



St Marys Group of Institutions Guntur for Women

**Chebroulu (V & M) Guntur District, Andhra Pradesh-
522212**

Institutional Development Plan



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1. Preamble

Higher Education Institutions (HEIs) such as colleges and universities are intricate organizations characterized by their scale, size, and complexities. A strategic plan for these institutions serves as a roadmap for both long-term and everyday decisions, ensuring alignment with the institution's vision, mission, and values, while also adhering to global development goals and governmental regulations. This plan enables institutions to operate effectively and maintain financial health while preparing for future challenges. Achieving success in higher education, whether by enhancing graduation rates or fostering inclusivity, demands cooperation, expertise, and effort from various departments. By promoting interdepartmental relationships, integrated strategic planning helps eliminate redundant efforts, encourages collaboration, and ensures that resources are utilized efficiently to fulfill the institution's objectives. When developing the Institutional Development Plan, it is essential to consider the broader context and macro environment to create a comprehensive and relevant strategic action plan.

2. Top Ten Challenges in Higher Education Management

2.1 Enrolment Management and Student Retention

Despite successfully attracting qualified students, the institute faces challenges in managing enrolments and retaining its student population. Traditional enrolment methods can be slow and resource-intensive for both staff and students. Additionally, identifying students who may be at risk of dropping out is often difficult. By implementing advanced enrolment management tools, the institute can streamline the enrolment process, utilizing features like prospect management, virtual tours, and application oversight. These tools also contribute to student retention by providing an early warning system to detect potential dropouts, alongside fostering community through surveys and forums for student feedback.

2.2 Students Have Higher Standards

The institute acknowledges that student expectations have significantly risen over the years. Students now expect a higher quality of service and technology from their educational experiences, similar to what they encounter as consumers. Delayed responses to inquiries or inadequate communication are no longer acceptable; students anticipate quick replies and

personal engagement. As such, the institute recognizes that students are not merely learners but valued customers who require nurturing and marketing.

2.3 More Competition

The higher education landscape has become increasingly competitive. The institute must be aware of not just the growing number of universities but also the rise of alternatives like boot camps, micro-credentials, and various online training providers. Potential students now compare the institute not just with other universities but also with platforms like LinkedIn Learning and Skill Share. Meeting these diverse options requires the institute to adopt a holistic approach, enhancing its offerings to attract and satisfy student needs.

2.4 Focus Shifting from Degrees to ‘Experiences’

The institute appreciates that students today view their university experiences differently, seeking more than just academic credentials. They desire an enriching environment that integrates learning with personal development. In light of this shift, the institute recognizes the need to adapt its communication and marketing strategies to emphasize the student experience rather than merely academic achievements. By prioritizing the long-term value of education and nurturing student relationships, the institute can enhance its reputation and appeal.

2.5 Embracing Technology and Digital Transformation

The institute acknowledges the pressing need to upgrade its outdated technology infrastructure, which hinders the ability to offer competitive educational services. Implementing advanced tools is crucial for enhancing student communication and engagement, making the institution more capable of responding to students' needs. Embracing digital transformation is essential for staying relevant in the post-pandemic education landscape.

2.6 Building Relationships with Students

The institute recognizes the importance of forging strong relationships with students through effective communication and service throughout their academic journey. Utilizing modern CRM systems to track leads and enhance interactions is vital, along with organizing community-building events. By improving communication workflows and personalizing

outreach, the institute aims to strengthen connections with students and foster a supportive environment.

2.7 Decreased Public Funding

The institute is grappling with the constraints imposed by declining public funding, which pressures it to maintain affordable education without compromising quality. This situation often leads to increased tuition fees, disproportionately impacting students and exacerbating social inequalities. To mitigate these challenges, the institute can improve efficiency by streamlining recruitment and enrolment processes and centralizing data management.

2.8 Rising Costs of Education

The institute is increasingly finding it difficult to maintain affordable education amidst declining public investment and rising operational expenses. To combat these rising costs, the institute is exploring innovative business models and pricing structures, such as subscription-based and alternative education offerings, to attract a broader range of students.

