



("To be an Institution of National Repute Creating Globally Competent Technocrats to Serve the Society")
Sector 27, Mihan Rehabilitation Colony, New Khapri (Rly), Nagpur- 441108 (Maharashtra State)
"To be an Institution of National Repute Creating Globally Competent Technocrats to Serve the Society"
Phone No. (07103) 295226 (P), 295220(O) Website: www.gcoen.ac.in
e-mail: principal.gcoenagpur@dtemaharashtra.gov.in

## Department of Mechanical Engineering

#### **Academic Audit**

U.G. Programmes
Academic Year: 2021 - 2022

Date and Day of Visit: Tuesday, 06/09/2022

| SN | <b>Details</b>  | Auditor 1             | Auditor 2           |
|----|-----------------|-----------------------|---------------------|
| 1  | Name of Auditor | Dr. Kiran Asutkar     | Dr. S. P. Jolhe     |
| 2  | Designation     | Associate Professor   | Assistant Professor |
| 3  | Institute name  | GCOEN                 | GOCEN               |
| 4  | Contact no      | 9881747815            | 9890424373          |
| 5  | email           | kgasutkar@gcoen.ac.in | sp.jolhe@gov.in     |

## Summary

| Sr. | Parameters of Evaluation         | Page<br>No. | Max.<br>Marks | Marks<br>Scored |
|-----|----------------------------------|-------------|---------------|-----------------|
| No. |                                  | 3           | 150           | 122             |
| 1   | Academic Facilities              | 4           | 240           | 201             |
| 2   | Teaching Learning Process        | 6           | 110           | 93              |
| 3   | Examination System               | 7           | 100           | 78.68           |
| 4   | Result                           | 8           | 100           | 87              |
| 5   | General Academic Activities      | 9           | 100           | 83.3            |
| 6   | Feedback and Corrective Action   | 10          | 70            | 45              |
| 7   | Faculty Performance/Up-gradation | Total       | 870           | 631.3           |

#### **Grading System:**

|       | - I            | Total Marks scored |
|-------|----------------|--------------------|
| Grade | Details        |                    |
| A۴    | Excellent      | 675 and above      |
|       | Good           | 541-674            |
| A     |                | 450-540            |
| В     | Acceptable     |                    |
| C     | Not-acceptable | Below 450          |

- 1 . Strengths 1) More than 50% faculty is PhD & remaining are pursuing PhD 2) Effective Teaching Learning
- 2. Weaknesses- I) No. of books available in library are less II) Professor not available III) Sanctioned posts of Assistant Professor are not filled IV) Some laboratories are under developed
- 3. Suggestions based on information: I) Efforts should be taken by the department for getting regular faculty II) Software and laboratory equipment should be procured

Auditor 1. ( . Name and Signature of Auditor/s

## 1. Academic Facilities

| Sr. No. | Sub-parameter   | Quantity/<br>Facility(Y/N) | Marks<br>Assigned | Mar<br>Secur |
|---------|---|----------------------------|-------------------|--------------|
| 1       | No of class rooms   | 4                          | 10                | 10           |
| 2       | No of laboratories  | 10                         | 10                | 10           |
| 3       | No of tutorial rooms  | 1                          | 5                 | 5            |
| 4       | Faculty rooms/cabins  | 6                          | 5                 | 5            |
| 5       | Equipments available (curricula and cost wise)  |                            | 30                | 24           |
| 6       | Computing facilities (including software)   | 17 computer                | 10                | 7            |
| 7       | Research facilities   |                            | 10                | 0            |
| 8       | Electric power available for 24x7   | 2 DG set of<br>320KVA      | 5                 | 5            |
| 9       | Audio visual facilities   | Y                          | 10                | 10           |
| 10      | Class rooms furniture (quantity and quality)  | Y                          | 5                 | 4            |
| 11 '    | Laboratories furniture (quantity and quality)   | Y                          | 10                | 8            |
| 12      | No of books, e-library, online journals and printed journals related to programme in the central library                        | Y                          | <sub>*</sub> 15   | 10           |
| 13      | Departmental library  | Y                          | 5                 | 5            |
| 14      | Internet and wi-fi facility   | Y                          | 10                | 10           |
| 15      | Improvement made in infrastructural facilities during last year   | Y                          | 10                | 9            |
|         |   | Total =                    | 150               | 122          |
| Boo     | y additional comments/feedback/observa<br>y not be based on above points:<br>oks are insufficient<br>L Subscription for journal | tions/advice whi           | ch may or         |              |

