SELF STUDY REPORT

FOR

3rd CYCLE OF ACCREDITATION

MAHARAJ VIJAYARAM GAJAPATHI RAJ COLLEGE OF ENGINEERING

VIJAYARAM NAGAR CAMPUS CHINTALAVALASA VIZIANAGARAM-535 005
535005
www.mvgrce.edu.in

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Submitted To

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BANGALORE

February 2021
1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

Maharaj Vijayaram Gajapathi Raj (MVGR) College of Engineering was established in the year 1997 by Maharaj Alak Narayan Society for Arts and Sciences (MANSAS) to impart quality technical education. The society MANSAS was established in 1958 by the erstwhile Raja Saheb of Vizianagaram, (Late) Dr. P.V.G. Raju. It offers KG to PG level education in Arts, Sciences, Engineering and Management across 12 Institutes. MVGR College of Engineering is one of those 12 institutes and is located in lush green, serene and pollution free environment spread over 60 acres of land in Chintalavalasa village situated in the outskirts of Vizianagaram, a fort city in the north coastal region of Andhra Pradesh.

The college is offering B. Tech programmes in seven branches with an intake of 960, five M.Tech programmes with 90 in addition to 120 in MBA programme. The college has autonomous status since 2015 granted by UGC and consistently been upgrading itself in terms of academics, research, industrial interaction, etc. amply putting in endeavours to conform to and evolve as envisaged by the Vision and Mission of the institution. At present, the college has 228 well experienced faculty members including 84 members with Ph.D. qualification. The college has a built-up area of about 7,00,000 sfts, meeting all the norms of AICTE and is permanently affiliated to JNTUK, Kakinada.

The college has been accredited by NBA three times for all the UG programs up to 2021 whereas MBA has been accredited by MBA two times till 2022. The college has been participating in the NIRF rankings of MHRD successively every year, ever since it was introduced. MBA program was ranked among the top100 (in the bracket of 75 to 100) institutions in India in the year 2017 by NIRF. The college has been graded with ‘A’ two times (2009 & 2015) by NAAC. The College (MANSAS Society) is recognised as 'Scientific & Industrial Research Organization (SIRO) by DSIR, Govt. of India in the year 2019. Eight of the Departments are recognised as Research Centres by JNTUK. MVGR bagged ‘Green Campus’ award from the Govt. of AP

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 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 placement 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, the atmosphere to encourage students to pursue self-learning on advanced topics and conduct research.

1.2 Strength, Weakness, Opportunity and Challenges (SWOC)

Institutional Strength

1. More than 60 year old trust with legacy in education dating back to 1857
2. All UG programs accredited by NBA for three cycles. MBA program also NBA accredited for 2 cycles
3. Autonomous institution actively involved in industry-oriented curriculum design, development and assessment
4. Teaching faculties with a spread of 35% PhD holders and another 30% pursuing PhD from premier institution
5. State of the art infrastructure that goes beyond curriculum and substantially supports R&D initiatives with SIRO recognition
6. Consistently 60% students placed on campus with substantial number go on to pursue higher studies
7. Active student participation in co-curricular (Industry internships, MOOCs with NPTEL Local Chapter) and extra-curricular activities (IEEE, IEI and IICHE student chapters)
8. Collaboration with industry leading to 20 active agreements for student training and research
9. Institutional member of CII and Institution of Engineers
10. Recognized skill development center with in-house facilities
11. Dedicated infrastructure discipline wise both in terms of building (7 lakh square feet) and lab infrastructure (to the tune of about Rs. 10 crore)

Institutional Weakness

1. Industry footprint not very strong and diverse in the district
2. Limited scope for consultancy with industry given the footprint of industry in the district
3. Lack of geographical and cultural inclusivity in student admission
4. On account of lack of diversity and appropriate ecosystem - challenges in terms of communication skills among the aspiring students
Institutional Opportunity

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
4. Despite remoteness of location, opportunity to provide diverse learning experience through online platforms
5. Scope for implementation of multi-disciplinary courses and programs leading to full autonomy

Institutional Challenge

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. Constantly delayed admission process and increasing presence of private universities, with unlimited admission capacity, capitalizing on the uncertain admission schedules resulting in institution not having access to substantial student pool
3. Institution not being able to leverage the full spirit of autonomy

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

With receiving autonomy in 2015, the institution has been very proactive in developing and implementing a wide range of curricular initiatives that specifically address the needs of the students at MVGR. The curricula developed and being constantly updated at MVGR seeks to cater to the rural and agrarian population belt who form the major category of students while at the same time striving to mould and prepare them to face the challenges of the multi-cultural corporate world as well as meet the standards of international education. Over the last 23 years, MVGR has entered into agreements with more than 50 companies for exchange of expertise in technology and practices leading to curricular interventions initially in the form of add-on programs and, post autonomy, into core and elective courses. MVGR has developed a comprehensive curriculum adopting the Choice Based Credit System while keeping in tune with the AICTE model curriculum and also integrating courses on professional ethics, human values, Indian traditional knowledge etc. The students are also put through a well-structured induction program in the very first 3 weeks of admission to their respective programmes to give a birds-eye view of the societal fabric within which the engineer is expected to perform. MVGR also conducts bridge programs for diploma students who join in the third semester (lateral entry) to help these students improve their understanding of mathematics required for engineering as well as programming skills.

The programmes offer project-based learning to students in order to help improve their problem solving skills. As part of the laboratory experience, students are expected to design their own experiments given a problem.
statement and write their experiences in the form of a report. Students are also encouraged to take up MOOCs courses in order to give them the ability for self-learning as well as to pursue specific courses of their interest and which will help them in their chosen careers. The course structure offers students a lot of opportunity to take up internships in the 8th semester.

**Teaching-learning and Evaluation**

Teachers actively use ICT tools for making power point presentations. Teachers also actively encourage students to take up online MOOCs courses that are given credits. In addition to the regular class work, online learning through MOOCs is encouraged. Assignments and tutorials are conducted for a given subject. Teachers use models for effective communication and also conduct remedial classes for slow learners. MVGR regularly conduct invited lectures by eminent speakers both from industry and academia on contemporary topics.

Additional learning approaches are implemented through laboratory courses involving demonstrative experiments and simple projects undertaken jointly with students, conduct of viva voce for all laboratory courses, project based learning. In addition to the above, other processes such as conduct of summer camps/internships, exposure to e-content from NPTEL, NITTTR and IUCEE is promoted.

Academic calendars are prepared well in advance of the academic year. In keeping with the calendar and teaching requirements, teachers prepare in detail a subject file and a course file. The subject file contains technical content related to the subject in terms of note material, question banks, presentations, reference material etc. The course file contains the lesson plan, log sheet, details of assessments carried out during the delivery of the course etc. The faculty deliver the course according to the lesson plan and the daily content delivered is recorded in the log sheet. The time tables designed based on the academic calendar are strictly adhered to in the delivery of the course content.

The assessment and examinations procedures are well designed and practiced in line with outcome based education and followed as per the academic regulations framed. The conduct of the examinations is supported by a software-driven system that software consists of Pre-examination, Post examination and Utilities & Exam Account modules. Question banks have been prepared for all courses offered in UG and PG programs involving subject experts from National institutions/Universities/Autonomous institutions covering the entire syllabus, mapping to CO’s and following Bloom Taxonomy. Continuous assessment is carried out in the form of subjective tests, objective tests, assignments, Project based learning, mini & major projects are also being conducted.

**Research, Innovations and Extension**

MVGR has been very active in research and development. Till date, MVGR has received close to Rs. 5.6 crore in the form of extra-mural funding for core research, research infrastructure development and faculty training that has also led to the establishment of research centres (such as the Centre for Intelligent Manufacturing Automation (CIMAT) for machine tool research). In addition to the above, 8 of the departments are recognised as research centres by the affiliating university JNTUK. MVGR is also active in third party quality control
testing for the government. MVGR also has a very well drafted research policy with milestones and metrics to assess progress. The research objectives include creation of an environment that fosters a culture of innovation and research leading to development of processes, tools, products or services, motivating faculty to pursue and complete their PhD, motivating faculty to carry out quality research leading to publication in reputed journals and building strong industry-institute partnerships. Till date, MVGR has entered into agreements with 54 industries and other leading organisations for collaborative research and faculty development activities. Faculty members of MVGR have published 12 patents till date and are also actively involved in product development through well-planned student activities. Students of MVGR are also active in developing prototypes for possible incubation and establishment of startups. MVGR is also actively involved with the local community in addressing community issues and bringing technology to rural development.

Infrastructure and Learning Resources

MVGR has well-established infrastructure and resources. The institution has a total built up space of square feet across an overall campus facility of 60 acres. This also includes extensive sports and recreation facilities including a fully established gymnasium, cricket ground, basketball courts etc. spread over 8 acres. The institution has 96 state-of-the-art laboratory facilities with an overall investment of . The college has also established a 45,000 square feet central library complete with digital library, auditorium and book lending facilities including RFID based automated issue and return of books. MVGR has subscribed to e-journals and books in order to supplement student learning and faculty research. The institution has solar power system with an installed capacity of 400 kW and backup systems with capacity of 375 kVA. The college has both boys and girls hostel facility with capacity of 700 and 350 respectively.

The institution has 9 seminar halls with capacity ranging from 160 to 250 participants and 4 drawing halls with a total capacity of 220 students. The college has a fully air-conditioned auditorium of 187 Sq. m. to host large gatherings for cultural as well as academic events. It has a TV studio with seating capacity of 100 persons and well equipped with latest and modern gadgets and is sound proof and acoustic treated. One major seminar hall of 199 sq. m. with approximate seating capacity of 300 persons is fully air conditioned and well maintained with modern amenities to host large gatherings for seminars, national and international conferences and cultural events. A very spacious open air auditorium of 5065 sq. m. is available that can accommodate 5000 students and is located in the heart of the campus for the purpose of open gatherings, fests, and annual celebrations. The college has created an ambience for students to conduct various cultural and literary events as well to practice music both vocal and instrumental by providing the music equipment to the cost of 4 lakhs and a dedicated practice hall of 76 sq. m. size.

Student Support and Progression

The steps taken by the institution to provide necessary assistance to the students in terms of academics such as providing meaningful experiences for learning at the campus facilitating holistic development and progression. It also aims at student performance and alumni engagement and the progression of student for higher education and/or achieving employment.
The capability enhancement and development schemes include skill development courses: communication skills, soft skills, and technical skills and structured CRT programs. Co-curricular and Extracurricular activities are embedded into the system for an overall development of a student.

Remedial classes are conducted slow learners so that they can improve in their academics. Bridge courses are conducted for lateral entry students in the II year to address the curriculum gaps between diploma and current course of study.

The institute follows a Proctorial system in which around fifteen students are assigned to each faculty. Besides this, personal counselling is given to students through a qualified professional Student Counsellor.

The consistent academic and other support rendered, has resulted in increased net selections in placements and gradual improvement in average pay package.

A plethora of sports and cultural activities / competitions are organized by the institution every year wherein the students play an important role in planning and organizing.

The institution also has a transparent mechanism for timely redressal of student grievances. Students are represented in several academic & administrative bodies/committees of the institution. The committees are Class Review Committee, Anti ragging committee, Canteen committee, IQAC, Women Development cell and many more.

There is also a registered MVGR Alumni Association (MAA) which contributes significantly to the development of the institution through financial and non-financial initiatives.

**Governance, Leadership and Management**

Governance is the key activity that develops the relationship among the management, staff, students and the community. The institution believes in effective and efficient governance in execution of its duties. The governing structure of institution and Departments consists of following statutory and non-statutory academic and administrative bodies:

1. Governing Body
2. Academic Council
3. Board of Studies
4. IQAC
5. Academic & Administrative Committees

**A) Governing Body**

The governing body provides guidelines and strategic direction for aligning the programs, policies and processes of the Institute with the changing environmental context. The governing body of the institution holds responsibility for strategic planning and ensuring effective management of the institution through well-defined organizational structure.

**B) Academic Council**

MVGR College of Engineering has been functioning as an Autonomous Institution since 2015. The Academic Council shall primarily be concerned with all the academic affairs of the college encompassing curricular and co-curricular activities. It is the responsibility of Academic Council to endeavor and ensure the best practices
are implemented and standards are maintained.

C) Board of Studies of various Departments

As an autonomous institution the college follows academic syllabi and course structure as recommended by the Board of Studies and approved by college Academic Council

D) IQAC

Institute Quality Assurance Cell (IQAC) is functional ever since 2009. The IQAC regularly reviews the teaching learning process, evaluation and assessment methodologies and other such academic and administrative process on regular basic.

E) Academic & Administrative Committees

The institution has a very clear and transparent administrative setup. Chairman is the administrative head and Principal is the working head of the institution. They are advised by the Governing Body. Correspondent coordinates with all the colleges under the MANSAS umbrella. Apart from the statutory committees, various academic and administrative committees are constituted for specific purposes in administration. As part of decentralization, representatives of faculty, non-teaching staff and students participate in various Committees of the institution. E-governance has been implemented for the purpose of admissions, finance and accounts and examinations using the in house developed software.

Institutional Values and Best Practices

The college has adopted several innovative practices of which a few are highlighted herein. The college has put in place several 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.

The college has so far started 7 such add-on programs namely Oracle Certified Java Programmer (OCJP), Creo-2.0 certified by Parametric Technology Corporation, NI LabVIEW Academy set up in the college for training on design and deployment of systems for embedded design applications, Process Equipment Design training, SIEMENS PLC and AC Drives training etc. APSSDC-Siemens Technical Skill Development Institute (tSDI) has also been setup at MVGR to offer technical skill training to students in 7 areas. These and many other such add-on programs currently being administered in the college have given a big edge to the students in enhancing their employability.

In addition, the practise at MVGR college has been to drawn 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 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. MVGR strives to adopt such best practices drawn from industry and international establishments in an effort to offer the best to students.
2. PROFILE

2.1 BASIC INFORMATION

<table>
<thead>
<tr>
<th>Name and Address of the College</th>
<th>MAHARAJ VIJAYARAM GAJAPATHI RAJ COLLEGE OF ENGINEERING</th>
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<tbody>
<tr>
<td>Name</td>
<td>MAHARAJ VIJAYARAM GAJAPATHI RAJ COLLEGE OF ENGINEERING</td>
</tr>
<tr>
<td>Address</td>
<td>VIJAYARAM NAGAR CAMPUS CHINTALAVALASA VIZIANAGARAM-535 005</td>
</tr>
<tr>
<td>City</td>
<td>Vizianagaram</td>
</tr>
<tr>
<td>State</td>
<td>Andhra Pradesh</td>
</tr>
<tr>
<td>Pin</td>
<td>535005</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.mvgrce.edu.in">www.mvgrce.edu.in</a></td>
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Contacts for Communication

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<thead>
<tr>
<th>Designation</th>
<th>Name</th>
<th>Telephone with STD Code</th>
<th>Mobile</th>
<th>Fax</th>
<th>Email</th>
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<tr>
<td>Principal</td>
<td>K. V. L. Raju</td>
<td>08922-241732</td>
<td>9440018656</td>
<td>08922-241199 9</td>
<td><a href="mailto:principal.mvgr@gmail.com">principal.mvgr@gmail.com</a></td>
</tr>
<tr>
<td>IQAC / CIQA coordinator</td>
<td>P.s. Sitarama Raju</td>
<td>8922-241732</td>
<td>9849075577</td>
<td>8922-241199</td>
<td><a href="mailto:dean.qa@mvgrce.edu.in">dean.qa@mvgrce.edu.in</a></td>
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Status of the Institution

| Institution Status | Self Financing |

Type of Institution

<table>
<thead>
<tr>
<th>By Gender</th>
<th>Co-education</th>
</tr>
</thead>
<tbody>
<tr>
<td>By Shift</td>
<td>Regular</td>
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</tbody>
</table>

Recognized Minority institution

| If it is a recognized minority institution | No |

Establishment Details

| Date of Establishment, Prior to the Grant of | 28-08-1997 |
### University to which the college is affiliated

<table>
<thead>
<tr>
<th>State</th>
<th>University name</th>
<th>Document</th>
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<tr>
<td>Andhra Pradesh</td>
<td>Jawaharlal Nehru Technological University, Kakinada</td>
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### Details of UGC recognition

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<tr>
<td>2f of UGC</td>
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<tr>
<td>12B of UGC</td>
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### Details of recognition/approval by stationary/regulatory bodies like AICTE, NCTE, MCI, DCI, PCI, RCI etc (other than UGC)

<table>
<thead>
<tr>
<th>Statutory Regulatory Authority</th>
<th>Recognition/App roval details Institution/Department programme</th>
<th>Day, Month and year (dd-mm-yyyy)</th>
<th>Validity in months</th>
<th>Remarks</th>
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<tr>
<td>AICTE</td>
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<td>15-06-2020</td>
<td>12</td>
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### Recognitions

<table>
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<tr>
<th>Question</th>
<th>Answer</th>
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<tbody>
<tr>
<td>Is the College recognized by UGC as a College with Potential for Excellence (CPE)?</td>
<td>No</td>
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<tr>
<td>Is the College recognized for its performance by any other governmental agency?</td>
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## Location and Area of Campus