2.9 Faculty Recruitment and Workload

The competition for quality faculty mirrors the challenges faced in attracting students. The institute aims to enhance the work experience of current faculty, who may be overwhelmed by heavy workloads. Simplifying administrative processes through integrated tools can enhance job satisfaction, making the institution more appealing to prospective faculty.

2.10 Inclusion and Diversity

Achieving true inclusion and diversity is a multifaceted challenge for the institute. It is committed to addressing socioeconomic barriers and unconscious biases that impede marginalized groups' access to education. By modernizing recruitment processes, analyzing student data, and fostering supportive environments, the institute seeks to create an inclusive community that benefits all students.

3. Overview and Background- National Education Policy 2020

The creation of an Institutional Development Plan (IDP) is crucial for implementing the transformative reforms outlined in the National Education Policy 2020 within Higher

Education Institutions (HEIs). An IDP serves as a comprehensive action plan that allows HEIs to map out their growth and direction over a potential span of up to 10 years. The policy identifies the IDP as a vital tool that will act as a vision document to steer institutional transformation. The IDP will influence various aspects such as academic programs, human resource management, infrastructure needs, governance practices, quality enhancement, equity by promoting the involvement of socially and economically disadvantaged groups, and will assist in mobilizing resources for financial stability and sustainability.

4. Technical Education scenario in Andhra Pradesh

Osmania University (O.U.) College of Engineering, established in Hyderabad in 1929, was the first engineering college in Andhra Pradesh and the sixth in British India. Later, in 1943, the Osmania University College of Technology was founded. In 1946, the Andhra University College of Engineering was sanctioned in Cocanada, now known as Kakinada. Following the division of the Telugu-speaking regions into Andhra State in 1953, the college relocated to Visakhapatnam in 1955, with expanded engineering disciplines such as mechanical, civil, and electrical engineering. Kakatiya University's College of Engineering was established in Kothagudem in 1956, followed by S.V. College of Engineering, the seventh institution, in Tirupati in 1958.

Jawaharlal Nehru Technological University (JNTU) was created in 1972 through a state legislature act, incorporating various government engineering colleges including those in Ananthapur, Kakinada, and Hyderabad. The JNTU Act was modified in 1992 to permit the affiliation of additional institutions. Consequently, in 2008, JNTU was divided into four universities: JNTU Hyderabad, JNTU Kakinada, JNTU Ananthapur, and Jawaharlal Nehru Architecture and Fine Arts University, increasing the total number of engineering colleges in Andhra Pradesh to ten by 1976.

Since 2013, there has been a notable decline in engineering seats, both at the state and national levels. Many private engineering colleges struggle to provide quality education, which subsequently affects the employability of graduates. In the 2017-2018 academic year, two private universities opened campuses in Amaravati, but despite Andhra Pradesh's significant share of educational institutions in India, only 45% of engineering students secured jobs through campus placements. The situation is further aggravated as about 20-30% of the 1.5 million engineers graduating annually face considerable challenges in finding jobs, leading to many entering low-skilled positions.

From 2017 to 2019, approximately 652 colleges recorded zero admissions, and around 150 institutions closed each year due to stringent AICTE regulations. Schools lacking adequate infrastructure and those with consistent low admissions over five years are especially at risk of closure. As a result, the AICTE has approved the phased shutdown of over 410 colleges from 2014 to 2018 due to these regulatory demands.

Several factors have contributed to this decline. The administrative framework governing technical institutions is highly centralized, limiting their ability to adapt to societal needs or tailor curricula to emerging technological trends. Furthermore, there is an oversupply of engineering seats caused by relaxed entry criteria for establishing colleges; for instance, the land requirement for setting up new institutions in rural areas has reduced from 25 acres to just 10 acres.

Engineering institutions are expected to operate as non-profit entities focusing on quality, but many established post-2008 prioritize profit, resulting in insufficient faculty and infrastructure, which in turn affects placement opportunities. Graduates often lack the skills required by the job market, largely due to limited autonomy in curriculum development and evaluation, leading to a disconnect between educational offerings and industry needs.

