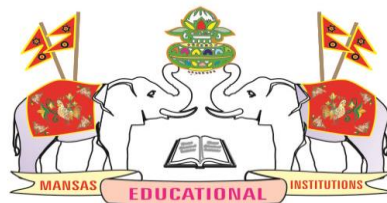# ANNUAL QUALITY ASSURANCE REPORT (AQAR) 2013-14

Submitted to

**NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL (NAAC)**
By

**INTERNAL QUALITY ASSURANCE CELL (IQAC)**
OF

## MAHARAJ VIJAYARAM GAJAPATHI RAJ (MVGR) COLLEGE OF ENGINEERING

(Approved by AICTE, New Delhi, and permanently affiliated to JNTUK, Kakinada)
Accredited by NBA of AICTE, NAAC with 'A' Grade of UGC, Listed u/s 2(f) & 12(B) of UGC Act 1956.
Vijayaram Nagar Campus, Chintalavalasa,
Vizianagaram-535005, Andhra Pradesh

# The Annual Quality Assurance Report (AQAR) of the IQAC

All NAAC accredited institutions will submit an annual self-reviewed progress report to NAAC, through its IQAC. The report is to detail the tangible results achieved in key areas, specifically identified by the institutional IQAC at the beginning of the academic year. The AQAR will detail the results of the perspective plan worked out by the IQAC. *(Note: The AQAR period would be the Academic Year. For example, July 1, 2012 to June 30, 2013)*

# Part – A

## 1. Details of the Institution

1.1 **Name of the Institution**               : **Maharaj Vijayaram Gajapathi Raj College of Engineering**

| | |
|---|---|
| 1.2 Address Line 1 | : Vijayaram Nagar Campus |
| Address Line 2 | : Chintalavalasa, Denkada |
| City/Town | : Vizianagaram |
| State | : Andhra Pradesh |
| Pin Code | : 535 005 |
| Institution e-mail address | : principal.mvgr@gmail.com |
| Contact Nos. | : 08922-241039/241199 |
| Name of the Head of the Institution | : Dr K V L Raju |
| Tel. No. with STD Code | : 08922-241039/241199 |
| Mobile | : 94400 18656 |
| Name of the IQAC Co-ordinator | : Dr P Ravindranadh |
| Mobile | : 09441939633 |
| IQAC e-mail address | : dean.sp.mvgr@gmail.com |

1.3 **NAAC Track ID** *(For ex. MHCOGN 18879)*     : APCOGN13920

1.4 **NAAC Executive Committee No. & Date:**     : EC/PCA/49/76 dated 15.06.2009

1.5 **Website address**               : www.mvgrce.edu.in

   Web-link of the AQAR:  http://www.mvgrce.com/index.php/naac-ssr/aqar

1.6 **Accreditation Details**               :

| Sl. No. | Cycle | Grade | CGPA | Year of Accreditation | Validity Period |
|---------|-------|-------|------|----------------------|-----------------|
| 1 | 1st Cycle | A | 3.23 | 2009 | 5 Years |

1.7 **Date of Establishment of IQAC**           : 20/08/2009

**1.8 AQAR for the year** *(for example 2010-11)*     **: 2013-14**

1.9 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC ((*for example AQAR 2010-11submitted to NAAC on 12-10-2011*)

i. AQAR on 20/09/2010
ii. AQAR on 20/09/2011
iii. AQAR on 20/09/2012
iv. AQAR on 20/09/2013

1.10 Institutional Status

University     State [ ]   Central [ ]   Deemed [ ]   Private [ ]

Affiliated College     Yes [√]   No [ ]

Constituent College     Yes [ ]   No [ ]

Autonomous college of UGC     Yes [ ]   No [ ]

Regulatory Agency approved Institution     Yes [√]   No [ ]

Type of Institution   Co-education [√]   Men [ ]   Women [ ]

     Urban [√]   Rural [ ]   Tribal [ ]

Financial Status   Grant-in-aid [ ]   UGC 2(f) [√]   UGC 12B [√]

     Grant-in-aid + Self Financing [ ]   Totally Self-financing [√]

1.11 Type of Faculty/Programme

Arts [ ]   Science [ ]   Commerce [ ]   Law [ ]   PEI (Phys Edu) [ ]

TEI (Edu) [ ]   Engineering [√]   Health Science [ ]   Management [√]

Others   (Specify):

1.12 Name of the Affiliating University    : **Jawaharlal Nehru Technological University-Kakinada (JNTUK) KAKINADA**

1.13 Special status conferred by Central/ State Government-- UGC/CSIR/DST/DBT/ICMR etc

Autonomy by State/Central Govt. / University [ ]

University with Potential for Excellence [ ]    UGC-CPE [ ]

DST Star Scheme [ ]    UGC-CE [ ]

UGC-Special Assistance Programme [ ]    DST-FIST [ ]

UGC-Innovative PG programmes [ ]    Any other (*Specify*) [ ]

UGC-COP Programmes [ ]

## 2. IQAC Composition and Activities

2.1 No. of Teachers  `10`

2.2 No. of Administrative/Technical staff  `6`

2.3 No. of students  `1`

2.4 No. of Management representatives  `1`

2.5 No. of Alumni  `1`

2. 6  No. of any other stakeholder and

   community representatives  `1`

2.7 No. of Employers/ Industrialists  `0`

2.8  No. of other External Experts  `1`

2.9 Total No. of members  `21`

2.10 No. of IQAC meetings held  4

2.11 No. of meetings with various stakeholders:  No. `4`  Faculty `2`

   Non-Teaching Staff Students `1`  Alumni `1`  Others `   `

2.12 Has IQAC received any funding from UGC during the year?  Yes  No

   If yes, mention the amount `        `  ☐  ☑

2.13 Seminars and Conferences (only quality related)

   (i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC

   Total Nos. ☐  International ☐  National ☐  State ☐  Institution Level ☐

   (ii) Themes

| Department | Themes |
| --- | --- |
| Chemical Engg | Eco-friendly Technologies for Better Tomorrow' |
|  | Successful implementation of green technologies in the Industry |
|  | Importance of green practices in the current scenario |
|  | Green practices in Pharmaceutical Industries |
|  | Eco-friendly processes for the production of valuable chemicals from Hydro treated off gas |
|  | Role and responsibilities of Chemical Engineers in implementing green technologies |

| | |
|---|---|
| EEE | Power Quality improvement in Hybrid energy systems |
| CIVIL | Sustainable Water Resources Management |
| CSE | APPSFEST – 2013 (ANDROID) |
| | APPSFEST – 2013 (CYBERMANIA) |
| | Intelligent Computing and Applications (IWICA-2012) |
| | Workshop on Lab view of National Instruments |
| | Students Technical Symposium (PRAKIRANA -14) |
| | FDP on Cyber Physical System Using NI LabVIEW |
| | Analogy and Mixed signal circuit design using Mentor Graphics Tools |
| | National Instruments Lab VIEW for Teaching and Research Applications |
| IT | Mobile Application Development |
| | Distributed Computing |
| | Cloud Computing & Its Applications |
| | Research Advances in Science and Engineering-2014 |
| MECH | Integration of Computer based Methodologies in Mechanical Engineering Systems (ICMMES-09) |
| | Applications of CFD'' In Fluid Flow Analysis |

2.14 Significant Activities and contributions made by IQAC

- The institute has in place a system of participative management wherein all staff contribute to the process of decision-making
- The Heads of Department are empowered to plan, organize and execute all developmental activities pertaining to the department
- Enhancing the employability of students by providing additional training on industry-oriented skills