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<thead>
<tr>
<th>Campus Type</th>
<th>Address</th>
<th>Location*</th>
<th>Campus Area in Acres</th>
<th>Built up Area in sq.mts.</th>
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<td>VIJAYARAM NAGAR CAMPUS CHINTALAVALASA VIZIANAGARAM-535 005</td>
<td>Rural</td>
<td>60</td>
<td>70142</td>
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### 2.2 ACADEMIC INFORMATION

#### Details of Programmes Offered by the College (Give Data for Current Academic year)

<table>
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<tr>
<th>Programme Level</th>
<th>Name of Programme/ Course</th>
<th>Duration in Months</th>
<th>Entry Qualification</th>
<th>Medium of Instruction</th>
<th>Sanctioned Strength</th>
<th>No.of Students Admitted</th>
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<tbody>
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<td>UG</td>
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<td>48</td>
<td>Ten plus two or its equivalent</td>
<td>English</td>
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**Position Details of Faculty & Staff in the College**
## Teaching Faculty

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<tr>
<th></th>
<th>Professor</th>
<th>Associate Professor</th>
<th>Assistant Professor</th>
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<tbody>
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<td></td>
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<td>Female</td>
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<tr>
<td>Recruited</td>
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<tr>
<td>Yet to Recruit</td>
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<td>0</td>
<td>0</td>
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<tr>
<td>Sanctioned by the Management/Society or Other Authorized Bodies</td>
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<td>Recruited</td>
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<tr>
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## Non-Teaching Staff

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<th>Female</th>
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<tr>
<td>Recruited</td>
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<tr>
<td>Yet to Recruit</td>
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<tr>
<td>Sanctioned by the Management/Society or Other Authorized Bodies</td>
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<td>62</td>
<td>62</td>
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<tr>
<td>Recruited</td>
<td>47</td>
<td>15</td>
<td>0</td>
<td>62</td>
</tr>
<tr>
<td>Yet to Recruit</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
### Technical Staff

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanctioned by the UGC /University State Government</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Recruited</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Yet to Recruit</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sanctioned by the Management/Society or Other Authorized Bodies</td>
<td>54</td>
<td>0</td>
<td>0</td>
<td>54</td>
</tr>
<tr>
<td>Recruited</td>
<td>46</td>
<td>8</td>
<td>0</td>
<td>54</td>
</tr>
<tr>
<td>Yet to Recruit</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### Qualification Details of the Teaching Staff

#### Permanent Teachers

<table>
<thead>
<tr>
<th>Highest Qualification</th>
<th>Professor</th>
<th>Associate Professor</th>
<th>Assistant Professor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Others</td>
</tr>
<tr>
<td>D.sc/D.Litt.</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>25</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>M.Phil.</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>PG</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
## Temporary Teachers

<table>
<thead>
<tr>
<th>Highest Qualification</th>
<th>Professor</th>
<th>Associate Professor</th>
<th>Assistant Professor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Others</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.sc/D.Litt.</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>M.Phil.</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>PG</td>
<td>0</td>
<td>0</td>
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</tr>
</tbody>
</table>

## Part Time Teachers

<table>
<thead>
<tr>
<th>Highest Qualification</th>
<th>Professor</th>
<th>Associate Professor</th>
<th>Assistant Professor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Others</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.sc/D.Litt.</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>M.Phil.</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>PG</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

## Details of Visiting/Guest Faculties

<table>
<thead>
<tr>
<th>Number of Visiting/Guest Faculty engaged with the college?</th>
<th>Male</th>
<th>Female</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Provide the Following Details of Students Enrolled in the College During the Current Academic Year
<table>
<thead>
<tr>
<th>Programme</th>
<th>From the State Where College is Located</th>
<th>From Other States of India</th>
<th>NRI Students</th>
<th>Foreign Students</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>PG</td>
<td>Male 154</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>154</td>
</tr>
<tr>
<td></td>
<td>Female 160</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>160</td>
</tr>
<tr>
<td></td>
<td>Others 0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>UG</td>
<td>Male 2606</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2606</td>
</tr>
<tr>
<td></td>
<td>Female 1253</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1253</td>
</tr>
<tr>
<td></td>
<td>Others 0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Provide the Following Details of Students admitted to the College During the last four Academic Years

<table>
<thead>
<tr>
<th>Programme</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC</td>
<td>Male 266</td>
<td>252</td>
<td>235</td>
<td>217</td>
</tr>
<tr>
<td></td>
<td>Female 133</td>
<td>125</td>
<td>123</td>
<td>114</td>
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<tr>
<td></td>
<td>Others 0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>ST</td>
<td>Male 63</td>
<td>61</td>
<td>49</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>Female 12</td>
<td>14</td>
<td>20</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Others 0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>OBC</td>
<td>Male 1428</td>
<td>1422</td>
<td>1223</td>
<td>1107</td>
</tr>
<tr>
<td></td>
<td>Female 704</td>
<td>656</td>
<td>599</td>
<td>581</td>
</tr>
<tr>
<td></td>
<td>Others 0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>General</td>
<td>Male 1003</td>
<td>1083</td>
<td>1226</td>
<td>1298</td>
</tr>
<tr>
<td></td>
<td>Female 564</td>
<td>626</td>
<td>799</td>
<td>873</td>
</tr>
<tr>
<td></td>
<td>Others 0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Others</td>
<td>Male 0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Female 0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Others 0</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>Total</td>
<td>4173</td>
<td>4239</td>
<td>4274</td>
<td>4269</td>
</tr>
</tbody>
</table>

2.3 EVALUATIVE REPORT OF THE DEPARTMENTS
<table>
<thead>
<tr>
<th>Department Name</th>
<th>Upload Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Administration</td>
<td>View Document</td>
</tr>
<tr>
<td>Chemical Engineering</td>
<td>View Document</td>
</tr>
<tr>
<td>Civil Engineering</td>
<td>View Document</td>
</tr>
<tr>
<td>Computer Science And Engineering</td>
<td>View Document</td>
</tr>
<tr>
<td>Electrical And Electronics Engineering</td>
<td>View Document</td>
</tr>
<tr>
<td>Electronics And Communication Engineering</td>
<td>View Document</td>
</tr>
<tr>
<td>Information Technology</td>
<td>View Document</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>View Document</td>
</tr>
</tbody>
</table>
Extended Profile

1 Program

1.1

Number of programs offered year-wise for last five years

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>13</td>
<td>15</td>
<td>15</td>
<td>14</td>
<td>14</td>
</tr>
</tbody>
</table>

File Description | Document
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Institutional data in prescribed format</td>
<td>View Document</td>
</tr>
</tbody>
</table>

1.2

Number of departments offering academic programmes

Response: 8

2 Students

2.1

Number of students year-wise during last five years

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>4051</td>
<td>4138</td>
<td>4143</td>
<td>4175</td>
<td>4144</td>
</tr>
</tbody>
</table>

File Description | Document
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional data in prescribed format</td>
<td>View Document</td>
</tr>
</tbody>
</table>

2.2

Number of outgoing / final year students year-wise during last five years

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>1094</td>
<td>1120</td>
<td>1157</td>
<td>1142</td>
<td>1115</td>
</tr>
</tbody>
</table>

File Description | Document
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional data in prescribed format</td>
<td>View Document</td>
</tr>
</tbody>
</table>
2.3

Number of students appeared in the examination conducted by the Institution, year-wise during the last five years

<table>
<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
<th>2018-19</th>
<th>2017-18</th>
<th>2016-17</th>
<th>2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4059</td>
<td>4145</td>
<td>4159</td>
<td>4205</td>
<td>4177</td>
</tr>
</tbody>
</table>

2.4

Number of revaluation applications year-wise during last five years

<table>
<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
<th>2018-19</th>
<th>2017-18</th>
<th>2016-17</th>
<th>2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2330</td>
<td>1281</td>
<td>477</td>
<td>137</td>
<td>133</td>
</tr>
</tbody>
</table>

3 Teachers

3.1

Number of courses in all programs year-wise during last five years

<table>
<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
<th>2018-19</th>
<th>2017-18</th>
<th>2016-17</th>
<th>2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>534</td>
<td>615</td>
<td>627</td>
<td>601</td>
<td>582</td>
</tr>
</tbody>
</table>

3.2

Number of full time teachers year-wise during the last five years

<table>
<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
<th>2018-19</th>
<th>2017-18</th>
<th>2016-17</th>
<th>2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>239</td>
<td>244</td>
<td>252</td>
<td>250</td>
<td>253</td>
</tr>
</tbody>
</table>

Number of sanctioned posts year-wise during last five years

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-20</td>
<td>239</td>
<td>244</td>
<td>252</td>
<td>250</td>
<td>253</td>
</tr>
</tbody>
</table>

4 Institution

4.1

Number of eligible applications received for admissions to all the programs year-wise during last five years

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-20</td>
<td>68909</td>
<td>34657</td>
<td>76725</td>
<td>67907</td>
<td>75575</td>
</tr>
</tbody>
</table>

4.2

Number of seats earmarked for reserved category as per GOI/State Govt rule year-wise during last five years

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-20</td>
<td>440</td>
<td>455</td>
<td>455</td>
<td>447</td>
<td>447</td>
</tr>
</tbody>
</table>

4.3

Total number of classrooms and seminar halls

Response: 92

4.4

Total number of computers in the campus for academic purpose

Response: 1485
Total Expenditure excluding salary year-wise during last five years (INR in Lakhs)

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount (INR in Lakhs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-20</td>
<td>78867222</td>
</tr>
<tr>
<td>2018-19</td>
<td>91164715</td>
</tr>
<tr>
<td>2017-18</td>
<td>71292539</td>
</tr>
<tr>
<td>2016-17</td>
<td>75296184</td>
</tr>
<tr>
<td>2015-16</td>
<td>67116634</td>
</tr>
</tbody>
</table>
4. Quality Indicator Framework (QIF)

Criterion 1 - Curricular Aspects

1.1 Curriculum Design and Development

1.1.1 Curricula developed and implemented have relevance to the local, national, regional and global developmental needs which is reflected in Programme outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) of the Programmes offered by the Institution.

Response:

Ever since MVGR became an autonomous institution in 2015, very proactive steps have been taken at the institution level to develop and implement curricula that specifically address the needs of the students at MVGR. Almost the entire student population at MVGR is drawn from the lesser developed North Coastal Andhra Pradesh region with a major population of students coming from the rural and agrarian belts. Over the years, MVGR has seen a student population with a wide range of intellectual capabilities from the reasonably bright to the sufficiently weak learners. The curricula developed and being constantly updated at MVGR seeks to cater to this category of student population while at the same time striving to mould and prepare them to face the challenges of the multi-cultural corporate world as well as meet the standards of international education.

It is found by companies that not all of the graduates that pass out of any given stream are suitable for employment. Only 17% of engineering graduates are found eligible in general out of a study of graduates across 28 low-wage countries including India. It is also found that only 25% of Indian engineers are suitable for hiring by a multi-national company. In a study conducted by the McKinsey Global Institute, the reasons for low levels of suitability are cited as: lack of necessary language skills; the low quality of significant portions of the educational system and its limited ability to impart practical skills; and a lack of cultural fit, which can be seen in interpersonal skills and attitudes towards teamwork and flexible working hours. The study goes on to elucidate that countries seeking to play a role in the emerging global labour market should concentrate on improving the quality of their talent, not just the quantity of educated workers. In many developing countries, a large potential labour supply could be unlocked by improving the suitability of college graduates, particularly their language skills. MVGR is a member of the Confederation of Indian Industry (CII) and regularly interacts with industry to learn from their practices and translate the same into curricular interventions. Over the last 23 years, MVGR has entered into agreements with close to 50 companies for exchange of expertise in technology and practices.

In tune with the above and in order to effectively address the wide range of needs of the student population, MVGR has developed a comprehensive curriculum adopting the Choice Based Credit System while keeping in tune with the AICTE model curriculum. Emphasis has been laid at the undergraduate level by providing opportunity to students to specialise is major areas of the concerned programme such as transportation engineering, power system, embedded systems, CNC machine technology, cloud computing, data analytics, networking etc. Students can thus choose from a set of electives and specialise in a particular sub area of their program. All of these are effectively captured in the POs, PSOs and COs of the various programmes at MVGR.
### 1.1.2 Percentage of Programmes where syllabus revision was carried out during the last five years.

Response: 100

1.1.2.1 **Number of all Programmes offered by the institution during the last five years.**

Response: 13

1.1.2.2 **How many Programmes were revised out of total number of Programmes offered during the last five years**

Response: 13

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any additional information</td>
<td>View Document</td>
</tr>
<tr>
<td>Link for Additional Information</td>
<td>View Document</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minutes of relevant Academic Council/BOS meeting</td>
<td>View Document</td>
</tr>
<tr>
<td>Details of program syllabus revision in last 5 years(Data Template)</td>
<td>View Document</td>
</tr>
<tr>
<td>Any additional information</td>
<td>View Document</td>
</tr>
<tr>
<td>Link for Additional Information</td>
<td>View Document</td>
</tr>
</tbody>
</table>

### 1.1.3 Average percentage of courses having focus on employability/entrepreneurship/skill development offered by the institution during the last five years

Response: 100

1.1.3.1 **Number of courses having focus on employability/entrepreneurship/skill development year-wise during the last five years.**

<table>
<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
<th>2018-19</th>
<th>2017-18</th>
<th>2016-17</th>
<th>2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courses</td>
<td>534</td>
<td>615</td>
<td>627</td>
<td>601</td>
<td>582</td>
</tr>
</tbody>
</table>
1.2 Academic Flexibility

1.2.1 Percentage of new courses introduced of the total number of courses across all programs offered during the last five years.

Response: 35.21

1.2.1.1 How many new courses are introduced within the last five years

Response: 1042

1.2.1.2 Number of courses offered by the institution across all programmes during the last five years.

Response: 2959

1.2.2 Percentage of Programmes in which Choice Based Credit System (CBCS) / elective course system has been implemented  (Data for the latest completed academic year).

Response: 100

1.2.2.1 Number of Programmes in which CBCS / Elective course system implemented.

Response: 13
### 1.3 Curriculum Enrichment

#### 1.3.1 Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

**Response:**

The programs offered at MVGR are tailored in such a way that issues of human ethics and values, environment and sustainability are integrated into the delivery. Very specifically, every programme offers courses on Professional Ethics and Human Values as a mandatory audit course along with Environmental Science. In addition, the students are put through a well-structured induction program in the very first 3 weeks of admission to their respective programmes. The induction program is designed to give a birds-eye view of the societal fabric within which the engineer is expected to perform. Covered in the induction program are topics such as human psychology, values and meditation, yoga, social responsibility, community service, gender equity, respect and protection. In addition, the programmes offer courses on Indian Traditional Knowledge and Constitution of India. Students are also required to carry out a Socially Relevant Project in semester IV.

In addition to the above efforts that are directly integrated into the curriculum either through audit or credit courses, MVGR also has a very active NSS team that conducts several programs for the adopted villages in the region. The NSS team comprises a large student body drawn from different programmes and years of study. This team carries out activities related to environmental pollution reduction, awareness programs on social issues such as drug abuse, women protection and empowerment, environmental afforestation and youth empowerment. MVGR has constituted a Women Empowerment Cell especially to address gender equity issues and women health. MVGR is also supported by the Govt. of India in undertaking the Unnat Bharat Abhiyan project for community developed. All of these activities are also executed by a team of students drawn from various programmes.
1.3.2 Number of value-added courses for imparting transferable and life skills offered during last five years.

Response: 104

1.3.2.1 How many new value-added courses are added within the last five years

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-20</td>
<td>29</td>
<td>32</td>
<td>20</td>
<td>12</td>
<td>11</td>
</tr>
</tbody>
</table>

1.3.3 Average Percentage of students enrolled in the courses under 1.3.2 above.

Response: 41.71

1.3.3.1 Number of students enrolled in subject related Certificate or Add-on programs year wise during last five years

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-20</td>
<td>3336</td>
<td>1991</td>
<td>519</td>
<td>1464</td>
<td>1263</td>
</tr>
</tbody>
</table>
1.3.4 Percentage of students undertaking field projects/ internships / student projects (Data for the latest completed academic year)

Response: 46.9

1.3.4.1 Number of students undertaking field projects / internships / student projects

Response: 1900

1.4 Feedback System

1.4.1 Structured feedback for design and review of syllabus – semester-wise / year-wise is received from 1) Students, 2) Teachers, 3) Employers, 4) Alumni

Response: A. All 4 of the above

1.4.2 The feedback system of the Institution comprises of the following:

Response: A. Feedback collected, analysed and action taken and report made available on website
<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any additional information</td>
<td>View Document</td>
</tr>
<tr>
<td>Link for Additional Information</td>
<td>View Document</td>
</tr>
<tr>
<td>URL for stakeholder feedback report</td>
<td>View Document</td>
</tr>
</tbody>
</table>
Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Average Enrolment percentage (Average of last five years)

Response: 93.29

2.1.1.1 Number of students admitted year-wise during last five years

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>1033</td>
<td>1058</td>
<td>1039</td>
<td>1048</td>
<td>1066</td>
</tr>
</tbody>
</table>

2.1.1.2 Number of sanctioned seats year-wise during last five years

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Seats</td>
<td>1110</td>
<td>1110</td>
<td>1146</td>
<td>1128</td>
<td>1128</td>
</tr>
</tbody>
</table>

2.1.2 Average percentage of seats filled against reserved categories (SC, ST, OBC, Divyangjan, etc. as per applicable reservation policy) during the last five years (exclusive of supernumerary seats)

Response: 136

2.1.2.1 Number of actual students admitted from the reserved categories year-wise during last five years

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>626</td>
<td>624</td>
<td>597</td>
<td>589</td>
<td>615</td>
</tr>
</tbody>
</table>
2.2 Catering to Student Diversity

2.2.1 The institution assesses the learning levels of the students and organises special Programmes for advanced learners and slow learners

Response:

In line and as per the guidelines of AICTE, an orientation program is organised for all students in the first semester before they begin their regular academic curriculum. This orientation program is designed to help students get acclimatised and adjusted to academic life in a higher education institution. During the induction program, detailed orientation is given to students in Mathematics, Physics and Chemistry in order to bridge the gap between intermediate education and the foundations required for professional education. Students are also given awareness on the importance and application of these subjects in professional education thereby helping them to build an appreciation for these subjects and seriously apply themselves to learning the fundamentals of these subjects.