Many engineering colleges struggle to distinguish themselves, failing to provide value or essential industry connections that facilitate internships. Despite the increase in engineering colleges in South India, particularly due to higher literacy rates and school graduation rates, demand for engineers is shrinking, particularly in the IT and ITES sectors, where automation is replacing many entry-level positions. This shift has discouraged students, who now explore various career paths beyond traditional engineering, such as aviation, biotechnology, and design.

In response to these challenges, the UR Rao Committee formed in 2003 identified a potential oversupply of graduates and warned that the rapid expansion of technical education could not be sustained. Today, this concern persists, leading the AICTE to implement a ban on new engineering colleges from 2020 onward and to manage the growth of traditional courses while encouraging emerging fields with high employment potential like artificial intelligence and data sciences.

To address employability, the AICTE is transitioning to a curriculum that emphasizes job readiness. Mandatory two-year internships for engineering students are now required, alongside training in basic communication skills. Continuous monitoring of institutions will ensure compliance with AICTE rules regarding enrollment and faculty development.

Moreover, collaboration between academic institutions and industries is essential to foster research and create better employment opportunities for students and faculty alike.

In conclusion, the current landscape of engineering education in Andhra Pradesh is complex, facing challenges of overcapacity, quality, and employability. Only through strategic regulation and reform can the educational framework adapt to meet the evolving demands of industry and society while preparing graduates for successful careers.

NEP 2020, Para 19.5 reads “Each institution will make a strategic Institutional Development Plan on the basis of which institutions will develop initiatives, assess their own progress, and reach the goals set therein, which could then become the basis for further public funding. The IDP shall be prepared with the joint participation of Board members, institutional leaders, faculty, students, and staff”

5. Global Goals for sustainable development

The Sustainable Development Goals (SDGs), also known as the Global Goals, represent a unified call for global action aimed at eliminating poverty, safeguarding people and the planet, and fostering inclusive human development and peaceful societies. In total, there are 17 SDGs, which were adopted by the United Nations General Assembly in 2015. The crucial role of education in facilitating sustainable development is highlighted in UNESCO documents, which state, “Universities must function as places of research and learning for sustainable development... Higher education should also provide leadership by practicing what they teach through sustainable purchasing, investments, and facilities that are integrated with teaching and learning.” It further emphasizes that higher education should focus on experiential, inquiry-based, problem-solving, interdisciplinary methods, and critical thinking (UNESCO, 2004, pp.22-23).

SDG 4 specifically calls for "ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all," encompassing ten sub-targets. The UEC is dedicated to achieving these objectives and targets, demonstrating a strong commitment to enhancing educational quality and inclusivity across the board.

Additionally, the National Education Policy (NEP) 2020 emphasizes the importance of strategic planning in higher education. Para 19.5 states that “Each institution will create a Strategic Institutional Development Plan, which will serve as a framework for institutions to develop initiatives, assess their progress, and achieve their set goals, forming a basis for potential public funding.” This plan will be developed through collaborative efforts involving board members, institutional leaders, faculty, students, and staff, ensuring a comprehensive approach to educational reform and sustainability

6. SMGG STATUS, PROFILE AND ITS ROLE IN CONTEMPORANEITY

St. Mary’s Group of Institutions Guntur for Women (SMGG) is a private engineering college managed by the Joseph Sriharsha & Mary Indrajaya Educational Society. Established in 2007 by a group of successful industrialists and business leaders, the college aims to contribute to societal development through education, recognizing that education can significantly improve living standards. Located in Chebrolu (V & M) in the Guntur District of Andhra Pradesh, India, the college occupies an attractive 14-acre campus along the state highway connecting Guntur and Bapatla, just 10 kilometers from Guntur city.

SMGG has received approval from the All India Council for Technical Education (AICTE) and is affiliated with Jawaharlal Nehru Technological University Kakinada (JNTUK). The institution is registered under the trust to conduct various engineering programs and related research activities. The college is noted for its discipline, well-equipped laboratories, highly qualified faculty, and effective administration. Key features of SMGG include high-quality academic programs, favorable teacher-student ratios, supplementary syllabus materials, strong teaching and learning facilities, and support for skill development and academic gaps.