# 2. Teaching – Learning Process

| Sr.<br>No | Description   | Quantity/ Facility<br>(Y/N) / Remarks | Max.<br>Marks | Marks<br>Secured |  |  |
|-----------|---|---------------------------------------|---------------|------------------|--|--|
| 1         | Theory lectures   |                                       |               |                  |  |  |
|           | Average % of lectures conducted compared with target: more than 90% - 60 marks and less than 40% - 00 marks; in between 40% -90% marks are linearly graded.   | More than 80%                         | 60            | 50               |  |  |
|           | Course File   |                                       |               |                  |  |  |
|           | % of subjects for which teaching plan is prepared and execution   | . Y                                   | 20            | 20               |  |  |
|           | Quality of teaching plan and notes prepared by faculty  | Y                                     | 10            | 8                |  |  |
|           | Preparation of question bank and allied activities  | Y                                     | 10            | 8                |  |  |
| <i>j</i>  | Novel techniques used for effective teaching learning process (including use of A/V aids, development of software/teaching aids, use of available software, use of available learning resources etc.) | Y                                     | 10            | 7                |  |  |
| 2         | Practical   |                                       |               |                  |  |  |
|           | Average % of practical conducted compared with that minimum required as per curriculum: less than 100% - 5 marks; 100% - 10, >100% marks; 15  | 100%                                  | 15            | 10               |  |  |
|           | Quality of experiments conducted  | Good                                  | 10            | 7                |  |  |
|           | Availability of laboratory manual and its quality   | Y                                     | 10            | 8                |  |  |
|           | Maintenance of laboratory equipments and new addition   | Y                                     | 15            | 12               |  |  |
|           | Sponsored projects of UG students   | Y                                     | 5             | 5                |  |  |
|           | Theory attendance of students   |                                       | 25            | 20               |  |  |
| 3         | Average % of lectures attended by students more than 90% - 25 marks and less than 60% - 00 marks; in between 60% -90% marks are linearly graded.  | More than 80%                         |               |                  |  |  |
|           |   | I                                     |               |                  |  |  |

|   | Average % of practical attended by students 100% - 10 marks and less than 75% - 00 marks; in between 75% -100% marks are linearly graded. |   |     |     |
|---|---|---|-----|-----|
| 5 | Corrective action taken by department against the defaulter students  | Y | 5   | 5   |
| 6 | Home assignments and its assessment.  | Y | 5   | 5   |
| 7 | Efforts taken by department to improve performance of academically weaker students  | Y | 10  | 8   |
| 8 | Efforts taken by department to improve overall performance of students by Courses conducted/Expert lectures etc                           | Y | 10  | 10  |
| 9 | Staff development programs for Faculty and/or supporting staff including CEP/STTP etc   | Y | 10  | 10  |
|   | Total=  |   | 240 | 201 |

Any additional comments/feedback/observations/advice which may or may not be based on above points:

