	0
3.	Corrective action taken by department against the students who are absent to the classes regularly	10	8
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	10
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>			
<ol style="list-style-type: none"> <li>1. Course plan and lesson plans are prepared and planned properly</li> <li>2. Quality of assignments can be improved</li> <li>3. Activity part is well handled by faculty by organizing presentation, models, problem solving using softwares</li> </ol>			

#### 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	3
	Innovation in question paper (Volume of repeated questions, correlation of question with competitive examinations)	5	2
<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	5
	Language / Clarity / Variety etc in questions (Majority of the questions should not be just like write short note/ explain / discuss etc.	5	5
<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	5
<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	5
	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	5
<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>133</b>

**Additional comments / feedback / observations/ advice which may or may not be based on above points:**

1. Overall examination preparation, conduction and evaluation is performed strictly and transparently.

*M. V. V. Ch. Lakshmi*

### 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		11.74
	% of students passing III year *0.15		8.30
	% of students passing II year *0.15		10
	% of students passing I year *0.15		9.75
2	<b>Overall Performance of students (With backlogs)</b>	<b>40</b>	
	% of students passing IV year *0.1		8.70
	% of students passing III year *0.1		6.61
	% of students passing II year *0.1		7.54
	% of students passing I year *0.1		6.5
	<b>Total</b>	<b>100</b>	<b>69.14</b>
Additional comments / feedback/ observations / advice which may or may not be based on above points:  1. Students pass percentage can be improved especially students without backlogs.			

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### 6. General Academic Activities

S. No.	Sub-Parameter	Marks Assigned	Marks scored
1.	Whether all activities performed as per academic calendar ?	10	7
2.	Whether academic processes are student development centric ?	10	10
3.	% of students actually enroll for co-curriculum activities in or out of the Institute <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 30%;">                     &gt;70% 30% to 70% &lt;30%                 </div> <div style="width: 40%; text-align: center;">                     10 marks linearly distributed 00 marks.                 </div> </div>	10	0
4.	Whether co-curriculum activities of institute /department are evenly disturbed throughout the year?	5	3
5.	Are emergency issues resolved by conducting Academic Council / Examination Committee meetings which are ratified in subsequent meetings ?	5	5
6.	How much is overall placement of students (in % based on eligible students) and annual pay package ?	10	8
7.	How is the performance of students in Extension of services through NSS / NCC /Unnath Bharath Abhiyan?	10	8
8.	Industrial visits organized by department	10	0
9.	Technical events organized by the department for faculty and students including STTP / Expert lectures / Model or project competition / GD/ etc.	10	7
10.	Entrepreneurship/ Techno idea activities contest in the department	10	10
11.	Performance in competitive examinations like GATE/ CAT/GRE etc	10	0
<b>Total</b>		<b>100</b>	<b>58</b>
<b>Additional comments / feedback/ observations / advice which may or may not be based on above points:</b> <ol style="list-style-type: none"> <li>1. Percentage of students participating in extra-curricular activities is very low.</li> <li>2. No industrial visits were conducted due to COVID-19</li> <li>3. Performance in competitive examinations are very less but it is increasing since last years.</li> </ol>			

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**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	20
	Corrective action taken at the departmental level	20	15
<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	1
	Corrective action taken for suggestions at the departmental level	10	2
<b>3</b>	<b>Exit feed back</b>		
	Attainment of POs for the academic year	10	10
	Corrective Action of attainment of POs	10	8
<b>4</b>	Survey on outcome of the course / individual class using web tools	20	20
	% of total courses for which survey is done * 20		
	<b>Total</b>	<b>100</b>	<b>81</b>
	<b>Additional comments / feedback/ observations / advice which may or may not be based on above points:</b>		
	<ol style="list-style-type: none"> <li>1. Suggestion box complaints are opened by central team</li> <li>2. Corrective actions can be more focused</li> </ol>		

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### 8. Faculty Performance

Sr. No.	Sub-Parameter	Marks Assigned	Marks scored
1	Feedback from students (Department index on 15 points)	20	17
2	Performance appraisal	20	10
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	0
5	MODROB/ TAPEC/ RPS and other sponsored projects received by the department	5	0
6	Participation of faculty as resource person outside the Institution	10	5
7	Performance of faculty, based on books publication, patent filed and awards.	10	0
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	5
11	Whether guided PG/ Research scholars	5	0
<b>Total</b>		<b>110</b>	<b>42</b>
<p><b>Additional comments / feedback/ observations / advice which may or may not be based on above points:</b></p> <p>1. Research orientation is observed to be poor.</p>			

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### 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	15
2	Documentation of Justification table for CO-PO articulation table for all courses	15	15
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	18
5	Reasons for non-attainment of COs and POs if any	15	15
6	Corrective measures for non-attainment of COs and POs	15	8
<b>Total</b>		<b>100</b>	<b>91</b>
<p><b>Additional comments / feedback/ observations / advice which may or may not be based on above points:</b></p> <ol style="list-style-type: none"> <li>1. CO-PO mapping is nicely done.</li> <li>2. Articulation matrix is well explained</li> <li>3. Indirect attainments are calculated</li> </ol>			

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