In a relatively short period, SMGG has established a strong reputation among students, achieving excellent results in university examinations and fostering a student-friendly environment that combines innovation and research with active campus engagement. The institution is committed to transparent administration, social outreach, community involvement, and maintaining high standards of infrastructure and upkeep.

7. General Institutional Profile

1.	Name and Address of the college	St. Mary's Group of Institutions Guntur for Women, Chebroulu (V & M) Guntur District, Andhra Pradesh-522212
2.	Website	https://stmarysguntur.com
3.	Year of Establishment	2007
4.	Institutional Status	Private Affiliated to Jawaharlal Nehru Technological University Kakinada (JNTUK), Andhra Pradesh.
5.	Land area	14 Acres
6.	Built up area	22093 sq m.
7.	Award, Recognition, Accreditation	AICTE approved. NAAC accredited with B grade. (Efforts on for NBA accreditation)
8.	Number of Programmes offered	Seven: Diploima-3; UG- 5 and PG-11
9.	Number of laboratories	120
10.	Number of computers	Workstation- 740 Printer & Photocopier 45
11.	Details of programmes offered	<ul style="list-style-type: none"> • Diploma in Artificial Intelligence and Machine Learning • Diploma in Cloud Computing And Big Data • Diploma in Computer Engineering • B.Tech in Computer Science and Engineering • B.Tech in Computer Science and Engineering (Artificial Intelligence and Machine Learning) • B.Tech in Artificial Intelligence and Data Science • B.Tech in Electronics and Communication Engineering • B. Pharma In Pharmacy • M. Pharm. in Pharmaceutics • M. Pharm. in Pharmaceutic AI Analysis and Quality Control • M. Pharm. in Pharmacology • MBA in MBA (Big Data Analytics) • MBA in MBA (Digital Marketing) • MBA in MBA (Artificial Intelligence, Machine Learning and Deep Learning)

		<ul style="list-style-type: none"> • M. Tech. in Computer Science and Engineering (Data Science) • M. Tech. in Artificial Intelligence and Data Science • M. Tech. in Computer Science and Engineering (Artificial Intelligence and Machine Learning) • M. Tech. in Computer Science and Engineering (Cyber Security) • M. Tech. in Computer Science and Engineering (IOT)
12.	Total No. of faculty	150.
13.	Total No. of technical staff	17 Regular: 10, Contract- 07
14.	Total No. of students	3446. Boys: 304 Girls: 3142
15.	No. of non-teaching staff	115: Female staff members -63 Male staff members -52
16.	Number of library books	46664 (Text Books) + 9137 (Reference Books)
17.	Outdoor sports facilities	Three courts for Badminton, Two courts for Ball Badminton, One court for Basketball, Two courts for Volleyball, One court for Throwball, & kabaddi. One Football field, one Cricket Ground and one Cricket Practice net
18.	Indoor Sports facilities	Ten Chess Boards, four Carrom Boards and one Table-tennis Board

8. Pedagogical approach: Teaching -learning and Evaluation

8.1 Outcome Based Education (OBE)

Outcome-Based Education (OBE) is implemented to enhance educational quality, elevate student knowledge levels, and provide measurable outcomes. The academic teaching-learning process is utilized for foundational-level planning, ensuring that educational objectives are met effectively. The Internal Quality Assurance Cell (IQAC) develops the academic calendar for the institution, aligning it with the university's calendar to incorporate all academic and non-academic activities.

To address syllabus gaps and keep students current with emerging technologies, the institution offers add-on courses. Initially, all students engage in common courses during their first year, progressing to branch-specific and elective courses from the second year onwards. Various curriculum implementation strategies are employed, including:

Course Plan Preparation: Detailed outlines of course objectives and learning outcomes are established at the beginning of each term.

Formation of Course & Class Committees: Dedicated groups that oversee course administration and address student concerns.

Identification of Group Tutors and Mentors: Faculty members assigned to provide tailored support and guidance to students.

Students' Performance Enhancement and Assessment Cell (SPEAC): Focuses on improving results and monitoring student performance.

Industry Visits and Internships: Arranged to provide practical exposure and real-world experience.

Offering Add-on and Minor Courses: Complementary courses provided to enrich the educational experience.