More than 80% faculty members are well qualified

# 3. Examination System

| Sr<br>No | Description  | Quantity/<br>Facility(Y/N) /<br>Remarks | Max.<br>Marks | Marks<br>Secured |
|----------|--|---|---------------|------------------|
| 1        | Examination Process  |   |               |                  |
|          | Execution of academic calendar for all examinations  | Y                                       | 10            | 8                |
|          | Transparency in the processes like internal assessment; & declaration of result  | Y                                       | 10            | 8                |
|          | Staff appointed for examination  | Y                                       | 10            | 10               |
| 2        | Quality of CT question papers  | ,                                       |               |                  |
|          | Appropriate coverage of syllabus in class test   | Y                                       | 10            | 9                |
|          | Difficulty level of the question papers including numerical (at par with University Exam)  | Y                                       | 10            | 8                |
|          | Innovation in question paper (Volume of repeated questions, correlation of questions with competitive examinations)  | Y                                       | 10            | 8                |
| 3        | Arranging quiz, surprise test, assignments etc.  | Y                                       | 10            | 10               |
| 4        | Practical / term work  |   |               |                  |
| 1        | Assessment of practical (journal).   | Y                                       | 10            | 8                |
|          | Assessment method to judge depth of understanding  | Y                                       | 10            | 8                |
|          | Appropriate weight-age to various components of term work assessment   | Y                                       | 10            | 7                |
|          | Continuous evaluation of project/seminar and its record (maintenance of logbook)   | Y                                       | * 10          | 9                |
|          |  | Total =                                 | 110           | 93               |
|          | Additional comments/feedback/observations/advious based on above points:  Difficulty level of question paper is remarkable Quizzes & Assignments are well planned & execut Many Industrial projects are done | ŧ                                       | nay not b     | е                |

#### 4. Result

| Sr<br>No | Description   | Quantity/<br>Facility(Y/N) /<br>Remarks | Marks<br>Assigned | Marks<br>Secured |
|----------|---|---|-------------------|------------------|
| 1        | Performance of students in Class Test-I                   |   | 10                | 9.6              |
|          | Average % of students passing in CT-1 *0.1                |   |                   |                  |
| 2        | Performance of students in Class Test-II                  |   | 10                | 9.7              |
|          | Average % of students passing in CT-II *0.1               |   |                   |                  |
| 3        | Performance of students in University Exam                |   | 30                | 27               |
|          | Average % of students passing in UE *0.3                  |   |                   |                  |
| 4        | Overall Performance of students                           |   | 50                | 32.38            |
|          | % of students securing CGPA > 9*0.5                       |   | 14.92             |                  |
|          | % of students securing CGPA in between 8.25 and 9.0 *0.4  |   | 12.93             | -                |
|          | % of students securing CGPA in between 6.75 and 8.25 *0.3 |   | 4.5               |                  |
|          | % of students securing CGPA in between 5.75 and 6.75 *0.2 |   | 0.0334            |                  |
|          | % of students securing CGPA < 5.75 *0.1                   |   |                   |                  |
| 5        | Number of copy cases reported and punished * (- 2)        |   |                   |                  |
| ,        | Total =   |   | 100               | 78.68            |
|          | •   |   |                   |                  |

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

Some students are in university toppers list

### 5. General Academic Activities

| Sr.<br>No. | Sub parameter   | Quantity/<br>Facility(Y/N)<br>/ Remarks | Marks<br>Assigned | Marks<br>Secured |
|------------|---|---|-------------------|------------------|
| 1          | Whether all activities performed as per academic calendar?  | Y                                       | 5                 | 5                |
| 2          | Whether academic processes are student developments centric?  | Y                                       | 5                 | 5                |
| 3          | Students enrollment for co-curriculum activities in or out the institute  | Y                                       | 10                | 8                |
| 4          | Whether co-curriculum activities of institute/department are evenly distributed throughout the year?  | Y                                       | 5                 | 5                |
| 5          | Participation of students in Sport?   | Y                                       | 10                | 10               |
| 6          | Participation of students in cultural activities?   | Y                                       | 10                | 10               |
| 7          | Implementation of AICTE schemes such as IIC, Skill India, NPTEL etc.  | Y                                       | 5                 | 2                |
| 8          | How much is overall placement of students (in % based on eligible students) and annual pay package?   | Y                                       | 10                | 7                |
| 9          | How is the performance of students in Extension of services through NSS/NCC?  | Y                                       | 5                 | 5                |
| 10         | Industrial visits organized by department.  | Y                                       | 10                | 8                |
| 11         | Technical events organized by the department for faculty and students including CEP/STTP/Expert lectures/Model or project competition/GD/PI etc | · Y                                     | 20                | 17               |
| 12         | Performance in competitive examinations like GATE/CAT etc   | Y                                       | 5                 | 5                |
|            | Total =   |   | 100               | 87               |

