SELF STUDY REPORT

FOR

1st CYCLE OF RE-ASSESSMENT

V.S.M COLLEGE OF ENGINEERING
MAIN ROAD RAMACHANDRAPURAM EAST GODAVARI 533255
https://www.vsm.edu.in/engineering

SSR SUBMITTED DATE: 09-03-2021

Submitted To
Executive Summary

Introduction:

VSM College of Engineering (VSMCE) was established in the year 2009 as a self financing engineering college by Ramachandrapuram Educational Society with a goal to promote excellence in Higher Technological Education and equip the students to face the challenges of the modern world in a successful manner. VSMCE is one of the well performing institutes affiliated to JNTUK and is now on its successful pathway to transform the rural students as quality engineers who are not just technically qualified but also have adequate life skills for the benefit of society and country's development as a whole.

VSMCE is approved by All India Council for Technical Education (AICTE), New Delhi, and permanently affiliated to Jawaharlal Nehru Technological University Kakinada (JNTUK), Kakinada. The college is located in a sprawling scenic lush green area of about 7.5 acres of land with a total built up area of over 16209 Sq.mts. Apart from this, the college has tennis court, gym and other playgrounds. Most of the students are day scholars who are commuting to the college in the college buses. The college has a fleet of 16 buses and 2 cars. College also provides free transport facility to all the staff members including non teaching as a welfare measure. The College has enjoyed geographical advantage as it is well connected by air, rail and road. The Airport at Rajahmundry is just a 50 minute drive and the college campus is close to State highway (SH 102) making it accessible to several important centers in and around the town. Principal of the college takes guidance on Academics, administration & budget allocation from the Governing Body and implements them in consultation with the College Academic Council (CAC), consisting of all HODs and senior faculty. The decisions are taken at the CAC meeting and implemented by the HODs in all departments and overseen by the Principal, thus total decentralization of administration and policies are implemented at various levels. The college has very good Library facility with over 3743 titles and 19994 volumes to cater the needs of all branches of engineering.

Vision:

To become a globally recognized institution in Technical education by way of excellence in academics, knowledge creation through inter disciplinary research and developing all round socially - responsible professionals.
Mission:

To provide curriculum, aligned with institutional goals and objectives, relevant to regional and national needs and for overall all development of students.

To implement modern pedagogical methods in delivering the academic programmes with experienced and committed faculty.

To create vibrant ambience that promotes learning, research, creativity, team spirit, scientific temperment invention and Innovation.

To enhance institute—industry interface through collaborative research, consultancy. And needs of the society.

To generate and disseminate knowledge through training programmes /workshops / seminars / conferences / publications.

In house faculty members conduct training through assessment such as mock interviews, group discussions and all other corporate requirements to enhance the employability skills of the students.

SWOC

Institutional Strength:

- The institution is led by visionary & supportive Management team along with an enthusiastic Principal and an efficient group of Head of Departments.
- Qualified, enthusiastic and experienced faculty
- Abundant trust of parents and alumni in VSM Group having strong brand image in Godavari Districts
- Good quality students
- Innovative teaching practices
- Student mentoring and support system
- Robust program for industry institute interaction (Training & Placement Department with excellent results)
- Industry specific add-on, value added training programmes
- Active Industry Innovation Council
- State-of-the-art Infrastructure with R&D Cell
- Hostels for Girls and Boys
- Near to the upcoming Port City of Kakinada and Well connected by rail, road and air
- Concessional Transportation facilities from distant places.

Institutional Weakness:

- Lacks academic freedom owing to Affiliated Status
- Insufficient funds for research and development
- Association with eminent Research Institutions requires a boost
- Unable to secure block grants due to private nature
- Sponsored Projects & Consultancy has to pick up
- Inability to attract major multinational companies for campus selections on a consistent basis
- Financial limitations for rapid progress, being an un-aided institution
In ability to depute faculty for full-time research

**Institutional Opportunity:**
- Strong brand image in Coastal Andhra Pradesh
- Government’s support for economically weaker sections
- To apply for more research funds from funding agencies like AICTE, UGC, DST, etc.
- Possible job opportunities due to “Make in India” initiative
- Very good faculty retention
- Port City is opening opportunities for jobs

**Institutional Challenge:**
- Majority students are from rural background with some of them being first generation literates in their families
- English language proficiency levels of the students
- Growing competition in nearby towns (Kakinada and Rajahmundry)
- Availability of experienced and Ph.D. faculty
- Vast academic syllabus and rigid academic schedule
- Huge delay by the Government in reimbursing the tuition fee for economically and socially weaker sections

**Criteria wise Summary**

**Curricular Aspects:**
VSMCE has established a clearly defined Vision and Mission which act as the guiding principles of the Institution. The institution has put in place well documented procedures for planning, execution, evaluation and enrichment of the curriculum. Following the AICTE and the Parent University guidelines, the curriculum has 65% core subjects, 15% of Basic Science, 15% Basic Engineering and 5% Management related subjects. For the effective delivery of the curriculum, the Institution has qualified and experienced faculty members who are oriented towards Student Centric Learning supported with ICT enabled class rooms, tutorial rooms and modern laboratories with state of the art facilities, Wi-Fi Enabled Campus, industrial training, e-Resources for Teaching Learning and Tools for student assessment. Formulated PEOs and POs for all Programs with focus on research oriented knowledge enhancement from industry resulting in improved employability. To know the current expectations of the industry and enrich the curriculum accordingly, VSMCE has Academic Advisory Council (AAC) for the engineering departments. Senior managers from various MNC’s, Industries and Alumni have been inducted into AAC to provide input for curriculum enrichment and also to address students on industry expectations. Academic flexibility is provided through elective subjects and also based on the curriculum enrichment suggested by the AAC, the Institution identifies various value added courses, enrichment courses, guest lectures, workshops and modular courses which further equip the students to enhance their employability skills and job prospects. For core subjects, faculty members identify content beyond syllabus and impart them in theory and laboratories. Curriculum change and enrichment is followed on the basis of the feedback. Along with the inputs from industry through AAC meetings, the institution constantly collects feedback from its
Students, Faculty, Alumni and Recruiters and consolidates the same, communicates to the affiliating university for implementation during curriculum revision and for own curriculum enrichment by offering as add-on and certificate programs.

VSMCE has taken initiatives to support students who had varied academic background. During admission the faculty assesses the learning levels of the freshmen students to identify the slow and advance learners and strategies are adopted to enrich their academic experience in the institution.

**Teaching-learning and Evaluation:**

VSMCE has 145 faculty members on its roll with 15 of them with Ph.D. Degree. The sanctioned intake of students is 480 for UG and 72 for PG programs. The dedicated support provided by the management, continuous and dedicated efforts made by the faculty members, staff, students and alumni contribute to the development of the core values of the Institution. The college implements transparent admission policies besides maintaining gender ratio and reservation policies as stated by the Government of A.P. Admission opportunities for differently-abled students is provided. Academic Calendar of the Affiliating University is followed and implemented. Preparation of lesson plans in advance and sharing with students through college portal is in practice. Classroom teaching is being supplemented through expert lectures, alumni interaction, seminars, workshops, mini-projects, field work, internship, hands-on training, self-study electives and e-courseware (NPTEL, Stanford etc). Various supportive teaching methods including quiz programs, power point presentations, video clippings, hands on experiments etc., have been introduced, to make the T-L processes more effective. Activities are conducted for communication development to facilitate the students to become confident in public speaking, debates and get updated on the general affairs. Students are instructed to read through an English newspaper and a set of students are invited to address rest of the class on a topic that they have read on that day. One thought provoking question is asked by faculty and answered in every period, to nurture critical thinking. To encourage scientific temperament, project exhibition is conducted every year and best projects are awarded. The Institution offers bridge courses, remedial classes and add-on courses to the needy students and provides support for advanced learners. Learning by doing is being practiced. Advanced Learners are identified, provided extra attention and prepared for placement with leading IT product and Core engineering companies.

Mentoring system for the students is implemented.

The institution focuses on faculty development and offers training program on Teaching Learning Process, Industry Training and Research.

A fully operational IQAC team conducts periodic audits to ensure effective T-L process.

Faculty trains the students to participate in high level national and international competitions.

**Research, Innovations and Extension:**

Research Committee is formed to promote the research activities. Process of promoting the research culture among the faculty and students encouraged by the Management.

Interdisciplinary Thrust areas for research have been identified.

As a self-financing college, faculty members face difficulty while seeking funds from various agencies.
Seed money of Rs 5Lakhs to promote innovative and inter-disciplinary research projects granted by the management every year.

Organization of project design contest every year for intercollegiate students and cash prizes awarded to adjudged winners

Promoting research activities and providing financial assistance for registration, TA etc to participating faculty & students by the management.

3 faculty members awarded with Ph.D in the last 4 years

160 faculty publications in the last 8 years

Policy for revenue sharing in consultancy has been fixed at 60:40

12 MoUs signed for the benefit of the students

Institute Social Responsibility activities carried out through NCC, NSS, and society oriented clubs

**Infrastructure and Learning Resources :**

The institution believes that providing a world class infrastructure would aptly complement effective teaching learning process.

16000 plus Sq mts of built-up infrastructure with excellent landscaping, Open Air Theatre and play courts.

Installed Reverse Osmosis plant (5000 LPD)

Smart Class Rooms with LCD Projectors, Internet connectivity.

60 Mbps Wi Fi Enabled Campus

College has 520 computers and a computer – student ratio of 1 : 2

Air-conditioned seminar halls and auditorium are available.

Modern Gym facility provided separately for girls and boys

Availability of indoor and outdoor sports facilities

Health Centre with 2 beds available with visiting Physician and full time qualified nurse.

Facilities like Bank, ATM, Book Store, Post Box, reprography centre, and fully equipped gymnasium exists within the Campus.

Maintenance of campus facilities through qualified engineer and estate officer

Test & Repair facility for maintenance of IT hardware and software

Project Laboratories available exclusively for every department with required facilities.

Placement Infrastructure including 300 seating capacity auditorium, exclusive placement training labs with computers, Group Discussion Rooms and Interview Halls are available.
Well stacked OPAC enabled library with 3743 titles and 19994 volumes, subscription to 60 journals/periodicals and subscription to DELNET and 40,000 JGATE e-journals.

Separate and fenced courts for all sports activities

Sewerage Treatment Plant, ATM, Dispensary, and Bank Help Desk.

40 CCTV Cameras are installed across the campus.

**Student Support and Progression:**

**Student Support**

Financial support by the management to the tune of Rs.15 lakhs every year to motivate meritorious, economically weaker students and students with exceptional sports record.

Rs.25,50,000/- has been granted by management for students projects during the last 4 years.

Implementation of Group Insurance to the students and faculty members

Special focus and attention to advanced learners to get them placed in IT Product Companies and Core Engineering Companies with good pay packages.

Effective Mentor-Mentee System with assistance from qualified and experienced counsellor to motivate slow learners to improve and do well in their academic performance.

Several Students Clubs and Associations have been established to develop and nurture inherent talent and leadership qualities among the students.

**Student Progression**

Well staffed Training and Placement Team provides about 300 hours of placement oriented training over a period of 2 years to enable students get placed in good companies.

Students progress have been intimated to the parents

Placement Statistics: 156 students have been placed in the current batch.

Publication of Department Newsletter, College Brochure and Newsletter

15 on campus recruitment drives, 2 new companies have been added with 07 IT product and core engineering companies

Highest salary offered – Rs.3.6 lakhs. 10 companies offering salary of Rs.3 lakhs per annum

The Entrepreneurship Development Cell is interacting actively with industry.

Few student entrepreneurs have been moulded by EDC Cell with technical, financial and marketing support.

Coaching for Civil Services aspirants is provided by an experienced coach. Coaching is also facilitated for GRE, CAT, GMAT, TOEFL etc. that help in students pursuing higher studies.

College has a registered Alumni Society. Alumni network is strong and active with alumni meet happening every year to promote their activities. Alumni are actively involved in placement activities.
10 teams participated in various national and international competitions and 6 teams won prizes during last 4 years.

100 above students secured prizes and awards in competitive events conducted by other colleges.

**Governance, Leadership and Management:**

Forward looking management supporting day to day activities of Institution with cordial communication with faculty, students and other stakeholders.

Principal providing guidance and ensuring quick decisions

Dynamic Leadership team comprising of Dean-Academics, Dean, Training & Placement Officer with vast experience in their respective fields.

Decentralized departments with empowered HoDs with substantial academic experience.

All Committee meetings are conducted regularly

Transparency in the academic and administrative practices

Feedback analysis, result analysis helps the Management

Financial Management through Department budget. Regular Internal and external audits for income and expenditure

Periodic counseling and skill enhancement training for non-teaching staff

Availability of clearly documented organization structure with responsibility and authority.

Formal periodic reviews to monitor the performance of departments on academics and industry linkage.

Formal and Transparent Annual Performance Appraisal system is in place to appraise the staff members on their performance based on UGC API.

**Institutional Values and Best Practices:**

Institution strongly believes in innovations and best practices as means to achieve higher levels of maturity.

**Innovations**

College adopts the environment-friendly practices

150 KVA Solar Photo Voltaic Power Generation is in place producing 800 KWH units of power daily.

Class Rooms are ICT Enabled with provision for LCD Projectors, Internet and Intranet connectivity through Wi-Fi.

Established Process for identifying and motivating slow and advanced learners

Academic Advisory Councils for the Departments

Computer Science Laboratories comparable with a Software company in ambience
Amenity centre with modern facilities
Installation of sewage treatment plant
Rain water harvesting, collection tank have been established
Established facilities in the areas of cloud computing and embedded systems

**Best Practices**

Implementation of Outcome Based Education.

Adhering and Promoting Green Practices

Implementation of Campus Management System (MIS) for documenting all the events and storing them and its effective utilization to take corrective actions

Activity to enhance confidence and public speaking abilities of students

Objective evaluation of performance of Faculty and the Departments

Doing various types of training to improve the Competence and Employability of the Students

**FUTURE PLANS**

To establish Industry supported Research & Development Centre and make the campus a hub of research

To get Autonomous Status

To have collaborative research projects

To have MoUs with foreign/national Universities for getting visiting professors

To get twinning programmes with foreign Universities

To establish a Centre of Excellence

To promote industrial cluster for micro and small industries

To acquire Deemed University status

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**Profile**

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**BASIC INFORMATION**

<table>
<thead>
<tr>
<th>Name and Address of the College</th>
</tr>
</thead>
<tbody>
<tr>
<td>V.S.M COLLEGE OF ENGINEERING</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>V.S.M COLLEGE OF ENGINEERING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>Main Road Ramachandrapuram East Godavari</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------------------------</td>
</tr>
<tr>
<td>City</td>
<td>Ramachandrapuram</td>
</tr>
<tr>
<td>State</td>
<td>Andhra Pradesh</td>
</tr>
<tr>
<td>Pin</td>
<td>533255</td>
</tr>
<tr>
<td>Website</td>
<td><a href="https://www.vsm.edu.in/engineering">https://www.vsm.edu.in/engineering</a></td>
</tr>
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</table>

**Contacts for Communication**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Name</th>
<th>Telephone with STD Code</th>
<th>Mobile</th>
<th>Fax</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>P VENKATESHWAR</td>
<td>08857-246400</td>
<td>7729972264</td>
<td>08857-242328</td>
<td><a href="mailto:principal@vsm.edu.in">principal@vsm.edu.in</a></td>
</tr>
<tr>
<td>Professor</td>
<td>Kandelli Balaji</td>
<td>08857-200212</td>
<td>7729972281</td>
<td>-</td>
<td><a href="mailto:kandellibalaji@gmail.com">kandellibalaji@gmail.com</a></td>
</tr>
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**Status of the Institution**

| Institution Status | Private and 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>
</tr>
</tbody>
</table>

**Recognized Minority institution**

| If it is a recognized minority institution | No |

**Establishment Details**

| Date of establishment of the college | 30-06-2009 |

**University to which the college is affiliated/ or which governs the college (if it is a constituent college)**

<table>
<thead>
<tr>
<th>State</th>
<th>University name</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra Pradesh</td>
<td>Jawaharlal Nehru Technological University, Kakinada</td>
<td>View Document</td>
</tr>
</tbody>
</table>

**Details of UGC recognition**
Under Section | Date | View Document
---|---|---
2f of UGC | 29-01-2020 | View Document
12B of UGC | 29-01-2020 | View Document

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/Approval 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>
<td>View Document</td>
<td>30-04-2020</td>
<td>12</td>
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</tbody>
</table>

Details of autonomy

Does the affiliating university Act provide for conferment of autonomy (as recognized by the UGC), on its affiliated colleges? Yes [autonomydoc_1611904472.pdf](autonomydoc_1611904472.pdf)

If yes, has the College applied for availing the autonomous status? No

Recognitions

Is the College recognized by UGC as a College with Potential for Excellence(CPE)? No

Is the College recognized for its performance by any other governmental agency? Yes

If yes, name of the agency NAAC of UGC and NIRF of MHRD

Date of recognition 11-09-2017

Location and Area of Campus

<table>
<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>
</tr>
</thead>
<tbody>
<tr>
<td>Main campus area</td>
<td>Main Road Ramachandrapuram East Godavari</td>
<td>Rural</td>
<td>7.5</td>
<td>16209</td>
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ACADEMIC INFORMATION