Through various committees, students are made aware of critical issues such as gender equality, environmental sustainability, professional ethics, and human values, contributing to holistic student development.

Curriculum enrichment is achieved by offering value-added courses and training in soft skills, placement preparation, as well as facilitating industrial visits and internships. The institution utilizes an Academic Management System (AMS) to manage daily course activities, including course planning, timetable creation, online attendance tracking, internal assessment entry, and report generation.

Students are encouraged to choose elective courses based on their interests, participate in online learning, engage in industry visits and internships, and take part in intercollegiate seminars and hands-on workshops.

A feedback system is in place at the St. Mary's Group of Institutions Guntur for Women (SMGG) to gather insights from students, faculty, alumni, and employers regarding the curriculum. SPEAC emphasizes a continuous evaluation process for students, suggesting measures for improvement in identified weak areas. Additionally, the Department Advisory Board convenes once per semester to propose enhancements in the teaching, learning, and evaluation processes, as well as to facilitate student preparedness for the industry through the integration of the latest technologies

8.2 Teaching-learning and Evaluation

IQAC develops the college's academic calendar in coordination with the University calendar, integrating co-curricular and extracurricular activities. Subject assignments are determined by the Heads of Departments (HoDs) at the semester's start, factoring in faculty specialization, experience, and workload. Each faculty member formulates a teaching plan for their course, ensuring that the minimum contact hours outlined in the syllabus are met, which is then verified by the HoD. Student feedback regarding course delivery is collected from all students and through class committees twice during the semester, and this information is communicated to the faculty for necessary adjustments. Program Outcomes (POs) and Program Specific Outcomes (PSOs) are established at the departmental level, while course plans and Course Outcomes (COs) are developed by the faculty responsible for each course, subject to approval by a committee comprising the HoD, course coordinator, and module coordinator. To facilitate smooth course progression and timely completion, SMGG has formed class/course committees that include senior faculty and student representatives. At the semester's end, the Department Advisory Board (DAB) assesses all academic and non-academic activities to identify deficiencies and areas for improvement.

The institution conducts internal examinations following the frequency and schedule set by the University. For each examination, two sets of question papers are created by the relevant faculty, which are then evaluated and verified by a committee made up of module experts,

subject experts, and the HoD to ensure quality standards. After thorough scrutiny, IQAC selects one question paper to be forwarded to the examination cell for the scheduled test. Students are permitted to review their assessed answer sheets alongside an evaluation scheme and can check their marks using the AMS. Internal marks are awarded based on students' performance in internal examinations, assignments, continuous lab assessments, practical exams, and viva voce evaluations. Once finalized, these internal marks are posted on the notice board and communicated to the students. An Academic Management System (AMS) is implemented to facilitate sharing of all academic activities among students, staff, and parents. An internal committee, comprising a module expert, subject expert, and the HoD, is established for the internal evaluation of both theory and practical courses. According to University guidelines, students must achieve minimum pass marks in the University examinations and earn activity points through participation in various co-curricular and extracurricular programs in order to complete their degree.

The institute has implemented several initiatives addressing issues related to gender, environmental sustainability, human values, and professional ethics. To enhance awareness, subjects concerning professional ethics and environmental sustainability have been incorporated into the curriculum by the University. Additionally, the institution has established an anti-ragging cell, a women's cell, and a student grievance redressal committee to address any gender-related issues. Some faculty members participate in evaluating answer books for university examinations and monitor the conduct of examinations at other engineering colleges affiliated with JNTUK. A select number of faculty act as resource persons for various Faculty Development Programs (FDPs) and workshops conducted by other institutions, while others have received invitations to submit journal articles from publishers. SMGG has implemented strategies to enhance the use of ICT-enabled teaching and maximize the application of learning management system software. To promote self-directed and collaborative learning, students are encouraged to complete assignments and presentations that cover specific syllabus topics. The institution also motivates students to engage in internships, industrial visits, and training relevant to their field of study. SMGG staff and students are actively encouraged to participate in workshops, short-term training sessions, seminars, and national or international conferences, while faculty members are supported in organizing conferences, seminars, workshops, and engaging in research and consultancy activities, including publishing their research in reputable journals recognized by UGC.