2.15 Plan of Action by IQAC/Outcome

The plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year *

| Plan of Action | Achievements |
|---|---|
| 1) Regular meetings are held by the Principal with the various committees responsible for the different administrative tasks of the institution<br>2) Close monitoring of the class work through regular meetings by the HoD with student representatives and class teachers<br>3) Motivate the faculty for undertaking quality research activities and bring out more number of research projects and publications<br>4) Establish industry-oriented training programs to increase student employability | 1) There are about 20 different committees established in the college categorized under administrative roles and academic responsibilities. These committees, coordinated by a convener, meet regularly to discuss, plan and execute their respective activities<br>2) Each class has a set of student class representatives and a designated class teacher who meet with the head every month to discuss syllabus coverage and class issues<br>3) Till date 502 papers have been published by the faculty in the last 3 years. A total of 18 funded research projects have been sanctioned<br>4) A total of 29 industry-oriented training programs/MOUs have been implemented and are greatly benefitting the students to gain employment |

2.16 Whether the AQAR was placed in statutory body          Yes          No

Management  [√]    Syndicate  [  ]    Any other body  [  ]

Provide the details of the actions taken

After careful investigation of AQAR, the management advised to rectify all the shortcomings in the forthcoming academic year in addition to examination and evaluation reforms

# Part – B

## Criterion – I  Curricular Aspects

1.1 Details about Academic Programmes

| Level of the Programme | Number of existing Programmes | Number of programmes added during the year | Number of self-financing programmes | Number of value added / Career Oriented programmes |
|---|---|---|---|---|
| PhD | - | - | - | - |
| PG | 7 | - | 7 | - |
| UG | 7 | - | 7 | - |
| PG Diploma | - | - | - | - |
| Advanced Diploma | - | - | - | - |
| Diploma | - | - | - | - |
| Certificate | - | - | - | - |
| Others | - | - | - | - |
| **Total** | 14 | - | 14 | - |

| Interdisciplinary | - | - | - | - |
|---|---|---|---|---|
| Innovative | - | - | - | - |

1.2  (i) Flexibility of the Curriculum: CBCS/Core/Elective option / Open options
      (ii) Pattern of programmes:

| Pattern | Number of programmes |
|---|---|
| Semester | 14 |
| Trimester | - |
| Annual | - |

1.3 Feedback from stakeholders*    Alumni [√]   Parents [√]   Employers [√]   Students [  ]
    *(On all aspects)*

        Mode of feedback   :    Online [√]   Manual [√]   Co-operating schools (for PEI) [  ]

## Analysis of Employer Feedback

The employers feel that the graduates of our Institution

- o Can work autonomously and collaboratively as a professional
- o Communicates effectively in professional practice and as a member of the community
- o Demonstrates international perspectives as a professional and as a citizen
- o Are effective problem solvers, capable of applying logical, critical, and creative thinking to a range of problems
- o Are committed to ethical action and social responsibility as a professional and citizen
- o Are prepared for life-long learning in pursuit of personal development and excellence in
  professional practice
- o Operates effectively with and upon a body of knowledge of sufficient depth to begin professional practice

1.4 Whether there is any revision/update of regulation or syllabi, if yes, mention their salient aspects.

- Being MVGR College of Engineering is an affiliated to JN Technological University-Kakinada it follows syllabi prescribed by the university
- University on regular basic revises the syllabus

1.5 Any new Department/Centre introduced during the year. If yes, give details.

NIL

## Criterion – II Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty

| Total | Asst. Professors | Associate Professors | Professors | Others |
|---|---|---|---|---|
| 239 | 163 | 37 | 39 | |

2.2 No. of permanent faculty with Ph.D.

52

2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year

| Asst. Professors | | Associate Professors | | Professors | | Others | | Total | |
|---|---|---|---|---|---|---|---|---|---|
| R | V | R | V | R | V | R | V | R | V |
| 163 | 0 | 37 | 0 | 39 | 0 | 0 | 0 | 239 | 0 |

2.4 No. of Guest and Visiting faculty and Temporary faculty 
- | - | -

2.5 Faculty participation in conferences and symposia:

| Academic staff development programs | No. of faculty nominated | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | CHE | CSE | CE | ECE | EEE | IT | MECH | S&H | MCA | MBA | Total |
| 2013-14 | | | | | | | | | | | |
| a) Refresher Courses | - | - | - | 6 | 3 | 3 | - | 1 | 1 | - | 14 |
| b) HRD Programmes | - | - | - | 6 | - | - | - | - | - | - | 6 |
| c) Training Programs | - | - | 1 | 44 | 8 | 5 | - | - | - | 1 | 59 |
| d) Work- shops etc. | 10 | 22 | 2 | 43 | 21 | 4 | - | - | - | - | 102 |

2.6 Innovative processes adopted by the institution in Teaching and Learning:

□ Each class room is provided with internet facility.
□ College has well equipped seminar halls and e-class rooms.
□ The use of modern multi-media teaching aids like OHP, LCD projectors, Internet enabled computer systems are usually employed in class room instructions.
□ The students are also encouraged to use computer software packages for analysis and experimental work of their projects.
□ The college encourages teachers to enhance their subject knowledge and research in their respective fields using library resources and software.
□ Creative assignments are prepared by the faculty in all the subjects and students are asked to prepare the solutions by referring the books and other e-learning materials.
□ Seminar s / symposia are conducted regularly every year to bring out inherent talents of the budding engineers. Special guest lectures are also arranged on the latest topics by eminent academicians / industrialists.
□ The faculty members are encouraged to participate in National/International level seminars by extending academic leaves and the required financial assistance.
□ The faculty members in turn transform their knowledge to their students either in the classroom or arranging special lectures for this purpose.
□ The college organizes training programmes for junior faculty members on regular basis, by inviting resource persons from NITTTR, Chennai on the topics of Instructional Design and Delivery
□ Training Teachers for Excellence
□ Mission10X adopted an innovative three-pronged approach on Empowering Faculty members to use Mission10X Learning Approach (MxLA)
□ Developing transformative Academic Leaders to build institutions of excellence Deploying Unified Technology Learning Platforms (UTLPs) to bridge the gap between industry and academia
□ ELCS lab is established to improve the verbal skills of the students.

2.7 Total No. of actual teaching days

during this academic year

192

2.8 Examination/ Evaluation Reforms initiated by the Institution (for example: Open Book Examination, Bar Coding, Double Valuation, Photocopy, Online Multiple Choice Questions)

All Internal Assessment Tests are conducted as per University regulations

2.9 No. of faculty members involved in curriculum restructuring/revision/syllabus development

| - | - | 2 |
|---|---|---|

as member of Board of Study/Faculty/Curriculum Development  workshop

2.10 Average percentage of attendance of students

| 96% |

2.11 Course/Programme wise distribution of pass percentage :

| Program | Branch | (Batch) Year | % of students passed out with 1st Division | % of students passed out with 2nd Division | Overall Pass % |
|---|---|---|---|---|---|
| B.Tech | CHEM | 2009-13 | 87.3 | - | 87.3 |
| B.Tech. | CSE | 2009-13 | 72.6 | 18.7 | 91.31 |
| B.Tech | ECE | 2009-13 | 87.77 | 3.0 | 90.77 |
| B.Tech. | MECH | 2009-13 | 82.02 | 7.8 | 89.82 |
| B.Tech. | IT | 2009-13 | 34.85 | 36.36 | 71.21 |
| B.Tech. | EEE | 2009-13 | 83.57 | 04.47 | 88.04 |
| B.Tech | CIVIL | 2009-13 | 72.92 | 15.87 | 88.79 |
| M.Tech. | MD | 2011-13 | 72.5 | - | 72.5 |
| M.Tech. | CSE | 2011-13 | 85.71 | - | 85.71 |
| M.Tech | VLSI | 2011-13 | 88.22 | - | 88.22 |
| M.Tech | CNIS | 2011-13 | 100 | - | 100 |
| MBA | MBA | 2011-13 | 90.2 | 06.8 | 97 |
| MCA | MCA | 2010-13 | 88.2 | - | 88.2 |

2.12 How does IQAC Contribute/Monitor/Evaluate the Teaching & Learning processes :

- □ The IQAC is constituted on 20.08.2009. It contributes to improve the teaching learning process in many ways. Some of them are::
- □ Development of Quality benchmark / parameters for various academic and administrative activities of the institute.
- □ Organization of workshops, seminars and quality related themes.
- □ Documentation of various programmes / activities leading to quality improvement.
- □ Conducting internal quality audit periodically.
- □ Preparation of Annual Quality Assurance Report (AQAR), post accreditation, to be submitted to NAAC.