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

<table>
<thead>
<tr>
<th>Program Level</th>
<th>Name of Program/Course</th>
<th>Duration in Months</th>
<th>Entry Qualification</th>
<th>Medium of Instruction</th>
<th>Sanctioned Strength</th>
<th>No.of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course</td>
<td>Male</td>
<td>Female</td>
<td>Others</td>
<td>Total</td>
<td>Male</td>
<td>Female</td>
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<td>---------------------------------------------</td>
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<td>--------</td>
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</tr>
<tr>
<td>UG BTech, Civil Engineering</td>
<td>48</td>
<td>0</td>
<td>0</td>
<td>48</td>
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<tr>
<td>UG BTech, Electrical And Electronics Engineering</td>
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<td>UG BTech, Mechanical Engineering</td>
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<td>UG BTech, Electronics And Communication Engineering</td>
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<tr>
<td>UG BTech, Computer Science And Engineering</td>
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<tr>
<td>PG Mtech, VLSI And Embedded System</td>
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<tr>
<td>PG Mtech, Computer Science Engineering</td>
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**Position Details of Faculty & Staff in the College**

### Teaching Faculty

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<tr>
<th>Position</th>
<th>Male</th>
<th>Female</th>
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<th>Total</th>
<th>Male</th>
<th>Female</th>
<th>Others</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
<th>Others</th>
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<tbody>
<tr>
<td>Professor</td>
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<tr>
<td>Associate Professor</td>
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<tr>
<td>Assistant Professor</td>
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### Non-Teaching Staff

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</table>

### Technical Staff

| Male | Female | Others | Total |       |       |       |       |       |       |       |       |       |       |       |
|------|--------|--------|-------|------|--------|--------|-------|------|--------|--------|-------|------|--------|
|      |        |        |       |      |        |        |       |      |        |        |       |      |        |
### 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>
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<tr>
<td></td>
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<td>Female</td>
<td>Others</td>
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<tr>
<td>D.sc/D.Litt.</td>
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<tr>
<td>Ph.D.</td>
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#### Temporary Teachers

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<th>Assistant Professor</th>
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<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Others</td>
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<td>D.sc/D.Litt.</td>
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<td>Ph.D.</td>
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<tr>
<td>M.Phil.</td>
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<tr>
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#### Part Time Teachers

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<td>Others</td>
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<tr>
<td>D.sc/D.Litt.</td>
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<tr>
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</tr>
<tr>
<td>M.Phil.</td>
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<tr>
<td>PG</td>
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#### Details of Visting/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>
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</tr>
</tbody>
</table>

Provide the Following Details of Students Enrolled in the College During the Current Academic Year
<table>
<thead>
<tr>
<th>Program</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>Diploma</td>
<td>Male</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>PG</td>
<td>Male</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>UG</td>
<td>Male</td>
<td>627</td>
<td>0</td>
<td>0</td>
<td>627</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>454</td>
<td>0</td>
<td>0</td>
<td>454</td>
</tr>
<tr>
<td></td>
<td>Others</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>Category</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
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</thead>
<tbody>
<tr>
<td>SC</td>
<td>Male</td>
<td>8</td>
<td>7</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>14</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>ST</td>
<td>Male</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>OBC</td>
<td>Male</td>
<td>54</td>
<td>73</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>38</td>
<td>34</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>General</td>
<td>Male</td>
<td>56</td>
<td>61</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>46</td>
<td>45</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>0</td>
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<td>0</td>
</tr>
<tr>
<td>Others</td>
<td>Male</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>216</td>
<td>235</td>
<td>233</td>
<td>400</td>
</tr>
</tbody>
</table>

Provide the Following Details

<table>
<thead>
<tr>
<th>Number of Programs</th>
<th>Self-financed Programs offered</th>
<th>New Programs introduced during the last five years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Provide the Following Details</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Unit Cost of Education</strong></td>
<td><strong>Including Salary Component</strong></td>
<td><strong>Excluding Salary Component</strong></td>
</tr>
<tr>
<td>54836.7</td>
<td>54836.7</td>
<td>26182</td>
</tr>
</tbody>
</table>

**QIF**

1. **Curricular Aspects**

1.1 **Curricular Planning and Implementation**

1.1.1 *The Institution ensures effective curriculum delivery through a well planned and documented process*

**Answer:**

**Response:**

VSM College of Engineering has a [Curriculum Committee](#) consisting of Chairperson and Program coordinators. Identification of learning gaps, industry expectations, emerging skills, knowledge enhancement, faculty training and designing of new courses in this backdrop, planning and conduct of programs for curriculum enhancement are undertaken by this committee.

*Academic calendar* is prepared to fulfill the objectives of the curriculum delivery. VSM CoE is affiliated to Jawaharlal Nehru Technological University, Kakinada, A.P., and follows the curriculum prescribed by the University. The Institution Academic Calendar is finalized in alignment with the University calendar.

*Annual Calendar of events* is prepared which consists of plan for Internships, Field tours and projects. Lectures are scheduled for connecting the requirements of industry and academics. Before the start of every academic session, Principal conducts meeting with Vice- Principal, Academic Dean, Heads of all the Departments, and finalize *Academic Policy* which covers following points:

**Teaching Load Distribution** (theory and practical) is appropriately allotted among the faculty members.

**Competency mapping** is undertaken at department level to ensure the teachers to handle the courses based on their specialization. *Time table* is prepared as per the teaching scheme of JNT University and department requirement by the Time-Table Committee. Time table prepared at Department level - teacher wise - class wise as a matrix structure.

**Preparation for Course Delivery:** Teaching Plans (Theory & Practical) and Tutorial Plans are prepared by the subject teachers before the start of every semester. Lesson plan is prepared by the subject teacher prior to the delivery of lecture.

**Course files** are prepared by all faculty members which include Syllabus, Academic calendar, Teaching Plan, Tutorial Plan, Program Outcomes, Program specific outcomes and Course Outcomes, CO-PO(s), CO-PSO(s) Mapping & Attainment, Tutorial Sheets, Class Assessment Tests (CAT) question Bank, Assignment Questions, University Question Papers & model solution, CAT & Sessional examination question papers, Support for Academically slow students etc.

**Teaching Learning Process:** Each department has its own Vision and Mission which matches with the Institutional Vision and Mission. *PEOs, POs, PSOs and COs are defined for each program.*

To complement the conventional teaching methods, the departments emphasize on following practices:

- Eminent academicians and industrial experts are invited for delivering guest lectures on current trends in the subjects related to curriculum.
- The use of ICT enabled Class rooms for Video lectures of expert from IITs and NPTEL.
The college provides 99 certificate/diploma and 169 value-added courses.
Meeting with industry experts to understand the industry needs, visit to industry as Intern / project Trainee for practical exposure.
Conferences, Workshops, seminars and Tech Fests are organized.
Training of teachers for new courses through orientation programs STTP, FDP and online courses.
Study groups for courses are formed for peer-to-peer learning.
Group discussion/Technical quiz/Surprise test.

Classes are conducted for the improving employability and preparation of GATE/IES

For the complete writup please click on the below link:

https://www.vsm.edu.in/engineering/pdfs/NAAC/C-1/1.1.1_QLM.pdf

<table>
<thead>
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<th>File Description</th>
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<td>Upload Additional information</td>
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<td>Link for Additional information</td>
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</tbody>
</table>

1.1.2 The institution adheres to the academic calendar including for the conduct of CIE

Answer:

Response:

The JNT University publishes an academic calendar for the programs well before the commencement of each semester. The University calendar portray important timelines like the beginning of the semester, last working day, scheduled for summer project/professional training, schedule of practical and theory examinations, and date of commencement of next semester.

The Institute prepares the academic calendar taking into consideration the guidelines issued by University which include all activities like the conduct of Continuous Internal Evaluation (CIE), End Semester Examination, Placements and Value added courses. Separate Institute academic calendar and department event cum academic calendar are prepared strictly complying with the university academic calendar accommodating all planned activities. While the institute calendar includes details like a total number of working days & holidays, CIE dates, institutes flagship programs, etc., the department calendar comprises about guest lectures, conferences, workshops, industrial visits, and other co-curricular & extra-curricular activities planned by respective departments.

The above academic calendars help faculty members to plan their respective course delivery and undertake academic and other related activities. Head of the Department closely supervise and monitor completion of the syllabus as per the lesson plan prepared by faculty members. Portions for each CIE are decided well in advance and faculty members are required to stick to it.

Meeting of the college academic committee and examination committee is held between May to July as per the requirements and various plans like Academic Evaluation Plan, Finalization of the summer internship and projects with mentors, Implementation of Institutional Social Responsibility, Mentor and Mentee finalization, Identification and support for advance learners and slow learners, Bridge Courses/Remedial Courses, and Field Visits/Live Projects are discussed and scheduled.

Two internal assessment tests, assignments, slip tests, quizzes, and seminars are part of the Continuous Internal Evaluation (CIE) of students. The respective course instructors prepare sample IA question papers
based on the revised Bloom's taxonomy and it will be reviewed and approved by the review committee within the department. The approved questions in the form of a databank are circulated with the students. The scheme of evaluation, internal assessment timetable prepared by the University will then be circulated to all faculty members and students. Post evaluation of papers, calculation of CO-PO attainment are carried out by respective faculty members.

Laboratory work is assessed on continuous basis. Submission of laboratory observations, records, conduction of labs & viva forms major components of laboratory evaluation. As per the University guidelines, the internal test is conducted at the semester end. Continuous Internal Evaluation is spread across the entire semester ensuring the final CIE marks are available much before the deadline. As the entire activities including CIE during the semester are pre-planned, the semester progresses smoothly as per the academic calendar.

For the complete writup please click on the below link:

https://www.vsm.edu.in/engineering/pdfs/NAAC/C-1/1.1.2_QLM.pdf

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<tr>
<td>Link for Additional information</td>
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</tr>
</tbody>
</table>

1.1.3 Teachers of the Institution participate in following activities related to curriculum development and assessment of the affiliating University and are represented on the following academic bodies during the last five years

1. Academic council/BoS of Affiliating university
2. Setting of question papers for UG/PG programs
3. Design and Development of Curriculum for Add on/ certificate/ Diploma Courses
4. Assessment/evaluation process of the affiliating University

Answer: A. All of the above

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
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</thead>
<tbody>
<tr>
<td>Institutional data in prescribed format</td>
<td>View Document</td>
</tr>
<tr>
<td>Details of participation of teachers in various bodies/activities provided as a response to the metric</td>
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</tr>
<tr>
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</tr>
<tr>
<td>Link for Additional information</td>
<td>View Document</td>
</tr>
</tbody>
</table>

1.2 Academic Flexibility
1.2.1 Percentage of Programmes in which Choice Based Credit System (CBCS)/ elective course system has been implemented

Answer: 100

1.2.1.1 Number of Programmes in which CBCS / Elective course system implemented.
Answer: 7

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minutes of relevant Academic Council/ BOS meetings</td>
<td>View Document</td>
</tr>
<tr>
<td>Institutional data in prescribed format</td>
<td>View Document</td>
</tr>
<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>

**1.2.2 Number of Add on /Certificate programs offered during the last five years**

Answer: 268

**1.2.2.1 How many Add on /Certificate programs are added within the last 5 years.**

Answer:

<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>Additions</td>
<td>67</td>
<td>59</td>
<td>53</td>
<td>48</td>
<td>41</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Add on /Certificate programs</td>
<td>View Document</td>
</tr>
<tr>
<td>Brochure or any other document relating to Add on /Certificate programs</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>

**1.2.3 Average percentage of students enrolled in Certificate/ Add-on programs as against the total number of students during the last five years**

Answer: 100

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

Answer:

<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>Students</td>
<td>1030</td>
<td>1187</td>
<td>1272</td>
<td>1298</td>
<td>1105</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Details of the students enrolled in Subjects related to certificate/Add-on programs</td>
<td>View Document</td>
</tr>
<tr>
<td>Any additional information</td>
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</tr>
</tbody>
</table>

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

Answer:

Response:

Gender:

Equal opportunities are given to both the genders in terms of admissions, training, placement, co-curricular and extra-curricular activities, NSS, NCC, Sports and Cultural Clubs, so that gender issues do not arise. The institute has constituted various committees including Women Empowerment Cell, Women Grievance & Redressal Committee. These committees help in promoting gender equity and also handle issues related to safety and security of girl students, lady staff. Women’s day is celebrated where both students and staff are encouraged to participate. Higher administrative positions like Smt. K. Madhura Meenakshi M.S (USA), as Director and many Associate Professor cadre are held by Women. Faculty Ratio (Female: Male) is 54:46 in the Institute.

The College maintains suggestion/complaint box where the students can drop their complaints or suggestion to be given to the college. It is observed that the complaints regarding sexual harassment in the college are NIL due to effective implementation of discipline in the college premises.

Anti- Ragging Committee has been constituted to handle the issues pertaining to ragging. As a Social Responsibility towards Community, college NSS/ NCC teams create awareness among the people in surrounding villages on various issues. The Institution conducted many programs such as, blood donation camps, Social awareness programs & welfare services, computer awareness program for public, especially in rural areas, organizing rally on creating awareness on cleanliness, and volunteer services to schools and villages.

Environment and Sustainability:

Environmental Sciences is offered as a compulsory course by JNT University to all branches of Engineering from 2013 Regulations. This course focuses on Environment, Ecosystems, Bio-diversity, addresses environmental pollution and conservation of natural resources. The details of the course related to Environment and Sustainability are given also in the additional information.

In Civil Engineering program, students learn Environmental Engineering 1 and 2 as core subjects. Students opt as electives from Environment and sustainability, Air pollution and solid waste management, Water and waste water treatment.

Electrical Engineering Program has Non Conventional Energy Source subject in III semester which deals with study of different Non Conventional Energy Sources. Mechanical Engineering Program has elective course Energy Conversion –III.

Many Projects are undertaken by final year students relating to environmental issues like climate change, water pollution, sewage treatment, air pollution, rain water harvesting, modeling, flood prediction, green concrete etc.

The following environmental initiatives are implemented by the Institute:

- A Roof-top solar power plant of 150 kW is installed which generates 15000+KWH Units of Energy.
- There are multiple Rain Water Harvesting percolating structures in the campus which keep the ground water charged during rainy season
- Ours is a Plastic-free green campus implementing Swatch Bharat Abhiyaan.
• Tree plantation and various environment-related awareness seminars are conducted on regular basis to inculcate the importance of the environment to the student community.

for the complete write up please click the link

https://www.vsm.edu.in/engineering/pdfs/NAAC/C-1/1.3.1.pdf
List of programmes and number of students undertaking project work/field work/internships

Any additional information

1.4 Feedback System

1.4.1 Institution obtains feedback on the syllabus and its transaction at the institution from the following stakeholders

1) Students

2) Teachers

3) Employers

4) Alumni

Answer: A. All of the above

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any additional information (Upload)</td>
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</tr>
<tr>
<td>Action taken report of the Institution on feedback report as stated in the minutes of the Governing Council, Syndicate, Board of Management (Upload)</td>
<td>View Document</td>
</tr>
<tr>
<td>URL for stakeholder feedback report</td>
<td>View Document</td>
</tr>
</tbody>
</table>

1.4.2 Feedback process of the Institution may be classified as follows:

Options:

1. Feedback collected, analysed and action taken and feedback available on website
2. Feedback collected, analysed and action has been taken
3. Feedback collected and analysed
4. Feedback collected
5. Feedback not collected

Answer: A. Feedback collected, analysed and action taken and feedback available on website

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upload any additional information</td>
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</tr>
<tr>
<td>URL for feedback report</td>
<td>View Document</td>
</tr>
</tbody>
</table>

2. Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Average Enrolment percentage (Average of last five years)

Answer: 59.77

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

Answer:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Seats</td>
<td>281</td>
<td>197</td>
<td>285</td>
<td>350</td>
<td>429</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)

Answer: 60.47

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

Answer:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>140</td>
<td>101</td>
<td>157</td>
<td>174</td>
<td>205</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

Answer:

Response:

VSM College of Engineering provides inclusive and need based education for all students including students coming from vernacular languages, slow learners, advanced learners, and socially, economically backward sectors. The institution follows a well designed academic plan to assess the students, implement desired learning objectives and guide them to improve their academic performance.

An admission Committee is formed for all UG/PG Programs at the commencement of the academic year which follows the rules and regulations of JNT University, Kakinada and Government norms.

Identifying learners abilities: After admissions into various Programmes, a diagnostic test is conducted in Mathematics, Physics, Chemistry and English. The question papers are set as per the difficulty level and the
learning abilities. On the basis of this test and the marks secured in the qualifying examination (+2), students are categorized into two batches: those who score above 60% are shortlisted as academically advanced learners and those who get below 40%, as academically slow learners. Subject experts and class in-charges through classroom interaction and counselling classes, identifies the strengths and weakness of individual students. In addition the HODs with the help of Mentors identify students who are slow learners and having backlogs.

**Support for slow Learners:**

**Remedial classes** are scheduled for slow learners in the regular class work time-table for every course. Slow learners are given extra coaching through, reading, peer group study, assignments and tests to enhance inclusive learning. The **remedial programme** improves the students participatory response in the classroom, internal tests and the CIA. **Bridge courses** in Programming, Mathematics, and English Communication Skills are conducted for Lateral Entry students to bridge the gap between the Diploma program and Undergraduate program. This provides confidence among Lateral Entry students to be on par with the regular students.