In addition to the above, MVGR also conducts bridge programs for diploma students who join in the third semester (lateral entry). This program is designed to help these students improve their understanding of mathematics required for engineering as well as programming skills and strengthen their understanding and application of these subjects which are generally not covered in depth at the diploma level.

The programmes offer project-based learning to students in order to help improve their problem solving skills. As part of the laboratory experience, students are expected to design their own experiments given a problem statement and write their experiences in the form of a report. In addition, a project is given at the beginning of the semester that students have to undertake as part of the laboratory experience. These are designed to inculcate the graduate attributes namely (a) problem analysis, (b) design/development of solutions and (c) conduct investigations into complex problems.

Students are also encouraged to take up MOOCs courses in order to give them the ability for self-learning as well as to pursue specific courses of their interest and which will help them in their chosen careers. The programme departments also design and deliver add-on courses in collaboration with industry to fill the gap between academia and industry. Interested and advanced learners apply for these add-on courses leading to a certification from industry. Some of these programs are CISCO certification, Salesforce certification, Creo certification from PTC etc.
2.2.2 Student - Full time teacher ratio (Data for the latest completed academic year)

Response: 17:1

2.3 Teaching- Learning Process

2.3.1 Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

Response:

Several student-centric learning initiatives are adopted at MVGR. The course structure of all programmes allows students one full semester (semester 8) to pursue their project without have to attend classwork while pursuing the 1 or 2 courses online. This offers students a lot of opportunity to take up internships or specialised industrial skill training in areas such as PLM, PLC, SCADA etc. In addition, MVGR takes students on field trips to industries in the region to give them detailed exposure to operating systems in the industry. Students are also encouraged to take up research problems being addressed by the respective faculty mentors as well as problems faced by industry. Students are also provided exposure through visits to local industries and collaboratively preparing reports on such visits. Students also have the opportunity to take up specialised training in industry-certified courses. This helps the students is getting a better understanding of industry problems and working on solutions to those problems.

Several avenues for participative learning are also available for students. MVGR actively promotes innovation among students and offers financial support for development of prototypes. Students form groups and take up innovative entrepreneurial ideas that benefit the society and collectively work to develop a prototype with help from the faculty members across programmes. Student are also actively encouraged to attend workshops, paper and model presentations at premier institutions and hackathons. As part of the laboratory experience, students are expected to design their own experiments given a problem statement and write their experiences in the form of a report. In addition, a project is given at the beginning of the semester that students have to undertake as part of the laboratory experience. These are designed to inculcate the graduate attributes namely (a) problem analysis, (b) design/development of solutions and (c) conduct investigations into complex problems.

Students have also formed a society reachout group called Swecha for technology support to rural communities in the region. They have also formed another group called ‘For the Youth-From the People’ ‘FYFP’ in order to address the problem of affordability of education to the rural children and youth. The
activities conducted by the students, while being a great opportunity to connect with the society and support societal needs, also serve to develop problem-solving skills among students and a spirit of collaborative working.

### 2.3.2 Teachers use ICT enabled tools including online resources for effective teaching and learning process.

**Response:**

Teachers actively use ICT tools for making power point presentations. Teachers also actively encourage students to take up online MOOCs courses that are given credits. In addition to the regular class work teaching methodology (chalk & board), the following supplementary methods are being adopted for interactive learning:

1. Course content delivery is effectively done by using ICT tools like LCD projector, laptop etc.,
2. Online e-learning materials like IUCEE Webinar classes (online/offline)
3. CO based assignments are given for each subject and tutorials are conducted for the same subject
4. E-books and subject relevant material kept available for students in the Intranet.
5. Quiz and models to deliver the contents effectively.
6. Conduct of remedial classes for weak students.
7. Conduct of guest lectures to the students on contemporary topics.
8. Learn through physical models for better understanding

Additional learning approaches are implemented through laboratory courses such as:

1. Demonstrative experiments and simple projects undertaken jointly with students to understand the concepts in depth
2. Conduct of viva voce for all practical laboratory classes
3. Project based learning
4. Conduct of design experiments
In addition to the above, other processes such as conduct of summer camps/internships, exposure to e-content from NPTEL, NITTTR and IUCEE is promoted.

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
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<tbody>
<tr>
<td>Any additional information</td>
<td>View Document</td>
</tr>
<tr>
<td>Provide link for webpage describing ICT enabled tools including online resources for effective teaching and learning process</td>
<td>View Document</td>
</tr>
<tr>
<td>Link for Additional Information</td>
<td>View Document</td>
</tr>
</tbody>
</table>

2.3.3 Ratio of students to mentor for academic and other related issues (Data for the latest completed academic year)

Response: 17:1

2.3.3.1 Number of mentors

Response: 239

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upload year wise, number of students enrolled and full time teachers on roll</td>
<td>View Document</td>
</tr>
<tr>
<td>Circulars pertaining to assigning mentors to mentees</td>
<td>View Document</td>
</tr>
<tr>
<td>Any additional information</td>
<td>View Document</td>
</tr>
<tr>
<td>Link for additional information</td>
<td>View Document</td>
</tr>
</tbody>
</table>

2.3.4 Preparation and adherence of Academic Calendar and Teaching plans by the institution

Response:

Academic calendars are prepared well in advance of the academic year. The academic calendar is prepared semester-wise with clear representation of the instruction period, the internal assessment dates and the end examination dates for both theory and laboratory work. The start and end dates of the semester are clearly defined along with the start date of the next academic year. In addition to the academic calendar, the institutional annual student activities plan is also well-drafted in terms of the sports activities and the cultural activities along with a detailed schedule for the same. In addition to these, the placement cell also schedules training programs for the final year students in preparation for the placement activities. These schedules are also duly factored into the academic calendar and released up front at the beginning of the academic year.

In keeping with the teaching requirements, teachers prepare in detail a subject file and a course file. The
subject file contains technical content related to the subject in terms of note material, question banks, presentations, reference material etc. The course file contains the lesson plan, log sheet, details of assessments carried out during the delivery of the course etc. The faculty deliver the course according to the lesson plan and the daily content delivered is recorded in the log sheet. There is expected to be deviation in the log sheet with respect to the lesson plan on account of students’ grasping ability. Hence lesson plans are constantly modified based on the log sheet of the previous delivery cycle. Preparation of time tables for each semester is carried out based on the academic calendar. The institution has a time table committee comprising members from all the departments who sit together and prepare a well-drafted time table for each semester and department in such a way the it does not cause any conflict for the faculty handling the respective courses. Based on the overall time table, individual time tables are prepared for each faculty member for cross verification of any conflicts. These time tables are then strictly adhered to in the delivery of the course content.

Each class has an identified faculty member who serves as class teacher and is tasked with monitoring the progress of the course work for that class of students. The departmental academic coordinator coordinates the academic activities of the department along with the class teachers and difficulties or issues are brought up for discussion with the head of the department for resolution.

As far as possible, the institution adheres to the academic calendar as sent out at the beginning of the academic year with the exception of major disruptive events that might take place.

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upload Academic Calendar and Teaching plans for five years</td>
<td>View Document</td>
</tr>
<tr>
<td>Any additional information</td>
<td>View Document</td>
</tr>
<tr>
<td>Link for Additional Information</td>
<td>View Document</td>
</tr>
</tbody>
</table>

### 2.4 Teacher Profile and Quality

#### 2.4.1 Average percentage of full time teachers against sanctioned posts during the last five years

**Response:** 100

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year wise full time teachers and sanctioned posts for 5 years(Data Template)</td>
<td>View Document</td>
</tr>
<tr>
<td>List of the faculty members authenticated by the Head of HEI</td>
<td>View Document</td>
</tr>
<tr>
<td>Any additional information</td>
<td>View Document</td>
</tr>
<tr>
<td>Link for Additional Information</td>
<td>View Document</td>
</tr>
</tbody>
</table>
2.4.2 Average percentage of full time teachers with Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. during the last five years (consider only highest degree for count)

Response: 29.4

2.4.2.1 Number of full time teachers with Ph.D./D.M./M.Ch./D.N.B Superspeciality/D.Sc./D’Lit. year wise during the last five years

<table>
<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
<th>2018-19</th>
<th>2017-18</th>
<th>2016-17</th>
<th>2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers</td>
<td>84</td>
<td>79</td>
<td>74</td>
<td>66</td>
<td>60</td>
</tr>
</tbody>
</table>

File Description

Institutional data in prescribed format (Data Template)

Any additional information

Link for Additional Information

2.4.3 Average teaching experience of full time teachers in the same institution (Data for the latest completed academic year in number of years)

Response: 10.13

2.4.3.1 Total experience of full-time teachers

Response: 2420

File Description

Institutional data in prescribed format

Any additional information

Link for Additional Information

2.5 Evaluation Process and Reforms

2.5.1 Average number of days from the date of last semester-end/ year- end examination till the declaration of results year-wise during the last five years

Response: 45.2

2.5.1.1 Number of days from the date of last semester-end/ year- end examination till the declaration of results year wise during the last five years
2.5.2 Average percentage of student complaints/grievances about evaluation against total number appeared in the examinations during the last five years

Response: 20.93

2.5.2.1 Number of complaints/grievances about evaluation year wise during the last five years

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>133</td>
<td>137</td>
<td>477</td>
<td>1295</td>
<td>2330</td>
</tr>
</tbody>
</table>

2.5.3 IT integration and reforms in the examination procedures and processes including Continuous Internal Assessment (CIA) have brought in considerable improvement in Examination Management System (EMS) of the Institution

Response:

MVGR College of Engineering affiliated to JNTUniversity Kakinada was conferred Autonomous status by UGC from the academic year 2015-16. The institution has implemented CBCS.

The examination procedures are well designed and practiced in line with outcome based education and followed as per the academic regulations framed.
Examinations section prepares, schedules strictly adhering to academic calendar of the institution. All the tasks related to the examinations have been integrated with IT tools using Bees Examination Software, which is exhaustive and completely automated in carrying out end to end tasks. The examination software consists of Pre-examination, Post examination and Utilities & Exam Account modules. Pre-examination module consists of Master setup, Transactions & Reports. Master setup includes course master, student data base, exams setup, grade setup etc. Transaction module includes fee details, OMR codes generation, seating plan etc. Reports includes application forms, fee details, Hall tickets, OMR sheets etc. Post Examination Module includes scanning and import of marks, Marks verification, results processing and declaration, result analysis and printing of grades Memos with security features. Utilities & Exam Account feature includes master setup, promotions and data backup.

Question Bank have been prepared for all the courses offered in UG,PG programs of A1 & A2 regulation by involving subject experts from National institutions/Universities/Autonomous institutions covering the entire syllabus, mapping to CO’s and following Bloom Taxonomy. All the question banks have been vetted by BOS chairman of the respective programs and kept in encrypted form. Question papers are generated using software tool developed by department of CSE from the question banks on the examination days.

**Continuous Internal Assessment:** Assessment in the form of subjective tests, objective tests, assignments, Project based learning, mini & major projects are being conducted as per the academic regulations.

**A1 Regulations:**

**B.Tech/M.Tech:**

**A. Theory courses** are assessed for 100 marks with 40 marks for internal and 60 marks for semester end examination.

Two assessments tests : 30 Marks

Assignments/surprise test/quiz : 10 Marks

**B. Laboratory:**

Laboratory courses are assessed for 100 marks with 40 marks internal and 60 marks for semester end examination.

Continuous assessment : 20 Marks

Internal assessment test : 20 Marks

**C. B.Tech Project Evaluation:** Project is evaluated for 200 marks.

Internal assessment : 80 Marks

External assessment : 120 Marks
D. M.Tech Project Evaluation:

Phase I : 100 Marks

Phase II : 300 Marks

MBA:

A. Theory courses are assessed for 100 marks with 40 marks for internal and 60 marks semester end examination.

Two assessments tests : 20 Marks
Mini Report : 20 Marks

B. Laboratory:

Courses are internally assessed for 50 marks.

C. Project Evaluation: Carried in IV semester.

Internal assessment : 80 Marks
External assessment : 120 Marks

A2 Regulations: B.Tech :

A. Theory courses are assessed for 100 marks of which 40 marks for internal assessment and 60 marks for semester end examination.

Internal Assessment : 40 Marks

Subjective tests : 20 Marks Objective tests : 10 Marks
Assignments : 10 Marks

B. Laboratory/Drawing/Design/Estimation:

Courses are assessed for 100 marks with 40 marks for internal and 60 marks for semester end examination.

Internal Assessment : 40 Marks

Continuous assessment : 15 Marks Project based learning : 15 Marks Internal test : 10 Marks

C. Integrated Course (Theory + Lab):

For Integrated courses, theory and lab courses shall be assessed for 100 marks each, out of which 40 marks are for internal and 60 marks are for semester end examination.
E. PROJECT:

I. Socially Relevant Project:

Student shall do socially relevant project and shall be evaluated internally for 50 marks.

II. Mini Project:

Student shall do Mini project during the vacation(VI semester) and shall be evaluated internally for 50 marks.

Project Evaluation:

Phase I: Shall be evaluated internally for 50 Marks(VII semester). Phase II: Shall be evaluated internally for 150 Marks(VIII semester).

Internal : 60 Marks. External : 90 Marks.

M.Tech :

A. Theory courses are assessed for 100 marks of which 40 marks for internal and 60 marks for semester end examination.

Internal Assessment : 40 Marks

Subjective tests : 30 Marks

Assignments : 10 Marks

B. Laboratory/Drawing/Design/Estimation:

All Laboratory courses are assessed for 100 marks of which 40 marks for internal and 60 marks for semester end examination.

Internal Assessment : 40 Marks

Continuous assessment : 20 Marks

Internal test : 20 Marks

C. PROJECT:

Phase I: Evaluated for 100 Marks. Phase II: Evaluated for 300 Marks.

MBA

A. Theory courses are assessed for 100 marks of which 40 marks for internal and 60 marks for semester end examination.
Internal Assessment : 40 Marks

Subjective tests : 20 Marks

Assignments/ Mini reports : 20 Marks

D. Laboratory/Drawing/Design/Estimation:

Courses are assessed for 100 marks of which 40 marks are for internals.

Internal Assessment : 40 Marks

Continuous assessment : 20 Marks

Internal test : 20 Marks

E. PROJECT:

Internal : 80Marks

External : 120Marks

<table>
<thead>
<tr>
<th>Reforms</th>
<th>Positive impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online payment of Examination Fee</td>
<td>Ease in payment of examination fee through highly secured payment gateway.</td>
</tr>
<tr>
<td>Receipt cum Application</td>
<td>The tool generates receipt of examination fee paid by student along with filled</td>
</tr>
<tr>
<td></td>
<td>application.</td>
</tr>
<tr>
<td>Implementation of ICT</td>
<td>Automation in generation of Hall tickets, seating plan, report of results, Grades</td>
</tr>
<tr>
<td></td>
<td>memo, CGM, University reports etc.</td>
</tr>
<tr>
<td>Use of OMR Answer booklet with barcode.</td>
<td>High level of confidentiality is achieved</td>
</tr>
<tr>
<td>Question paper Generation</td>
<td>Generation of question paper using tool from the encrypted question banks</td>
</tr>
<tr>
<td></td>
<td>covering all cognitive levels.</td>
</tr>
<tr>
<td>Spot valuation</td>
<td>Spot valuation camp is organized in the college involving universities and</td>
</tr>
<tr>
<td></td>
<td>Autonomous institutions for timely completion of valuation, processing and</td>
</tr>
<tr>
<td></td>
<td>declaration of results.</td>
</tr>
<tr>
<td>Question Bank Security</td>
<td>Question Banks for all the courses of UG &amp; PG programs kept in encrypted form.</td>
</tr>
<tr>
<td>Security features</td>
<td>Grades memos &amp; CGM have been printed with security features like Anti copy, HR,</td>
</tr>
<tr>
<td></td>
<td>Border, Static bar code, QR code, Penetrate numbering, Invisible, R Micro line,</td>
</tr>
<tr>
<td></td>
<td>Opaque text etc.</td>
</tr>
<tr>
<td>Plagiarism check</td>
<td>All the M.Tech Project reports are subjected to plagiarism check.</td>
</tr>
</tbody>
</table>
2.6 Student Performance and Learning Outcomes

2.6.1 Programme and course outcomes for all Programmes offered by the institution are stated and displayed on website and communicated to teachers and students.