2.13 Initiatives undertaken towards faculty development      190

| Faculty / Staff Development Programmes | Number of faculty benefitted |
|---|---|
| Refresher courses | 14 |
| UGC – Faculty Improvement Programme | - |
| HRD programmes | 6 |
| Orientation programmes | 9 |
| Faculty exchange programme | - |
| Staff training conducted by the university | 59 |
| Staff training conducted by other institutions | - |
| Summer / Winter schools, Workshops, etc. | 102 |

| | |
|---|---|
| Others | - |

2.14 Details of Administrative and Technical staff

| Category | Number of Permanent Employees | Number of Vacant Positions | Number of permanent positions filled during the Year | Number of positions filled temporarily |
|---|---|---|---|---|
| Administrative Staff | 54 | - | 2 | - |
| Technical Staff | 49 | - | 6 | - |

# Criterion – III Research, Consultancy and Extension

3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

- □ The college encourages faculty to get research projects from funding agencies
- □ Provide cash incentives for their research output to motivate.
- □ Provide autonomy to any principal investigators of respective projects as per the guidelines of funding authorities.
- □ The college also provides the necessary infrastructure, space, internet along with printers for carrying out their research activities.
- □ The college deputes senior faculty to faculty development programmes, skill enhancement programmes related to research projects and also provide travel grant to publish papers at conferences in India and abroad.
- □ Research projects taken up by the college are mostly of national relevance
- □ Both post graduate and under graduate students give preference to take up projects related to Industrial and society needs.
- □ The following are some of the projects/programmes taken up for transfer of relative findings of research to students and faculty of other colleges.
- □ Training on process equipment design in Chemical Engg by M/s. Simtech, Simulations, Hyderabad
- □ To extend technical assistance in production of Ginger oil to Gram Tarang foods [ A unit of Centurion University]
- □ Oracle Certified Java Professional Program (OCPJP) and internships by BOB Tech Solutions, Bangalore
- □ Industry connections for internships and employment by Microsoft Ed-vantage Platinum
- □ To provide certification course on embedded systems by Think Labs , IIT, Mumbai
- □ To provide certification course on embedded systems by National Instruments, Bangalore.
- □ To provide internship to students by Y2Y Signals PVT.LTD, Visakhapatnam
- □ To provide certification course on embedded systems & VLSI by Wipro Technologies, PVT.LTD., Bangalore
- □ To build competencies in the area of PLCs and provide student training & certification.
- □ To bridge the gap between curriculum and industry requirements and make the students industry ready by SIEMENS INDIA LTD, MUMBAI (PLCs, and AC drives).

3.2 Details regarding major projects

| | Completed | Ongoing | Sanctioned | Submitted |
|---|---|---|---|---|
| Number | 4 | 1 | - | 13 |
| Outlay in Rs. Lakhs | 98.48 | 17.00 | 0 | 138.00 |

3.3     Details regarding minor projects

|  | Completed | Ongoing | Sanctioned | Submitted |
|---|---|---|---|---|
| Number | 0 | 4 | 0 | 1 |
| Outlay in Rs. Lakhs | 0 | 13.30 | 0 | 39.00 |

3.4     Details on research publications

|  | International | National | Others |
|---|---|---|---|
| Peer Review Journals | 151 | 72 | - |
| Non-Peer Review Journals | - | - | - |
| e-Journals | - | - | - |
| Conference proceedings | 12 | 109 | - |

3.5 Details on Impact factor of publications:

Range [ ]     Average [ ]     h-index [ 6 ]     Nos. in SCOPUS [ ]

3.6 Research funds sanctioned and received from various funding agencies, industry and other organisations

| Nature of the Project | Duration Year | Name of the funding Agency | Total grant sanctioned | Received |
|---|---|---|---|---|
| Major projects | 2 Years | DST, IE | 29.95 | Yet to be received |
| Minor Projects | 2 Years | UGC | 11.50 | 7.80 |
| Interdisciplinary Projects | - | - | - | - |
| Industry sponsored | - | - | - | - |
| Projects sponsored by the University/ College | - | - | - | - |
| Students research projects *(other than compulsory by the University)* | - | - | - | - |
| Any other(Specify) | - | - | - | - |
| Total | - | - | - | - |

3.7 No. of books published   i) With ISBN No. [ 7 ]   Chapters in Edited Books [ 2 ]

ii) Without ISBN No. [ - ]

3.8 No. of University Departments receiving funds from

UGC-SAP [ ]     CAS [ ]     DST-FIST [ ]

DPE [ ]     DBT Scheme/funds [ ]

3.9 For colleges     Autonomy [ ]     CPE [ ]     DBT Star Scheme [ ]

INSPIRE [ ]     CE [ ]     Any Other (specify) [ ]

3.10 Revenue generated through consultancy  8.60

3.11 No. of conferences organized by the Institution

| Level | International | National | State | University | College |
|---|---|---|---|---|---|
| Number | - | 23 | - | - | - |
| Sponsoring agencies | - | AICTE, College | | | |

3.12 No. of faculty served as experts, chairpersons or resource persons

3.13 No. of collaborations    International  2    National  6    Any other

3.14 No. of linkages created during this year  8

3.15 Total budget for research for current year in lakhs :

From Funding agency  13.30    From Management of University/College  10.00

Total  23.30

3.16 No. of patents received this year

| Type of Patent | | Number |
|---|---|---|
| National | Applied | 2 |
| | Granted | 2 |
| International | Applied | - |
| | Granted | - |
| Commercialised | Applied | - |
| | Granted | - |

3.17 No. of research awards/ recognitions   received by faculty and research fellows
Of the institute in the year

| Total | International | National | State | University | Dist | College |
|---|---|---|---|---|---|---|
| 2 | - | - | - | 2 | - | - |

3.18 No. of faculty from the Institution who are Ph. D. Guides  10
and students registered under them  13

3.19 No. of Ph.D. awarded by faculty from the Institution  3

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)

JRF        SRF        Project Fellows        Any other

3.21 No. of students Participated in NSS events:

University level  -    State level  61

National level  -    International level  -

3.22 No. of students participated in NCC events:

| | |
|---|---|
| University level | - |
| State level | 49 |
| National level | - |
| International level | - |

3.23 No. of Awards won in NSS:

| | |
|---|---|
| University level | - |
| State level | 1 |
| National level | - |
| International level | - |

3.24 No. of Awards won in NCC:

| | |
|---|---|
| University level | - |
| State level | 50 |
| National level | 1 |
| International level | |

3.25 No. of Extension activities organized

| | | | | | |
|---|---|---|---|---|---|
| University forum | | College forum | | | |
| NCC | 2 | NSS | 5 | Any other | |

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

The institute has NSS and NCC Units organize many social service and community development programmes and inculcates the importance of social responsibility and service in the minds of students. The various activities conducted by the NSS Unit are listed out in the following:

1. Blood donations camps were conducted in the campus, in association with rotary club, Red Cross society, lions club and District Government hospital.
2. Special campaign programs like medical camps, veterinary camps, awareness programs on health, education, women and child care, employment skills etc. were conducted.
3. An awareness program was conducted on HIV\AIDS
4. An awareness rally was conducted on literacy in the adopted village Chintalavalasa
5. The NSS volunteers distributed cloths and fruits to the orphans an poor children of the voluntary organization
6. A plantation program was conducted in the campus
7. Independence Day celebrations were conducted The NSS volunteers have arranged and coordinated some cultural activities regarding patriotism.
8. A legal awareness program was conducted at Chintalavalasa village. This was conducted in association with District Legal Services Authority. The senior civil judge Sri. L. Appa Rao addressed the villagers on various legal acts.
9. An awareness program was conducted on self-employment schemes to the rural youth. This program was conducted, in association with District Self-employment Training Center, Vizianagaram.
10. PULSE POLIO IMMUNIZATION :A team of 25 students have participated in this activity. They went to 5 nearby villages and brought awareness among the villagers. They also assisted the medical staff at the immunization centers.
11. Books donation to school children at Chintalavalasa village .
12. 80 smokeless chulas were distributed for rural people with the help of NEDCAP at PEDADA village Denkadamandal.