*Tutorials* are included in the regular class work time-table to solve more number of problems and to revise the topics covered. The **communication skills** are given special emphasis for students coming from the rural background. Think-Pair-Share, POGIL teaching methodologies are used to enhance the learning abilities of students. Course Review Meeting is conducted after Mid Semester Exam to assess the learning level of students and additional classes are arranged for the slow learners.

The **VSM finishing school** provides a meticulously planned systematic approach distributed across all semesters to build the foundation and sharpen the skills of the slow learners.

**Supporting advanced Learners:**

Advanced learners are exposed to new technologies after class hours, by encouraging them to participate in the R&D activities of the institution, projects lab and funding for innovative projects.

To enhance the research competency, they are motivated to participate in research activities organized by Parent University. The guidance workshop for research activity and research project competition is organized at college level.

They are guided to take up additional courses viz. NPTEL courses, MOOCs, ORACLE certification, Microsoft certification, learn Tools like MATLAB, Android OS, PSCAD, Mi-Power, PSPICE, CAD/CAM.

for the complete write up click the link

https://www.vsm.edu.in/engineering/pdfs/NAAC/C-2/2.2.1.pdf

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<th>File Description</th>
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<tr>
<td>Past link for additional Information</td>
<td>View Document</td>
</tr>
</tbody>
</table>

**2.2.2 Student- Full time teacher ratio (Data for the latest completed academic year)**

**Answer:** 7.1
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

Answer:

Response:

The faculty of VSM College of Engineering are well trained to adopt student-centric approach in their class rooms. It is a regular practice of IQAC to organize orientation and skill training programmes every year/semester for the faculty before the commencement of the semester to enhance their pedagogy of teaching. Vibrant learner-centric teaching-learning process is used in the delivery of curriculum for the all-round development of students. Learning by Doing, Think- Pair-Share, Course Based Projects, Field visit / Guest lecture, Certificate courses, Project Based Learning are a few to mention.

As per the guidelines of AICTE, we are oriented on the Revised Blooms Taxonomy structure that focuses on outcome based education. It is an institutional practice to prepare the Programme outcomes, Programme specific outcomes and course outcomes, lesson plans and instructional strategies on a common format (Objective Oriented Learning Process) and submit them to the Academic Dean’s office after due scrutiny in the respective departments by the subject expert and HOD. Teachers design lesson plans and methodology in order to achieve specific learning outcomes. Some of the strategies used in the class are:

Problem solving skills:

- Class Assignments
- Think Pair Share
- Course-Based Projects
- Project Based Learning
- Case studies to develop problem solving skills
- Brain storming to generate ideas
- Mind-mapping
- Data mining
- Logic approximation

Participative learning:

- Flipped classroom & Blended learning
- Show and Tell
- Open House
- Role plays for conceptual clarity and participative approach.
- Guided group discussion to promote communication ability, generate ideas, interpersonal skills.
- Mock interviews
- Panel discussions to present ideas
- Puzzles, Drama, Debates, Games

Experiential learning:

- Learning by doing
- Internships/Industry Oriented Mini projects
- Field projects and internships
- Field/industry visits for survey
- Audio visual learning in Language Lab.
- Poster presentation, creating and including video clips
- Virtual labs
- Models and exhibits to promote creativity and experiential learning
- Education tours
- Movie making

Every faculty of the institution uses one or the other Student-centric methods and lot of E-content are developed. IQAC and Academic Audit cell keeps track on the Student-centric methods followed by each faculty.

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2.3.2 Teachers use ICT enabled tools for effective teaching-learning process.

**Answer:**

**Response:**

ICT is one of the most critical tool in enhancing the quality of education as it provides better learning outcomes and based on specific needs of learners, it can be made adaptive. Faculty can leverage ICT for effectively imparting desired skills amongst students. Teachers use ICT to address the issues related to advance learner and slow learner by creating interactive multimedia based instructional material. The benefits of e-learning include anytime learning, anywhere learning and asynchronous interaction.

The following are few ICT initiatives undertaken in recent past:

Institute has adequate ICT enabled tools and facilities for effective teaching-learning process. Classrooms have LCD projectors with computer systems, speaker and Wi-Fi, enabling teacher to use multimedia for graphical/animated/video based learning. The seminar hall is equipped with projectors audio and Wi-Fi facility. All departments are provided with internet connection through LAN. The Institute has state of the art smart classroom with smart board, lighting control, surround sound system, video conferencing and recording facilities. PowerPoint presentations with videos are used by teachers for effective teaching. Google classroom/ “Conduct Exam” extensions for Chrome are used to conduct online tests and assessments.

Apart from NPTEL courses, students are encouraged to undergo online courses and obtain Certification from reputed online training platforms like Coursera, Udemy, EdX, etc. which significantly increases their employability and also help to pursue higher education.

The institute has a well-equipped library including e-library. A variety of e-books and e-journals are subscribed for the purpose of improving knowledge and teaching learning by e-learning. The institute is a member of the DELNET/INFLIBNET and facility to conduct webinars is provided for the conferences and seminars. Webinars are organized by the departments where teachers and students can register and participate in the activity.

The institute has facility to update the academic process and ensures that information is shared with the faculty, student, parent, and management through college portal and the website. During lockdown period the institute changed its Teaching Learning Strategy from Onsite to Online. The teachers were trained on using various platforms (ZOOM, WEB-EX) for online teaching, assessment by Google exams and conducting webinars by eminent faculty across the globe. The teachers were trained to create their own ICT enabled tools like audio/video PPT’s and videos.
2.3.3 Ratio of students to mentor for academic and other related issues (Data for the latest completed academic year)

Answer: 12.41

2.3.3.1 Number of mentors

Answer: 83

2.4 Teacher Profile and Quality

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

Answer: 100

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)

Answer: 8.13

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

Answer:

### 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)

**Answer:** 3.7

### 2.4.3.1 Total experience of full-time teachers

**Answer:** 536

### 2.5 Evaluation Process and Reforms

#### 2.5.1 Mechanism of internal assessment is transparent and robust in terms of frequency and mode

**Answer:**

**Response:**

The institute follows the norms, rules, and procedures laid out by the university. Two theory mid semester exams, two assignment tests and a mid-practical exam are conducted for each paper of the subject in each semester for B. Tech & M. Tech Programs. Seminars, group discussions, show and tell and quizzes etc. activities are also conducted. The institution has developed an effective mechanism for efficient and transparent internal evaluation through Examination Committee. The schedules of internal/mid-semester/end-semester examinations, submission of assignments, tutorials and conduct of practical’s are communicated to students and faculty at the beginning of the semester through the institute academic calendar. Time Table & Circular for all IA will be circulated to all classrooms & displayed on the department notice board. The syllabus for internal assessment will be communicated to students well in advance.

The internal assessment evaluation process is communicated to students by the respective faculty and also during an orientation program for first-year students. IQAC monitors academic calendar and its effective implementation as well. Internal squad has been formed for vigilance during the examination.

Question papers are set based on Course Outcomes and approved by the department review committee. They are thoroughly scrutinized to ensure the standard, spread of the syllabus and mapping of COs and follow BLOOMS taxonomy. For engineering drawing and machine drawing practice and examinations we are using AUTOCAD. During these COVID times, some of the teachers are conducting online assignment tests as a part of the internal assessment. Solutions are prepared by the faculty upon completion of the assessment. The tutorials, assignments and projects are assessed according to the guidelines laid down by the university scheme prepared by the faculty. The answer scripts are given to
students after the completion of the evaluation for verification of the marks. The Challenge evaluation system and showing the evaluated answer script to the student are the measures taken as a part of the transparency in the evaluation system.

To revise and refresh the conceptual knowledge of various subjects, the concerned faculty conducts informal oral tests and assesses the understanding of the students from time to time including remedial students. The faculty makes the progressive evaluation of seminars, presentations, home assignments and group tasks in presence of the students and suggests guidelines for future improvements.

A Grievance Redressal Cell has been established. Examination related grievances have been attended by this Cell in time. This mechanism is transparent, time bound and efficient. Examinations are held at the college level as a part of internal evaluation as well as university conducted written examinations. Grievances from these two types of examination are solved through a system and a proper process laid down by the university.

for the complete write up click the link

https://www.vsm.edu.in/engineering/pdfs/NAAC/C-2/2.5.1.pdf

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2.5.2 Mechanism to deal with internal/external examination related grievances is transparent, time-bound and efficient

Answer:

Response:

The institute has well developed mechanism to deal with examination related grievances in a transparent, time-bound and efficient manner. The Institute follows all the guidelines of JNT University. Grievances of students are resolved within a specified time limit. The grievance redressal procedure related to examination are as follows:

Before the commencement, grievances related to non-issuance of examination hall ticket, correction in name etc. are addressed to Principal. He takes the necessary action with examination department for verification and compliance. Examination department after verification carries out the necessary corrections and orders are issued accordingly.

Flying squad of the institute functions to monitor the conduct of examination as well as to take disciplinary action in case of unfair means. During the examination, in case the student is found using unfair practice by the invigilator, he takes action as per the defined examination policy. Some of the policy guidelines are: Student’s written statement in the presence of the supervisor and invigilator is taken. The mater is then submitted to the Examination Committee. The Examination Committee calls for a meeting of its members, the student and the invigilator. Depending up on the nature of the unfair means, the committee after due
deliberations takes necessary action leading to supplementary examination or refereeing the matter to the Grievance Redressal Committee. The Grievance Redressal Committee follows the set procedure and recommends the appropriate action if any.

For grievances redressal related to marks, student can apply for obtaining photocopy of answer book of the examinations conducted by Institute within 7 working days from the date of the declaration of result. The answer sheets are shown to the students after evaluation for their information which provides transparency and accountability in the evaluation process. Students’ grievance are taken care off and addressed in a timely manner. Finalized marks are verified by the faculty and signed off by the students. Online internal marks are submitted to the university through faculty’s login account on the university internal examination portal.

If any student desires, he can apply for the copy of the Answer book. After going through the photocopy if there are grievances like ‘totaling mistake’ and or ‘question not assessed’. The student can bring the same to the notice of examination department. The examination department after initial verification refers the same to the evaluator who had assessed the paper for necessary corrections. If the examinee is not satisfied with the marks awarded, he / she may apply for revaluation to the Institution within a period of 7 working days. In case of revaluation, the answer book is first masked and sent for re assessment to another faculty. The marks obtained after revaluation shall be accepted as per University Rules. In case the student is not satisfied with the internal marks he/she can approach the Principal for reconsideration.

for the complete write up click the link

https://www.vsm.edu.in/engineering/pdfs/NAAC/C-2/2.5.2.pdf

### 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.**

**Answer:**

**Response:**

VSM College of Engineering is affiliated to J.N.T. University, Kakinada and hence the syllabus/curriculum prescribed by the university is followed. JNTU curriculum contains the core and elective courses. The curriculum is formulated and reviewed by the Board of Studies (BOS) of the University.

VSM COE follows Outcome-based education through which desired outcomes are achieved in terms of knowledge, skills, attitudes and behavior at the end of a program. Teaching with this consciousness and following the associated effort constitutes outcome-based education. Program Outcomes (POs) are statements that describe what students are able to do after graduating from the respective program. These relate to the skills, knowledge, analytical ability, attitude, and behavior that students acquire through the program. National Board for Accreditation (NBA) defined 12 POs for Engineering graduates focused on following Graduate attributes:
Program Specific Outcomes (PSOs) are a statement that describes what students are expected to know and be able to do in a specialized area of Engineering/MBA after graduation from a program. PSOs are framed for each program offered in the Institution.

Course Outcomes (COs) of a course are the statements describing what the student would be able to do after studying a course. VSMCOE is affiliated to JNTU and the syllabus is framed and disseminated by the university. The syllabus provided by the university specifies the Course objective and course outcomes for each course. If the COs specified in the syllabus does not cover the essential Bloom's taxonomy levels, the course instructor modifies the CO's.

Awareness of Program Outcomes (POs), Program Specific Outcomes (PSOs), and Course Outcomes (COs) among faculties and students in the Institute are done by:

- POs and PSOs boards are displayed in the corridor of each department.
- POs and PSOs for each program are disseminated to the students by respective Department HODs during Induction Program arranged by the institute for newly joined students.
- POs and PSOs for each program are made available to the students on the college website www.pestrust.edu.in/pesitm
- Students are made aware of POs, PSOs, and COs through the handbooks circulated among the students.
- The course instructor describes the relevance of POs, PSOs and COs to students during the beginning of each course.
- Students are encouraged to write POs, PSOs, and Course Outcomes in assignments given by the Course Instructors.
- Students are made aware of the COs of each Course by mentioning COs in the Internal Assessment question papers.

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<tbody>
<tr>
<td>Upload COs for all Programmes (exemplars from Glossary)</td>
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<td>Upload any additional information</td>
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2.6.2 Attainment of programme outcomes and course outcomes are evaluated by the institution.

Answer:

Response:
The assessment methods and processes used for the attainment measure of each of the Program Outcomes and Program Specific Outcomes are as follows

**Assessment of COs / POs**

- For each course, the course instructor will identify 5-6 course outcomes (CO) & these COs are mapped with relevant Program Outcome (PO) as high, medium & low.
- The consolidated matrix of CO-PO mapping is done for each program & the same for the CO-PSO mapping.
- CO attainment for each course is calculated by considering the marks scored by the student in internal & external examination.
- The Program Outcomes and the Program Specific Outcomes are assessed with the support of course outcomes of the relevant courses through direct and indirect methods.
- Direct methods are provided by Internal and External examinations against course outcomes.
- Average attainment of the direct method will be evaluated based on University Examination, Internal assessment, and Assignment.
- Indirect assessment strategies are implemented by embedding them in the Student Exit Survey, Employer Survey, and Alumni Survey.
- PO Attainment (%) = (weightage: 80%) x (Average attainment (direct method)) + (weightage:20%) x (Average attainment (indirect method))
- The attainment of CO for each course is recorded & maintained in an excel sheet.
- By considering CO-PO mapping for each course, final PO attainment is recorded & the data is maintained.

**The methods which are used to assess the CO/PO are given below.**

- At the end of the semester, the university will conduct examinations & based on the results of the university COs and POs are measured. For each course, assignments are given to students and they are part of Continuous Internal Evaluation (CIE). The performance of students in 2 IA tests is considered to evaluate whether COs are achieved or not.
- An alumni survey is done to find out the level of relevance of the curriculum with the expected skills of the industries.
- Employer surveys are conducted for finding out whether the knowledge, skill, and attitude acquired from the institution is adequately satisfying their expectation or not.
- Student Exit survey is done to understand the impact of classroom learning, various value added courses offered, pre-placement training imparted to them on their overall development.

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2.6.3 Average pass percentage of Students during last five years

**Answer:** 74.21

2.6.3.1 Number of final year students who passed the university examination year-wise during the last five years
Answer:

304     327     196     233     160

2.6.3.2 Number of final year students who appeared for the university examination year-wise during the last five years

Answer:

402     413     258     295     261

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2.7 Student Satisfaction Survey
2.7.1 Online student satisfaction survey regarding teaching learning process

Answer:

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<tr>
<td>Upload database of all currently enrolled students (Data Template)</td>
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3. Research, Innovations and Extension
3.1 Resource Mobilization for Research
3.1.1 Grants received from Government and non-governmental agencies for research projects, endowments, Chairs in the institution during the last five years (INR in Lakhs)

Answer: 2.8

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

Answer:

1.445   0.507    0.30     0.30     0.25

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<tr>
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<tr>
<td>e-copies of the grant award letters for sponsored research projects / endowments</td>
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</table>
3.1.2 Percentage of teachers recognized as research guides (latest completed academic year)

Answer: 0

3.1.2.1 Number of teachers recognized as research guides

Answer: 0

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

Answer: 96

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

Answer:

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3.1.3.2 Number of departments offering academic programs

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<td>List of research projects and funding details</td>
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<td>Paste link to funding agency website</td>
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3.2 Innovation Ecosystem

3.2.1 Institution has created an ecosystem for innovations and has initiatives for creation and transfer of knowledge

Answer:

Response:

VSM College of Engineering has established an Entrepreneurship Development Cell, Research Cell and Incubation Centre. The early initiative to create an ecosystem for innovations is the formation of various
student clubs for creation and transfer of knowledge. The hidden talents of the students are identified and nurtured through student clubs and extracurricular activities.

Our Institute Innovation Council (IIC) approved and certified by Innovation Cell, MHRD primarily established to encourage students, staff and alumni for entrepreneurship and innovation. It provides a platform to the prospective entrepreneurs to convert business plan into a commercially viable project by applying technical and managerial skills for societal needs. It is also aimed to resolve the issues of local area.

The following Facilities are available for Innovation & Incubation at VSM COE:

Fully furnished office with required space, personal computers, printers and scanners,

software tools for analysis and design and high speed internet connectivity, Audio-video conferencing facility, equipment in laboratory or workshop, Digital Library facility and most important being the support and guidance of VSM Group Alumnai spread across the globe.

The Entrepreneurship Development Cell, Research Cell and Incubation Centre together support the students in business network support through mentoring, providing access to professionals, relevant training programs, legal advice, guidance in registering IPR/company and Seed Funding Assistance.