8.3 Research, Innovations and Extension

SMGG focuses on fostering research and development among both staff and students. Undergraduate students with a keen interest in research are identified and provided with appropriate training to enable them to carry out small-scale research projects as part of their B Tech studies. The Innovation and Entrepreneurship Development Centre (IEDC) plays a pivotal role by encouraging students to transform their projects into viable products. SMGG also seeks collaboration with local authorities, such as government agencies and public utility services, to engage in consultancy projects or conduct outreach programs. This interaction allows students to recognize public issues and develop effective solutions, ultimately preparing them to become socially responsible engineers equipped with problem-solving abilities. IEDC hosts an annual idea pitching competition to spot talented students, and members of the IEDC club are motivated to participate in Hackathon boot camps.

The National Service Scheme (NSS) unit has received commendations from various community sectors for its active involvement in conducting awareness programs in the villages surrounding the Institute. Institute volunteers have made significant contributions by collecting and distributing clothing and food resources to underprivileged rural residents. Additionally, NSS volunteers have led numerous clean-up initiatives in nearby areas, demonstrating their commitment to community service. Furthermore, a student committee has taken the initiative to adopt local villages, providing essential electrical wiring services for those in financial need.

8.3.1 Research and Development Cell (R&D Cell)

The Institute's Research and Development (R&D) Cell is dedicated to enhancing research activities among staff and students to foster an environment rich in innovation, creativity, and intellectual curiosity. This cell plays a pivotal role in initiating various projects, including the establishment of IEEE student chapters, thereby encouraging student involvement and leadership in research initiatives.

Encouraging Research

The R&D Cell provides a robust platform for both students and faculty to engage in diverse research activities. It nurtures a research-oriented mindset among students, guiding them in identifying relevant research topics, conducting comprehensive literature surveys, and crafting well-defined research proposals. The cell actively encourages participation in funded projects

from various organizations such as AICTE, DoE, and DST, facilitating the necessary processes to secure these projects, thus supporting students in their research endeavours.

Promoting Innovation

Fostering a culture of innovation is a key objective of the R&D Cell, which organizes workshops, seminars, and guest lectures focused on cutting-edge technologies and emerging research trends. By creating opportunities for collaborative research, the cell encourages faculty and students to work together on innovative projects and prototypes. This initiative not only enhances academic knowledge but also motivates participants to develop practical solutions that can address real-world challenges.

Building Industry-Academia Partnerships

The R&D Cell plays an instrumental role in bridging the gap between academia and industry. It organizes joint research initiatives, internships, and industrial visits, providing students with valuable exposure to the latest technologies and industry practices. These collaborations enable knowledge transfer from academic settings to industry, thus enriching the learning experience for students and enhancing their career readiness.

Disseminating Research Findings

Promoting the dissemination of research findings is another critical responsibility of the R&D Cell. The cell organizes conferences and symposiums and encourages the publication of research papers in reputable journals to share knowledge with the wider academic and professional community. Furthermore, it assists students in applying for patents to protect their innovations and supports the commercialization of their research projects. This emphasis on outreach ensures that the college's research contributions have a significant impact beyond the campus.

8.3.2 Research Policy:

To achieve the outlined goals for developing robust research infrastructure and fostering academic excellence, the following comprehensive report has been prepared. This report focuses on doctoral candidate recruitment, enhancing research output, patent creation, and support for students with special educational needs, as well as faculty training initiatives.

Research Candidate Recruitment

Establishing a target of at least three doctoral candidates in each department is crucial for fostering a vibrant research culture within the college. To attract and retain high-caliber candidates, departments can implement strategies such as conducting outreach at undergraduate levels, engaging potential candidates in research projects early, and providing

competitive funding for their studies. The development of mentorship programs connecting current doctoral students with prospective candidates can also facilitate recruitment, ensuring a steady flow of adept scholars who contribute to the college's research endeavors.