# Criterion – IV Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

| Facilities | Existing | Newly created | Source of Fund | Total |
|---|---|---|---|---|
| Campus area | | | | 42.21 acres |
| Total built up area | 30532sqms | 1419sqms | | 31951sqms |
| Class rooms | 5107sqms | 332sqms | | 5439sqms |
| Laboratories | 5892sqms | 312sqms | | 6204sqms |
| Seminar Halls | 1272sqms | 140sqms | | 1412sqms |
| Others | | | | |

**Future Planned Expansions**:
- □ New academic block with built up area 4000 sqms. is under construction on the first & second floors of CIVIL Block .
- □ It is also proposed to construct a workshop building of 500 sqms built up area

4.2 Computerization of administration and library

| Head | purpose | Application |
|---|---|---|
| Administrative procedures including finance | Accounts | TALLY |
| | Pay roll, tax, PF | In-house ERP system |
| Student admission | Student admission | In-house ERP system |
| Student records | Student fee | In-house ERP system/ eZschool college management version |
| Evaluation and examination procedures | Evaluation and examination procedures | In-house ERP system |
| Research administration | Research administration | In-house ERP system |
| Library | Library | SOUL |
| Students feedback | Students feedback | In-house ERP system |

4.3  Library services:

| | Existing | | Newly added | | Total | |
|---|---|---|---|---|---|---|
| | No. | Value | No. | Value | No. | Value |
| Text Books | 27629 | 87046032 | 1109 | 836699 | 28738 | 87882731 |
| Reference Books | 6904 | 21761568 | 97 | 72756 | 7001 | 21834264 |
| e-Books | 1604 | | 159 | | 1704 | |
| Journals | 110 | 3383934 | 22 | 307404 | 132 | 3691338 |
| e-Journals | 6 | 2825805 | 4 | 1895709 | 10 | 4721514 |
| Digital Database | - | - | - | - | - | - |
| CD & Video | 1824 | - | 64 | - | 1888 | - |

| | | Total Computers | Computer Labs | Internet | Browsing Centres | Computer Centres | Office | Depart-ments | Othe rs |
|---|---|---|---|---|---|---|---|---|---|
| Existing | | 1086 | 15 | 16mbps leased+ 10mbps shared | All the existing computers are connected with internet | 1 | In-house ERP syste m | 13 | |
| Added | | 71 | 1 | 29mbps leased | | 1 | | 0 | |
| Total | | 1157 | 16 | 45mbps leased+ 10mbps shared | | | | 13 | |

4.4 Technology up gradation (overall)

4.5 Computer, Internet access, training to teachers and students and any other programme for technology upgradation (Networking, e-Governance etc.)

- All the labs in the different departments are connected with internet.
- Separate net connection is provided to the faculty in the staff room & also in the rooms of Heads of Departments.
- Wi fi connection is provided.
- Digital library is equipped with modern facility, internet connectivity
- Linux systems were upgraded
- Usage of ERP systems in administration and academic processes

4.6  Amount spent on maintenance in lakhs :

   i)   ICT        `83.35`

   ii)  Campus Infrastructure and facilities   `233.25`

   iii) Equipments    `77.68`

   iv) Others    `507.21`

   **Total :**   `901.49`

# Criterion – V Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

   i.   Training & placement assistance through campus training programs for placement
   ii.  College student body with elected student representatives meet and promote student activities
   iii. Fee reimbursement as scholarship for toppers of each branch
   iv.  Central computing facility for students

v.   Sponsorship for students who present papers or participate in inter-collegiate technical fests
vi.  Students coordinate and organize student technical symposia in the college
vii. Guest lectures from members of the industry and reputed academic institutions on the latest developments in industry and technology
viii. Grievance redressal committee
ix.  Visits are arranged to industries for the students to give exposure on current industry practices

5.2 Efforts made by the institution for tracking the progression

In its quest for excellence, the institution has been continuously adapting it's monitoring system for quality assurance in academic programmes & administration. Measures are being taken at two levels namely the academic audit level and the administrative control mechanism:

**Academic Audit System**
□ Handouts with lecture plan, assignment questions, useful Uniform Resource Locators (URL) and references are distributed to the students in the beginning of the semester.
□ Content Preparation is made available to all the students.
□ Close monitoring of course coverage through frequent meetings of HODs with faculty members.
□ Class review committee meetings are held once in month.
□ Regular monitoring of academic activities through College Academic Committee (CAC)
□ Periodic collection of student feedback on individual subject teachers.
□ Review of performance of teachers based on feedback and pass percentage of students at university examinations.
□ Faculty counselors for every 20 students.
□ Remedial classes, bridge courses to make up for weak and slow learners.
□ Incentives for those carrying out research and publishing papers/participating in Seminars/Conferences.

**Administrative Control Mechanism:**
□ Grievance redress cell to attend to the problems of students.
□ Physical directors attend to all sports activities of boys and girls.
□ Technicians in all departments look after the repair and maintenance of lab equipment under the supervision of the teaching staff.

HOD and senior faculty of each Department look after the teaching and learning process.

5.3 (a) Total Number of students

| UG | PG | Ph. D. | Others |
|----|----|--------|--------|
| 2677 | 411 | - | - |

(b) No. of students outside the state

| 6 |
|---|

(c) No. of international students

| Nil |
|-----|

Men

| No | % |
|----|---|
|    |   |

Women

| No | % |
|----|---|
|    |   |

| Last Year | | | | | | This Year | | | | | |
|-----------|---|---|-----|------------|-------|-----------|---|---|-----|------------|-------|
| General | SC | ST | OBC | Physically | Total | General | SC | ST | OBC | Physically | Total |

| | | | | Challenged | | | | | | Challenged | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1262 | 363 | 99 | 1711 | 29 | 3464 | 1251 | 383 | 109 | 1963 | 18 | 3724 |

Demand ratio   98.45          Dropout % 1

5.4 Details of student support mechanism for coaching for competitive examinations (If any)

**Organizing Coaching Class for Competitive Examinations**:
- □ In house GATE coaching classes are conducted by both internal and external faculty.
- □ In addition, the departments provide guidance to their students preparing for competitive examinations like CAT/GRE/TOEFL through Placement Cell
- □ The college has sufficiently well stocked library books for CAT/GRE/ TOEFL
- □ **Skill development(spoken English, computer literacy, etc.,)**
- □ The college has the following laboratories to enhance skills:
- □ **ELCS Lab** :for developing communication skills.

**Support for slow learners:**
- □ Remedial classes are arranged for the slow learners. Student counselors continuously monitor their progress.

**Exposure of students to other institutions of higher learning/Corporate/business houses, etc.**
- □ Students are encouraged & guided to participate in events organized by other institutions. Industrial visits are arranged for the students for practical exposure. Workshops on entrepreneurship development are organized to enhance the interests of students to start their own business/industry.