On the activity side, students are well-informed about Incubation Centre. Eminent industrialists and budding entrepreneurs are often invited to motivate young students. Prospective start-ups are advised to submit application with an executive summary of business plan. Advisory Board’s meetings are conducted. The executive summary is presented to Advisory Board. Advisory Board provides guidance about viability of the project. Modifications if any are suggested and plan is finalized. Incubation Project proceeds further. Our EDC has an advisory board comprising members like, chartered accountant, bank manager, practicing advocate, sr. managers from industry, renowned regional entrepreneurs, principal of the institute and faculty in-charge.

Activities Undertaken by EDC include awareness programs for 3rd & final year students by institute which were conducted during 2017-18 & 2018-19. Many webinars were organized during COVID times. Information about incubation centre is constantly shared with students and they are motivated for entrepreneurship and innovation. Our Institution has 10 above active MoU’s with the best of the Industries in all branches who support students technically by conducting regular training programs and competitions leading to entrepreneurship, innovation and incubation.

Following workshops were carried out.

Doing Various NSS Activities

Workshop on Introduction to Embedded Systems

Training Program on Recent Trends in IT

Workshop on Automobile

Training Program on UI Design

Other Initiatives:

The institute consistently provides motivation, support and platform for students to showcase their skills and knowledge in various competitive technical events.

for the complete write up click the link
3.2.2 Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the last five years

Answer: 137

3.2.2.1 Total number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship year-wise during last five years

Answer:

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<thead>
<tr>
<th>Year</th>
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<td>2018-19</td>
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<td>2016-17</td>
<td>28</td>
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<tr>
<td>2015-16</td>
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3.3 Research Publications and Awards

3.3.1 Number of Ph.Ds registered per eligible teacher during the last five years

Answer: 0

3.3.1.1 How many Ph.Ds registered per eligible teacher within last five years

Answer: 0

3.3.1.2 Number of teachers recognized as guides during the last five years

Answer: 0

3.3.2 Number of research papers per teachers in the Journals notified on UGC website during the last five years
**3.3.2.1 Number of research papers in the Journals notified on UGC website during the last five years.**

Answer:

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<tr>
<th><strong>File Description</strong></th>
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<tbody>
<tr>
<td>List of research papers by title, author, department, name and year of publication</td>
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**3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/international conference proceedings per teacher during last five years**

Answer: 0.24

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

Answer:

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<tr>
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**3.4 Extension Activities**

**3.4.1 Extension activities are carried out in the neighborhood community, sensitizing students to social issues, for their holistic development, and impact thereof during the last five years.**

**Answer:**

Response:

For the holistic development of students, various extension activities are undertaken in the institute. Many of these extension activities are carried out in the neighborhood community so as to sensitize students about current social issues. It is expected from Engineering students to offer technological solutions to hard pressing societal issues by undertaking socially relevant project works, research studies, etc. Students should be able to understand and respond to the needs of the local community and institutes should extend all possible support.

Role of the Institution in extension activities is to sensitize students to social issues through various activities, to be responsible for well-being of the neighborhood society, to collaborate with other social organizations to make the services more effective and to ensure the holistic development of the community.
Extension activities conducted for community:

The following are links related to extension activities

https://www.vsm.edu.in/engineering/pdfs/NAAC/C-3/3.4.3_supported_19-20.pdf
https://www.vsm.edu.in/engineering/pdfs/NAAC/C-3/3.4.3_supported_18-19.pdf
https://www.vsm.edu.in/engineering/pdfs/NAAC/C-3/3.4.3_supported_17-18.pdf
https://www.vsm.edu.in/engineering/pdfs/NAAC/C-3/3.4.3_supported_16-17.pdf
https://www.vsm.edu.in/engineering/pdfs/NAAC/C-3/3.4.3_supported_15-16.pdf

Adoption of Rayavaram village:

<table>
<thead>
<tr>
<th>S.No</th>
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<th>Dates</th>
<th>No. of participants</th>
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<tbody>
<tr>
<td>1</td>
<td>inaugural function &amp; door to door survey</td>
<td>24-02-2020</td>
<td>55</td>
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<tr>
<td>2</td>
<td>Plastic Free Campaign</td>
<td>25-02-2020</td>
<td>55</td>
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<tr>
<td>3</td>
<td>Plantation Programme</td>
<td>26-02-2020</td>
<td>55</td>
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<tr>
<td>4</td>
<td>Blood Group Testing</td>
<td>27-02-2020</td>
<td>55</td>
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<tr>
<td>5</td>
<td>Swachh Bharat</td>
<td>28-02-2020</td>
<td>55</td>
</tr>
<tr>
<td>6</td>
<td>Arduino Workshop And Electrical Wiring</td>
<td>29-02-2020</td>
<td>55</td>
</tr>
<tr>
<td>7</td>
<td>Door To Door Awareness On Corona Virus</td>
<td>1-03-2020</td>
<td>55</td>
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Various student chapters under various professional bodies were formed for the students at departmental levels. Students actively participate and organise various events through these chapters as per the departmental needs and requirements for overall development of students.

The following are the impact of extension activities:

- Students very much realized the responsibility towards the society.
- Environmental awareness is improved among the students, villagers in general.
- Collaboration with organizations like Rotary club, Forest department, Police department, NGO raise your hands, helped in organizing activities effectively.
People got rid of unhealthy habits.

Because of appreciation by collaborating organizations, media reports and display students are highly motivated.

Appreciation by Govt/Non-govt Agencies:

- Police department has appreciated activity of awareness program of cyber crime.
- Panchayat secretary Rayavaram appreciated the work done in their village.
- Rotary club appreciated the work of blood donation.
- Headmasters appreciated our Teachers and students in program.

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</tbody>
</table>

3.4.2 Number of awards and recognitions received for extension activities from government/ government recognised bodies during the last five years

Answer: 16

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

Answer:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Award</td>
<td>4</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>1</td>
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</table>

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of awards for extension activities in last 5 year</td>
<td>View Document</td>
</tr>
<tr>
<td>e-copy of the award letters</td>
<td>View Document</td>
</tr>
</tbody>
</table>

3.4.3 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)

Answer: 71

3.4.3.1 Number of extension and outreached Programmes conducted in collaboration with industry, community and Non-Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., year-wise during the last five years
Answer:

<table>
<thead>
<tr>
<th>Year</th>
<th>2019-20</th>
<th>2018-19</th>
<th>2017-18</th>
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<td>25</td>
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<td>5</td>
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<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reports of the event organized</td>
<td>View Document</td>
</tr>
<tr>
<td>Number of extension and outreach Programmes conducted with industry, community etc for the last five years</td>
<td>View Document</td>
</tr>
<tr>
<td>Any additional information</td>
<td>View Document</td>
</tr>
</tbody>
</table>

3.4.4 **Average percentage of students participating in extension activities at 3.4.3. above during last five years**

**Answer:** 90.14

3.4.4.1 **Total number of Students participating in extension activities conducted in collaboration with industry, community and Non- Government Organizations such as Swachh Bharat, AIDs awareness, Gender issue etc. year-wise during last five years**

Answer:

<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>1840</td>
<td>1267</td>
<td>1198</td>
<td>693</td>
<td>196</td>
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<table>
<thead>
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<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report of the event</td>
<td>View Document</td>
</tr>
<tr>
<td>Average percentage of students participating in extension activities with Govt or NGO etc</td>
<td>View Document</td>
</tr>
<tr>
<td>Any additional information</td>
<td>View Document</td>
</tr>
</tbody>
</table>

3.5 **Collaboration**

3.5.1 **Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship per year**

**Answer:** 640

3.5.1.1 **Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship year-wise during the last five years**

Answer:

<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>112</td>
<td>431</td>
<td>53</td>
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<td>15</td>
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</table>

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>e-copies of related Document</td>
<td>View Document</td>
</tr>
</tbody>
</table>
3.5.2 Number of functional MoUs with institutions, other universities, industries, corporate houses etc. during the last five years

Answer: 27

3.5.2.1 Number of functional MoUs with Institutions of national, international importance, other universities, industries, corporate houses etc. year-wise during the last five years

Answer:

<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>Count</td>
<td>10</td>
<td>8</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

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.

Answer:

Response:

To realize the desired outcomes of qualitative learning, we have provided facilities for leveraging information technology. The college is offering UG & PG Programmes, Add-on, Certificate and Vocational courses, to cater the needs of 1030 students in current academic session.

Institution caters to the needs of students and has excellent infrastructural facilities spread over 7.5 Acres of land with 16209 Sq.mts built up area. The college has taken a number of initiatives to make the teaching-learning effective and efficient by providing adequate academic infrastructure.

The Institution raised its infrastructure facilities to 80 laboratories, 36 classrooms, 6 tutorial rooms, 3 Seminar Halls and 1 Auditorium as per the SRA, AICTE guidelines. All the classrooms, seminar halls and many of the Laboratories are equipped with ICT facilities. All the laboratories have prescribed equipment as per JNTU Curriculum from basic tools to advanced research oriented equipment and are well maintained. Computer laboratories have up-to-date PCs with installed licensed software as well as open source software. 2:1 Student Computer Ratio is being maintained in the institute.

All departments have their own library for references. The resources of each department are shared by all the other departments in case of necessity. VSMCOE has a Computer centre, comprising 8 computer labs with about 520 computers. All the departments make use of computer labs to conduct tests like online test, aptitude
test and so on. Besides strong LMS system developed using ICT, the college also offers some classes on cloud computing.

**Specialized facilities and equipment for teaching:** In engineering & science laboratories, elaborative charts are available for teaching and learning activities including instructions about Do’s and Don’t in the laboratory premises. Additional Experiments beyond the prescribed JNTU curriculum are carried out in most of the labs to fulfill the curriculum gaps.

**Research space:** A well-developed research lab facility is provided with high end equipment for quality research.

The academic infrastructure is complemented with Principal chambers, Administration office, Board Room, Director cabins, Incubation Center, Examination Branch, IQAC cell, EDC cell, Innovation Council, Institute Industry Interaction Cell, Training and Placement office, HOD and faculty cabins, consumer store, canteen, medical room, girls and boys waiting rooms, NSS room, Alumni office, NSS Room, ladies common room, a conference hall and a canteen.

Institution has a rich exclusive library. At present the total volumes in our library are 19994. We receive 40 journals/periodicals, 15 magazines, 300 CDs for reference in various subjects. The institution has subscribed to many online journals through DELNET, INFLIBNET etc. Everyday a good number of students, faculty and research scholars make use of library for enrichment of their knowledge.

A separate Digital Library / Internet Centre with 30 computers with high speed internet connectivity is maintained in the campus to facilitate the self learning among students. Kindle E-books are made available in the library. They can download materials from the internet and copy it on CD/Pen drives. The Digital Library is kept open on all days.

For complete writeup please click the below link

https://www.vsm.edu.in/engineering/pdfs/NAAC/C-4/VSM-QLM-4.1.1.pdf

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</table>

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

**Answer:**

Keeping in view the importance of sports, yoga and cultural activities and their role in students’ health and personality development, the college offers immense opportunities and resources to the students.

**Sports and Games:** Quality physical education programs are needed to increase the physical competence, health-related fitness and self-responsibility. The sports department is headed by PET and Sports Club is under the convenership of a senior faculty member who coordinates all the sports activities.

**The following Indoor and Outdoor facilities are available in college.**

- 3 Badminton courts
Basket Ball court
5 Table Tennis Tables
30 chess Boards
12 caroms Boards
Gym with Imported equipment
Yoga Center with a permanent Instructor
Rest rooms for Players
A separate Medical Center with full time Doctor, Nurse and adequate medicines
Cricket and Football Ground
Volleyball Courts

**Gymnasium** is also available for the students. It provides an arena for the body builders and the students who wish to maintain their general health. A number of ultra-modern equipment is made available.

**Yoga Club** in the college provides training of yoga to the students and organizes various workshops for the holistic development of the teachers and the students. An exclusive facility is provided with a dedicated yoga teacher for training both the students and faculty. Practicing yoga helps to engineer a deep lasting personal transformation. Every year on June 21st, the International Day of Yoga is conducted where all the students and faculty proactively participate. Best performers are rewarded to encourage active and more participation. Self defence training is provided to the girl students through Karate. Trained coaches train the potential sports persons regularly. The students who outperform in college events are short-listed for the college team to participate in inter-college events. The college organizes the annual Athletic Meet every year and the winners are awarded in the Annual Prize Distribution Function. Rs.611104/- has been spent on sports infrastructure and its activities.

The following infrastructural facilities are available on the campus.

<table>
<thead>
<tr>
<th>Facility</th>
<th>Numbers (Area)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditorium</td>
<td>01 (290 m²)</td>
</tr>
<tr>
<td>Conference Hall &amp; Activity Room</td>
<td>02 (172 m²) &amp; (111 m²)</td>
</tr>
<tr>
<td>Multi-Purpose Hall</td>
<td>01 (300m²)</td>
</tr>
<tr>
<td>Play-Ground</td>
<td>03 (1170 m²), (133 m²) &amp; (5073 m²)</td>
</tr>
</tbody>
</table>

**Cultural Activities:** The Cultural Committee of the college organizes the Sparks Program at the beginning of the session that includes various cultural events and the schedule of different activities is included in the academic calendar of the college. The college organizes Inter-Collegiate cultural fest to commemorate the Andhra Pradesh State Formation Day every year. The cultural team of the college participates in different competitions every year. Our students have participated in many Fests and Competitions.

For the complete writeup please click the below link:

https://www.vsm.edu.in/engineering/pdfs/NAAC/C-4/4.1.2.d.pdf

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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)**
Answer: 100

4.1.3.1 Number of classrooms and seminar halls with ICT facilities

Answer: 42

<table>
<thead>
<tr>
<th>File Description</th>
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<tbody>
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</tbody>
</table>

4.1.4 Average percentage of expenditure, excluding salary for infrastructure augmentation during last five years (INR in Lakhs)

Answer: 31.32

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

Answer:

<table>
<thead>
<tr>
<th>Year</th>
<th>Expenditure</th>
</tr>
</thead>
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<tr>
<td>2019-20</td>
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</tr>
<tr>
<td>2018-19</td>
<td>97.57</td>
</tr>
<tr>
<td>2017-18</td>
<td>149.92</td>
</tr>
<tr>
<td>2016-17</td>
<td>156.02</td>
</tr>
<tr>
<td>2015-16</td>
<td>90.47</td>
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</table>

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upload Details of budget allocation, excluding salary during the last five years (Data Template)</td>
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</tr>
<tr>
<td>Upload audited utilization statements</td>
<td>View Document</td>
</tr>
<tr>
<td>Upload any additional information</td>
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</tbody>
</table>

4.2 Library as a Learning Resource

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

Answer:

VSM College Library is an important source of knowledge for young minds. The library is spread over a carpet area of 615 sq.mtrs., the reading space is 187 sq.mtrs. The number of seats in reading space is 80. Library has a collection of around 19994 books and 60 periodical journals and Magazines, Thesis reports, Book banks, Proceedings, News clippings and Back volumes. It also has archive of college magazine, News Letter, Annual Reports, Syllabus, Course Materials, Semester Question Papers, Thesis, Projects, Publications, Videos, Audios and photographs etc. The digital library is an integral part of the main Library acting as backbone to the teaching and learning process. The library is fully automated with library management software, SOUL 2.0 version. The OPAC page is the home page of the college library. The Online Publicc Access to Cataloguing (OPAC) page, being the gateway to library collection, shows the kind of knowledge-store that exists in the institution. The entire collection of our library that can be accessed through the IP address http://18.224.73.193/libsystem the intranet. The key functions of the library automation, are acquisition, cataloguing, circulation, serials control, acquisition, Course management, reports and reference service.
**Digital Library:** The institute has a digital library with 20 terminals. It is fully automated with the help of Soul Software. It has a collection of **40,000** e-journals from DELNET, Science Direct, ASCE, Springer, ASME, ASTM, JGATE, MGH, ACM publications. The digital library is available on LAN through IP address: http://18.224.73.193/libsystem An E-learning centre with in the digital library is established with NPTEL video lectures from IITs, MIT, etc related to all Engineering subjects. These E-learning data can be reached at http://192.168.1.9 in the LAN.

The following are ICT support deployed to provide access to the library:

- OPAC
- Electronic Resource Management package for e-journals
- Federated searching tools to search articles in multiple databases
- Library Website
- In-house/remote access to e-publications
- Library automation
- Institutional Repository
- Content management system for e-learning
- Participation in Resource sharing networks/consortia (like INFLIBNET)

Every department is connected to the library via intranet where in the faculty can network with the above facilities. Faculty has remote access to e-publications. Library information is available on institute web site. Within the library, 4 PCs are available, along with printers for automation and other activities. Institute is a member of the DELNET Consortium and INFLIBNET.