Response:

The program and course outcomes for all the programmes are very well drafted and displayed at prominent locations in each of the respective programme departments. In addition, the same displayed on the website of the institution as well as communicated to the teaching faculty as well as students. The exercise of defining the POs and COs is carried out by teams of faculty members themselves and then duly advocated to the student community.

MVGR has been accredited by NBA for all its eligible programs. As part of the NBA accreditation exercise, detailed effort has be put in towards defining the program educational objectives (PEOs), program outcomes (POs) and course outcomes (COs). These are very clearly displayed and disseminated at 19 different locations across the campus.

The PEOs are evolved through a process of discussion and deliberations chiefly coordinated by the program assessment committee comprising of senior faculty members. The discussions are in the spirit of larger objectives of under graduate programs in engineering as laid out by NBA, AICTE, State Higher Education Council, affiliating university (JNTUK) and professional bodies. The PEOs are refined based on expectations of the stake holders from the Program. The draft PEOs are shared by the committee with various stake holding groups like alumni, parents, employers etc. and revisions to the draft are made based on the inputs and subsequent deliberations made among the committee members. The latest draft is then put forth for discussion among all faculty members for further refinement. The board of studies deliberates on the draft and with final changes/modifications, the same is discussed and ratified by the academic council of the institution.

Keeping the vision, mission and PEOs in the forefront the POs are arrived at. In consideration of the POs, the program curriculum is designed. The design of the course structure is deliberated upon by the faculty members who then prepare the course curriculum and subject content accordingly. This is then collectively discussed and ratified by all the faculty members before further deliberations are held in the board of studies. Upon arrival of consensus in the board of studies, the same is put forward for ratification by the academic council and adopted as curriculum.

The entire process is a very intellectually enriching experience for all the faculty members, whose collective effort leads to the development of a well-drafted curriculum with clearly defined COs and POs.
The same is very clearly explained to the students in each course by the respective faculty members.

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upload COs for all courses (exemplars from Glossary)</td>
<td>View Document</td>
</tr>
<tr>
<td>Any additional information</td>
<td>View Document</td>
</tr>
<tr>
<td>Link for Additional Information</td>
<td>View Document</td>
</tr>
</tbody>
</table>

### 2.6.2 Attainment of programme outcomes and course outcomes are evaluated by the institution.

**Response:**

MVGR has a clearly defined approach for assessment and evaluation of program and course outcomes. MVGR has been accredited by NBA for all its eligible programs and as such, has a well-drafted policy for evaluation of assessment of POs and COs. The PO assessment for the courses in the curriculum is calculated through two methods: Direct method and Indirect method. Several rubrics such as course outcome assessment, exit feedback, alumni feedback, employers’ feedback and parents’ feedback are taken and evaluated. In direct method, each course outcomes of every course are mapped with relevant POs. The mapping is done on three levels of correlation.

In the Indirect Method, assessment is carried out through feedback from stakeholders in the form of student exit feedback, alumni feedback, parents feedback and employer feedback. The feedback is taken from students at the time of graduation. Alumni Feedback is taken from students who have already graduated from the department. This feedback is taken during Alumni Meet and whenever alumni visit the department. Parent feedback consists of generic questions and also questions related to POs and PSOs to gauge the department is general as well as academic matters. This feedback is taken during the parents’ meet and whenever parents visit the department. Employer feedback form consists of questions related to attainment of POs and PSOs based on the performance of students recruited and working in their organization. Employer feedback form is mailed to the organizations that have recruited students during placement drives held every year. The overall assessment is a weighted average of all these elements.

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
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<tr>
<td>Any additional information</td>
<td>View Document</td>
</tr>
<tr>
<td>Link for Additional Information</td>
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</tr>
</tbody>
</table>

### 2.6.3 Pass Percentage of students(Data for the latest completed academic year)

**Response:** 85.74

2.6.3.1 **Total number of final year students who passed the examination conducted by Institution.**
2.6.3.2 **Total number of final year students who appeared for the examination conducted by the Institution.**

Response: 1115

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upload List of Programmes and number of students passed and appeared in the final year examination (Data Template)</td>
<td>View Document</td>
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<tr>
<td>Any additional information</td>
<td>View Document</td>
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</tbody>
</table>

**2.7 Student Satisfaction Survey**

2.7.1 **Online student satisfaction survey regarding teaching learning process**

Response:

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upload database of all currently enrolled students</td>
<td>View Document</td>
</tr>
<tr>
<td>Upload any additional information</td>
<td>View Document</td>
</tr>
<tr>
<td>Link for any additional information</td>
<td>View Document</td>
</tr>
</tbody>
</table>
Criterion 3 - Research, Innovations and Extension

3.1 Promotion of Research and Facilities

3.1.1 The institution Research facilities are frequently updated and there is well defined policy for promotion of research which is uploaded on the institutional website and implemented

Response:

MVGR has a very well drafted research policy with milestones and metrics to assess progress. The following are the objectives of the institution in the arena of research and development:

1. To create an environment that fosters a culture of innovation and research leading to development of processes, tools, products or services
2. To enthuse faculty to pursue and complete their PhD thereby enhancing the total number of doctorates in the institution
3. To motivate faculty to carry out quality research leading to publication in reputed journals
4. To motivate faculty and staff to continue learning further through live/on-line courses/skill training programs and thereby significantly enhance their capabilities and exposure
5. To motivate faculty to actively guide scholars towards their PhD work
6. To motivate faculty to build strong industry-institute partnerships
7. To motivate faculty to become a sought-after resource in the country

The following outcomes are envisaged:

1. Actively implementing at least 5 extra-mural, individual-centric funded projects every year
2. Establishment of at least 5 centres of research through facilities established as a result of extra-mural funding
3. Development of at least 5 products/processes/services/tools as a result of facilities created through extra-mural funding
4. Award of at least 2 patents preferably at the international level
5. Ensuring that at least 50% of the publications made by faculty are in reputed international journals with valid Thomson Reuters impact factor and all publications are at least in journals listed in the journal citation report
6. Ensuring that at least 20% of the faculty (around 50 faculty members) are actively guiding scholars (internal or external) towards their PhD
7. Ensuring that at least 20% of the faculty (around 50 faculty members) build strong networking with industry as demonstrated through joint projects/case studies/consultancy etc.
8. Ensuring that at least 10% (around 25 faculty members) of the faculty build strong connectivity leading to their being invited as resource persons
3.1.2 The institution provides seed money to its teachers for research (average per year, INR in Lakhs)

Response: 374400

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount (INR in lakhs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-20</td>
<td>0</td>
</tr>
<tr>
<td>2018-19</td>
<td>0</td>
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<td>2017-18</td>
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<td>2016-17</td>
<td>1872000</td>
</tr>
<tr>
<td>2015-16</td>
<td>0</td>
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</tbody>
</table>

3.1.3 Percentage of teachers awarded national / international fellowship for advanced studies/research during the last five years

Response: 6.87

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-20</td>
<td>14</td>
</tr>
<tr>
<td>2018-19</td>
<td>21</td>
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<tr>
<td>2017-18</td>
<td>20</td>
</tr>
<tr>
<td>2016-17</td>
<td>11</td>
</tr>
<tr>
<td>2015-16</td>
<td>19</td>
</tr>
</tbody>
</table>
3.2 Resource Mobilization for Research

3.2.1 Grants received from Government and non-governmental agencies for research projects, endowments, Chairs in the institution during the last five years (INR in Lakhs)

Response: 37498550

3.2.1.1 Total Grants from Government and non-governmental agencies for research projects, endowments, Chairs in the institution during the last five years (INR in Lakhs)

|----------------|---------|---------|---------|---------|---------|
| 3.2.2 Percentage of teachers having research projects during the last five years

Response: 1.86

3.2.2.1 Number of teachers having research projects during the last five years

<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td>Number</td>
<td>6</td>
<td>8</td>
<td>4</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>
3.2.3 Percentage of teachers recognised as research guides

**Response:** 10.46

3.2.3.1 Number of teachers recognized as research guides

Response: 25

3.2.4 Average percentage of departments having Research projects funded by government and non-government agencies during the last five years

**Response:** 35

3.2.4.1 Number of departments having Research projects funded by government and non-government agencies during the last five years

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<tr>
<td></td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>0</td>
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</table>

3.2.4.2 Number of departments offering academic programmes

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<tr>
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<tbody>
<tr>
<td></td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>
3.3 Innovation Ecosystem

3.3.1 Institution has created an eco system for innovations, creation and transfer of knowledge supported by dedicated centers for research, entrepreneurship, community orientation, Incubation etc.

Response:

MVGR is actively promoting innovation among faculty and students. Especially given the need of the economy in difficult times such as that created by the COVID-19 pandemic, establishing successful entrepreneurs and entrepreneurial ventures is the need of the hour. Recognising this, MVGR is actively supporting students in coming up with innovative products and services that especially address the societal needs. Till data, MVGR has supported 13 student innovation startup ideas with seed funding received from an alumnus of MVGR. In addition, MVGR also actively supports financially student innovation projects that are mentored by faculty members across departments. Several innovative products have been developed encompassing cutting edge technologies such as embedded systems, IoT etc. MVGR has also earmarked close to 700 square feet of built-up area for student innovation activities. The various research laboratories established in the individual departments actively support these student innovation efforts. In addition, MVGR has also organised motivational lectures by successful entrepreneurs.

3.3.2 Number of workshops/seminars conducted on Research methodology, Intellectual Property Rights (IPR), entrepreneurship, skill development during the last five years.

Response: 110

3.3.2.1 Total number of workshops/seminars conducted on Research methodology, Intellectual Property Rights (IPR), entrepreneurship, skill development year-wise during the last five years.

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<tr>
<td></td>
<td>16</td>
<td>19</td>
<td>31</td>
<td>20</td>
<td>24</td>
</tr>
</tbody>
</table>
### 3.4 Research Publications and Awards

#### 3.4.1 The Institution ensures implementation of its stated Code of Ethics for research through the following:
1. Inclusion of research ethics in the research methodology course work
2. Presence of Ethics committee
3. Plagiarism check through software
4. Research Advisory Committee

**Response:** B. 3 of the above

#### 3.4.2 Number of Ph.D’s registered per teacher (as per the data given w.r.t. recognized Ph.D guides/supervisors provided at 3.2.3 metric) during the last five years

**Response:** 1.4

- 3.4.2.1 How many Ph.Ds are registered within last 5 years
  Response: 275

- 3.4.2.2 Number of teachers recognized as guides during the last five years
  Response: 196

#### 3.4.3 Number of research papers per teachers in the Journals notified on UGC website during the last five years

**Response:** 2.73
3.4.3.1 Number of research papers in the Journals notified on UGC website during the last five years

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<tbody>
<tr>
<td></td>
<td>172</td>
<td>135</td>
<td>129</td>
<td>109</td>
<td>132</td>
</tr>
</tbody>
</table>

3.4.4 Number of books and chapters in edited volumes / books published per teacher during the last five years

Response: 0.98

3.4.4.1 Total number of books and chapters in edited volumes/books published and papers in national/ international conference proceedings year-wise during last five years

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<tr>
<td></td>
<td>26</td>
<td>67</td>
<td>51</td>
<td>54</td>
<td>44</td>
</tr>
</tbody>
</table>

3.4.5 Bibliometrics of the publications during the last five years based on average citation index in Scopus/ Web of Science or PubMed

Response:

Bibliometrics of the publications during the last five years

3.4.6 Bibliometrics of the publications during the last five years based on Scopus/ Web of Science - h-
3.5 Consultancy

3.5.1 Revenue generated from consultancy and corporate training during the last five years (INR in Lakhs).

Response: 40.55

3.5.1.1 Total amount generated from consultancy and corporate training year-wise during the last five years (INR in lakhs).

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<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
<th>2018-19</th>
<th>2017-18</th>
<th>2016-17</th>
<th>2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>3.89</td>
<td>4.51</td>
<td>6.85</td>
<td>22.05</td>
<td>3.25</td>
</tr>
</tbody>
</table>

3.5.2 Total amount spent on developing facilities, training teachers and staff for undertaking consultancy during the last five years (INR in Lakhs).

Response: 150.69

3.5.2.1 Total amount spent on developing facilities, training teachers and staff for undertaking consultancy during the last five years (INR in Lakhs)

<table>
<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
<th>2018-19</th>
<th>2017-18</th>
<th>2016-17</th>
<th>2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td>16.11</td>
<td>18.95</td>
<td>33.97</td>
<td>36.07</td>
<td>45.59</td>
</tr>
</tbody>
</table>
3.6 Extension Activities

3.6.1 Extension activities are carried out in the neighbourhood community, sensitising students to social issues, for their holistic development, and impact thereof during the last five years

Response:

Extension activities are carried out by the NSS wing of MVGR. As part of the extension activities, MVGR has adopted 5 villages in the region and all the outreach activities are carried out in coordination and for the welfare of the residents of these villages. The adopted villages are Chintalavalasa, Boddavalasa, Pedada, Chittigunkalam, Venkampeta & Akulapeta. The NSS team consists of faculty members and student volunteers who plan and undertake the NSS activities. The activities for the year are planned in advance and a calendar of events is prepared. Through these activities, students are sensitised to the issues and problems faced by society. Students also get an opportunity to think deeply about social issues and technological interventions that can be taken up for holistic development of these adopted villages. As part of the NSS activities, blood donation camps, planting of saplings and development of water harvesting pits/repair of check dams is carried out. Swach Bharat activities, awareness program on drug abuse and legal awareness activities are also carried out.

In addition to the NSS activities, the students have also formed two major groups namely FYFP and Swecha, under the umbrella of NSS. FYFP has supported basic stationary to needy school children near the college by distributing complete annual aid to 9 interior schools in Vizianagaram. A total 390 students were benefitted from these schools with this project. Every year team FYFP along with 50 volunteers carry out this project in the month of July. The FYFP team also provides social awareness, life skills and teaches ethnic and moral values to the downtrodden children in the primary schools. Every Sunday, team FYFP along with 5 -6 volunteers go to government schools nearby where school children are gathered and taught basic English, moral stories, logical reasoning questions and also conduct various competitions like sports, drawing, essay writing etc.

Under the aegis of NSS, MVGR has also another student group named Swecha MVGR. Following the line of Swecha’s Motto - ‘Technology for Society’, Swecha MVGR has done a lot of innovations and projects for the nearby rural places on behalf of MVGR. Some of the initiatives are:
• BalaSwecha: Weekend school visits and empowering digital teaching learning practises at nearby rural places.

• Low Cost CPU: A low cost, open source hardware CPU computer design for under privileged schools.

• Freedom Box: A low cost wifi network for MVGR

• MVGR MOODLE: A Learning Management System for MVGR Virtual Teaching – Learning

• An IoT based Smart GLUG Office at MVGR: A Mobile app to operate/ control and monitor the infrastructure at office room using IoT.

• A few Technical trainings/ workshops, summer camps and consultancy projects for groups working for social causes

MVGR is also part of 168 institutions in the state actively supporting 5 adopted villages under the Unnat Bharat Abhiyan scheme of the Govt. of India. Several activities have been undertaken as part of this effort.

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<td>Paste link for additional information</td>
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</tbody>
</table>

3.6.2 Number of awards and recognition received by the Institution, its teachers and students for extension activities from Government / Government recognised bodies during last five years

Response: 458

3.6.2.1 Total number of awards and recognition received for extension activities from Government/ Government recognised bodies year-wise during the last five years.

<table>
<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
<th>2018-19</th>
<th>2017-18</th>
<th>2016-17</th>
<th>2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awards</td>
<td>92</td>
<td>114</td>
<td>114</td>
<td>70</td>
<td>68</td>
</tr>
</tbody>
</table>

3.6.3 Number of extension and outreach programs conducted by the institution through NSS/NCC/Red cross/YRC etc., during the last five years ( including Government initiated programs)
such as Swachh Bharat, Aids Awareness, Gender Issue, etc. and those organised in collaboration with industry, community and NGOs)

Response: 172

3.6.3.1 Number of extension and outreach Programs conducted in collaboration with industry, community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., year-wise during the last five years

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>49</td>
<td>30</td>
<td>29</td>
<td>26</td>
<td>38</td>
</tr>
</tbody>
</table>

3.6.4 Average percentage of students participating in extension activities listed at 3.6.3 above during the last five years

Response: 80.03

3.6.4.1 Total number of students participating in extension activities listed at 3.6.3 above year-wise during the last five years.