Enhancing Research Output

Improving research output through a minimum target of two publications per faculty member annually is aimed at reinforcing the quality of scholarship produced by the institution. The formulation of research committees within each department can help identify funding opportunities and encourage collaborative projects that lead to high-quality publications. Workshops and seminars on research methodologies, effective writing, and publishing strategies can further enhance faculty capabilities, enabling them to meet publication targets while ensuring the rigor and relevance of their research.

Focus on Patents and Intellectual Property

The college's dual focus on the creation of patents and intellectual properties across all departments, particularly in the science and engineering sectors, highlights the importance of innovation in academic research. Departments should establish a specific infrastructure to guide faculty and students in the patent application process, including training sessions on intellectual property rights and commercialization strategies. Furthermore, fostering partnerships with industry can provide additional support and resources for translating research discoveries into marketable products, thus enhancing the college's reputation and impact.

Inclusive Education Practices

To adequately serve students with special educational needs, the college must implement inclusive educational practices across its programs. This includes tailored support services that promote equal access to education for all students, regardless of their learning challenges. Training for faculty members on accommodations and inclusive teaching strategies will ensure that diverse student needs are addressed effectively. Developing partnerships with local organizations can also enhance resource availability and provide students with additional support mechanisms.

Faculty Development and Training

Encouraging faculty participation in induction programs, refresher courses, and short-term training sessions is essential for professional growth and academic excellence. Creating a structured framework that allocates time and funding for continuous learning opportunities will benefit faculty members significantly. Offering workshops led by experts in research, teaching,

and administration can improve faculty productivity and morale, ultimately impacting student success and fostering a culture of continuous improvement within the college.

Conclusion

The college's initiatives for promoting research, enhancing educational quality, fostering innovation, and supporting inclusivity are pivotal for establishing a strong academic framework. By prioritizing the recruitment of doctoral candidates, pushing for high-quality research output, focusing on patent development, implementing inclusive teaching practices, and investing in faculty development, the college can ensure a meaningful impact in both educational and research landscapes. These strategies collectively contribute to achieving the college's mission and supporting its stakeholders effectively.

8.4 Infrastructure and Learning Resources

The Institute is strategically located on a 14-acre campus featuring six academic blocks, designed to facilitate a comprehensive educational experience. Each block serves specific functions, with the Computer Science (CSE) and Electronics and Communication (ECE) faculty and classrooms situated in blocks E and F. The Pharmacy College is housed in block A, while block B accommodates all first-year classrooms and administrative offices. Laboratories are contained within a dedicated block G, and computer labs are distributed across blocks B, C, E, and F. Physical education facilities and the canteen for day-scholars are located in blocks E and F, respectively, while block H is designated for mess services. Each block is equipped with seminar halls, with block F featuring a large seminar hall that can host up to 500 students. The library and digital library are situated in block C, providing essential resources for student learning and research.

Infrastructure and Facilities

The college boasts a substantial technological infrastructure, consisting of approximately 740 personal computers across its labs, all equipped with internet connectivity. The entire campus is Wi-Fi enabled, supported by ten access points that ensure comprehensive coverage. Seventy percent of classrooms and all seminar halls are equipped with sound systems and LCD projectors, enhancing the learning experience through modern audiovisual technology.

The Institute has also made significant strides in library automation using an open-source platform called Genlib. The library holds over 55,000 books, e-journals, and reputable publications, along with previous university question papers, technical magazines, and newspapers. Photocopying services are available for student convenience. The library can

accommodate 200 students and features a digital library with 21 desktop computers offering internet access speeds of 100 Mbps.

Sports and Extracurricular Activities

Sporting facilities are a vital component of campus life, with a dedicated physical education department overseeing an array of sports activities. Available facilities include a Kabaddi court, shuttle and badminton courts, and volleyball and football fields. The department organizes various tournaments, including zonal and inter-zone competitions across sports like volleyball, cricket, football, basketball, and badminton. The Institute also hosts an annual cultural fest, providing students with a platform to showcase their artistic talents and creativity.

Hostel and Utilities

For residential students, the Institute provides hostel accommodations for women, ensuring a safe and supportive living environment. To maintain a reliable power supply, the campus is equipped with a 200+80 KVA diesel generator set for both general campus needs and the girls' hostel. Accessibility to clean drinking water is prioritized, with water filters, coolers, and bottled water available on each floor of every block.