4.2.2 **The institution has subscription for the following e-resources**

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

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

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)**
Answer: 1.68

4.2.3.1 Annual expenditure of purchase of books/e-books and subscription to journals/e- journals year wise during last five years (INR in Lakhs)

Answer:

<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>
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<td>2.821</td>
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<td>0.858</td>
<td>1.108</td>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Details of annual expenditure for purchase of books/e-books and journals/e- journals during the last five years (Data Template)</td>
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<tr>
<td>Audited statements of accounts</td>
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<tr>
<td>Any additional information</td>
<td>View Document</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

Answer: 24.68

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

Answer: 290

<table>
<thead>
<tr>
<th>File Description</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Details of library usage by teachers and students</td>
<td>View Document</td>
</tr>
<tr>
<td>Any additional information</td>
<td>View Document</td>
</tr>
</tbody>
</table>

4.3 IT Infrastructure

4.3.1 Institution frequently updates its IT facilities including Wi-Fi

Answer:

Computing Facility:

As the world is becoming completely digital, VSM is keen in giving computer education to all the students in the college and has updated its IT infrastructure to cater to the needs of the students ensuring effective and outcome based teaching-learning. Value added IT courses are conducted in all the departments. VSM College has a total of 520 computers which are of latest hardware configuration. There are around 8 Computer labs in the campus. The Student - Computer ratio is 3:1. All the departments and the research centres have their own computers which are connected though a campus network and through internet with the rest of the world.

Servers, Open source software and Propriety Software:

VSM maintains a total number of 5 servers, which include 1 web server, 1 server exclusively for library, 3 servers for UG lab (Linux server-2, Windows server-3, Oracle Server-1), with which our students enjoy the computing facility.
The need for Internet has become mandatory in information sharing and knowledge dissemination. To facilitate the sharing of files between departments there exists LAN connection. The campus Network has been established and maintained at a cost of Rs.24000 PM by the Department of CSE. The old network has been upgraded and replaced with 10 extreme switches, 8 wireless access points, a high resolution sonic firewall, WLAN controller, unified threat management system and 2 high end servers for Antivirus, FTP and DHCP.

Our campus is completely Wi-Fi enabled in the year 2018. From all the departments, classrooms, and seminar halls data could be easily accessed. The institution has 8 hotspots with extenders provided to cover the wireless range throughout the college & hostels. The speed of the Wi-Fi access is 60 Mbps. Biometric attendance machines are also connected with Wi-Fi. The laptops those are brought in by the students are connected by noting down their system’s MAC address. As many students are having laptops of their own, they bring it and register their device’s IP address and get Internet access inside the campus.

The noteworthy feature of our wi-fi facility is, students, faculty and research scholars have 24/7 access to the internet. The present wired and wireless network infrastructure has been established with priority on reliability, performance and efficiency. Dedicated leased line Internet facility with a bandwidth of 60 Mbps is available to cater to the academic & research needs in the Campus. The entire campus is Wi-Fi enabled. The activity in the institute is under video surveillance with 40 CC cameras.

Video-conferencing facility is also available within the institute. The periodical updates and maintenance is done by the qualified in-house personnel. Our active web team, deals with creating, updating the college website. Periodic updates are done regularly to make the website very vibrant and dynamic. Learning Management System (LMS) and The Student Management Software are hosted on cloud computing.

for complete writup please click the below link:

https://www.vsm.edu.in/engineering/pdfs/NAAC/C-4/4.3.1.d.pdf

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</table>

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

**Answer:** 1.98

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<thead>
<tr>
<th>File Description</th>
<th>Document</th>
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</thead>
<tbody>
<tr>
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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**

**Answer:** A. ≥50 MBPS

<table>
<thead>
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<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</td>
<td>View Document</td>
</tr>
</tbody>
</table>
4.4 Maintenance of Campus Infrastructure

4.4.1 Average percentage of expenditure incurred on maintenance of infrastructure (physical and academic support facilities) excluding salary component during the last five years (INR in Lakhs)

Answer: 55.04

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

Answer:

<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>168.087</td>
<td>178.690</td>
<td>252.647</td>
<td>220.086</td>
<td>151.846</td>
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</thead>
<tbody>
<tr>
<td>Upload any additional information</td>
<td>View Document</td>
</tr>
<tr>
<td>Details about assigned budget and expenditure on physical facilities and academic support facilities (Data Templates)</td>
<td>View Document</td>
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<tr>
<td>Audited statements of accounts</td>
<td>View Document</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.

Answer:

Response:

Systematic procedures are being followed for maintaining and utilizing physical, academic and support facilities available in the college. The Principal in consultation with the Governing Body of the college takes direct and active initiatives relating to the maintenance and renovation of the total infrastructure of the college. The College Governing Body has appointed staff who supervises the maintenance and the repair works inside the campus.

There is a Planning, Purchase and Building Committee to review and ensure the proper planning and utilization of funds on the construction and renovation of the infrastructure. Stock verification of books, laboratory apparatus, sports equipment, furniture, machines and ICT equipment is done biennially by the faculty. Instruments in labs, ROs, Overhead water tanks, Generators etc. are serviced regularly. The institution has a Computer Maintenance Facility with a Hardware Engineer. Standard Operating Procedures are available for maintaining and Utilizing all facilities like: General, Engineering, Security Wing, Stock, Computers and Networking, Telephones, Electrical equipment, Mechanical and Civil facilities. Moreover, respective HODs are also part of the system to ensure the smooth functioning and performance of each constituent.

Laboratories

Laboratories are maintained regularly without disturbance to the academic schedules. The in-house maintenance and repairs are addressed by the respective laboratory In-charges, who are qualified and trained. Service requisition is forwarded by the lab in charge to the HoD, and the HoD in turn sends a requisition to
the principal for the repair. After sanction approval is received by the HoD, the department carries out the required work. Inventory is made in the register about the nature of the repair carried out along with the date. The same procedure is applied for any equipment used in the laboratory, computers, furniture, building repair, etc. The Institution also provides maintenance budget for the department. Besides in-house maintenance, the college outsources for the maintenance and calibration of equipments.

Library

The college has Central Library is fully automated with OPAC facilities. The library advisory committee reviews the existing resources every six months and gives suggestions for books to be procured as per the syllabus on a yearly basis based on the changes in the curricula. Before the commencement of the session, each department submits its requirement of books which is consolidated by the librarian and put up before the principal for approval. The faculty members and students have been issued individual Login IDs and Password to access e-contents. The Learning Management System (LMS) of the library has many contents of different subjects which can be accessed both in the library and in the class rooms.

Sport Amenities

Campus sports facilities are maintained and utilized under the guidance of the Physical Director, Sports Committee along with the PT’s of the college. The gym and other equipment servicing are taken up as and when required under the supervision of the physical director. The playgrounds are made ready and kept up to the mark before the commencement of sports activity. There is optimum utilization of sports infrastructure and facilities available in the college.

Academic Infrastructure

Classrooms have been planned to accommodate the students as per AICTE guidelines. Wi-fi enabled ICT class rooms and conference rooms are maintained by the IT Engineer of the college. The faculty members are regularly given training to use smart facilities efficiently. There is in-house web admin for upgrading the website and Learning Management System (LMS) for effective and efficient curriculum delivery and students-related information.

In addition to the maintenance of the academic area, the areas of hostels, canteen etc, is also undertaken. White wash and painting of the building is done periodically. The quality of work carried out is inspected by a group of engineers of the college and certified prior to the clearance of the bills.

A Gardner looks after the maintenance of the garden along with his sub ordinate staff in clearing, watering, de-weeding, maintenance, lawns and horticultural equipment and record keeping. The electricians ensure timely serving of diesel generator sets, as per the manual supplied by the manufacturer. The college building, toilets, are periodically maintained by the concerned staff, with de-odorants, and keep them in hygienic condition.

The institution has 15 buses, with valid permits and driving licenses. The vehicles are periodically checked and maintained by an automobile agency and fitness certificate is obtained from the RTA, AP.

One male teacher and one female teacher is identified as hostel wardens for boys and girls respectively for monitoring and functioning of the hostels along with the student representatives. Inspection is done by the
chief warden or coordinator of students affairs in keeping the hostels clean hygienic and inspecting the quality of food.

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</table>

5. Student Support and Progression

5.1 Student Support

5.1.1 Average percentage of students benefited by scholarships and freeships provided by the Government during last five years

Answer: 78.64

5.1.1.1 Number of students benefited by scholarships and freeships provided by the Government year-wise during last five years

Answer:

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<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>1257</td>
<td>1046</td>
<td>1083</td>
<td>681</td>
<td>502</td>
</tr>
</tbody>
</table>

5.1.2 Average percentage of students benefitted by scholarships, freeships etc. provided by the institution / non-government agencies during the last five years

Answer: 78.83

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

Answer:

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</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>850</td>
<td>892</td>
<td>986</td>
<td>1038</td>
<td>873</td>
</tr>
</tbody>
</table>
5.1.3 Capacity building and skills enhancement initiatives taken by the institution include the following

1. Soft skills
2. Language and communication skills
3. Life skills (Yoga, physical fitness, health and hygiene)
4. ICT/computing skills

Answer: A. All of the above

5.1.4 Average percentage of students benefitted by guidance for competitive examinations and career counselling offered by the Institution during the last five years

Answer: 49.8

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

Answer:

<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>Students</td>
<td>680</td>
<td>720</td>
<td>530</td>
<td>430</td>
<td>525</td>
</tr>
</tbody>
</table>

5.1.5 The Institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases

1. Implementation of guidelines of statutory/regulatory bodies
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

Answer: A. All of the above
5.2 Student Progression

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

Answer: 76.39

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

Answer:

<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>Placed</td>
<td>200</td>
<td>200</td>
<td>300</td>
<td>255</td>
<td>124</td>
</tr>
</tbody>
</table>

5.2.2 Average percentage of students progressing to higher education during the last five years

Answer: 23.66

5.2.2.1 Number of outgoing student progression to higher education during last five years

Answer: 93

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.)

Answer: 66.38

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
5.2.3.2 Number of students appearing in state/ national/ international level examinations (eg: JAM/CLAT/NET/ SLET/ GATE/ GMAT/CAT,GRE/ TOFEL/ Civil Services/ State government examinations) 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>Students</td>
<td>32</td>
<td>55</td>
<td>29</td>
<td>12</td>
<td>17</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.

Answer: 18

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

Answer:

<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>5</td>
<td>8</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

5.3.2 Institution facilitates students’ representation and engagement in various administrative, co-curricular and extracurricular activities following duly established processes and norms (student council, students representation on various bodies)
Answer:

The Institute creates a platform for the active participation of the students in the various academic and administrative bodies. It empowers the students to gain leadership qualities, understanding rules & regulations, and developing executive skills. Student Councils are actively participating and organizing various activities related to academics, co-curricular and extra-curricular activities, under the guidance of faculty.

The Institute also promotes participation of students on academic and administrative bodies. The class representatives are nominated on the basis of their academic performance in their respective sections.

**Student Council:** Ensures participation of all the other Councils in annual college festival which provides an avenue for creativity, team building and leadership amongst the student community.

**Cultural Council:** Activities like dance, singing, fashion show, modern art is carried out throughout the academic year to showcase students’ talent.

**Technical Council:** Technical activities such as paper presentation, technical quiz, hands on workshops, technical talks by eminent personalities are organised.

**Sports Council:** Well-equipped Gym and open grounds for students are available to engage in numerous sports activities. The Council organises sports event every year.

**Literary Council:** Inter college debate and quiz competitions are organised. The Council organizes a literary event every year.

2. **Representation on the academic committees:**

Academic Monitoring Committee: Consists of class representatives of all branches along-with faculty members to monitor and ensure discipline in academics. Informal feedback on teaching-learning processes like teaching, course content and study material, practical sessions is sought through meetings with Class Representatives. The suggestions/grievances are accordingly addressed for an enriched teaching learning environment at Department level.

Students Associations: Every department has student associations such as ECEANS, CATCHE, MARSS, PHASORS etc., with a faculty convener and students and conduct academic activities.

**Student Clubs:** Students have been representing and actively engaging in various club activities. In these clubs, many students carry out the responsibilities as In-Charge Facilitator and Assistant In-Charge.

3. **Representation on the administrative committees:**

**NSS:** Institute has set up NSS to sensitize students towards societal issues and community services. Students have been actively associating with Institute’s NSS Unit.

**Alumni Association:** Alumni Association is in place to strengthen the relationship amongst alumni. Institute’s Alumni Committee includes representation from students.

**Anti-Ragging committee:** One student and one Parent are nominated as Member of Anti-Ragging committee. This facilitates to promotion of an ambiance conducive for VSM to be a ragging-free campus.

**College Development Committee:** Students’ representation on this Committee facilitates receiving inputs on overall development plan of the college regarding academic, administrative and infrastructural growth from
students’ perspective.

**Internal Complaints Committee:** Student representation facilitates to investigation into the information against the complaints launched, if any.

**IQAC:** Institute’s IQAC cell has student representation as members.


**Discipline committee:** To ensure the safety and wellness of the students, the discipline committee takes care of the disciplinary issues. This committee has student members who help in maintaining discipline in the campus.

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</table>

5.3.3 *Average number of sports and cultural events/competitions in which students of the Institution participated during last five years (organised by the institution/other institutions)*

**Answer:** 29.4

5.3.3.1 *Number of sports and cultural events/competitions in which students of the Institution participated year-wise during last five years*

Answer:

<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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<tbody>
<tr>
<td>Events</td>
<td>44</td>
<td>31</td>
<td>30</td>
<td>23</td>
<td>19</td>
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<tbody>
<tr>
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<tr>
<td>Report of the event</td>
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<tr>
<td>Number of sports and cultural events/competitions in which students of the Institution participated during last five years (organised by the institution/other institutions)</td>
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5.4 **Alumni Engagement**

5.4.1 *There is a registered Alumni Association that contributes significantly to the development of the institution through financial and/or other support services*

**Answer:**

VSM has played a pivotal role in shaping the careers of students into technocrats, leaders, entrepreneurs, researchers and global managers. The VSM College of Engineering has a registered alumni Association named as “VSM College of Engineering Alumni Association”.
Alumni Committee is functions with the objective to nurture a platform for its alumni base of 1500+ to connect, engage and benefit the alumni, students and staff. Subsequently, Alumni Association is formed in 2016 having one representative from every Department to accommodate the ever increasing number of alumni.

Alumni association undertakes activities such as, to receive feedback on the design and review of syllabus, to enhance employment opportunities, get-togethers, alumni directory, informational publications, continued learning opportunities and administration of social services. The college organizes a reunion meeting of its alumni members once in a year. The alumni take this meet as an opportunity to meet junior students and faculty to share their professional experience and also guide them for their future aspects like employment and training updates.

Star Alumni: VSM takes pride in many star alumni who are currently holding eminent and illustrious positions in various multinational companies. Some of the star alumni are also successful entrepreneurs.

Contribution from Alumni:

VSM alumni contribute significantly to the development of the Institute through the following means like:

Expert speaker: Alumni are invited for guest lectures in their respective domains, keynote speakers for Conferences, training programmes, seminars etc., also as examiners for the final year project exhibition and annual degree distribution ceremony as distinguished speakers.

Experience sharing: Alumni meets are organised by the Alumni Committee every year in the month of January. In all these meets, alumni shared their valuable experience and gave inputs on the current trends in industry. They helped to bridge the academia-industry gap to encourage students for Research and Development work in various fields like engineering and Computer industrialisation.

Curriculum enrichment: Alumni contribute for curriculum enrichment through their structured feedback on curriculum in-order to keep pace with the recent advancements in industry. They also help us to mitigate the identified gaps through out of box thinking & beyond syllabus activities like hands-on workshops, guest lectures and value-added courses.

Faculty: Alumni were appointed as faculty and presently 5% of the faculty are alumni of this Institute and are serving as regular teaching faculty.

IQAC: Alumni are active members of IQAC and their inputs are helping us for quality enhancements.

Project work & Placements: Alumni are involved in training final year students with Industry Specific Skills. Alumni facilitate Institute for campus recruitment by suggesting to their companies.

Educational-tour: VSM alumni facilitate our students for industrial visits to their employer companies.

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

Answer: A. ≥ 5 Lakhs
6. Governance, Leadership and Management
6.1 Institutional Vision and Leadership

6.1.1 The governance of the institution is reflective of and in tune with the vision and mission of the institution

Answer:

Response:

The Institute’s focus and core ideology are reflected in its Vision, Mission, and Quality Policy as shown below:

Vision: To become a globally recognized institution in Technical education by way of excellence in academics, knowledge creation through interdisciplinary research and developing all round socially responsible professionals.

Mission:

- To provide curriculum, aligned with institutional goals and objectives, relevant to regional and national needs and for overall all development of students.
- To implement modern pedagogical methods in delivering the academic programmes with experienced and committed faculty.
- To create vibrant ambience that promotes learning, research, creativity, team spirit, scientific temperament invention and Innovation.
- To enhance institute industry interface through collaborative research, consultancy. And needs of the society.
- To generate and disseminate knowledge through training programmes /workshops / seminars / conferences / publications.
- In house faculty members conduct training through assessment such as mock interviews, group discussions and all other corporate requirements to enhance the employability skills of the students.

Quality Policy: VSM College of Engineering is committed to impart “Quality Education & Training” leading to Various Professional Degrees and aims to be a global Institution through continual improvement.

The administration is overseen by the Board of Governors (BOG) which is constituted as per the statutory provisions. One faculty member is included as member of BOG. BOG meeting is conducted in a transparent manner regularly. The members of BOG make active contributions for academic growth and improvements in the service matters of the employees.