**Publication of student magazines**
- □ Departmental student associations bring out semi-annual Technical Magazines.

No. of students beneficiaries            423

5.5 No. of students qualified in these examinations

NET     -     SET/SLET    -     GATE    87     CAT    20

IAS/IPS etc    -     State PSC    -     UPSC    -     Others    -

5.6 Details of student counselling and career guidance

- □ The class teachers carefully monitor the regularity of attendance and the performance of the students in internal evaluation tests and end semester examinations. Accordingly, the students are advised and also remedial classes are conducted for slow learners to improve their performance in the subsequent examinations.
- □ Counselors are allotted for each class or group of students to provide academic and personal guidance. Usually, one faculty member is assigned as counselor for a group of 20 students. By this way, all the students of the college are benefited.
- □ Psychiatric counseling is made available in the campus through a qualified counselor
  - Counselor's Name  :Dr. K. Suneetha
  - Qualification       :Ph.D. (Psychology)
  - Timings            :8.30AM to 5.00PM

**Counselling and Career Guidance:**
Career Guidance Cell is constituted with the following members:
1. Principal
2. Dean, Training & Placement
3. TPO

4. One faculty from each of the departments

The cell provides effective career guidance by organizing guest lectures by experts from Academics and Industry for the students of third and final year. The cell has tie-ups with various professional organizations which help in the guidance and development of the students.

The cell also provides guidance to the students for their career development and helps them in preparing for various competitive examinations.

Functions of the Committee:
- To arrange Seminars/ Workshops on Career opportunities
- To arrange GATE/TOEFL/IELTS/GMAT/CAT coaching classes
- To conduct mock tests for competitive examinations
- To arrange interactive sessions between alumni and students
- To design and develop study material and make it available in the Library / Intranet

No. of students benefitted

| 423 |

## 5.7 Details of campus placement

| On campus | | | Off Campus |
|---|---|---|---|
| Number of Organizations Visited | Number of Students Participated | Number of Students Placed | Number of Students Placed |
| 16 | 468 | 304 | 16 |

## 5.8 Details of gender sensitization programmes

- □ The institution has a practice of constituting class representatives(CRs)-one each from both the genders
- □ Women Empowerment cell (WEC) is established in the college to look into the problems of girl students and lady staff members.
- □ Awareness workshops are conducted on human rights, climate change and gender equivalence.

## 5.9 Students Activities

5.9.1    No. of students participated in Sports, Games and other events

State/ University level          National level          International level

No. of students participated i | 1 | cultural events | 2 | | - |

State/ University level | 61 |    National level | 10 |    International level | - |

5.9.2    No. of medals /awards won by students in Sports, Games and other events

Sports : State/ University level | 12 |    National level | 2 |    International level | - |

Cultural: State/ University level | 11 |    National level | 3 |    International level | - |

## 5.10 Scholarships and Financial Support

|                                                                        | Number of students | Amount |
| ---------------------------------------------------------------------- | ------------------ | ------ |
| Financial support from institution                                     | 766                | 34.93  |
| Financial support from government                                      | 1837               | 606.39 |
| Financial support from other sources                                   | 24                 | 19.20  |
| Number of students who received International/ National recognitions   | -                  | -      |

5.11    Student organised / initiatives

Fairs     : State/ University level [    ]     National level [ 2 ]     International level [    ]

Exhibition: State/ University level [    ]     National level [    ]     International level [    ]

5.12    No. of social initiatives undertaken by the students     [ 6 ]

**5.13 Major grievances of students (if any) redressed:**

A total of eight grievances have been reported during the period under review.  Out of which, six of the grievances are pertaining to lack of/improper functioning of certain amenities like toilets, transport, drinking water etc., The remaining two of the grievances are regarding 'language problems' and 'psychological problems'.

All the grievances related to repair or provision of new physical amenities have  been addressed by providing them and ensuring efficient maintenance by referring them to the administration who have readily responded and did the needful.

The grievance which involved problems in language, that is inability of the academically backward students coming from Telugu medium has been referred to the Science & Humanities Department of our college.  The English faculty of that department promptly responded and extended their services in teaching English even beyond college hours.  Several such students have been benefited till now.

## Criterion – VI Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

**Vision:**

MVGR College of Engineering strives to become a center par excellence for technical education where aspiring students can be transformed into skilled and well-rounded professionals with strong understanding of fundamentals, a flair for responsible innovation in engineering practical solutions applying the fundamentals, and  confidence and poise to meet the challenges in their chosen professional spheres.

**Mission:**

The management believes imparting quality education in an atmosphere that motivates learning as a social obligation which we owe to the students, their parents/guardians and society at large and hence the effort is to leave no stone unturned in providing the same with all sincerity. Towards that end, the management believes special focus has to be on the following areas:

- □ Have on-board staff with high quality experience and continuously updating themselves with latest research developments and sharing that knowledge with students.
- □ Having a well stream-lined teaching learning process that is continuously assessed for effectiveness and fine-tuned for improvement.
- □ Having state-of-the-art lab and general infrastructure that gives students the necessary tools and means to enhance their knowledge and understanding.
- □ Having a centralized department focused on improving placement opportunities for our students directly on campus and coordinating the training programs for students to complement the curriculum and enhance their career opportunities.
- □ Having advanced research facilities and more importantly atmosphere to encourage students to pursue self-learning on advanced topics and conduct research

6.2 Does the Institution has a management Information System :         YES

6.3 Quality improvement strategies adopted by the institution for each of the following:

6.3.1  Curriculum Development

- □ Being MVGR College of Engineering is an affiliated to JN Technological University-Kakinada it follows syllabi prescribed by the university
- □ University on regular basic revises the syllabus
- □ The college faculties are actively involved in the curriculum design and development and discuss proposals for curricular revisions communicated by the university from time to time.
- □ The institution is in the process of forwarding application for autonomy and therefore orienting and grooming its faculty on the aspects of curricular design and development. At present, being an affiliated institution, has a limited role.
- □ Taking into consideration the suggestions of the students, faculty and other stakeholders through feedback and also Department Advisory Committees (DAC), the college makes its suggestions to the respective board of studies of the University.

6.3.2  Teaching and Learning

- □ Provision of State-of-the art learning resources in Central Library &Information Centre and department libraries.
- □ Ergonomically designed classrooms with networking facility
- □ Provision of e-classrooms
- □ Development of student support material
- □ Organisation of Remedial classes
- □ Delivery of Add-on-courses
- □ Conduct of pre-placement training classes and campus connect programmes
- □ Conduct of GATE coaching classes
- □ Structured course files and lab manuals on all courses
- □ Academic audit
- □ Continuous improvement of resources

6.3.3  Examination and Evaluation

- □ The external exams are administered by the affiliating university, including setting of papers, evaluation, tabulation and other details. Two internal examinations are conducted using on-line pattern by the affiliating university. Two internal examinations are conducted by the institute as per the guidelines of the affiliating university.

□ All information regarding the examination pattern and marks division, minimum marks to clear the examination and other pertinent details are available in the course structure and academic regulations book given to each student at the time on enrolling into the program.

6.3.4  Research and Development

□ Formulation Research committee
□ Allocation of budget for in house R&D
□ Incentives and rewards for publications/research
□ Financial assistance to students for model buildings

6.3.5  Library, ICT and physical infrastructure / instrumentation

**e-learning Resources**
□ Modern teaching aids like OHP, Multimedia, Projectors, and Internet enabled Computer systems are used for class room instruction as well as other student learning experiences.
□ The students are also encouraged to use computer software packages for their projects.