<table>
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<tbody>
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<td></td>
<td>5995</td>
<td>2618</td>
<td>1820</td>
<td>2075</td>
<td>3947</td>
</tr>
</tbody>
</table>

3.7 Collaboration
3.7.1 Number of Collaborative activities per year for research/ faculty exchange/ student exchange/ internship/ on –the-job training/ project work

Response: 334.8

3.7.1.1 Total number of Collaborative activities per year for research/ faculty exchange/ student exchange/ internship/ on –the-job training/ project work

<table>
<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
<th>2018-19</th>
<th>2017-18</th>
<th>2016-17</th>
<th>2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>348</td>
<td>421</td>
<td>298</td>
<td>297</td>
<td>310</td>
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</table>

File Description

<table>
<thead>
<tr>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Number of Collaborative activities for research, faculty etc</td>
<td>View Document</td>
</tr>
<tr>
<td>Copies of collaboration</td>
<td>View Document</td>
</tr>
</tbody>
</table>

3.7.2 Number of functional MoUs with institutions of national, international importance, other institutions, industries, corporate houses etc. during the last five years (only functional MoUs with ongoing activities to be considered)

Response: 51

3.7.2.1 Number of functional MoUs with institutions of national, international importance, other Institutions, industries, corporate houses etc. year wise during last five years

<table>
<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
<th>2018-19</th>
<th>2017-18</th>
<th>2016-17</th>
<th>2015-16</th>
</tr>
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<tbody>
<tr>
<td></td>
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</table>

File Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>e-copies of the MoUs with institution/ industry/ corporate house</td>
<td>View Document</td>
</tr>
<tr>
<td>Details of functional MoUs with institutions of national, international importance, other Institutions etc during the last five years</td>
<td>View Document</td>
</tr>
</tbody>
</table>
Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

4.1.1 The Institution has adequate infrastructure and physical facilities for teaching-learning, viz., classrooms, laboratories, computing equipment etc.

Response:

MVGR College of Engineering is located in lush green, serene and pollution free environment spread over 60 acres of land in Chintalavalasa village situated in the outskirts of Vizianagaram, a fort city in the north coastal region of Andhra Pradesh. It has excellent infrastructural facilities and caters to the needs of all stakeholders. The following is the summary of infrastructural facilities:

1. Number of classrooms: 73 (Seating capacity of 75-80)

   All classrooms are equipped with adequate lighting and good ventilation, Multimedia Projector, Wi-Fi, Fan & Lights.

1. Number of Seminar Halls: 09 (Seating capacity of 160 to 250)

   Seminar Halls are equipped with LCD Projector with white board facility, Wi-Fi, Audio and Video facilities.

1. Number of Drawing Halls: 04 (Total seating capacity up to 220)

   Drawing halls are equipped with Drawing tables, Chairs, Fans, Light with good ventilation and ambience.

1. Number of Laboratories: 96 (Seating capacity ranges from 30 to 80)

   All Laboratories are equipped with state of the art facilities with periodic maintenances like system maintenance, antivirus updations, software updations, calibration and servicing. Each lab is provided with necessary display boards and adequate safety measures.

   1. In addition to regular curriculum labs, the college established more than 17 labs and COEs in collaboration with industry for skill upgradation in advanced technologies in the last five years.

Department of Electrical Engineering

   1. Home Lab
   2. PLC Lab

Department of Mechanical Engineering

   1. 2 & 4 wheeler Lab
   2. Refrigeration & Air conditioning Lab
   3. Solid edge Lab
   4. CNC Lab
5. Welding Lab
6. Agro and Farm Equipment Lab

**Department of Electronics and Communication Engineering**

1. Home Lab
2. Office Lab
3. NI Lab view
4. Embedded Systems

**Department of Computer Science and Engineering**

1. Networking Lab
2. Programmable Infrastructure
3. Cyber security
4. Operating Systems & Information Technology
5. Programming

**1. Library:**

MVGR Library is fitted with 'Smart Library' technology and therefore able to be opened to library users without being staffed. The technology enables remote control of library buildings, including automatic doors, lighting, self-service kiosks. It uses RFID (Radio Frequency Identifiers) technology like RFID ID cards, Books tagged with RFID tags, Book drop box and Self issue kiosk. Further, all departments are having department library for ready reference.

**1. Computing equipment:**

The entire campus is facilitated with Wi-Fi connectivity. Total numbers of computers in the campus are 1485 desktops. All computers are connected to campus LAN with optical fibre backbone.

**1. Learning Recourses**

2. ASCE E-Journals (CIVIL) 35
3. ASME E-Journals (MECH) 33
5. IEEE ASPP + POP Combo Package 169
6. ASTM Digital Library 38
8. Jgate
9. DELNET
10. Btechguru
11. LocalGuru (Institutional Repository)
12. Ezproxy (remote login)

**1. Backup** : 375 KVA
**2. SOLAR Power** : 400KW
3. Hostel accommodation: 700 boys; 350 girls
4. Sports facilities: 8 acres; Gym, Turf wicket of Cricket and Basket Ball etc.

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</table>

4.1.2 The institution has adequate facilities for cultural activities, yoga, games (indoor, outdoor) and sports. (gymnasium, yoga centre, auditorium, etc.)

Response:

MVGR College of Engineering strives for its students’ holistic development by providing dedicated infrastructure required to fulfill the academic quotient and the need to organize multiple sports and cultural events, the college provides the entire necessary infrastructure for the same in terms of Auditoriums, Recording Digital Studio, Digital Display Board, Gymnasiums, Music Hall, Yoga and Meditation Hall, Basket Ball Court, Foot Ball Court etc.

Auditorium:

The College has majestic fully air-conditioned auditoriums of 187 Sq. m. to host large gatherings for cultural as well as academic events. It has a TV studio with seating capacity of 100 persons and well equipped with latest and modern gadgets with wooden paneling on the walls and is sound proof and acoustic treated.

Seminar Halls:

One major Seminar Hall of 199 sq. m. with approximate seating capacity of 300 persons is fully air conditioned and well maintained with modern amenities to host large gatherings for seminars, national and international conferences and cultural events. Besides, all the 8 departments are provided with one seminar hall each of 167 sq. m. with around 200 seating capacity.

Conference Halls:

Fully equipped Conference Halls (fully air conditioned) are available for conducting Faculty Meetings and Student Body Activities in the campus.

Open Air Auditorium:

Very spacious Open Air Auditorium of 5065 sq. m. of area that can accommodate 5000 students is provided in the heart of the campus for the purpose of open gatherings, fests, and annual celebrations.

Cricket Ground of National Standards:
The college has developed in association with Andhra Cricket Association sprawling 15437 sq. m. Cricket Ground of National Standards with turf pitch to encourage upcoming cricketers from the college.

**Basketball Court:**

The college has fully developed Basket Ball court of 892 Sq. M. The students take the pride of the basketball court for their winning trophies to the college.

**Gymnasiums:**

The college has provided the students the gym of national standards in three different location of the campus. They are at Sports Complex Gym in 64 sq. m., Boys Hostel Gym in 139 sq. m. and Girls Hostel Gym in 76 sq.m. The Gym equipment available is Thread Mill, Flat Press Bench, Incline Press Bench, Seated leg extension, Dumbles 2.25Kgs – 20 Kgs, Olympic Bars, Rubber Weight Plates etc.,

**Music Room:**

The college has created an ambience for students to conduct various cultural and literary events as well to practice music both vocal and instrumental by providing the music equipment to the cost of 5 lakhs and a dedicated practice hall of 76 sq. m. size.

**Meditation Hall:**

To keep students both mentally and physically fit, it is felt the need of yoga and meditation. So it has provided exclusive hall of 76 sq. m. for regular practice of Yoga and Meditation. Students are being given yoga and meditation sessions under certified trainers.

All the facilities are available to students since inception. But upgradation of the equipment and refurbishment of the halls are made time to time as per the need of the students.

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</table>

4.1.3 Percentage of classrooms and seminar halls with ICT-enabled facilities such as smart class, LMS, etc. *(Data for the latest completed academic year)*

**Response:** 100

4.1.3.1 Number of classrooms and seminar halls with ICT facilities
4.1.4 Average percentage of expenditure for infrastructure augmentation excluding salary during the last five years (INR in Lakhs)

Response: 32.6

4.1.4.1 Expenditure for infrastructure augmentation, excluding salary year-wise during last five years (INR in lakhs)

<table>
<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
<th>2018-19</th>
<th>2017-18</th>
<th>2016-17</th>
<th>2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>expenses</td>
<td>37616752</td>
<td>26354684</td>
<td>18871085</td>
<td>22292061</td>
<td>20337419</td>
</tr>
</tbody>
</table>

4.2 Library as a Learning Resource

4.2.1 Library is automated using Integrated Library Management System (ILMS)

Response:

MVGR College of Engineering having good facilities meeting the expectations of the academicians in the learning environment. The institution is having a good library which caters the needs of the faculty, students and staff in providing the required learning resources at the right time. The college library consists of a central library together with twelve departmental libraries which collectively support the teaching, research and extension programs of the institution. The library occupies 48000 Sft of area with 400 seating capacity accommodated in two floors of Periodical section, Reading Hall, Digital Library, Auditorium, Technical section, Loan book section, Reference section with fully air conditioned.

The central library is fully automated in the year 2005 with SOUL (Software for University Libraries)
software developed by INFLIBNET, India and later migrated to Koha (open source software) in the year 2019. The library is fully integrated with RFID (Radio Frequency Identification) Technology where user can enter, search catalogue, borrow and return books can be done on his own.

**Koha:** Koha is fully featured ILMS software for Libraries of varying types and sizes, volunteers and support companies worldwide. MVGR library is fully automated using the Koha software by using the following modules for regular activities.

**Software Modules**

- **Circulation**
- **Cataloguing**
- **Acquisitions**
- **Serials**
- **OPAC (Online Public Access Catalogue)**
- **WebOPAC (Web Online Public Access Catalogue)**

Circulation: Circulation Module comprises of patron data and books data for transitions. All the activities in the circulation module are integrated with RFID technology like RFID Id card, RFID tags for books.

**Cataloguing**

Cataloguing of books is done through Koha software, data input is entered using MARC format, fixing of RFID label and other processing works is done in the technical section.

**Acquisition**

Acquisition of books is processed through koha software by entering the required data like budget, approvals, processing of invoices and other related to acquisition is done at technical section.

**Periodical Section:** The Periodical section in the central library is well designed to sit for longer hours to refer the Journals, Magazines and Newspapers. Computer OPAC system is placed to search the catalogue of periodicals at the entrance of the section.

**Serials (Periodicals)**

Serials or Periodicals processing are done through the Koha software. Subscriptions, renewals, missing issues, communication with vendors etc. are done at the technical section and periodical section.

**OPAC (Online Public Access Catalogue)**

Users after entering into the library, they can check the status of the materials available in the library through the OPAC module. Computer systems are placed near the entrance of the library for checking the
status of the books and the user accounts on their own.

**WebOPAC**

Users can search the library material status and user accounts through WebOPAC module available in the Koha software. The link is provided in the college website where user can directly login into the page and search the availability status.

For proper organization of the library material, library has purchased ILMS, ‘KOHA’ Library Software. Software is upgraded from time to time against the regular Annual Maintenance Contract.

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<tbody>
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<tr>
<td>Paste Link for additional information</td>
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</tbody>
</table>

### 4.2.2 Institution has access to the following:

1. e-journals
2. e-ShodhSindhu
3. Shodhganga Membership
4. e-books
5. Databases
6. Remote access to e-resources

**Response:** A. Any 4 or more of the above

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<th>File Description</th>
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<tbody>
<tr>
<td>Upload any additional information</td>
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</tr>
<tr>
<td>Institutional data in prescribed format</td>
<td>View Document</td>
</tr>
<tr>
<td>Details of subscriptions like e-journals, e-books, e-ShodhSindhu, Shodhganga Membership etc</td>
<td>View Document</td>
</tr>
</tbody>
</table>

### 4.2.3 Average annual expenditure for purchase of books/ e-books and subscription to journals/e-journals during the last five years (INR in Lakhs)

**Response:** 44.28

<table>
<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
<th>2018-19</th>
<th>2017-18</th>
<th>2016-17</th>
<th>2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure</td>
<td>31.25194</td>
<td>50.13143</td>
<td>51.65438</td>
<td>45.71600</td>
<td>42.63794</td>
</tr>
</tbody>
</table>
4.2.4 Percentage per day usage of library by teachers and students (foot falls and login data for online access) during the last completed academic year

Response: 8.11

4.2.4.1 Number of teachers and students using library per day over last one year

Response: 348

4.3 IT Infrastructure

4.3.1 Institution has an IT policy covering wi-fi, cyber security, etc., and allocated budget for updating its IT facilities

Response:

Purpose: To outline the broad framework of IT infrastructure that needs to be made available for students and employees of the institution for effective realization of the objectives of the institution while also ensuring sufficient controls and safeguards to prevent misuse and inappropriate usage.

Policy:

- Usage of unlicensed software prohibited.
- Institution encourages and actively enforces usage on Open Source/Free License software where available.
- Wireless internet access in hostels disables during 9:00 AM to 4:00 PM (College Hours) to discourage students from skipping classes.
- Bandwidth limitations enforced on certain application protocols to reduce bandwidth clogging.
- Some sites with non-desirable content blocked at firewall level.
- Digital library access (115 desktops) available to students at all time from 9:00 AM to 7:00 PM in library building.
- Outside access to college domain blocked at firewall level.
- Setup in place to have entire institution internet bandwidth available through wireless in hostels.
after hours.
- Bandwidth sufficiency is continuously tracked through daily reporting on level of utilization and information thereof used to plan requirements each subsequent year.
- Campus wide licensing & distribution mechanism for anti-virus software.
- Finger-print based attendance for Staff and Students.

**Broad IT Infrastructure available for the benefit of students:**
- Internet bandwidth available 255 Mbps (wired) + 155 Mbps (wireless)
- More than 1000+ desktops available in Labs, Digital Library, Staff Rooms and so on.
- ERP Software that is used as a Management Information System for attendance tracking, attendance alerts, fee tracking among other services.
- Firewall at the entry point to enforce security policies in terms of internet access.
- Campus part of Microsoft Academic Allianz service that is renewable each year allowing us campus wide access to MS Office, OS License Upgrades, Microsoft Teams and their cloud services.

**Objectives:** We should always stay on top of the curve in terms of modern state of the art IT infrastructure for the benefit of our students and staff alike.

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<th>File Description</th>
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<td>Paste link for additional information</td>
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</tbody>
</table>

**4.3.2 Student - Computer ratio (Data for the latest completed academic year)**

**Response:** 3:1

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<tbody>
<tr>
<td>Upload any additional information</td>
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</tr>
<tr>
<td>Student - computer ratio</td>
<td>View Document</td>
</tr>
</tbody>
</table>

**4.3.3 Bandwidth of internet connection in the Institution.**

**Response:** 250 MBPS

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<thead>
<tr>
<th>File Description</th>
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<tbody>
<tr>
<td>Upload any additional information</td>
<td>View Document</td>
</tr>
<tr>
<td>Details of available bandwidth of internet connection in the Institution</td>
<td>View Document</td>
</tr>
</tbody>
</table>
4.3.4 Institution has the following Facilities for e-content development

1. Media centre
2. Audio visual centre
3. Lecture Capturing System (LCS)
4. Mixing equipments and softwares for editing

Response: A. All of the above

4.4 Maintenance of Campus Infrastructure

4.4.1 Average percentage expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component during the last five years

Response: 67.4

4.4.1.1 Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component year wise during the last five years (INR in lakhs)

<table>
<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
<th>2018-19</th>
<th>2017-18</th>
<th>2016-17</th>
<th>2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td>41250470</td>
<td>64810031</td>
<td>52421454</td>
<td>53004123</td>
<td>46779215</td>
</tr>
</tbody>
</table>

4.4.2 There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc.

Response:
There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc

**Maintenance of Physical Facilities**

The physical facilities are maintained by the Central Maintenance team, which comprises Dean (Admin), Dean (Civil Infrastructure), System administrator, Supervisor (Civil works), Supervisor (Electrical works) and Technicians. The services of plumbers, electricians, and computer analysts are available in the campus. The team is responsible for the uninterrupted power supply and maintenance of equipment like generator sets, general lighting, power distribution system, solar panels etc. Maintenance of water plumbing plants, sewage and drainage is undertaken by support staff.

**Maintenance of Classrooms, Furniture and Laboratories**

Classrooms with furniture, teaching aids and laboratories are maintained by the respective department staff and attendants and supervised by the respective Head of the Department. The laboratory assistants take care of their respective laboratories.

**Maintenance and Utilisation of Library and Library Resources**

The library staff is clearly instructed in the care and handling of library documents, particularly during processing, shelving and conveyance of documents. The following steps need to be taken:

- Bound volumes are not to be sorted out from their fore edges, as this process weakens the binding.
- Shelves should not be fully packed. A too-full shelf can crack spines and cause damage when a reader tries to remove a volume.

**Maintenance and Utilisation of Seminar Halls and Auditoria**

Seminar halls and auditoria are under the purview of the civil engineer and electrical engineer and the cleanliness is taken care of by the housekeeping team. Effective utilisation of seminar halls and auditoria for organising academic meetings, seminars, conferences and cultural events is made. For accessing the facilities, the organising faculty/staff member submits a form available with Manager, through HOD and Dean and the date of event is registered and the halls are accessed on priority basis.

**Maintenance of ICT Facilities**

In Campus, E – services team comprising of System administrators, networking administrator and technical staff to maintain the ICT facilities including computers and servers. The annual maintenance includes the required software installation, antivirus and upgrade. To minimise e-waste, electronic gadgets like projectors, computers, printers, photocopiers are serviced and reused. Campus Wi-Fi is maintained by respective centre.