The BOG approves the strategic Plan, Vision & Mission, and the Budget based on the Institutional needs and growth strategy. The BOG ensures that all decisions on the matters such as admissions, new programmes, infrastructure, Teaching & Learning Process and Placements are arrived based on the fundamental concerns of the Institution.

The Principal, who is the academic head of the institution, is aided by: Dean, Heads of the departments, Finance officer, Section heads, and Chairpersons of other institute-level committees. The various Committees that direct the day-to-day functioning of the Institute include: Governing body; College Academic Committee, Planning, Finance and Development Committee.
Other bodies that take part in governance include: Internal quality assurance cell (IQAC), Approvals committee, Accreditation committee, Admissions committee, Examinations committee; Research and Consultancy Cell, Mentoring committee and Training and Placement Cell.

Ramachandrapuram Educational Society, as well as the principal who ensures seamless management systematically, encourages participative leadership by involving various stakeholders at various levels of decision-making.

Recurring and intermittent requirements of departments and sections are identified by the heads of the respective departments, which are presented to the finance committee for evaluation of financials and to the concerned deans and the principal for a consolidated need assessment. The identified requirements are presented to the BOG by the Principal and approvals necessitate interactions with the concerned stakeholders and faculty members.

For the complete write up click the link

https://www.vsm.edu.in/engineering/pdfs/NAAC/C-6/6.1.1.pdf

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

Answer:

Decentralization and Participative management:

The college involves all the stakeholders in decision making process for framing guidelines and rules & regulations to ensure smooth and systematic functioning of the institute. The institution has decentralized and transparent mechanism in management, administration, financial and academic affairs. This mechanism is delegating appropriate responsibilities from the top level management to low level and allows the top management to focus on policy making and major decisions.

The Governing body is the highest decision-making body which formulates/ amends rules and regulations, delegates powers and responsibilities to various Committees, Principal, Heads of the Departments (HoDs), Heads of the Sections.

The constitution of statutory committees like Governing body, College Academic Committee, Finance Committee are systematically carried out with specified functions and responsibilities as per the requirements to the regulatory/statutory bodies. These committees play a major role in policy making of governance, academics, finance, research and teaching learning

The Principal ensures the smooth functioning of the institution with the support of HODs,

Department HODs

Officer Incharge of Examination

Administrative Officer
Student Progression Head

Convenor of Innovation, Incubation & Entrepreneurship

Coordinator of Research, Development & Consultancy

There are 48 non-statutory committees working continuously to identify possibilities, planning, organizing, implementing and monitoring all the activities of the institution.

The decentralized mechanism exists even at the department levels. Every department has Program coordinators at UG and PG level to look after the activities of each program. Decisions at department levels are taken by well-structured committees like Department Academic committee, Program Assessment committee, Departmental Advisory Committee, Department Development Committee, Class Review Committee.

HODs are invited for the College Development Committee meeting and the Governing body member and management interact to develop a road map for the development of the departments and the institution.

All Stakeholders of the institution have participative roles in various decision-making committees. External stakeholders like Statutory bodies nominees, State government Nominees, University nominees, State government Nominees, Industry experts, Employees, Educationists, Scientists, represent in majority of the committees as members. Faculty, Students, Alumni also represent in most of the committees as members. The committee members also includes members from Management.

The Management has brought out a handbook to ensure transparency and guide the staff to discharge their responsibilities with efficiency. The book provides policies, procedures, rules, benefits and other service matters.

The details provided in the additional information shows the involvement of management and all the stakeholders including Head of the Departments, Faculty, Students, Alumni, employers, industry experts, educationalist, scientist, community representatives in various functional committees of the institution. This shows that the institution has decentralization of administration through committees and has participative management. A democratic approach is setup in the decision-making process, by which all the stakeholders of the institution could participate in the managerial decisions.

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6.2 Strategy Development and Deployment

6.2.1 The institutional Strategic / Perspective plan is effectively deployed

Answer:

Response:

The Strategic Plan seeks to leverage the strengths of VSM College of Engineering to build upon them and acquire new potentials. In particular, the Strategic Plan proposes to nurture the faculty working on transformational technologies having potential to address the societal challenges - specifically in areas such as water, energy, healthcare, education and waste management etc.
The strategic plan of the college has been developed involving all the stakeholders through focused group discussions and workshops by adopting a participatory approach both at institutional and department level. Strategic Plan envisages the following broad outcomes:

- Become a leading technical Institution
- Become well known for transformational technologies that impact lives of people
- Incubate successful start-ups creating innovative products and business models using the knowledge and technologies nurtured by the Institute
- Have more faculty with Ph.D. qualification with very good retention rate and provide a congenial work environment for faculty and staff
- Be a model campus in terms of sustainability, usage of energy and water and recycling of materials
- Intensify the involvement of alumni in all aspects of the Institute's development—interacting with students, mentoring interns, contributing resources towards enhancing the facilities and quality of education, collaborating with faculty members in research and development.

The management feels that quality of faculty and diversified educational system play a key role for institution to reach its full potential. To have strong knowledge and its impact on research and pedagogy, we aim to have more faculty with Ph.D. Qualification in all cadres. The management has introduced several initiatives for enthusing faculty to pursue doctoral degree viz., study leave with full salary for the faculty pursuing Ph.D. under QIP, reimbursement of fee paid for pursuing Ph.D., research and development centre to enthuse faculty and students to take up research, continuous improvements of labs with state of art equipment and software, collaboration with best institutions for research activities etc. There has been considerable increase in the number of faculty with Ph.D. degree during the assessment period from 2016 to 2020.

The detailed strategic plan and its complete elements are hosted on Institution website. The plan is developed with the aim of achieving excellence through optimum utilization of resources. The management has identified seven thrust areas to set a strategic directionality (both short and long term) for the institution in the following areas:

- Curricular Aspects
- Teaching-Learning and Evaluation
- Research, Innovations and Extension
- Infrastructure and Learning Resources
- Student Support and Progression
- Governance, Leadership and Management
- Institutional Values and Best Practices

To facilitate better planning and implementation, IQAC is formed and empowered through senior administrators and teachers. The IQAC meets periodically to discuss and propose plans/measures for strengthening the above mentioned aspects. The conclusions arrived at IQAC meeting is taken into quality policy where each proposed measure is approved and developed into an action plan for implementation and the same is monitored through regular reviews of compliance to strategic plan.

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<td>strategic Plan and deployment documents on the website</td>
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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.
Answer:

Response:

The Governing Body of VSM College of Engineering is the statutory decision making body of the college carrying out functions and responsibilities in pursuit of institutional vision, mission and core values. It is constituted as per the norms of AICTE, New Delhi, Affiliating University (JNTUK) & Govt. of A.P, wherein the members of the board of management have adequate representation.

The GB meets twice a year to deliberate on the activities and approves the minutes of the committees which report to the GB. In this way, strategic plan, minutes of the academic committee, fixing the fee structure, budget proposals of the finance committee and new initiatives for the future regarding the intake changes of any program are presented to GB for approval. It has a robust framework for governance with the support of 48 statutory and non-statutory functional committees. GB also decides the promotions or penalties as recommended by the academic committee, nominate and constitute central committees for smooth discharge of responsibilities.

Principal functions as the Head of the Institution and is the Ex-officio member of the GB. Based on the directions received from the GB, the Principal executes decisions taken by GB through various committees with the support and coordination of Dean and HODs and manages the day-to-day affairs of the college. The vice-principal assists Principal in daily admin and heads the internal quality assurance cell. Heads of Department are the administrative head of the concerned department and ensure the smooth running of the department by setting goals and milestones of the department. They are responsible for timetables of each semester, upkeep and maintain records of the department, maintain laboratories, assets, assign duties and monitor faculty performance, verify faculty appraisal, benchmark the growth parameters, monitor mentoring of students by the mentors, identify and execute actions on departmental needs, prepare the team towards audits and compliance, monitor R&D and project activities of the department, ensure up keeping of departmental library, lead the team towards publications and IPR, forge MoUs from suitable industries.

Various committees are constituted as per the guidelines from AICTE, JNTUK and UGC to ensure all stakeholders’ needs are effectively catered. Some of the important committees functional in the institute are:

- Academic Monitoring Committee
- Time Table Committee
- Discipline Committee
- Research Committee
- Training & Placement Cell
- Purchase Committee
- Sports Committee
- NSS Committee
- Budget Committee
- Co-curricular and Extra-Curricular Activities Committee
- Entrepreneur Development Cell
- Anti-Ragging Committee
- Grievance Redressal Committee
- Anti-Sexual harassment Committee
- Student Welfare Committee

The Academic committee is the highest academic body which decides and advises on all academic matters. Academic proposals from each department are scrutinized and approved with or without modifications by the academic committee. It also recommends/advice the BoG on proposals for new programme of study and other academic matters. Departments are advised on admission, sports, extracurricular activities, maintenance etc. College is advised regarding institution of scholarships, studentships, fellowships, prizes and medals etc.

For the complete write up please click the link.
6.2.3 Implementation of e-governance in areas of operation

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

Answer: 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

Response:

The Institution provides effective welfare measures to both teaching and non-teaching staff. All statutory welfare measures are implemented. Various welfare measures towards personal and professional growth are being followed to the satisfaction of the employees.

- As per the norms of AICTE, 6th Pay commission recommendations are implemented. The benefits under CAS are being extended as per AICTE norms.
- Employees are covered under EPF and Gratuity to all eligible members (as per PF Rules).
- Study, Maternity and Medical leaves are sanctioned for the needy staff. Sanction of SCL, OD for Conferences, Workshops, FDPs, STTPs, and other university-related work.
- Festival & Medical Advance extended to all employees. Advances/loans are provided for vehicle and laptops to both teaching and non-teaching faculty. One month salary as loan in advance is given without interest and the same will be recovered in 10 EMIs.
- Financial assistance to attend Conferences, Workshops, FDPs, STTPs. Registration fees, dearness allowance, travel grants for faculty attending conferences and workshops are provided.
- Cash incentives provided for best research work.
- Faculty can avail 8 books from the library for a period of one semester.
- Incentive scheme to enthuse faculty to take up Membership Fee in respect of any Indian / Foreign Professional Body.
- Providing management quota seats to wards of teaching staff. Fee concessions to the children of the staff, they are rewarded for their best performance in academics.
- Free transportation for all staff.
- Uniform is provided for supporting staff.
- Health coverage – group insurance scheme for the whole staff and the premium is paid by the college who don’t fall under ESI. Medical reimbursement facility is provided.
- On campus free Full time medical facility with qualified Doctor and nurse are available in the institution.

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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**

**Answer:** 21.28

**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**

Answer:

<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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<tbody>
<tr>
<td>Teachers</td>
<td>92</td>
<td>42</td>
<td>11</td>
<td>5</td>
<td>2</td>
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<tbody>
<tr>
<td>Upload any additional information</td>
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<tr>
<td>Details of teachers provided with financial support to attend conference, workshops etc during the last five years</td>
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</tbody>
</table>

**6.3.3 Average number of professional development/administrative training programs organized by the institution for teaching and non teaching staff during the last five years**

**Answer:** 10.4

**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**

Answer:

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

Answer: 59.64

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

Answer:

<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>Teachers</td>
<td>223</td>
<td>104</td>
<td>42</td>
<td>24</td>
<td>35</td>
</tr>
</tbody>
</table>

6.3.5 Institutions Performance Appraisal System for teaching and non-teaching staff

Answer:

Response:

Faculty Performance Assessment is done considering the following:

1. Faculty Self-Appraisal
2. Student feedback
3. Appraisal by Head of the Department.

The Institution has a formal annual performance appraisal for both teaching and non-teaching staff conducted every year. Self-Appraisal is collected once in an academic year. At the beginning of the academic year the faculty appraisal format is shared by the HOD to all the teaching and non-teaching staff of the department so that faculty members are well aware of the appraisal measurement criteria. The faculty is required to submit...
the filled in pro forma of self-appraisal which is based on “Performance Based Appraisal System” as per UGC regulations.

Evaluation of each staff member's appraisal report is based on the criteria like: qualifications, experience, student feedback, JNTUK exam results, research papers published (national/international), patents filed/obtained, projects work/dissertation and Ph.D. guided, UG projects guided, research projects applied/funded, FDPs conducted/attended, international/ national conferences/ seminars/ workshops conducted/ attended, pedagogy methods adopted/followed details, administrative responsibilities, responsibilities for students co-curricular activities and university duties.

Student feedback is collected and assessed once in a semester. Every faculty self-appraisal is evaluated by HODs based on the above criteria and the same is forwarded to the Principal. The consolidated API scores are analyzed, reviewed and appropriate actions are taken accordingly. The principal in consultation with HOD makes recommendations to the GB. This system helps the staff in setting up new goals and self-assesses their strengths and weaknesses.

Based on the Annual appraisal the teaching and non-teaching staff are given increments and this is one of the parameters in giving promotions in their respective cadre. On an average 95% of the staff are given increments in the last 5 years and 10% are promoted in their respective cadre.

Based on filled in pro-forma faculty are suggested for the scope of improvement. In case of adverse remarks in the annual performance report, the employees are counseled and provided training to improve efficiency.

Non-teaching staff are also assessed based on their work achievements, qualification enhancement and adoptability towards the technological changes.

Annual performance reports of the employees and the subsequent rating are being taken into consideration for extending the benefits like CAS promotions for teaching staff, time bound promotions of non-teaching staff and continuation of service & enhancement of the annual increments employees and performance awards.

---

6.4 Financial Management and Resource Mobilization

6.4.1 Institution conducts internal and external financial audits regularly

**Answer:**

The financial resources of the institute are managed in very effective manner. The following types of accounts are in operation.

- Receipts and payment accounts
- Income and expenditure accounts
- Balance sheet.

Financial planning is exercised well in advance for efficient budgeting and review is done on periodic intervals through Accounts committee under the supervision of principal, Vice Principal, management representative, HOD and account personnel involving the various academic departments and administrative sections of the institute. The institution prepares the budget after taking into account of the sources of earnings and expenditure. It mainly allocates fund for the salary of its faculty and staff. Infrastructure development,
faculties, development, research, library, canteen, hostels are the other recurring expenditures. The institution monitors the earnings by the admissions of the students and revenue collection in the form of deposits (loans from banks), income derived on deposits and other assets. Salary component, infrastructural requirement based on increased intake and new courses, the equipment in laboratories, furniture, books, journals and sundry expenses are considered as expenditure. This study is carried out in association with the management, chartered accountant, HODs based on previous year expenditure.

Finance Committee meets twice a year and reviews the income-expenditure statements and suggest further action plan. Management through governing body looks into to income and expenditure pattern and pragmatic recommendations are given.

A **fully computerized accounts department** is functioning in the institution and every financial transaction is recorded through software. Financial rules are in place in the institute and “no-cash” transaction system is followed for amounts above Rs.2,000/-. Fee payment is encouraged through online mode. A flexible financial system allows spending more than the budget allocated as per the approved budget on demands and requirement. Optimal utilization and execution of the budget is monitored through internal and external auditing. The internal audit is an ongoing continuous process and is conducted on quarterly basis. Qualified Internal Auditors have been permanently appointed and a team of staff under them do a thorough check and verification of all payments, receipts & journals vouchers of the transactions cash books, ledger account review that are carried out in each financial year on an accrual basis system.

The **external auditor** appointed by the college performs audit of the financial statements of the college. The financial records are audited by qualified chartered accountants after the end of each fiscal year is certified income & expenditures, balance sheet are certified. Statutory financial audit of Institute is conducted in two sessions, first in the month of October November/December for period of six months starting from 1st April to September and second in the month of May/June for the period from October to March. Finalization of account is completed in June and audited statement is prepared in July. The audited statement is duly signed by Principal, Chairman and Chartered Accountant. All accounting systems are accrual basis and computerized.

For the complete write up please click the link

https://www.vsm.edu.in/engineering/pdfs/NAAC/C-6/6.4.1.pdf

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

**Answer:** 5.3

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

**Answer:**

6.4.3 Institutional strategies for mobilisation of funds and the optimal utilisation of resources

Answer:

Response:

Mobilization of Funds:

VSM College of Engineering is a self financing Institution. The major source of revenue for the college is the annual fee collected from students. The fee is collected as per the fee & guidelines fixed by the State fee regulatory authority. The fee is converted into fixed deposits and withdrawn periodically as per the requirements of the institute. The interest earned on these fixed deposits is being utilized for the needs of the institution.

In addition, funds are also mobilized through consultancy and through external funded research projects from AICTE, UGC, DST, FIST, DRDO, Industry sponsored projects by the faculty and philanthropic/ alumni contribution. Faculty will purchase the equipment, meets expenditure for travel and stipend for research associates from the research project funds. The other minor sources are: fee collections for the other services rendered to the students, like bus fee, collections for workshops and skill enhancement activities.

The financial planning is prepared well in advance for the organization with efficient budgeting that involves the academic and administrative sections of the institute. The budget is prepared every year which involves projected revenue and general expenditure and capital expenditure so that we can manage the funds effectively and plan well in advance. The same will be presented for the approval from the finance committee.

Strategies for optimal utilization of financial resources:

As per the availability of funds, the management plans for expansion of infrastructure. During the budget preparation in the institution all the academic and section heads are requested to provide the annual budget requirements keeping in view of development and up-gradation of laboratories, computing facilities, library, teaching-learning process, training, extension activities, software etc.