**NPTEL and other e-resources**
NPTEL video courses on 245 subjects are provided in the library.
E-Books                  : 2,200 (McGRAW-HILL-365 & ASTM  Digital Library-1700)
E-Journals               : 1,874 (IEEE-145, SPRINGER(Electrical& Electronics)-134,SPRINGER (Mechanical)-46, ASCE-34, ELSEVIER-275,
Article Database         :J-GATE Engg. – 1,763, J-GATE Management– 2128)
IUCEE Material           : 1 Terabyte hard disc
NITTTR Material          : 275 CDs on all Subjects

6.3.6  Human Resource Management

□ Transparent policy document
□ Transparent and scientific way of selections
□ Imparting related training
□ Formulation and communication of policies of the college
□ Support for academic advancement
□ Systematic performance appraisal system and guidance to the faculty
□ Systematic promotion policies
□ Democratic way of administration with participative management

6.3.7  Faculty and Staff recruitment

□ Recruitment Procedure: - The normal method of recruitment to any service in the teaching cadre is either by recruitment or career advancement duly satisfying the norms laid out by regulating bodies from time to time.  Recruitment of faculty is made strictly in-accordance with the rules framed by the affiliating university and the regulatory bodies like AICTE, APSCHE.
□ The candidates with qualifications and experience in line with the AICTE guidelines are recruited by constituting selection committee at college level by inviting subject experts from the University, followed by final selections/ ratification from time to time through duly constituted selection committee comprising of
  ▪ Vice Chancellor
  ▪ Registrar
  ▪ Director Academic Planning
  ▪ Rector of the University
  ▪ Two  external subject experts
  ▪ HoD of the concerned affiliating university
  ▪ Principal of the institution

6.3.8   Industry Interaction / Collaboration

&#9633;   The institution engages industry for joint content development and delivery in emerging areas and deploys  the same for development of industry ready skills.

| Dept. | Organization | | Nature of Collaboration |
|---|---|---|---|
| CHEM | M/s. Simtech Simulations, Hyderabad | | Enriching technical education in procedures & practices followed in Chemical Process |
| CHEM | Gram Tarang foods [ A unit of Centurion University] | | Supercritical extraction |
| CSE | BOB Tech Solutions, Bangalore | | Enhancing skills of students through real time project |
| CSE | Microsoft Ed-vantage Platinum | | Industry connections for internships and employment |
| CSE | Oracle India Pvt. Limited Bangalore | | WDP Certification |
| ECE | Think Labs, IIT, Mumbai | | To train the trainer |
| ECE | National Instruments, Bangalore | | To train the trainer |
| ECE | Y2Y Signals PVT.LTD, Visakhapatnam | | Incubation Centre |
| ECE | Wipro Technologies, PVT.LTD., Bangalore | | To train the trainer |
| EEE | New Dawn Automation, Visakhapatnam (NDAV) | Train the trainer to faculty. Provide certificate training program organized by NDAV and MVGR College of Engineering | |
| | SIEMENS INDIA LTD, MUMBAI | Train the trainer to faculty of MVGR college of Engineering, Training center on Siemens PLC, HMI and  Drives, process instrumentation. Provide certificate training program organized by SIEMENS INDIA LTD,  MUMBAI and MVGR College of Engineering | |
| MECH | M/s Paramatric Technology (India) Pvt.Ltd., 4 F Phoenix Towers,No.16 Museum road,Bangalore-560025 | | Industry & Institution Authorised Training Partnership |
| | ZEUS NUMERIX  Pvt. Ltd., Mumbai | | CFD Research Centre |
| | M/s Kriatec Services Pvt.Ltd.,S1(IInd Floor) New No.12 Lake Veiw Street,(Errikkarai Street) Adam bakkam,Chennai-600088 | | Industry Institute Interaction for Technical Advancement & to support collaborative research activities |

6.3.9   Admission of Students

The College follows the guidelines given by Andhra Pradesh State Council of Higher Education (APSCHE), Government of Andhra Pradesh. Admissions to the institution are categorized into two i.e., Category A & Category B for all the programs. Under category A,  APSCHE makes

admission the extent of 70% through a state level common entrance examination followed by counseling. whereas the institution shall conduct admission process for the remaining 30% under category B duly following the guidelines as communicated by the government from time to time

**Notification in regional / national dailies**

For category B, the institution notifies the public by publishing it in the form of notification in reputed newspapers and also all the particulars including number of seats available branch wise, criteria for selection etc. are hosted on college web portal which all the prospective candidates can easily access.

The candidates can submit the applications to the office by post, in-person or online. Applications thus received are scrutinized and organized in the order of merit by the department and college admission committee. This process is quite transparent and ensures merit based admission.

**College Website**

The college has a regularly updated website www.mvgrce.edu.in  which provides all information about the college. The **transparency** in the admission process is ensured through the following processes:

- □ The availability of seats in various categories and reservations, fee payable, facilities available etc. are posted on the website.
- □ Rules and regulations of A.P. State Higher Education relating to eligibility and the admission procedures are given in the website.
- □ The list of selected candidates along with their rank and selection criteria for all the programmes is posted on the website.

6.4 Welfare schemes for

Teaching Staff

The following are welfare schemes adopted by the college

- □ EPF, Group Insurance, & Medical Insurance to all the staff.
- □ Free transport for non-teaching staff
- □ Cash Incentives for Research Publications.
- □ Basic Salary for the period of full time Ph.D.
- □ Reimbursement of fees in case of part time Ph.D.
- □ Reimbursement of TA, DA & Registration Fee for participation in Seminars/Workshops/Refresher Courses
- □ Sponsorship for conferences outside India subject to a  maximum amount of
- o Rs. 10,000/- for presenting paper without attending
- o Rs. 15,000/- for presenting paper in person
- o Rs. 25000/- for chairing the sessions
- o Professional Society memberships (2)- Free for HODs
- o  50% membership fee reimbursement for the rest of the faculty

Non-teaching staff

- o EPF: Rs.780/-per month. College pay sits contribution of Rs.780/-month if the faculty member pays his contribution.100%of faculty and staff of availing the benefit.
- o Health Insurance cover  (Rs.50,000/-        Mediclaim) and      Personal      Accidents (Rs.1,00,000/-).          100% of faculty and staff of availing the benefit.
- o Transport Facilities: Free Transport for   senior Professors. Non-teaching are provided free transport from Vizianagaram
- o Medical Facilities: Free Medical consultancy provided through College Medical Centre.
- o All the employees are extended with the following leaves:
- • Casual Leaves (15 days)
- • Medical Leaves(10 full paid /20 half paid)

- Earned Leaves-6 days in case of vacation staff &30 days non vacation staff
- Special Casual Leaves(7days)
- Maternity Leave(90 days with pay)
- Extra Ordinary Leave on Loss of pay
o Apart from these, faculty is granted academic leave for attending seminars/ conferences / workshops and attending research related works.

Students

The following financial assistances are extended by the institution to students
□ Free transport for all SC/ST hostel students
□ Gold Medals and Silver Medals to the best performers of the academic year.
□ A cash incentive to the tune of Rs.35,000/- ( tuition fee) to each class topper in every branch(aggregating to about Rs. 12,00,000/- per year).
□ Reimbursement of TA, DA and Registration fee for participation in Technical paper presentations/ Quiz competitions.
□ Providing T.A. & D.A. for the participation in Extramural Sports, Cultural & Literary Events.
□ Providing Free Transport to the students using library facility beyond class hours.
□ Transport is free for all local industry visits
□ Partial reimbursement of TA for industrial tours

6.5 Total corpus fund generated

642 L

6.6 Whether annual financial audit has been done    Yes  √   No  ☐

6.7 Whether Academic and Administrative Audit (AAA) has been done?

| Audit Type | External | | Internal | |
|---|---|---|---|---|
| | Yes/No | Agency | Yes/No | Authority |
| Academic | NO | | YES | Academic audit committee headed by DEAN (SP) |
| Administrative | YES | University | | |

6.8 Does the University/ Autonomous College declares results within 30 days?

For UG Programmes    Yes  √   No  ☐

For PG Programmes    Yes  √   No  ☐

6.9 What efforts are made by the University/ Autonomous College for Examination Reforms?

□ The college is affiliated to JNTUK University, Kakinada, Andhra Pradesh. The university has initiated various evaluation reforms viz.
  ▪ Introduction of internal assessment.
  ▪ Introduction of on-line evaluation
  ▪ Introduction of four sets of question papers for final exams at the end of each semester.
□ The college has adopted various university reforms concerning evaluation viz.
  ▪ Internal marks are awarded to the students as per the university criteria.
  ▪ On-line objective type examinations are conducted.
  ▪ Student centric learning through assignments, projects, seminars and practical sessions.