**Maintenance of Lab Equipment**

The respective faculty members, staff, lab assistants and other service personnel are given responsibility to
maintain the equipment’s under their purview. Stock registers, asset registers, log books, tools and plant
registers are maintained by the respective laboratories to report entries and defects arising for rectification.
All major repairs are identified and external expertise sought for maintenance of equipment wherever
necessary with the permission of the Head of the Institution.

Standard operating procedures for all high end equipments are made available to the users. In-campus users
register in the log books and are responsible for the safe handling of the equipments. Breakage and repair if
any, are reported to the Head of Department or the faculty-in- charge as the case may be and suitable
measures are taken for speedy functioning of the equipment.

The condemned/obsolete items are discarded by procedure after getting the report of the IMF and the same
is entered in the stock register. Annual maintenance contract (AMC) is sustained for maintenance of high
end equipments and high end servers and computers

**Maintenance and Utilisation of Advanced Research Lab and the Central Computing Lab**

Advanced research labs housing sophisticated equipments operate for the benefit of the research scholars.
They are maintained by a faculty-in-charge who reports to the corresponding Dean/HOD on all matters
related to the working and maintenance and in-campus service and outsourcing of the equipments. Entry to
the labs is through log book registration. Users must duly submit a service requisition form to the
concerned HOD.

5. **Maintenance of Sports and Games Facility**

The sports equipments, fitness equipments, ground and various courts are supervised and maintained by
the Physical Directress and Faculty members of Physical Education Department respectively. Expensive
equipments in the Gymnasium are maintained through Annual Maintenance Contract. Ground level
maintenance is done annually during vacation in addition to the seasonal maintenance done in once in
every three months. Grounds men, vendors of Sports goods and students of Physical Education jointly
maintain the sports equipments.

**Maintenance of Campus Cleanliness**

Cleaning of the campus areas including the academic and administrative buildings is performed
daily in the morning before the regular classes begin with the help of the outsourced housekeeping team.
Toilets are cleaned thrice every day. The whole campus area is maintained by the housekeeping supervisor
who will be reporting the completion

of work to the Deam (Admin).

**Maintenance of other amenities**

The effluent treatment plants and rain water harvesting systems are maintained by the Dean (Civil
Infrastructure) and support staff. The maintenance of equipment for water pumping plants, sewage,
elevators are undertaken as per their preventive maintenance schedules and guidelines by the equipment
supplier.

**Annual Stock Checking**
Annual stock checking of furniture, lab equipment, stationery, ICT facilities, sports items and all assets and reporting of repairs is done by designated faculty as a year ending activity and the consolidated report is submitted to the administration to take up necessary actions if required.

**Replacement of Equipment/ Electronics /Computers**

The maintenance comprises actions that are carried out to replace worn out assets. To avoid e – waste the outdated electronics /computers are put on buy back as per norms and new items are procured.

**Day to Day Emergency Maintenance**

Day to day maintenance includes daily running repairs, like replacing light bulbs, repairing water leakages - leaking water pipes, taps, valves and cisterns, cleaning blocked drains, repairing locks and door handles and other minor repairs that necessitate day to day maintenance checks are taken care of by the Engineer and his team members.

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</table>
### Criterion 5 - Student Support and Progression

#### 5.1 Student Support

<table>
<thead>
<tr>
<th>5.1.1 Average percentage of students benefited by scholarships and freeships provided by the Government during last five years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Response:</strong> 50.46</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5.1.1.1 Number of students benefited by scholarships and freeships provided by the Government year-wise during last five years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2019-20</strong></td>
</tr>
<tr>
<td>2234</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>File Description</th>
<th>Document</th>
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</thead>
<tbody>
<tr>
<td>upload self attested letter with the list of students sanctioned scholarships</td>
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<tr>
<td>Upload any additional information</td>
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</tr>
<tr>
<td>Institutional data in prescribed format</td>
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</tr>
<tr>
<td>Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years</td>
<td>View Document</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>5.1.2 Average percentage of students benefited by scholarships, freeships, etc. provided by the institution and non-government agencies during the last five years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Response:</strong> 1.25</td>
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</table>

<table>
<thead>
<tr>
<th>5.1.2.1 Total number of students benefited by scholarships, freeships, etc provided by the institution / non-government agencies year-wise during last five years</th>
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<tr>
<td><strong>2019-20</strong></td>
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<tr>
<td>0</td>
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</table>
5.1.3 Following Capacity development and skills enhancement activities are organised for improving students capability 1. Soft skills 2. Language and communication skills 3. Life skills (Yoga, physical fitness, health and hygiene) 4. Awareness of trends in technology

Response: A. All of the above

5.1.4 Average percentage of students benefited by career counseling and guidance for competitive examinations offered by the Institution during the last five years.

Response: 100

5.1.4.1 Number of students benefitted by guidance for competitive examinations and career counselling offered by the institution year wise during last five years

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<tbody>
<tr>
<td></td>
<td>4051</td>
<td>4138</td>
<td>4143</td>
<td>4175</td>
<td>4144</td>
</tr>
</tbody>
</table>
2. Organisation wide awareness and undertakings on policies with zero tolerance
3. Mechanisms for submission of online/offline students’ grievances
4. Timely redressal of the grievances through appropriate committees

Response: A. All of the above

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<tbody>
<tr>
<td>Upload any additional information</td>
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</tr>
<tr>
<td>Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee</td>
<td>View Document</td>
</tr>
<tr>
<td>Details of student grievances including sexual harassment and ragging cases</td>
<td>View Document</td>
</tr>
</tbody>
</table>

5.2 Student Progression

5.2.1 Average percentage of placement of outgoing students during the last five years

Response: 41.7

5.2.1.1 Number of outgoing students placed year-wise during the last five years.

<table>
<thead>
<tr>
<th>Year</th>
<th>2016-17</th>
<th>2017-18</th>
<th>2018-19</th>
<th>2019-20</th>
<th>2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>439</td>
<td>551</td>
<td>675</td>
<td>546</td>
<td></td>
<td>508</td>
</tr>
</tbody>
</table>

<table>
<thead>
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<th>File Description</th>
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<tbody>
<tr>
<td>Upload any additional information</td>
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</tr>
<tr>
<td>Self attested list of students placed</td>
<td>View Document</td>
</tr>
<tr>
<td>Details of student placement during the last five years</td>
<td>View Document</td>
</tr>
</tbody>
</table>

5.2.2 Percentage of student progression to higher education (previous graduating batch).

Response: 2.29

5.2.2.1 Number of outgoing student progressing to higher education.

Response: 25
5.2.3 Average percentage of students qualifying in state/national/ international level examinations during the last five years (eg: IIT-JAM/CLAT/NET/SLET/GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/State government examinations, etc.)

Response: 100

5.2.3.1 Number of students qualifying in state/ national/ international level examinations (eg: IIT/JAM/ NET/ SLET/ GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/ State government examinations, etc.) year-wise during last five years

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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students qualifying</td>
<td>35</td>
<td>87</td>
<td>54</td>
<td>66</td>
<td>48</td>
</tr>
</tbody>
</table>

5.2.3.2 Number of students appearing in state/ national/ international level examinations (eg: IIT/JAM/ NET / SLET/ GATE/ GMAT/CAT,GRE/ TOEFL/ Civil Services/ State government examinations) year-wise during last five years

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students appearing</td>
<td>35</td>
<td>87</td>
<td>54</td>
<td>66</td>
<td>48</td>
</tr>
</tbody>
</table>

5.3 Student Participation and Activities

5.3.1 Number of awards/medals won by students for outstanding performance in sports/cultural activities at inter-university/state/national / international level (award for a team event should be counted as one) during the last five years.
5.3.1.1 Number of awards/medals won by students for outstanding performance in sports / cultural activities at inter-university / state / national / international events (award for a team event should be counted as one) year-wise during the last five years.

<table>
<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
<th>2018-19</th>
<th>2017-18</th>
<th>2016-17</th>
<th>2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awards</td>
<td>21</td>
<td>12</td>
<td>16</td>
<td>19</td>
<td>15</td>
</tr>
</tbody>
</table>

5.3.2 Presence of an active Student Council & representation of students on academic & administrative bodies/committees of the institution

Response:

MVGR College of Engineering has its student active representation on academic and administrative bodies and committees of the college. The student representation is made active at every curricular, co-curricular and extra-curricular initiative in the campus. Students participate at every level of academic and administrative functioning in the college for smooth and effective planning and implementation of the academic policies befitting to the need of the time. The structure of the student representation in the college is as follows:

- Each class for each year of study nominates two Class Representatives (CRs) one from girls and one from boys;
- As such each year of study is going to have two CRs for each section in each program department.
- Like that in every program department for all four years of study section-wise CRs represent the students regarding their issues and concerns related to academic and administrative matters and network between the students, faculty and head of the department for a healthy and happy environment in the campus.
- In turn, all the CRs elect among themselves and form various student bodies for the smooth and effective conduct of wide range of student activities in the campus.
- The Student Executive Committee constitutes of President, Vice-President, Secretary, Joint-Secretary, Treasurer and four Executive Members. This is the Central Student Council which leads all ancillary student bodies which are formed to look after specific activities in the campus.
- The ancillary student bodies are
All together these committees represent students at various levels in supporting the College Academic and Administrative bodies in smooth and effective functioning of the college. The student Executive Committee in coordination with all the ancillary committees plan and organize inter, intra mural, and national level student seminars, workshops, fests, sports and cultural meets in order to equip themselves and their peers to combat the competitive arena assertively. Students have formed different clubs like NSS, SWECHA, UBA and social forums to bring awareness among the school children and people of surrounding villages on various public health and social issues.

### 5.3.3 Average number of sports and cultural events / competitions organised by the institution per year

**Response:** 6.2

### 5.3.3.1 Number of sports and cultural events / competitions organised by the institution year-wise during the last five years.

<table>
<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
<th>2018-19</th>
<th>2017-18</th>
<th>2016-17</th>
<th>2015-16</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>8</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>
5.4 Alumni Engagement

5.4.1 The Alumni Association / Chapters (registered and functional) contributes significantly to the development of the institution through financial and other support services.

Response:

MAA was established in the year 2007 and registered under “The certificate of registrations and societies act XXI of 1860” on 2007 February 24 with the society number 100/2007 in Vizianagaram, Andhra Pradesh. The alumni, who have been successfully deploying their services in various sectors, formed the executive committee and went on putting their contribution to enhance the quality culture. The Principal, MVGR College of Engineering will act as The Honorable Chief Patron for this association. The office bearers will take his valuable suggestion in running the association. This association will be supported by an internal alumni committee appointed by the Principal. This committee will have a Dean, a Convener and members from all the departments. A savings bank account in Canara Bank, Chintalavalasa, with the number 3119101002091 was opened on 2010 November 09. Unconditional contributions from the alumni will be collected into this account which will be used for various activities like poor student funding, alumni meetings, chapter opening and maintenance etc. Conditional contributions from the alumni for specific reasons like student projects etc., will be directed to the concerned accounts. On 2010 April 19, an exclusive alumni website was launched for a better connectivity between alumni and the college. With the advent of social media, alumni relationships have taken a different flavor altogether. To harness this power of alumni, later on various networking platforms like AlmaConnect, Linkedin, Facebook, Twitter, WhatsApp etc. were used in the place of the website.

The official Alma Connect page is: https://mvgrce.almaconnect.com/signup?trk=website. This page will have log-ins for alumni, faculty and students of MVGR. Using this interface alumni are interacting with other alumni, faculty and students providing the necessary information and guidance. MAA organizes a meeting in the first month of each calendar year to discuss various activities for that specific year. MAA supports the college management and staff members with their innovative suggestions to improve the institute’s social commitment stature.

Activities of Alumni/ Role of Alumni in the development of the Institution:

1. As members of the Department Board of Studies
2. As members of Internal Quality Assurance Cell (IQAC):
3. As Project Guides & Evaluators: As Adjunct Faculty
4. Offering technical expertise
5. Offering career guidance
6. Mentorship and Scholarships
7. Support system
8. Book Donation
9. Research Collaboration
10. Patents:
11. Consultancy
12. Campus recruiters:
13. Summer Internship Opportunities
1. Campus recruitment specific training
2. Entrepreneurship Awareness
3. Women Empowerment Programs
4. Promoting Institute Events
5. Institute Social Responsibility
6. Reconnect
7. Expand & Advance

Alumni Meets & Chapters:

MAA organizes alumni meets/get-together every year across the globe. Four general alumni meets are held on the college campus. One exclusive women alumni meet, one exclusive MBA alumni meet held in the campus. Two alumni meets were organized in the United States of America, one meet each at Hyderabad, Pune, Bengaluru and Chennai, where respective chapters were opened.

Conclusion:

Having understood the power of alumni networks, we see a big change in the way MVGR interact with their alumni.

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<td>Link for additional information</td>
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</tbody>
</table>

5.4.2 Alumni financial contribution during the last five years (in INR).

Response: A. ₹ 15 Lakhs

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<th>File Description</th>
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<tbody>
<tr>
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<td>Link for additional information</td>
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</tbody>
</table>
Criterion 6 - Governance, Leadership and Management

6.1 Institutional Vision and Leadership

6.1.1 The governance of the institution is reflective of an effective leadership in tune with the vision and mission of the Institution

Response:

Vision of the Institute

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 of the Institute

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 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 placement 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, the atmosphere to encourage students to pursue self-learning on advanced topics and conduct research.

The vision and mission statements define the institute’s distinctive characteristics in addressing the needs of stakeholders involved. In adherence to the above vision and mission, and the norms of regulatory bodies link AICTE and UGC, JNTUK, College management constituted a Governing body. Members of the Governing Body participate actively, and with their extensive experience, and leadership skills contribute for growth and development of the institution.

Statutory committees like Boards of Studies, Academic council, Finance committee, and other non-statutory committees involving faculty are constituted to help in administration.

The Principal ensures the right logistical and academic atmosphere in the institution to assist the learners to become professionally deft, globally competitive. In the linear structure, Deans and Heads of the Departments are next in the hierarchy. A Dean is a senior Professor with significant authority over a specific academic unit or area of concern or both. He takes instructions from the Principal, implements
them, and provides feedback and suggestions to the Principal.

HOD is responsible for content delivery, effective teaching and learning process, monitoring mentor system, up-gradation and maintenance of Centre of Excellence, ensuring calibration and maintenances of equipment. The senior professors, with assistance of faculty members, act as conveners of the non-statutory committees and assist the Principal on routine administration and academic processes. Teachers play a proactive role in the academic and administrative activities of the institution.

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6.1.2 The effective leadership is reflected in various institutional practices such as decentralization and participative management.

Response:

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 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.

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
6.2 Strategy Development and Deployment

6.2.1 The institutional Strategic / Perspective plan is effectively deployed

Response:

MVGR College of Engineering has been striving for academic and research excellence since 1997. Till date, the institution has established for itself a strong reputation in the state of Andhra Pradesh. The institution is identified by the state government as Skill Development Centre. JNTU Kakinada has recognized 5 of the engineering departments as Research Centres. The institution has MOUs with 26 industries for active collaboration in the area of research and development, staff training and student training.

There are several crucial areas of development that need to be addressed in order to make the institution grow to the level of national eminence. Several critical areas need to be augmented to the existing capabilities. The institution has been making efforts in moving towards a fully residential campus by establishing a 340 student capacity girls’ hostel which is fully functional. The institution has recently constructed a 750 student capacity boys’ hostel. The following strategic plan for next Five Years (2013-18) is envisaged for moving to the next level.

Establishment of Advanced Technology Training Centre:

Engineering students rudimentary understanding of industrial equipment operation, advanced technology training is required at the engineering level to enhance their competence to meet the design, project management and field research capabilities. The establishment of an advanced technology training centre is very much essential in this regard.

Establishment of Technology Business Incubation Park:

Recently, the institution had submitted an application for establishment of an incubation centre in response to a call for proposals by NITI Aayog, National Institution for Transforming India. This central government funding agency extends support to the tune of Rs. 10 crore for establishment of an Atal Incubation Centre meant to provide a platform for business incubation.

Establishment of Industry Outreach and Training Centre:
With a wide range of industries operating in the region and with the projected establishment of the international airport at Vizianagaram, there will be a large-scale shift in industrial activity in the region given that the airport is expected to also be a maintenance-repair-overall facility. This opens up a very big avenue for extending training to industry personnel as well as taking up large-scale consultancy works in collaboration with the respective industries.

R & D Centres:

To promote intra-disciplinary research, it is planned to establish Research Centres with required infrastructure, advanced research equipment in each department.

Social relevance to local community and industry:

To make the students realize the importance of social relevance of engineering, in the proposed new curriculum, socially relevant projects are made a credit course.

Centre of Excellences:

The Institution is planning to establish Centre of Excellence in each department in the area of their core strength.

Foreign collaborations:

The Institution has recently made an MOU with Central Florida University to start a PG program in Industrial Engineering. In this, admitted students can study the one-year program in our institute under the mentorship of Industrial Engineering Department of Central Florida University and remaining one year at Central Florida University, USA.

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6.2.2 The functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment and service rules, procedures, etc.

Response:

The Institution has a well-structured administrative setup and implements participative management system. The governing body is the highest decision-making body, which gives constructive suggestions to the management for effective decision making and to meet the Vision, Mission of the college. An organogram in the website represents the administrative hierarchy of the institute.