Monthly budget plan is also invited from all the sections for optimal planning of financial resources. Individual budget estimations are collected and Institutional budget is prepared. The Accounts committee will deliberate and make necessary changes if any for a proper balance of receipts and expenditure and submit to Governing body for approval. The Governing body approves the budget. Budget approvals will be communicated to the departments and sections.

For the complete write up please click the link.
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

Answer:

As per the guidelines of NAAC, an Internal Quality Assurance Cell [IQAC] has been established as a post accreditation quality sustenance and enhancement measure. IQAC is driven by a competent team comprising Principal, Professors, Alumni, Industry Experts, and also students. Chairman, IQAC is part of all major committees and other bodies and extends support to all the academic activities and recommends student centric core procedures. IQAC at VSM has significantly contributed to meet the standards of Institution in the form of formulating and implementing a predefined process or all the activities and made efforts for institutionalizing the quality assurance strategies and processes. The quality parameters for various aspects of the institution are:

- Admission Quality, Student Profile
- Placement Quality, Admissions for Higher Studies
- Result Analysis, Feedback Analysis
- Participation of student in Guest Lectures/Seminars/Workshops
- Day to day attendance monitoring
- Success of Passed out students, Success in competitive exam
- Awards and recognition received by students
- Alumni Profile/Distinguished Alumni
- Faculty Quality, Quality of Research publications
- Consultancy, Research Projects
- Workshops/seminars/conferences organized/participated
- Patents Applied/Awarded
- Books published/Reviewed/Edited
- Awards and recognition to faculty
- No of Collaborations
- Class room, Seminar Halls, Auditorium, Hostel Quality
- Number of ICT Programs

Two Best Practices

1. Academic Monitoring Committee (AMC)

AMC is an Institute level committee responsible for regulating and implementing different academic activities in VSMCOE. It is meant for smooth and uniform conduction of academics through out the Institute. AMC is headed by the academic head along with department coordinators. All coordinators are included in the monitoring process. Class teachers and Teacher Mentors are pillars of AMC.

Functions of the AMC:

- The progress of the coverage of the Syllabus of each class.
The overall attendance of the student of each class
- Result analysis at the end of each semester.
- Ensuring the adherence to the dates mentioned in the academic calendar for conducting various activities by each department.
- The monitoring of the students of each class.
- Compliance with previous meeting remarks.

1. **Conduct of Academic Audit of Departments:**

The IQAC believes that the academic audit provides an opportunity for a regular strategic overview of teaching-learning process. The academic audit is conducted exclusively for first year engineering courses, for higher semesters and for post graduate programmes. The audit is conducted at faculty level, department level and at the institute level.

The first level is the self-analysis by faculty handling the respective course. The audit comprises of around 10 parameters namely the course outcomes defined for each course, the CO-PO mapping, Assessment tools followed, assessment analysis, CIE graphical representation, grade distribution, their correlation factor, CO attainment and best practices followed.

For complete detailed writeup please visit the following link

https://www.vsm.edu.in/engineering/pdfs/NAAC/C-6/VSM-QLM-6.5.1.pdf

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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)

Answer:

Response:

The institution reviews its teaching learning process, structures & methodologies of operations through Academic Departments. The IQAC is responsible for developing, coordinating and monitoring academic assessment activities to effect improvement in student learning. All the heads of the departments, deans and nominated teachers are members of the Institute Academic Committee and is chaired by the head, IQAC.

The roles and responsibilities of the committee:

- Plan, monitor and control the academic functioning of all the Departments.
- Introduce innovation in Teaching, Learning and Evaluation practices.
- Recommend additional infrastructural facilities required to strengthen the Departments in view of the changing needs of curriculum or introduction of new disciplines.
Evolve processes for conducting Academic Audit both at the Institute level and at the Department level.

The Institute Academic Committee meets every month as a scheduled activity and monitors all the activities.

The Internal Quality Assurance Cell Supports the activity by involving various departments of the institute, and audits the departments as a calendar activity every semester. IQAC also conducts an External Audit for the Academic as well administrative aspects. The institute prompts the departments to implement the recommendations of the Audit Committee.

The IQAC also supports in anchoring the academic review activities such as:

- The Academic Plan is prepared well in advance before the commencement of class work for the Courses.
- Feedback is collected twice in a semester. It is communicated to Faculty and Heads of the Departments and necessary measures are taken.
- Ongoing course review is done by involving students and faculty through class Review Committee Meetings
- Attendance registers are maintained with day-to-day outcome mapping and the delivery mechanism.
- Every Faculty maintains Course files for the subjects

The IQAC of the institute also reviews the assessment of teaching learning outcomes through:

- Course end survey which is collected after a semester course for every subject.
- Course outcome analysis for each course after completion of the semester which incorporates the input collected from course end survey also.
- Result analysis every semester.
- Program assessment for the graduating batch. The Learning outcomes of program (POs) are assessed through curricular and co-curricular activities.

All the suggested changes in the curriculum by the departments and their BOS are put forth to the academic council for approval.

OUTCOMES

- Exit survey has helped in revising the curriculum according to the needs of the present Day.
- Alumni feedback has helped in refinement of curriculum.
- Inclusion of value added courses, training programs, finishing school led to better placements.
- The revised curriculum has enabled the students to gain admission in Premier Institutions.
- The Institute has been accredited by NAAC in 2017.

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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, NBA)
**Answer:** A. All of the above

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<td>Upload details of Quality assurance initiatives of the institution</td>
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<td>Paste web link of Annual reports of Institution</td>
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**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.**

**Answer:**

**Response:**

VSM College of Engineering nurtures students to be technically competent and ensures students are aware of social and civil responsibilities. The institute is perceptive to gender issues and with regard to sexual harassment, it has zero-tolerance. Women's safety and security is one of the priority areas for the institute.

**Gender equity & sensitization in curricular and co-curricular activities:**

One of the important objectives of VSMCOE is to provide education to students considering the requirements of various sections of the society with a special focus on gender sensitivity and gender equality. At VSM students of both the gender have equal opportunities to develop to their optimum potential. Some of the efforts made by the institute to promote women empowerment are highlighted below:

The annual gender equity and sensitization action plan includes the curricular and extra-curricular initiatives that were prior planned and further executed. The institute arranges special programs, especially during International Women’s Day, wherein female students and staff take part in large numbers.

Sessions on ‘Personal Hygiene & Cleanliness among female students’, ‘Education about Cervical Cancer & Breast Cancer’ etc. were organized in recent past. Also, during COVID Lockdown, our Counseling Cell, organized online program “Women’s Health & Well-being” exclusively for the female faculty members and Students.

**Facilities for women on campus:**

**Safety & Security:** Safety and security of students, particularly female students, are of prime importance at VSM. The institute has adequate security personnel who are vigilant 24x7 in the campus. Identity cards are mandated for everyone on campus. Security is provided at the entrance to ensure all the visitors adhere to the entry procedure. The entire campus is under the surveillance of CCTV camera which records the movements of everyone and thus ensures safety of girl students within the campus. Adequate provision is made with first aid box for the employees.

**Common Rooms:** Institution has ladies common rooms with facilities like cot, bed, table, chair etc. Every floor has the provisions of common rooms for girls and women to rest in privacy.

**Counseling:** VSMCOE has faculty mentoring system, through which students are mentored periodically by their respective faculty mentors.
**Redressal of grievance related to sexual harassment:** The institute has anti-sexual harassment committee which resolves any issues related to sexual harassment within the campus.

**Other Initiatives taken by the institute:** Institute Celebrates ‘International’s Woman’s Day’ with zeal and enthusiasm. Various women-related themes and topics taken up for discussion and debates during cultural events. Institute has formalized committee as per the guidelines of UGC/AICTE/State Government to ensure safety and security of female employee and students on campus. Some of this committee are:

- Anti-Ragging Committee
- Grievance Redressal Committee
- Internal Complaints Committee
- Women Development Committee

All the above committee have representation from students. Notice is also put up on the notice board about the committee and their members. It is our endeavor to make the VSM campus a gender neutral campus wherein everyone enjoys equal opportunities, resources, services, benefits, decision-making power and influence.

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<tbody>
<tr>
<td>Link for specific facilities provided for women in terms of: a. Safety and security b. Counselling c. Common Rooms d. Day care center for young children e. Any other relevant information</td>
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<tr>
<td>Link for annual gender sensitization action plan</td>
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### 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

**Answer:** A. 4 or All of the above

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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
Answer:

Response:

VSM College has made efforts towards a sustainable environment by prioritizing waste management and implementing the policy of reducing, reusing and recycling the waste. The institute has also made efforts to sensitize its students on waste management and waste disposal by participating in the Swatch Bharat Abhiyan. Management of degradable and non-degradable waste is one of the important agenda. The institute has taken various initiatives for disposal of different types of waste and ensure environment in and around the campus is environment friendly.

Solid Waste Management:

Being an institute with residential facility, considerable quantity of wet (food/ organic) waste is generated in the premises. Biodegradable wet waste is mostly generated from hostel kitchens. Food waste generated in these kitchens is sent to cattle farm or used as vermicompost. A small unit of vermicompost is also created in the campus. The vermicomposting unit is an outcome of academic activities being integrated with practical projects taken up by students. In classrooms, offices, mostly paper waste and plastic wrappers are generated. Dustbins are provided on each floor, in staff rooms, laboratories, washrooms, cafeteria and kitchens in campus area. Hostel dining room areas has signage for creating awareness on minimizing food wastage. The Institute has made all the provisions to segregate the waste in dry and wet so that further processing can be done. The Institute segregates the dry waste into three categories i.e. paper, wood, dry garbage such as tissue paper, scrap waste paper and plastic. It is stored in an area demarcated for the same. Arrangements are made with municipality for collection of the residual waste.

Liquid Waste management

Wastewater is mainly generated from toilet flushing and hostel kitchens. Academic block has 6 wash rooms, boys hostel has 10 bathrooms and 10 toilets, girls hostel has 40 bathrooms and 40 toilets. Sewage which is generated from the academic block as well as hostel block is conveyed through the underground sewers to the sewage treatment plant of capacity 100 KLD which is situated inside the campus. Recycled water is used for gardening. Liquid waste generated in the institute is treated in septic tanks and disposed into soak pits. The institute has implemented the Biodigester technology at some places, which is environment friendly, maintenance free, efficient and does not depend on conventional energy sources. Biodigesters remove the waste in water that is then used for gardening in the Institute. The institute is making efforts to implement this technology throughout the campus and also re-design the existing systems to efficiently manage liquid waste.

Rain water is collected in the underground rain water harvesting tank. The collected water is primarily used for gardening through pipes connecting garden with tanks. The well maintained green landscape which has been deliberately included on the campus to keep the ground porous helps collect rainwater through natural means to recharge the ground water table.

for the complete writeup please click the link

https://www.vsm.edu.in/engineering/pdfs/NAAC/C-7/VSM-QLM-7.1.3.pdf
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

Answer: A. Any 4 or all of the above

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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

Answer: Any 4 or All of the above

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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

Answer: A. Any 4 or all of the above

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<td>Certificates of the awards received</td>
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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

Answer: A. Any 4 or all of the above

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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).

Answer:

Response:

An inclusive environment is one in which members feel respected by and connected to one another. VSM believes in cultural diversity and cultural tolerance as a key to social harmony and has a diverse range of student body as well as employees from diverse regions. Students admitted through centralized admission process reflects Inclusiveness in the entry level and acceptance of all students from diverse regions, academic backgrounds, and linguistic competencies. A cosmopolitan environment has helped in each person bringing to the group a unique perspective which is influenced by his or her own unique cultural identity. The Institution follows a tolerant recruitment policy with recruitments of staff from all parts of the country. This has resulted in making the employees cultural identity a multifaceted one. Diversity along all cultural dimensions are recognized, valued and respected.

The analysis has shown that students at the institute come from diverse cultural background such as North India, South India and from different religion such as Hindus, Muslims, Christians, Buddhist, Jains and Sikhs.

Irrespective of the state or the religion the institute practices cultural inclusiveness to deepening mutual understanding and trust. Regardless of the cultural background institute focuses on developing the students through academics, co-curricular and extracurricular activities.

The annual cultural fest of the institute ‘Sparks’ is celebrated with pomp and show. The entire campus adorns a festive look on this day. Various inter department competitions are arranged during this day. In fact the preparations and preliminary competitive events start much before Sparks. Music, dance, literary, theatre and
fine arts events are part of these competitions. Students irrespective of their religion and cultural background drive this fest.

Ethnic Day is also one of the much awaited events by the students in the institute. During this day students not only display the ethnicity of local region, but also reflect the cultural diversity of entire nation. Students wear traditional dresses representing different states of India. The spirit of ‘Unity in Diversity’ is clearly evident during this ethnic day.

Students and staff of respective departments perform Saraswathi Pooja & Ayudha Pooja in their laboratories during Navarathri Festival and invoke the blessings of almighty. Also, students and staff send their wishes during Sankranthi, Ramzan, Christmas and other festivals to concerned friends and colleagues. The entire campus welcomes New Year with joy and hope. Institute celebrates various cultural events such as Diwali, Christmas, Makarsankanti, Woman’s Day, Yoga Day and Eid.

The prominent days are enthusiastically celebrated with pledges, various activities and competitions related to the event every year include the following:


Sadbhavana Day (Birth anniversary of the Late Prime Minister Shri Rajiv Gandhi) (20th August)

Teachers Day (5th September) (birth anniversary of Dr. Sarvepalli Radhakrishnan).

for the complete writeup please click the link
https://www.vsm.edu.in/engineering/pdfs/NAAC/C-7/VSM-QLM-7.1.8.pdf

<table>
<thead>
<tr>
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<td>Link for any other relevant information</td>
<td>View Document</td>
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<tr>
<td>Link for supporting documents on the information provided</td>
<td>View Document</td>
</tr>
<tr>
<td>(as reflected in the administrative and academic activities of the Institution)</td>
<td></td>
</tr>
</tbody>
</table>

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).

Answer:

Response:

The courses ‘Constitution of India’, ‘Professional Ethics’ offered in B.Tech curriculum. UG students are sensitized about fundamental rights, directive principles, and duties of citizens. Important outcomes of this course are to ensure students have constitutional knowledge and they understand the responsibilities of engineers.

Apart from working towards academic excellence, the institute strives to develop students as responsible citizens of this country. Through various programs and practices, students & employees are sensitized about various constitutional obligations. Faculty members & students enthusiastically involve in all the programs arranged for driving these obligations.

Every year ‘Independence Day’ and ‘Republic Day’ is celebrated with great vigor to constantly remind the faculty and the students with respect to the sacrifices made by our freedom fighters and recollect their
contributions. During these celebrations, rights, duties, and responsibilities of citizens are stressed by invited guests. Students and staff speak about fundamental rights & duties, human rights and directive principles of the constitution. Institution conducts essay writing competition on Republic day and prizes were distributed to the deserving candidates.

Institution celebrates constitution day as “Samvidhan Diwas” on 26th November of every year. During this day all the staff and students administer oath to follow and protect the constitution of India. NSS unit of the institute arranges health camps, blood donation camps, Swach Bharat Abhiyan, literacy drives, social responsibilities awareness rallies, national integration, and social harmony rallies, etc. In all these activities students involve as volunteers and display their duties and responsibilities towards society.

Institution organizes awareness program on “Electoral Day” and conduct rally at nearby village to sensitize the public with respect to voting and participation in the democracy. Institution conducts debate competition during the annual day on various subjects related to executive, judiciary and the Legislation.

A few specific programs initiated by the institute in recent past:

**Rural connect through Unnat Bharat Abhiyan:**

Institute is registered under the Ministry of Human Resource Development (MHRD) initiated program Unnat Bharat Abhiyan with AISHE CODE: C-24342 Under the UBA program, VSM has adopted 5 villages:.
Various grassroot studies are undertaken in these villages under the guidance of Smt A.B. Chandrika, Assoc. Prof. Electronics and Communication Engineering Department.

**Digitalisation Awareness Program:**

A team of VSMCOE staff and students from the CSE stream visited few rural schools near RC Puram on November 2019 and held Digitalisation Awareness Campaigns. Apart from sensitizing students about the basics of computers, how to use the internet, the advantage of computers, its hardware was covered during the campaign.

**Awareness Campaign on Skilling and Health:**

A team of VSM staff and students from the Engineering stream held the following awareness campaign on 9th Jan 2020 at Rayavaram Village.

1. Skill Development Program for PU Students

Awareness about Life Skills and measures to safeguard against Pandemic and Epidemic diseases were covered during this campaign.

For the complete writeup please click the link

https://www.vsm.edu.in/engineering/pdfs/NAAC/C-7/VSM-QLM-7.1.9.pdf
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

Answer: A. All of the above

<table>
<thead>
<tr>
<th>File Description</th>
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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>
</tr>
<tr>
<td>Code of ethics policy document</td>
<td>View Document</td>
</tr>
<tr>
<td>Any other relevant information</td>
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</tbody>
</table>

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

Answer:

Response:

Every year institute celebrates national and international commemoratory days, important festivals on the campus which promotes desired harmony amongst students and staff. Few selected events organized/celebrated in the recent past are highlighted below:

National youth day on occasion of Swami Vivekananda Jayanthi (12th Jan): Student recollect the message put forth by Swami Vivekananda and the role of the youth in the development of the Nation and the Society.