6.10 What efforts are made by the University to promote autonomy in the affiliated/constituent colleges?

University on regular basis conducts workshops, awareness and sensitisation programs to encourage autonomy in the affiliated/constituent colleges

6.11 Activities and support from the Alumni Association

MAA - An Alumni Association of MVGR has been formed by the students of the college. The MAA came into being in the year 2007 with Dr. K.V.L. Raju, Principal, MVGR as the Chief Patron and old students from different batches as the office bearers. This is an association with society number 100/2007, registered with Govt. of Andhra Pradesh, Registration and Stamps Department, Office of the District Registrar, Vizianagaram.

**Alumni association organizes various events like:**
□ Assisting Internship Programs for students from III & IV year
□ Referral Job Placements for IV year & passed outs.
□ Funding assistance & guidance for students higher studies.
□ Assisting Industrial Visits
□ Guiding Project Works
□ Workshops & Guest Lectures to students on latest technologies, job profiles.
□ Supporting economically weak students.
□ Donating books, journals & e-material to the college library.
□ Assisting College Infrastructural development.

**Alumni Contribution**:
□ Every alumnus joins the association with Rs1000/Rs500 as registration fee.
□ Alumni donate for various activities.
□ All contributions through a registered bank account will be used for various activities.

6.12 Activities and support from the Parent – Teacher Association

Parent – Teacher meetings are being conducted on regular basis at department level

6.13 Development programmes for support staff

- Every year, each lab Technician is assessed and sent for the improvement of skills and knowledge. They will be dispatched to industry or Universities on workshops.
- After training and assessment, if we found his/her performance is good, he /she will be awarded with increment in salary.
- In-house training programs are conducted for smooth handling of laboratories.

6.14 Initiatives taken by the institution to make the campus eco-friendly

**a) Energy Conservation**
□ Institution meters energy segment wise and constantly reviews the same for initiatives for minimizing the consumption.
□ Periodic energy audit is being conducted at regular intervals by EEE department and recommendation made for savings
□ Periodic inspection and maintenance is carried out for improved performance of electrical systems and reduced loss
□ Awareness among the students and staff on energy conservation is created by displays at appropriate places.
□ The buildings are fitted with glass windows for maximum utilization of natural light.

**b) Use of Renewable Energy**
□ Steps are being taken for the utilization of solar power in the college campus.

**c) Water Harvesting**
□ To minimize the wastage of water resources and to improve the ground water level, the

rain water is led into the pond located in the campus.

**d) Check Dam Construction**
- □ At present there is no check dam in the college premises.

**e) Efforts for Carbon neutrality**
- □ Care is taken to restrict vehicle entry into the campus and specific parking area is allotted for faculty and students.
- □ The institute restricted the usage of plastic bags in the campus.

**f) Plantation**
- □ Plantation programme has been taken up by the NSS unit for increasing the Green Cover in the campus and surrounding villages.
- □ The NSS unit regularly conducts awareness programmes on plastic free environment in and around the village.

**g) Hazardous Waste Management and e-Waste Management**
- □ The condemned batteries are disposed through outside agencies.

Awareness programmes are initiated on waste management

# Criterion – VII Innovations and Best Practices

7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.
   i. Introduced Outcome Based Education: Faculty are being encouraged to plan and deliver subject content in order to effectively meet the outcomes
   ii. Submitted application for Autonomy in order to enable the implementation of industry-oriented programs
   iii. Academic audit teams regularly visit departments for auditing of academic procedures
   iv. Structured training program scheme implemented for students from II year onwards to prepare them for campus recruitment and other soft skills
   v. Encouraging faculty to submit proposals for possible funding by government organizations for applied research

7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year

| Task | Action | Status |
|---|---|---|
| It is proposed to go for NBA re-accreditation for all engineering programs in the Tier-II format | Proposal submitted for 7 engineering branches | The institution is awaiting visit by the NBA team |
| Application submitted for re-accreditation of the institution by NAAC | Proposal Submitted to NAAC | The institution is awaiting visit by the NAAC team |
| Application submitted to UGC for Autonomy | Proposal Submitted to UGC | The institution is awaiting visit by the UGC team |
| Enhancing funded research by faculty in the institutions | Encouraging faculty to submit proposals to AICTE, UGC and DST | One DST project sanctioned<br>4 UGC Minor research |

7.3 Give two Best Practices of the institution *(please see the format in the NAAC Self-study Manuals)*

**Best Practice-I**

**Title of the Practice**

Improving Employability Through Skill Development

**Goal**

In an attempt to bridge the above gaps as well as enhance the employability of its graduates, MVGR College of Engineering has actively been involved in the design and implementation of add-on programs across different engineering streams. The following are the educational objectives and expected outcomes of such add-on programs:

1. To expose students to industry culture and practices
2. To inculcate in students a flair for problem definition and build problem-solving capability
3. To provide hands-on training to students in contemporary industry tools and techniques

**The Context**

Despite best efforts at developing a curriculum for industry ready engineering graduates, a targeted and well-established approach towards bridging the gap between the talent pool and the demands of core engineering sectors still needs to be clearly defined. Attempts are being made in pockets to understand the industry need and address the same through add-on programs at the undergraduate level. However, the effectiveness of such programs critically depends upon thorough understanding of industry needs and skill requirements and developing programs, in collaboration with the concerned industry sectors, in order to fill the gap. Educational institutions typically tend to work in isolation with the demands of the industry leading to engineering content delivery being mostly textbook oriented and traditional. Students hardly ever get to understand or be exposed to state-of-the-art developments in their respective fields.

**The Practice**

Administering an add-on program requires careful consideration of the engineering curriculum already being delivered, the gaps in the curriculum that need to be plugged to make the student industry-ready and the ability of the administering department to effectively bridge this gap. The following is the procedure adopted by departments in introducing an add-on program to bridge curricular gaps:

   i. Review the academic curriculum and identify gaps in the content
  ii. Define industry sector requirements and identify potential skill development/training programs to augment student capability
 iii. Prepare a clear mapping of the curricular gaps with the proposed skill development program
  iv. Identify available infrastructure with the department and propose additional facilities (if any) required (with budgetary requirements)
   v. Identify faculty competency available in the department (if any) in the proposed area and/or propose faculty skill enhancement plan (with budgetary requirements)
  vi. Anticipated intake, proposed course fee and viability of the programme

A Detailed Project Report covering the above activities along with the estimated budget, possible demand, proposed course fee and viability for break-even within 5 years is prepared by the department proposing to introduce an add-on program. The report of the department is reviewed by the central administrative team of the college chaired by the Principal. Upon approval of the proposed program, the department proceeds with implementation of the add-on program. The central administrative team is responsible for monitoring the effectiveness of delivery of the add-on programme and in ensuring that the stated objectives and outcomes are met while the departmental program committee, consisting of a team of faculty with relevant training, bears the responsibility for implementation and successful delivery of the program.

The college has put in place suitable add-on programs in collaboration with industry to bridge skill gaps. The course content for these programs are detailed based on discussions with the concerned industry and the individual delivery modules and their contents are finalised. The programs are delivered to the students during their course of study at the undergraduate level

typically beginning from the later half of their II year and ending in the first half of their final year of study. By the time they complete their B.Tech program, they also receive certification of completion of these industry-oriented training modules.