Various statutory and non-statutory bodies / committees are constituted strictly in line with the guidelines.
of regulatory bodies like UGC & AICTE to share the responsibility for the orderly functioning of the Institution under the guidance of the Principal. These committees are listed below:

STATUTORY BODIES/COMMITTEES

- **Governing Body**

  The administration is overseen by the Governing Body, which meets regularly and approves the strategic plan and the budget. The institution is well known for its good administrative practices and work culture.

- **Academic Council**

  The Academic Council is the highest academic body which decides and advices on all academic matters. Academic proposals of BoS from each department are scrutinized and approved with or without modifications by the academic council. It also recommends/advise the Governing Body on proposals for new programme of study and other academic matters. Academic council performs such other functions as may be assigned by the Governing Body

- **Boards of Studies**

  Prepare syllabi for various courses keeping in view the objectives of the college, interest of the stakeholders and national requirement for consideration and approval of the Academic Council

- **Finance Committee**

  The Finance Committee will be an advisory body to the Governing Body.

- **Internal Quality Assurance Cell**

  The cell shall take the OVERALL RESPONSIBILITY of Internal Quality Assurance in the institution

NON-STATUTORY
The above committees constitution, functions, periodicity of meetings are given in the college website.

The Institution has a set of well-defined rules, policies, and regulations within the framework of AICTE, UGC, State Government, and Affiliating University. The Governing Body and Academic Council approves these rules.

**Policies for the functional aspects of the Institution**

- Code of Ethics-Policy
There are standard operating procedures for the maintenance of infrastructural facilities:

- Civil Maintenance
- Electrical Maintenance
- IT Infrastructure Maintenance EPABX and Telephone Maintenance
- Academic facilities
- Campus Maintenance

Service rules, Procedures, Recruitment and Promotional Policies:

The Institute has a set of well-established rules, policies and regulations with regard to Service rules, Procedures, Recruitment and Promotional Policies.

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6.2.3 Implementation of e-governance in areas of operation

1. Administration
2. Finance and Accounts
3. Student Admission and Support
4. Examination

Response: A. All of the above
6.3 Faculty Empowerment Strategies

6.3.1 The institution has effective welfare measures for teaching and non-teaching staff and avenues for career development/ progression

Response:

The following are the welfare measures extended to Teaching & Non-teaching Staff

Faculty

1. **Group Gratuity Scheme** for all the staff
2. Provisions of *Employees Provident Fund (EPF)*
3. **Provisions of ESI**
4. **Group Insurance cover** to the tune of Rs. 2,00,000/-
5. **Medical Insurance Cover** to the tune of Rs. 1,00,000/- to Employee & family members
6. **Cash Incentives** for Research Publications and other such R&D Activities such as Funded Projects, Consultancy, MOOCs, Patents etc….
7. **Sponsorship** for higher Education through QIP.
8. **Academic Leave with Pay** to pursue PhD
9. **Reimbursement** of TA, DA, & Registration Fee to attend FDPs such as Seminars / Workshops / Refresher Courses / GIAN / Industry Internships / Training on Modern Tools / etc…
10. **Reimbursement** of application and registration fee of Patents for filing
11. **Financial Assistance** / Sponsorship for attending conferences outside India subject to a maximum of 25000/-
12. **Sponsorship** of Professional Society Memberships free (Full for HODs and 50% for faculty)
13. **Internal R&D funding** to faculty
14. **AICTE 6th Pay Scales** with allowances
15. Paid Maternity Leave of SIX months

Non-Teaching Staff

1. **Group Gratuity Scheme** for all the staff
2. Provisions of *Employees Provident Fund (EPF) & ESI*
3. **Group Insurance cover** to the tune of Rs. 2,00,000/-
4. **Medical Insurance Cover** to the tune of Rs. 1,00,000/- to Employee & family members
5. **Pay Scales** with allowances
6. **Free local transportation** for NT Staff
7. Paid Maternity Leave of SIX months

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6.3.2 **Average percentage of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the last five years.**

**Response:** 64.23

6.3.2.1 **Number of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies year wise during the last five years**

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<td>90</td>
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<td>166</td>
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6.3.3 **Average number of professional development / administrative training Programmes organized by the institution for teaching and non-teaching staff during the last five years.**

**Response:** 25.8

6.3.3.1 **Total number of professional development /administrative training Programmes organized by the institution for teaching and non teaching staff year-wise during the last five years**

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<td>35</td>
<td>25</td>
<td>41</td>
<td>21</td>
<td>7</td>
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</table>
6.3.4 Average percentage of teachers undergoing online/face-to-face Faculty Development Programmes (FDP) during the last five years (Professional Development Programmes, Orientation/Induction Programmes, Refresher Course, Short Term Course).

Response: 145.57

6.3.4.1 Total number of teachers attending professional development Programmes, viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes year wise during last five years

<table>
<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
<th>2018-19</th>
<th>2017-18</th>
<th>2016-17</th>
<th>2015-16</th>
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<tr>
<td>Number</td>
<td>593</td>
<td>322</td>
<td>365</td>
<td>279</td>
<td>231</td>
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6.4 Financial Management and Resource Mobilization

6.4.1 Institution conducts internal and external financial audits regularly

Response:

MVGR College of Engineering(A) has the mechanism of both internal and external audits for all the financial activities carried out in the Institution every Year. Accounts department headed by Dean(Fin) maintains financial accounts daily and prepares all financial statements and submits them to all statutory and regulatory bodies like AICTE, UGC and State Government as and when required. The college has both Internal and External audit system.
Internal Audit:

The Principal constitutes an Internal Audit Committee with three/four members. The audit is conducted on a Sampling basis to check the correctness of the financial transactions and statement affairs of the Institution. The Committee verifies

a. Cash Book
b. Bank Accounts
c. Ledgers
d. Bills
e. Vouchers
f. Statement of cash position and cash flow

related to the following accounts:

1. Transport Fee
2. Tuition Fee
3. Miscellaneous Fee
4. Hostel Fee-Boys & Girls
5. Personal Department
6. Establishment Department
7. Examinational Cell
8. Security

physically and conducts sample check on the heads of various accounts, balance dates, and postings.

External Audit:

M/S Balaji Associates, Vizianagaram, have been auditors for the Institution from the inception of the college. An annual external audit is conducted, and the reports are submitted to the management. The Finance Committee ratifies these reports.

Audit of funds received from Government and Non-Government research funding agencies and Consultancy is duly done as per the guidelines of the funding agencies as and when required and submitted.

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6.4.2 Funds / Grants received from non-government bodies, individuals, philanthropists during the last five years (not covered in Criterion III and V) (INR in Lakhs)

Response: 2.8

6.4.2.1 Total Grants received from non-government bodies, individuals, Philanthropers year-wise during the last five years (INR in Lakhs)

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<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
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<th>2017-18</th>
<th>2016-17</th>
<th>2015-16</th>
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<td>Amount</td>
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6.4.3 Institutional strategies for mobilisation of funds and the optimal utilisation of resources

Response:

There are primarily 2 main sources of funds for the institution.

- Tuition Fee Receipts from Students admitted into various programs offered by the institution.
- Management Grant for infrastructural (mainly civil) augmentation as per immediate and future requirements and availability of funds.

Note: Since the quantum of management grant and its availability will depend on extraneous parameters not under the control or purview of institution itself, the funds if, when and how much ever they come are completely used for infrastructure augmentation on the basis of a long term infrastructural road map/wish list that is ordered in the sequence of priority. How many of these projects can be taken up would depend on the availability of grants from management.

Tuition fee receipts are the primary source of funds for meeting all the operational expenditure of the institution including depreciation and equipment infrastructure acquisition of the institution.

The Government of Andhra Pradesh through a regulatory commission formed under the statute of A. P. Education Act, on a three year block period basis goes over the expenditure of the institution (as per audit reports and excluding the expenditure for new civil infrastructure), factors in the inflation factor and furtherance requirements through a well-defined process seeking all relevant data from the institution and cross verifying with audited statements. Having gone through the expenditure, the regulatory commission would through a pre-specified automated process, computes the tuition fee required per student (based on...
sanctioned strength) to meet the expenditure. This process ensures sufficient funds mobilization for the sustenance of institution for the next three year block period.

The process has been more or less in place for more than a decade now and is a well established and widely accepted process now of course with periodic course corrections wherever required.

This aside, the institution is also actively working on ways in which the strengths of the institution can be leveraged both for the enrichment of the larger locality that encompasses the campus and also provide additional sources of funds for the institution. The channels currently being widely explored with some already yielding some funds mobilization are:

- Offer skill-based certification programs in areas of institution’s expertise for local youth with the idea to improve their employability.
- Offer testing, design and project consultancy for industry partners through our accomplished teaching staff & lab resources in the institution.
- Offer induction training to industry partners that would cover initial training needs of their fresh graduate employees.
- Seek and get funded projects from central and state funding agencies like UGC, AICTE and so on.
- Have an in-house business incubation center that would promote new entrepreneurs, provide them initial support and seek partnerships with potential success stories during early states of prototype in lieu of support extended, in terms of capital, logistics, man-power, and technological.

All the above are at different stages of exploration

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6.5 Internal Quality Assurance System

6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes visible in terms of – Incremental improvements made for the preceding five years with regard to quality (in case of first cycle) Incremental improvements made for the preceding five years with regard to quality and post accreditation quality initiatives (second and subsequent cycles)

Response:

Civil Amenities/Exclusive Facilities Infrastructure:

- State-of-the-art captive boys’ hostel facility comprising of 2 accommodation blocks and one amenities block with modern gym, exclusive meeting hall and other facilities with an occupation capacity of 720 students.
- A dedicated state-of-the-art library facility with 45000 SFT built-up space with spacious reading
rooms, digital library facility with nearly 120+ desktops and an elaborate reference section with tastefully done interiors, out-check-in facility for books and so on. Also added in there is a state-of-the-art digital recording room for recording video lectures.

Learning Outcomes attainment measurement process

- Substantial improvements in the specification of learning outcomes with provision to tailor the outcomes for each program with program specific learning outcomes linked to generic learning outcomes has been made.
- The question bank pattern has been changed for the summative assessment to ensure full coverage of learning outcome measurement both in terms of breadth (syllabus) and in terms of all depth (thee levels of blooms taxonomy).
- A new approach to curricular design that provides a unified process to more effectively couple the outcomes to the curriculum design and the question bank design.

Curricular design process:

- An innovative process of defining syllabus in terms of equivalent size concepts that takes care of not only unified distribution of syllabus across different modules, but also takes care of appropriate mapping between credits to engagement hours to syllabus specification.
- IQAC has also piloted a bridge plan to map the current syllabus with the possibilities that would become possible in NEP 2020 and is currently fine tuning next syllabus design based on a major-minor combination model with a scope for Honors in Major with additional 20 credits. This is at design stage.

Teaching – Learning Process:

- COVID has necessitated what was always a plan to slowly gear ourselves to a partial flipped class model where students would listen to video lectures and contact hours could be spent on a participative discussion model for some units as a different mode of learning. We are now delivering live lectures through Microsoft team software and are now ready to deliver classes in hybrid model where some students are in class and other dial in to the live online transmission of that class.
- We have ramped up our continuous assessment to now include objective assessment along with subjective assessment.
- The student feedback review process for mid-term improvement and post-mortem analysis has been fine-tuned.

Office Automation:

- The ERP software is now being used for tracking student attendance. All fee payments are also now being tracked and done through our ERP package.
- We are working on utilizing and integrating more office processes into our ERP so we can achieve further automation.
- We are working on integrating the leave tracking and purchase process next.
6.5.2 The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms and recorded the incremental improvement in various activities (For first cycle  - Incremental improvements made for the preceding five years with regard to quality  For second and subsequent cycles  - Incremental improvements made for the preceding five years with regard to quality and post accreditation quality initiatives )

Response:

The institution through its IQAC has define a cross-section of processes that basically measure the effectiveness of teaching-learning process, focuses on early detection of any bottlenecks/fault lines and escalating them to the appropriate level, finding remedies to cover for the fault lines and assess their effectiveness. The processes work at various levels primarily focused on:

- Teaching Staff
  - Training Requirements
  - Pre-course preparations
  - Teaching Delivery both in terms of regularity as per time table and efficacy of delivery
  - Average outcome attainment for the course.

The processes we have here for the above are:

- Course allocation time identification of any training requirements.
- Course Info-sheet mandatory before course work start.
- Mid-term and end-course feedback process.
- Outcome attainment rubric system

Under the aegis of IQAC a manual has been defined for outcome attainment process that includes the rubrics to be used. The manual is a reference guide but the specific programs are given flexibility to evolve their own rubrics.

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6.5.3 Quality assurance initiatives of the institution include:

1. Regular meeting of Internal Quality Assurance Cell (IQAC); Feedback collected, analysed
and used for improvements
2. Collaborative quality initiatives with other institution(s)
3. Participation in NIRF
4. Any other quality audit recognized by state, national or international agencies (ISO Certification)

**Response**: 2 of the above

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Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

7.1.1 Measures initiated by the Institution for the promotion of gender equity during the last five years.

Response:

MVGR College of Engineering sensitizes students and employees regarding gender equity and takes the social responsibility by creating awareness on various gender aspects through expert talks, sensitization programs, and conducting campaigns on current gender issues time to time. The institute promotes gender equity in admissions, recruitment, administrative functionality and academic activities.

Measures initiated by the institution for the promotion of gender equity during last five years:

- Given priority of girl students to take part actively in NSS, UBA, FYFP and Sweccha activities.
- Proposal is made for Girls NCC wing.
- As a part of self defense taekwondo training to girls students.
- Internal Complaint Cell is formed to take care of girls' safety and security in and around campus.
- Women Empowerment Cell is formed for bringing awareness among the girl students regarding the policies pertaining to girl student welfare and development.
- Girls waiting halls are provided in each block in the campus with required facilities. Two girl's hostels are provided with gym facility and dispensary with lady doctor and a nurse.
- Health centre is provided in the campus with qualified physician.
- Separate space is provided for girls in the central library and the college canteen to avoid inconvenience.
- Student Activity Centre (SAC) is established with instruments JAZZ set, Veena, Tabla, Keyboard, Congo drums, Guitar, Flute, Saxophone and Violin composure set to train the students. Resource persons for music and dance are provided to train the girls and the boys.
- The girl students are nominated as members of various committees at department, institute levels and the institute encourages their participation in co-curricular and extra-curricular activities.
- During orientation programs and other events, awareness is created on gender equity among the students. Boys are sensitized to participate in Rangoli competitions or to respond to Nirbhaya and Disha incidents.
- The institute celebrates Women's day in a grand manner and presents success stories of famous women to inspire the girl students and to make them understand their potential.
- Internal Complaints Committee (ICC) is organising various events including guest lectures to empower and support young minds in achieving their goals.
- The institute has a policy of appreciating faculty without gender bias. Women faculty are nominated, based on their ability, as heads of the departments and conveners of various committees and discharging their duties efficiently.

7.1.2 The Institution has facilities for alternate sources of energy and energy conservation measures

1. Solar energy
2. Biogas plant
3. Wheeling to the Grid
4. Sensor-based energy conservation
5. Use of LED bulbs/ power efficient equipment

Response: A. 4 or All of the above

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<th>File Description</th>
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<tr>
<td>Geotagged Photographs</td>
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7.1.3 Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste (within 500 words)

- Solid waste management
- Liquid waste management
- Biomedical waste management
- E-waste management
- Waste recycling system
- Hazardous chemicals and radioactive waste management

Response:

Electronic waste:

The institution uses a lot of Electronic equipment given the central activity of the institution and each of the electronic items have a finite lifespan beyond which they become obsolete/unusable and we have to retire them to be replaced with new equipment.

There are two aspects to this process:

1. What is the life-span of each of the electronic equipment and when does it become non-stock item/unusable item in regular life span?
2. What do you do with the equipment once you retire it and want to dispose it off?

The item 2 above is what we are dealing with here. Before we go into it, please find below the typical list of electronic items we deal with and their life spans as we defined them.

<table>
<thead>
<tr>
<th>Item</th>
<th>Lifespan</th>
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<tbody>
<tr>
<td>Desktop Computers</td>
<td>5</td>
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<tr>
<td>Thin Clients</td>
<td>5</td>
</tr>
<tr>
<td>Air Conditioners (2T Split)</td>
<td>12</td>
</tr>
<tr>
<td>Air Conditioners (11T)</td>
<td>12</td>
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<tr>
<td>Air Conditioners (15T)</td>
<td>12</td>
</tr>
<tr>
<td>Air Conditioners (1.5 Ton)</td>
<td>12</td>
</tr>
<tr>
<td>Printers &amp; Photocopiers</td>
<td>8</td>
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<table>
<thead>
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<th>File Description</th>
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<tbody>
<tr>
<td>Relevant documents like agreements/MoUs with Government and other approved agencies</td>
<td>View Document</td>
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<tr>
<td>Geotagged photographs of the facilities</td>
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<tr>
<td>Any other relevant information</td>
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</table>

### 7.1.4 Water conservation facilities available in the Institution:

1. Rain water harvesting
2. Borewell/Open well recharge
3. Construction of tanks and bunds
4. Waste water recycling
5. Maintenance of water bodies and distribution system in the campus

**Response:** A. Any 4 or all of the above

---

Each of the above items needs to be disposed of once their lifespan is completed and are no longer in a condition that can be reliably used.