Any additional comments/feedback/observations/advice which may or may not be based on above points:

Best department trophy won by the department

# 6. Student's Feedback and Corrective Action

| Sr.<br>No. | Sub parameter  | Quantity/<br>Facility(Y/N)<br>/ Remarks | Marks<br>Assigned | Marks<br>Secured |
|------------|--|---|-------------------|------------------|
| 1          | Feedback during the semester   |   |                   |                  |
| 1          | Frequency of obtaining student's feedback (Meetings of CRs etc)            | Y                                       | 10                | 9                |
|            | Corrective action taken at the departmental level                          | Y                                       | 10                | 9                |
| 2          | Grievance/Suggestion mechanism   |   |                   | ,                |
| 2          | Through Online /email  | Y                                       | 10                | 9                |
|            | Corrective action taken for suggestions at the departmental level          | Y                                       | 10                | 9                |
| 3          | Feedback at the end of semester (Over all impression reported by students) | Y                                       | 40                | 32.3             |
|            | % of Excellent responses *0.4  |   | 0.8               |                  |
|            | % of Very Good responses *0.35   |   | 24.5              |                  |
|            | % of Good responses *0.25  |   | 7                 |                  |
|            | % of Poor responses *0.15  |   |                   |                  |
|            | % very poor responses *0.05  |   |                   |                  |
| 4          | Corrective action taken by department for point 3                          |   | 20                | 15               |
|            | Total =  |   | 100               | 83.3             |

Any additional comments/feedback/observations/advice which may or may not be based on above points:

Overall feedback responses are very good

## 7. Faculty Performance

| Sr.<br>No. | Description   | Quantity/<br>Facility(Y/N)<br>/ Remarks | Marks<br>Assigned | Marks<br>Secured |
|------------|---|---|-------------------|------------------|
| 1          | Performance appraisal   |   | 30                |                  |
|            | % of faculty received "A+" remark* 0.3  |   |                   |                  |
|            | % of faculty received "A" remark* 0.2   |   |                   |                  |
|            | % of faculty received "B" remark* 0.1   |   |                   |                  |
| 2          | Qualification enhancement of faculty through qualification / online courses                             |   | 5                 | 0                |
| 3          | Overall performance of faculty, based on research paper published in journals, conferences and seminar. |   | 15                | 12               |
| 4          | MODROB/UBA/ RPS and other sponsored projects received by the department                                 |   | 5                 | 5                |
| 5          | Participation of faculty outside the Institution  |   | 10                | 8                |
| 6          | Performance of faculty, based on books publication, patent filed and awards                             |   | 5                 | 0                |
| 7          | Performance of faculty, based on consultancy and internal revenue generation (IRG)                      |   | h 5               | 4                |
| 8          | % of faculty members participated in various faculty development programme                              |   | 10                | 8                |
| 9          | Innovative ideas implemented by the department for overall academic development of students             |   | 10                | 5                |
| 10         | Whether guided Research scholars?   |   | 5                 | 3                |
|            | Total =   |   | 70                | 45               |

Any additional comments/feedback/observations/advice which may or may not be based on above points:

CR of 2021-22 not yet received NPTEL enrollment is very poor

Note: If any activity is not associated / eligible, then allotted marks may be deducted from marks of that section.