## Evidence of Success

- Increased student employability as reflected in improved placements
- In creased competency and resulting enhanced delivery  from faculty in their teaching learning
- Increased R&D capacity resulting in significant improvement in research proposals
- Substantial growth in Industry- Institution collaboration

As a result:

The college is implementing 8 such add-on programs  which are given below:

1. Oracle Certified Java Programmer (OCJP): - This is certified by Oracle Corporation. Over 100 students from the Computer Science and Engineering department have the prestigious OCP certification

2. Creo-2.0:- This is certified by Parametric Technology Corporation. The course was started in 2009 and till date, 160 students have completed the course. Of these, 41 students were placed in various MNCs on the strength of their certification training

3. NI Lab VIEW:- NI Lab VIEW Academy has been set up in the college by National Instruments Corporation for training on design and deployment of systems for embedded design applications

4 Process Equipment Design-SIMTECH

5 Technology Learning Centre-VLSI-WIPRO Technologies

6 SIEMENS –AC Drives

7 New Down Automation-PLCs

8 Think Labs-Embedded Systems

These and few other such add-on programs currently being administered in the college have given a big edge to the students in enhancing their employability. Many of these students easily get placed on the strength of their skill enhancement.

## Problems Encountered and Resources Required

When applied practically, a few gaps exist between the proposed methodology and practical implementation.  This is mainly because of the financial constraints as each department is given budgetary allocations exclusively to meet costs of academic services which are curricular in nature. Hence the need for procurement of auxiliary infrastructure to meet the industrial skill needs to be carefully planned and administered properly. To avoid this, measures are taken to anticipate the requirements so that resources can be not only well maintained but also managed to enhance the purpose of skill development.

Apart from this, faculty have to be properly trained to justify the objective of the value added program by being flexible to the changes in the current trend. Should there be lack of pace with the contemporary versions of the technology, an aggregate overview of the package is lost. Faculty with aptitude  in the program are therefore sent for training at the respective organizations in advance to be able to handle the training programs.

## Notes(Optional)Nil

## Contact Details

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**Best Practice-II**

## Title of the Practice

Participative Management

### Goal

- To promote in the faculty a sense of belongingness and responsibility for the overall development of the college through collaborative and participative management, the faculty are oriented and motivated to plan, organise and implement activities related to a specific institutional requirement such as conduct of examinations, purchases, civil and infrastructural development etc.

### The Context

For the success of any organisation, it is imperative that all its employees feel a sense of belongingness and learn to take responsibility for the effective functioning of the organisation. In most organisations, employees are given a set of responsibilities and expected to execute them to some degree of conformance. They generally do not have much of a say in the overall integration of these responsibilities to the development of the organisation. Only those organisations that are able to motivate their staff to see and take responsibility for the overall functioning of the organisation can go the extra mile in delivering quality output through coordinated and concerted efforts of the staff and not through individual excellence.

### The Practice

For the overall administration of the institution, there are several requirements that need to be planned and addressed effectively. Generally, the overall responsibility for this lies with the Principal of the college, who, along with a team of administrative staff, attempt to execute the same. This places the entire onus of success of the institution on this team as also the burden of its execution. Moreover, such an approach tends to isolate individual faculty members from the overall institutional challenges for they fail to identify themselves in suitable assistive roles. The practise at MVGR College has been to draw in all its faculty members into different administrative roles so that each and every faculty of the college feel responsible for the overall success of the institution. The faculty are therefore grouped into various committees each headed by a senior faculty member who serves as convenor of the committee. The following are some of the major committees of the college:

1. Examination Cell
2. Purchase Committee
3. Training and Placement Cell
4. Alumni Cell
5. Library Committee
6. R&D Cell
7. Maintenance Committee
8. Disciplinary Committee
9. Grievance Cell
10. College Academic Council
11. E-Services Committee
12. Women Empowerment Cell
13. Cultural Committee
14. Canteen Committee
15. IQAC

16. Magazine Committee

The members of each of these committees are drawn one from each department. The Principal of the college serves ex-officio as chairman of all these committees. The members of each of these committees meet on a regular basis to plan, coordinate and implement various developmental activities under their purview. The challenge faced in such an approach is to bring all faculty involved onto a common platform to be able to appreciate the overall vision of the institution and identify what needs to be done in their respective domains that would enhance the performance of the institution.

**Evidence of Success**
The benefits of deep delegation understandably are reflected in the ability of the system in adopting to changes at short notices. Sense of belongingness, pride and a feel of ownership naturally leads to improved social networking and job satisfaction. It is very difficult to quantify the benefits of participative management, if there is one metric, we believe, it is the reputation, rating and recognition the institution is enjoying among its stake holding groups in particular and the society at large. The following are observed to be important outcomes of the model.

- Improved volunteerism
- High levels of team spirit
- Shared vision
- Increased organizational ability
- Shared quality consciousness

**Problems Encountered and Resources Required**
One of the biggest challenges in this endeavour has been to bring all the faculty on board to equally appreciate the task at hand and deliver effectively. All faculty are part of this effort beginning from the most newly recruited to the senior-most. Significant amount of time is spent in orientation of the faculty to appreciate the challenges on hand. While this may appear to be a limitation, it greatly helps capacity building for the system. Faculty at the junior-most level learn to appreciate the challenges faced in administration. The greatest benefit is that it fosters a sense of belongingness and team-spirit.

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              *Provide the details in annexure (annexure need to be numbered as i, ii,iii)*

7.4 Contribution to environmental awareness / protection

7.5  Whether environmental audit was conducted?      Yes  √   No

7.6 Any other relevant information the institution wishes to add. (for example SWOT Analysis)

### SWOT Analysis

<u>Strengths</u>

1. Highly renowned society

2. Strong faculty both in terms of numbers, qualifications and competencies
3. State of the art infrastructure beyond curriculum that substantially and adequately meet R&D
4. Good placements and strong industry relationship
5. Core competency and infrastructure in areas of industry ready skills through ADD ON programs in almost all disciplines
6. One of the top ranking private Engineering institution among JNTUK
7. Dedicated infrastructure discipline wise both in terms of building and lab infrastructure

Weakness

1. Not adequately residential in nature limiting the extent of utilization of resources
2. The location of the institute, i.e., the district, does not have industries that can supplement professional learning
3. Being located in a district which is backward, the aspiring students usually come with low level of communication skills
4. Being an affiliated institution, it has a little or no flexibility in curricular design, instruction and evaluation

Opportunities

1. Being in proximity to fast growing city, with significant presence of wide cross-section of industry, business organizations, giving scope for potential access to experts in technical and business organizations and also possible exposure to industrial environment
2. Increasing levels of competency among its faculty with a strong desire to build and develop research and consultancy through the support of industry and R&D institution
3. Its visibility which can tantamount to increased and deeper engagement with renowned technical universities located well in the proximity

Challenges/threats

1. Deep rooted rote learning practices in the current schooling and plus two level education, affecting the comprehension and learnability of the prospective students
2. Mushrooming of the institution, though supporting increased access to higher education, contributing to deteriorating quality of standards
3. Constantly delayed admission process and increasing presence of private universities, with unlimited admission capacity, capitalizing on the uncertain admission process through government resulting in good students taking earlier admission opportunities and not being available for admission into affiliating institutions

## 8. **Plans of institution for next year**

□ To introduce Post Graduate Courses in all departments
□ To become Center of Excellence and offer Ph.D. Programs
□ To become residential campus with staff and faculty quarters
□ To facilitate and promote alumni activities for the further growth and development of the institution
□ To become autonomous and deemed Institute

Dr. P. Ravindranadh                                    Dr. K. V. L. Raju
Coordinator-IQAC                                        Principal


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