**Policy of disposing:**

We have no mechanism to recycle e-waste on our own. We therefore exclusively rely on buy-back or sale option to partners who can than take the responsibility of recycling the e-waste or appropriately disposing it off. The preferred option is to use buy-back where we get a certain amount of discount on purchases in lieu of buy back of the equipment we intend to dispose off. In circumstances where we cannot settle for a buy back option either because no one interested of if someone has quoted a higher price to buy the disposable stock than what we would get in buy back, we sell the stock off.
7.1.5 Green campus initiatives include:

1. Restricted entry of automobiles
2. Use of Bicycles/ Battery powered vehicles
3. Pedestrian Friendly pathways
4. Ban on use of Plastic
5. Landscaping with trees and plants

Response: Any 4 or All of the above

7.1.6 Quality audits on environment and energy regularly undertaken by the Institution and any awards received for such green campus initiatives:

1. Green audit
2. Energy audit
3. Environment audit
4. Clean and green campus recognitions / awards
5. Beyond the campus environmental promotion activities

Response: A. Any 4 or all of the above

7.1.7 The Institution has disabled-friendly, barrier free environment
1. Built environment with ramps/lifts for easy access to classrooms.
2. Disabled-friendly washrooms
3. Signage including tactile path, lights, display boards and signposts
4. Assistive technology and facilities for persons with disabilities (Divyangjan) accessible website, screen-reading software, mechanized equipment
5. Provision for enquiry and information: Human assistance, reader, scribe, soft copies of reading material, screen reading

Response: A. Any 4 or all of the above

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<th>File Description</th>
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<tbody>
<tr>
<td>Policy documents and information brochures on the support to be provided</td>
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<tr>
<td>Geotagged photographs/videos of the facilities</td>
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7.1.8 Describe the Institutional efforts/initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities (within 500 words).

Response:

To start with, the admissions to the programs offered by institution happen in two categories. 70% of the sanctioned seats each year are filled through the state government driven common admission process referred to as convener process admissions and the remaining 30% of the sanctioned seats are filled by the institution through its own screening process and are referred to as management seats.

The 70% of the seats filled through the convener quota follow the socioeconomic reservation policies as defined by the state government. There are specific ratio of seats reserved for Scheduled Castes, Scheduled Tribes, Socially Backward classes categorized in A, B, C and D categories. There are also certain specific seats now reserved for economically backward sections. These seats are 10% of the convener seats over and above the sanctioned seats. The seats are filled with an online admission process.

The management quota seats are filled by institution by inviting applications through newspaper advertisements and then processing the applications received in an order or merit based on parameters like marks in +2 exams, EAMCET rank, IIT entrance qualification score and so on. We have tried to welcome people from other states also through this process to encourage cultural and linguistic diversity. We must admit we have not achieved success to the level desired but it is heartening to note that there is progress albeit slow. This year we have also take steps to increase awareness among students in north-east through some of our employees who hail from there to see we can tap into students from there.

We are seriously working out ways in which we can tap into student base predominantly from Bihar, North–east states. We were inhibited a bit till 2018 in this because we did not have a self owned boys’ hostel. We now have a state-of-the-art boys’ hostel and we have always had a good girls’ hostel. Now that we have a boys’ hostel of about 750 capacities and girls’ hotel of 400+ capacities, we have ramped up our efforts to attract students from other states in India. We believe that will enrich our students experience in...
our campus by promoting better understanding of our country’s regional, cultural and linguistic diversity.

Finally in terms of gender diversity, we take great pride in saying we have always had a high ratio of women students. Reasons for that include an incredibly good girls’ hostel inside the campus with state-of-the-art facilities. Our convener quota admissions have specific quota for girl students ensuring minimum due representation but to be fair we have always had more than minimum representation for girl students among our student ranks. It is also pertinent to point out here that our teaching staff also has a good gender mix to go with a reasonably solid social spread and within the state regional spread.

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<tr>
<td>Supporting documents on the information provided (as reflected in the administrative and academic activities of the Institution)</td>
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7.1.9 Sensitization of students and employees of the Institution to the constitutional obligations: values, rights, duties and responsibilities of citizens (within 500 words).

Response:

Starting from 11/2018, when we first realized we were seriously contemplating introducing a mandatory Audit Course on ‘Constitution of India’, the institution started to push the idea of increasing awareness among employees about constitution and more importantly on ‘Fundamental Rights’ and directive principles of Indian Constitution.

Since that time, the institution has been focused on raising awareness among the teaching staff about these aspects of Indian Constitution, with the idea that through them the same can be percolated to the students over period of time.

The focus of the sensitization was primarily:

- Preamble
- Directive Principles
- Fundamental Rights
- Articles 14 to 32 covering the 6 fundamental rights
- Watershed judgments like ‘Kesavananda Bharati Case’ that laid out the sanctity of basic structure of constitution.

The methodology defined and adopted for increasing awareness was:

- Identify an internal resource person(s) who has the interest and who could explore the above in detail and intern educate/inform others about the same through targeted sessions.
- Subsequently, invite guest lecture from eminent constitutional experts or local legal minds that have expertise on the above aspects for the benefit of our staff.
• Have the humanities department staff members work on the curriculum plan for the mandatory audit course on ‘Constitution of India’ and build knowledge base to effectively deliver those lectures.

The following sessions were conducted by the internal resource person over the course of last 2 years (with a break during COVID times):

11/2018: One generic teaching staff session explaining the rationale on why it would be good to exposure on certain aspects of ‘Constitution of India’ by an internal resource person.

02/2019: A detailed session focused mainly on Directive principles and 6 fundamental rights and how and why ‘Right to Property’ was removed as a fundamental right including the genesis of it through the land ceiling acts and 9th Schedule. This was done again by an internal resource person. The invitees to the session were all teaching staff on voluntary basis. It was attended by about 57 of the teaching staff.

05/2019: Humanities staff got ready with curriculum and material framework for delivering classes on constitution for the A2 regulation year I students.

07/2019: Started detailed session with a shorter group of people. Completed sessions for 3 departments teaching staff members namely CSE, IT, and ECE.

10/2019: Had a Guest lecture by the lawyer attached to MANSAS educational institutions to our staff members on fundamental rights.

10/2019: Session on ‘Basic Structure of Constitution’ and right to amend it including conflict between article 13 and article 368, Golakhnath case, Kesavananda Bharati case, Mills Case and how the balance between Judiciary and Legislature is in terms of amendments of constitution is. This was delivered by an internal resource person who has a passion for ‘Constitution of India’.

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<tbody>
<tr>
<td>• Details of activities that inculcate values; necessary to render students in to responsible citizens</td>
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7.1.10 The Institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic programmes in this regard.

1. The Code of Conduct is displayed on the website
2. There is a committee to monitor adherence to the Code of Conduct
3. Institution organizes professional ethics programmes for students, teachers, administrators and other staff
4. Annual awareness programmes on Code of Conduct are organized
Response: A. All of the above

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<tbody>
<tr>
<td>Details of the monitoring committee composition and minutes of the committee meeting, number of programmes organized, reports on the various programs etc., in support of the claims</td>
<td>View Document</td>
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<tr>
<td>Code of ethics policy document</td>
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<td>Any other relevant information</td>
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</table>

7.1.11 Institution celebrates / organizes national and international commemorative days, events and festivals (within 500 words).

Response:

It is pivotal for any institution to inculcate the national fervor and the universal brotherhood among its students through fostering them to understand the significance of the days of national and international importance and their pedigree. MVGR is committed to such nurturing by encouraging the students to organize and promote such days by conducting various competitions, events, exhibitions, rallies, shows, flash-mobs, music concerts as per the relevance and respect of the respective days of significance.

MVGR is on this motto to build better India by making students practice pluralist approach towards all religion functions and encourage them to showcase the same. Every year MVGR organizes the national festivals and birth / death anniversaries of the great Indian personalities. Staff and students get to know the importance of national integrity in the country in general and their role in it in particular.

They are as follows:

- Republic Day (26th Jan)
- International Women’s Day (8th March)
- World Water Day (22nd March)
- Sir Arthur Cotton Birth Anniversary (15th May)
- World Environment Day (5th June)
- International Yoga Day (21st June)
- Sri K.L.Rao Birth Anniversary (15th July)
- Independence Day (15th August)
- Teachers’ Day (5th September)
- Engineers’ Day (15th September)
- World Ozone Day (16th September)
- World Water Monitoring Day (18th September)
- NSS Day (24th Sept)
- Karl Terzaghi Birth Anniversary (2nd October)
- World Students’ Day (15th October)
- National Mathematics Day (22nd December)

The way the Events organized by the students of MVGR
Republic Day - Republic Day is celebrated every year on January 26 to commemorate the adoption of our constitution.

International Women’s Day: International Women's Day is a global day celebrating the social, economic, cultural and political achievements of women.

World Water Day: World Water Day is held annually on 22 March

Sir Arthur Cotton Birth Anniversary: Sir Arthur Thomas Cotton’s birth anniversary for his visionary contributions to the nation.

Independence Day : The day is a grand event marked with the flag hosting.

International Yoga Day: MVGR adheres to the protocol of the Yoga Day.

World Environment Day: MVGR by creating awareness among all the students in protecting the environment.

Teachers’ Day: Celebrated every year to commemorate the birth anniversary of Dr. Sarvepalli Radhakrishnan.

Engineers’ Day: MVGR celebrates Engineer's Day on September 15, the birth anniversary of Visvesvaraya

World Ozone Day: The day intending to spread awareness of the depletion of the Ozone Layer and search for solutions to preserve it.

World Water Monitoring Day: The day was first instituted in the year 2003 to build public awareness and involvement in protecting water resources around the world.

Karl Terzaghi Birth Anniversary: The Birth Anniversary of Dr. Karl Von Terzaghi, Father of Modern Day Soil Mechanics is celebrated.

NSS Day: The concept of NSS is started in the year 1969 to build sense of social responsibility

World Students Day: The birth anniversary of former President APJ Abdul Kalam on October 15 is observed as World Students' Day.

National Mathematics Day: The birth anniversary of Srinivasa Ramanujan is celebrated as National Mathematics Day
### 7.2 Best Practices

#### 7.2.1 Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual.

**Response:**

**Best Practice-1**

**Improving Employability Through Skill Development**

In an attempt to bridge the above gaps as well as enhance the employability of its graduates, MVGR College of Engineering (A) 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

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.

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:
• Review the academic curriculum and identify gaps in the content
• Define industry sector requirements and identify potential skill development/training programs to augment student capability
• Prepare a clear mapping of the curricular gaps with the proposed skill development program
• Identify available infrastructure with the department and propose additional facilities (if any) required (with budgetary requirements)
• Identify faculty competency available in the department (if any) in the proposed area and/or propose faculty skill enhancement plan (with budgetary requirements)
• 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.

This program has been quite successful in the following ways:

• Increased student employability as reflected in improved placements
• Increased 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

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

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

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

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

Process Equipment Design-SIMTECH

Technology Learning Center-VLSI-WIPRO Technologies
SIEMENS – PLC and AC Drives

New Dawn Automation-PLCs

Think Labs-Embedded Systems

APSSDC-Siemens Technical Skill Development Institute (tSDI) – MVGR has set up the tSDI in collaboration with APSSDC in order to offer technical skill training to students in 7 areas namely (1) Automotive 2-wheeler maintenance (2) Automotive 4-wheeler maintenance (3) Solid modelling (CBT lab) (4) Welding lab (5) CNC lab training in turning centre and vertical machining centre (6) Refrigeration and Air-conditioning lab and (7) Home electrical lab for training in basic house wiring and equipments

These and several 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.

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.

**Best Practice-2**

**Participative Management**

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.

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.

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.
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

One of the biggest challenges in this endeavor 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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### 7.3 Institutional Distinctiveness

#### 7.3.1 Portray the performance of the Institution in one area distinctive to its priority and thrust within 1000 words

**Response:**

As identified by several surveys, there exists a large gap between industry and academia especially in professional education. This has led to the poor employability of professional graduates. The institution has as its primary vision objective, defined its mandate to provide high-quality education tailored to the needs of students in the emerging technology age. Since it acquired autonomy status in 2015, MVGR has been actively building curriculum and pedagogy approaches to bridge this gap. MVGR conduct bridge courses in basic sciences for students at the first year level to supplement their understanding and build a common platform before embarking on their respective professional programs. Attempt is made by the faculty to also bring in relevant program-wise examples of application of basic sciences (math, physics and chemistry) so that students can better appreciate the importance of strong foundation in basic sciences. Once this platform is built, individual programs deliver their respective curricula that have been developed comprehensively by the concerned faculty members. The curricula attempts to integrate industry practices
into academic settings to give students exposure to real-life scenarios both in classroom as well as laboratory sessions. In the classroom, this has been done through the introduction of industry parts catalogue for design and selection of suitable part. In the laboratory, attempts have been made to recreate industry scenarios that students have to address through suitably self-designed experiments and present the solution to the problem. Elective course on leadership using a case-based approach as adopted in the world’s best management institutions such as Harvard and MIT, was introduced at the undergraduate level to engineering students to give them exposure to alternate pedagogical approaches as well as to prepare them for leadership careers in industry.

The autonomous curriculum also offers elective streams that are carefully designed to build competence in upcoming areas of technology such as cloud computing, big data analytics, product development etc. rather than providing a list of electives alone. These major curriculum development initiatives have helped the faculty members carefully understand the needs of the student in the present smart connected age and build competence in them accordingly through a combination of curriculum, pedagogy approaches and evaluation methodologies.

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5. CONCLUSION

Additional Information :

NBA Accreditation:

All eligible UG Programs (CHEMICAL, CIV, CSE, ECE, EEE, IT & MECHANICAL) were re-accredited by NBA - Department of Civil Engineering was accredited under Tier – I. MBA program was also accredited by NBA.

NAAC Accreditation

Had been accredited with Grade ‘A’ by NAAC of UGC two time in 2009 and 2015

SIRO Recognition:

MANSAS recognised as Scientific & Industrial Research Organization (SIRO) by Department of Scientific and Industrial Research (DSIR), Govt. of India in the year 2019

Research Centres

EIGHT departments are recognized as RESEARCH CENTERS by the affiliating University: JNTU-K

Research and Consultancy

1. About Rs. 4 crore worth of on-going R&D projects
2. Actively involved in civil engineering consultancy work as Third Party Quality Auditor for Vizianagaram Municipality

Autonomy by UGC

Granted Autonomy by UGC in 2015

Faculty

228 faculty of which 84 Ph.D. Degree holders

Infrastructure

1. Total built up area of about 7 Lakh sft
2. 83 Laboratories with an investment of over 13 crores
3. About 42,000 volumes and Access to 8 international online journal packages like IEEE, SPRINGER, ASME, ASCE etc.
4. 1540 Systems & 395 Mbps bandwidth internet facility
5. Backup (Generators) : 375 KVA
6. SOLAR Power : 400KW
7. Hostel accommodation : 700 boys; 350 girls
Recognitions

1. Rated as AA (20th Position) by NPTEL Swayam for active participation in MOOCs
2. WIPRO Recognized technology learning center and MISSION 10X partner institution
3. Recognized National Instruments Academy for Training in LabView
4. Recognized PTC Centre of Excellence for CREO Training
5. Identified by MSME as Business Incubation Centre
6. APSSDC-Siemens Technical Skill Development Institute (tSDI)
7. Recognized CMs SKILL EXCELLENCY CENTER (SEC)
8. Microsoft Ed-vantage Platinum Partner
9. Green Campus award by Govt. of AP

Memberships

1. Institutional member of IUCEE
2. Institutional Member of CII
3. Member, Chamber of Commerce, Vizianagaram

Concluding Remarks:

Maharaj Vijayaram Gajapathi Raj College of Engineering was established in the year 1997 by Maharaj Alak Narayan Society for Arts and Sciences (MANSAS) with a vision of developing integrated technical manpower and thereby contribute to the socio economic development of the region. In the journey of past 24 years, it has become feather in the cap of north coastal districts of Andhra Pradesh. Started with a modest intake of 200 now rose to 1170 and strength is more than 4000.

MVGR has scaled a rapid growth in terms of quality and quantity since its inception in 1997 with support of vision of the management and governance. The state-of-the-art infrastructure, amenities and other support services provided in the campus has nurtured the student growth as well as the learning process. The institution with its defined vision leading to the objectives has played an important role in the holistic growth of students. The research initiatives, industry-academia interface, extension and outreach programmes by the institution have promoted research culture and establishment of good rapport with the community and industries. In pursuit of excellence, MVGR looks forward to achieve more heights in the times ahead.

The thrust in academic excellence and holistic growth of the students remain the prime focus of the institution. The faculty members join hands in the Institution’s zeal to enhance and sustain quality education flagging way for the attainment of Vision, Mission and Values. The institution’s societal commitment provides opportunity for the faculty members and students alike to render services to the society. The institution today can boast of activities and accomplishments with regard to the social responsibility and academic excellence. The Institution promises to itself to do every possible thing to quench its thirst to reach the apex of academic excellence.