Republic Day (26th Jan): Students, Staff and Management hoist the National Flag and recollect the importance of protecting the constitution and contribution made by Dr. B. R. Ambedkar in framing the constitution. Principal, HODs, teaching & non-teaching staff & students of the institute participated in 71st Republic Day Celebrations arranged on the campus.

International Women’s Day (8th March): Reputed Women personalities are invited for the talks. The women achievers are awarded on this occasion.

International Yoga Day – (21st June):

Due to the COVID-19 pandemic, this event was organized through online mode and a good number of students actively took part in this event. The faculty members of VSM participated in ‘International Yoga Day’ celebrations. In this offline event, few important yoga postures were demonstrated and yoga dance was presented during this event.

Independence Day (15th August): The institution celebrates every year independence day. Management, Principal, Staff, NSS Volunteers and Students of the institution participate in flag hoisting. Students speak about the sacrifices made by our freedom fighters.
Teachers Day (5th Sept): Students take lead in organizing the celebrations by showering love and affection towards the staff members for their service and sacrifice. Principal address all the staff members and speak about the achievements and qualities of Sri. Sarvepalli Radhakrishnan. Students distribute sweets to all the teaching and non-teaching staff.

Engineers Day (15th Sept): It is celebrated every year to mark the birth anniversary of Sir. M. Visweswaraiah and technical talks are delivered by reputed engineers from the society. Quiz program is organised by the departments to recollect the engineer’s contributions.

Gandhi Jayanthi & Lal Bahadur Shastri Birth Anniversary (2nd Oct): Students and staff members recollect the contributions made by father of the nation Mahatma Gandhi and Lal Bahadur Shastri w.r.t. importance of peace, non-violence and hygiene. Swachh bharath program is conducted by cleaning the campus and surrounding places.

A.P. Formation Day (1st Nov): Students, Staff and the Management recollect the importance of celebrations of statehood and regional language. Students speak about importance of Telugu and the famous personalities for their contributions in the area of arts, science & literature.

World Aids Day (1st Dec): NSS Volunteers take a lead role in spreading the awareness on prevention of AIDS at the nearby villages. All the staff members wear the Red Ribbon on that day to empathize with patients, and recognize the contribution made by the district administration.

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<thead>
<tr>
<th>File Description</th>
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<tbody>
<tr>
<td>Link for Geotagged photographs of some of the events</td>
<td>View Document</td>
</tr>
<tr>
<td>Link for Annual report of the celebrations and commemorative events for the last five years</td>
<td>View Document</td>
</tr>
<tr>
<td>Link for any other relevant information</td>
<td>View Document</td>
</tr>
</tbody>
</table>

7.2 Best Practices

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

Answer:

Best Practice I:

Title of the Practice: Objective Outcome Based Education Practice

Objectives:

- To focus on student learning outcomes.
- To train Graduates suitable to industry/entrepreneurship/research
- To ensure Continuous Quality Improvement

Context:

Along with the traditional methods of teaching, Outcome Based Education is practiced in the institute. The traditional method focusing on ‘covering the content’ is giving much less thought to the ‘learning by the student’ and has been generating graduates with lower employability. The content-driven approach to teaching has been referred to as a teacher-centered approach where instructional objectives and learning outcomes are not comprehensively planned and informed to students. Stress on Lower Order Thinking Skills
and Student assessment is not aligned to program outcomes. The Outcome Based Education activities such as quiz, course seminar, course project, subject proficiency test based on Blooms taxonomy help a faculty member evaluate the student on continuous basis. This system focuses on providing a platform to apply the knowledge gained by the student, apart from what the student has learnt and understood. Hence outcome based orientation has become essential for quality engineering education.

Practice:

- Our institution is an affiliated college. As per the University guidelines internal assessment test, practical examination and university examination are the only ways of assessing the academic performance of the student. OBE includes quiz, assignments, seminar, presentations, etc., adopting Blooms Taxonomy. Continuous counselling was done to explain the importance of these activities in their academic and professional life which motivated the students to participating in the OBE activities.
- Stating clear vision and mission of each program in line with the vision and mission of the Institution
- Articulation of program educational objectives, program outcomes and program specific outcomes development of curriculum with broad knowledge areas specified by national and international bodies.
- Establishing rubrics for measuring the learning outcomes with emphasis on attaining blooms levels
- Feedback sought for curricular improvements and update periodically

Evidence of Success:

- It has been evident that students have become more confident and they have good learning experience. This has helped them in performing well in the University exams and helped in getting good placements.
- Outcome based system facilitating easy and early assessment of learning

Problems Encountered and Resources Required

- Transition of members of faculty to new method has been challenging
- Complete practice of Outcome based education is relative and a difficult task to present and defend to an external statutory body
- Complete understanding of the Bloom’s levels of skills is an essential resource to be gained by educators.

Best Practice II

Title of the Practice: Energy Environment Consciousness: Carbon Neutrality Initiatives

The context that required the initiation of the practice

VSM College of Engineering, situated in Ramachandrapuram, West Godavari District is an important constituent of Konaseema green region. Keeping in view the degrading environmental conditions, the institution realized its responsibility towards society by making the citizens aware of deteriorating environmental parameters and nudging them for adopting eco-friendly methods. We aimed at training and involving our committed students in this socio-eco drive for generating awakening and involving masses for a global cause.

Objectives of the practice

- To infuse environment consciousness among students
- To make the students realize the devastating consequences of climate change and global warming
- To make students as well as general public at large aware of various green environment practices for reducing carbon footprints.
• To develop required skills and expertise among students to deal with associated glaring challenges
• To design, utilize and sustain such platforms where students learn and then involve citizens in various green environmental programmes and practices

The Practice

Environment education is a part of our curriculum. Our students understand the value of dividends derived from clean and green environment. The college has various societies for implementing various green initiatives viz, NSS, Green Club and Swach Bharat Abhiyan Team to augment students’ engagements and participation in various environmental awareness drives.

On the recommendation of the IQAC, the Eco and Energy Conservation clubs (ECB) were formed under which a dedicated team of forty students organized various programmes in and outside the college for spreading the message of green environment. Eco Club and Energy Conservation Club have played a dynamic role in awakening and involving masses in various green practices by organizing activities on environment related issues, through rallies, door- to -door campaign, regular cleanliness drives of the campus, tree plantation, displaying instructions and writing slogans in the campus and outside as well, besides labeling all the plants and the trees in the college for their identification. Energy and Green Audits have also been carried out. The college installed a solar plant with actual power generation capacity of 150 kW and 600 units of power per day which is a very encouraging step towards using renewable and inexhaustible clean energy source, besides helping reduction in dependence upon the traditional thermal power source there by resulting into the not only the conservation but also decreeing drastically the carbon count.

The college has been consistently transforming computer labs which reduce e-waste, carbon emission and energy consumption.

All conventional lights have been replaced by LED bulbs and energy efficient AC Units.

Energy consumption in the college has been reduced through enlightening inmates by arranging awareness programmes about the indispensability and compulsion of energy saving besides putting stickers (*Switch-off the equipments and lights when not required!* ) on switch boards and all concerned places.

There is no practice of burning waste and proper waste management system is in practice. The biodegradable waste is put in the Vermi-compost units, so that it gets converted into organic manure for the plants and trees. The non-degradable waste is given to approved local disposers. E-waste, like mother boards etc. are used by the students to retrieve important electronic components for reuse in project works.

Obstacles faced if any and strategies adopted to overcome them

Sometimes it becomes a challenging task to convince masses and even students and staff who are unaware of the existence of poor air quality and its dreaded consequences to adopt green practices in everyday life. Repeated convincing techniques like organizing awareness programmes, short plays and carrying out door- to- door campaign helped us to overcome the obstacles.

Impact of the Practice

• Installation of Solar Panels is an example that will provide benefit in the upcoming years.
• Use of natural resources with less carbon emission and enhanced Carbon Neutrality.
• Reduction in the energy consumption in the college.
• Use of renewable and sustained energy source besides no practice of burning waste.
• Proper waste management system for all types of waste generated in the campus
• The students volunteering whole heartedly for keeping the campus clean, and
• The Eco-Club, the Energy conservation Club and the Swachhhta Senanis Team succeeded in fostering an energy conservation culture and attitude among students, staff and masses in nearby areas.
**Resources Required** The financial resources are managed at the Governing body level and funds received from various government agencies, and the available human resource in the college.

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<tr>
<td>Link for Best practices in the Institutional web site</td>
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<td>Link for any other relevant information</td>
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</table>

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

Answer:

Response:

Teaching – learning as thrust area

The Vision of the institution is “To provide an excellent technical education for development of global engineers with strong entrepreneurial skills and social ethics” which indicates the commitment of the institution to teaching and thereby the learning of the students. The institution is predominantly over decade has evolved into excellence in teaching-learning with other development verticals such as research, innovation, consultancy, industry interaction and entrepreneurship. In these years, the institution has been progressively achieving results in all other verticals besides its primary domain of teaching – learning.

Priority:

“Konaseema” region of Andhra Pradesh is backward in education. The development and education opportunities to the students in this region were scanty. The setting of the institution in this rural region in 2009 was to provide quality technical education to generate first generation engineers. Owing to their background, students who joined the institution had to be given the best possible teaching to learn and secure a job. Initially the management of the institution has made a focused approach to academic development of students through best teaching-learning methods and ambient infrastructure to providing them the campus placement. Even today the Institution is predominantly a teaching-learning institution but with well laid strategic plan to augment other development verticals such as research, consultancy, and industry interaction. The Institution has developed leaps and bounds by securing Quality accreditation “NAAC Accredited” status by NAAC, research funding, industry sponsored projects and other achievements which testify the overall development of the institution with its sound footing in teaching-learning.

Thrust:

The thrust on teaching-learning process is given by the Institution to:

- Impart knowledge
- Develop skills
- Imbibe values and ethics
- Mentor to build up capacity for self learning and inquisitiveness for lifelong learning

**Student development stages through holistic teaching and mentoring:**
Developing knowledge and insights: Ability to recall or remember facts without necessarily understanding them (Bloom’s Level-1)  
Comprehension: Ability to understand and interpret learned information. (BL-2)  
Application: Ability to use learned material in new and concrete situations, e.g. put ideas and concepts to work in solving problems. (BL-3)  
Analysis: Ability to break down information into its components (BL-4)  
Evaluation: Ability to judge the value of material for a given purpose (BL-5)  
Create: Ability to put parts together to form a new whole (BL-6)  

VSM also offers a highly-efficient Mentoring system through which a group of students is assigned to a faculty member at the commencement of the program. Mentors meet their students and guide them with their studies and extra-curricular activities. They also provide advice relating to career guidance and personal problems. The mentors act as guides to the students during the course of stay in the institute. The mentoring system ensures that the students adapt to the dynamic learning environment and lead their ways into highly successful careers.

Other Priority and Thrust Areas Integrated with Teaching-Learning:

Implementation of ICT

Institute has taken initiative in implementation of ICT and some of these are:

- Learning Management System (Moodle)  
- Learning Material for Bridge Course  
- Students with specialisation in areas other than core engineering  
- Learning Material for Remedial Coaching  
- For slow learners, institute provides remedial coaching through LMS  
- Developing Program objectives and Program Specific objectives  
- Smart Classrooms: Where a variety of synchronous technologies facilitates faculty to make presentations more interactive.  
- Lecture Capturing System helps recording live classroom and also to create content for e library.  
- Audio and video conferencing enables the institute to live streaming of the lecture.  
- Multimedia enabled audio-visual classrooms  
- ERP for academic administration, Admission, Attendance Management, Examination, Fee Management and Result Generation

Outcome:

The student through an effective teaching – learning process shall go through the rigor of gaining knowledge and practical skills from the first semester to undertake innovative work as project in the final semester. This helps the student to either pursue his interest in higher education, take-up campus placement or endeavor entrepreneurship besides lifelong learning.

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Extended Profile
Program

Number of courses offered by the Institution across all programs during the last five years

Answer:

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<thead>
<tr>
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<th>2018-19</th>
<th>2017-18</th>
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<td>1707</td>
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File Description | Document
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Institutional data prescribed format | View Document

Number of programs offered year-wise for last five years

Answer:

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<th>Year</th>
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Students

Number of students year-wise during last five years

Answer:

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<th>Year</th>
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<th>2017-18</th>
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File Description | Document
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Institutional data in prescribed format | View Document

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

Answer:

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<th>Year</th>
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<th>2017-18</th>
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File Description | Document
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Institutional data in prescribed format | View Document

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

Answer:

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<th>Year</th>
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File Description | Document
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Institutional data in prescribed format | View Document
Teachers

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

Answer:

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<td>145</td>
<td>136</td>
<td>151</td>
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Number of sanctioned posts year-wise during last five years

Answer:

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<th>2017-18</th>
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<td>136</td>
<td>151</td>
<td>147</td>
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</table>

Institution

Total number of classrooms and seminar halls

Answer: 42

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

Answer:

<table>
<thead>
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<td>342.33</td>
<td>423.64</td>
<td>392.42</td>
<td>337.67</td>
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</table>

Number of Computers

Answer: 520

Conclusion

Additional Information:

VSM college of engineering (VSMCE) is promoted by "Ramachandrapuram Education Society", founded in 1966 by late Sri Vundavilli Satyanarayana Murthy with a vision to provide education to the marginalized sections of the rural area of East Godavari District. The vision of VSMCE is founded on the belief that there is prosperous young talent in the rural pockets of our country and with right guidance and encouragement, we can raise them to the highest levels both in technology and leadership.
To fulfill this vision the Institution is professionally managed by distinguished academicians, industrialists and technocrats belonging to EG district, Andhra Pradesh under the President ship of Sri. M. Narayana Murthy, an educationist and philanthropist. The motto of the Institution is “VIDYA VIJAYATETARAM”.

Concluding Remarks:

VSMCE made a humble beginning in 2009 and has grown into a reputed centre of academic excellence and research in emerging technologies. The college is located in serene area surrounding amidst cluster of green fields on the state highway on Kakinada-Ravulapalem road in Ramachandrapuram. VSMCE is in the reach of about 50 minutes drive from Raja Mahendravaram Airport and Railway station. The college enjoys a congenial atmosphere essential for a leisure and vibrant scholastic learning process.

As an exemplary institution of learning, VSMCE follows an admission policy that strongly favors merit, even as it enables access to education for students from all strata of society through appropriate scholarships. VSMCE provides engineering education for life through a combination of stimulating environment for intellectual development, individual thinking, and personal growth, supporting its students with dynamic learning opportunities and equipping them with the skills, insights, attitudes and practical experiences that are necessary to take up challenges in the industry and society at large.

With a highly qualified faculty and a technology enabled campus, VSMCE focuses on 360 degree development of its students. Students are encouraged to participate in research activities, sports, cultural, social, co-curricular and extracurricular activities to ensure that they are all round graduates. At VSMCE, students are given every opportunity to gain optimal advantage in terms of advanced technical knowledge, skills and research by sheer motivation through special training modules. The approach offers distinct aspects of intellectual growth and development of individual students as future engineers to suit the growing needs and aspirations of the nation in future.

VSMCE graduates are thus the cream of the crop and are today working in a diverse range of organizations and a host of others in India and abroad. VSMCE graduates are also active in a wide variety of areas in pure research and entrepreneurship thus demonstrating their ability to shine across geographies and industries.

The beautiful and spacious buildings have been designed accommodating the needs of administration, computer centre, academic block, lecture halls, library, laboratories, conference halls, and hostel and students common rooms.

EXCLUDED METRICES

List of Excluded Metrics

3 Research, Innovations and Extension : Weightage ( 120 )

3.1 Resource Mobilization for Research : Weightage ( 15 )

<table>
<thead>
<tr>
<th>Ref No</th>
<th>Details of Metric</th>
<th>weightage</th>
<th>Metric Performance</th>
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<tbody>
<tr>
<td>3.1.2</td>
<td>Percentage of teachers recognized as research guides (latest)</td>
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</table>
3.3 Research Publications and Awards : Weightage (25)

Ref No | Details of Metric                                                                 | weightage | Metric Performance
-------|-----------------------------------------------------------------------------------|-----------|------------------
3.3.1  | Number of Ph.Ds registered per eligible teacher during the last five years         | 5         | 0                
       | (Metric Type: Derived, Question Type: QN, Evaluation: By DVV, Nature: Value)       |           |                  

5 Student Support and Progression : Weightage (130)

5.2 Student Progression : Weightage (25)

Ref No | Details of Metric                                                                 | weightage | Metric Performance
-------|-----------------------------------------------------------------------------------|-----------|------------------
5.2.2  | Average percentage of students progressing to higher education during the last five years | 10        | 23.66           
       | (Metric Type: Derived, Question Type: QN, Evaluation: By DVV, Nature: Value)       |           |                  

6 Governance, Leadership and Management : Weightage (100)

6.4 Financial Management and Resource Mobilization : Weightage (20)

Ref No | Details of Metric                                                                 | weightage | Metric Performance
-------|-----------------------------------------------------------------------------------|-----------|------------------
6.4.2  | Funds/Grants received from non-government bodies, individuals, philanthropers during the last five years (not covered in Criterion III) | 8         | 5.3              
       | (Metric Type: Derived, Question Type: QN, Evaluation: By DVV, Nature: Value)       |           |                  

ANNEXURE