Transportation and Communication

Transportation needs are effectively met by the Institute's fleet of 22 buses, which facilitate movement for students and staff. Furthermore, there are three system administrators available around the clock to address any internet or networking issues that may arise.

Connectivity and Online Presence

SMGG is fully equipped with internet services from BSNL and ACT, delivering speeds exceeding 1 Gbps throughout the campus. Communication is streamlined through a dedicated domain website, and the Institute maintains an active presence on social media platforms such as Facebook and Instagram. For quick and efficient communication, staff and students utilize G Suite, alongside WhatsApp groups, fostering an integrated community within the institution.

In summary, the SMGG Institute campus is well-equipped with comprehensive facilities and infrastructure that support educational excellence, promote student well-being, and foster a sense of community among staff and students.

9. VISION, MISSION & STRATEGIC STATEMENT

9.1 Vision

To emerge as a world class institution in creating and disseminating knowledge, and providing unique learning experience in emerging technologies and management areas that will best serve and contribute for betterment of the world.

To realize this vision, the institute will align its curriculum with the objectives of the National Education Policy, which emphasizes the promotion of a multidisciplinary approach and a comprehensive method of learning. The institution will focus on cultivating critical thinking, problem-solving, and communication abilities, alongside technical expertise. The institute aims to ensure that its graduates possess the necessary skills to face the challenges of the 21st century, encompassing emerging technologies, sustainable development, and social responsibility.

In order to develop engineers who meet societal needs, the institute will establish an innovative ecosystem that stimulates creativity, experimentation, and entrepreneurship. This will involve creating opportunities for students to collaborate across various disciplines and to engage in real-world projects that effect positive change in society. Additionally, we will emphasize the importance of strong ethical values and promote a culture of ethical conduct among students, faculty, staff, and leadership. It is essential to foster social awareness and a sense of responsibility among all stakeholders, ensuring that students approach their work with integrity, honesty, and a commitment to social justice.

By adopting a multidisciplinary framework, encouraging innovation, and endorsing ethical practices, our college will cultivate graduates who can make a positive contribution to society, adapt to the fast-evolving demands of the world, and create a significant impact in their communities.

9.2 Mission

- **Accomplish process of knowledge attainment through rigorous academic enrichment.**
- **Build and attract people for a rewarding, inspiring, and sustainable environment by fostering freedom, empowerment, creativity, innovation, and social conscience.**

SMGG envisions a future where it remains a premier institution dedicated to offering innovative and creative engineering education to its students. To realize this vision, the Institute aims to maintain a highly qualified faculty and robust infrastructure that effectively supports teaching and learning. To provide students with access to advanced and relevant technologies, the college intends to invest in state-of-the-art equipment and facilities, ensuring that students gain practical experience and keep up with the latest advancements in their respective fields.

The institution also plans to form partnerships with industry leaders and research organizations to expose students to emerging technologies and research initiatives. To align with its goal of shaping students who can address evolving global challenges, SMGG will offer opportunities for international exchange programs and internships. Additionally, the Institute aims to integrate a multidisciplinary approach into its curriculum, allowing students to develop a broader perspective and a deeper appreciation for the relationships among various fields of study.

Furthermore, SMGG understands the significance of instilling moral and ethical values in its students. To foster this, the institution will promote a culture of ethical conduct and social awareness, ensuring that graduates approach their careers with integrity, honesty, and a commitment to social responsibility. The college will also create opportunities for students to participate in community service and other social engagements that will enhance their understanding of societal needs and enable them to contribute positively to their communities.

9.3 Strategic Statement

All initiatives will be aimed at enhancing student enrolment, improving faculty professionalism, increasing student success, fostering community development, and establishing a sustainable business model. The goal is to achieve financial independence as quickly as possible by diversifying revenue sources and encouraging a culture of cost awareness throughout the college.

Efforts will be concentrated on several key areas to enhance the institution's overall performance and sustainability.

9.3.1 Student Enrolment Growth

A primary focus will be on increasing student enrollment, which can be measured using metrics such as:

Conversion Rate: This metric tracks the percentage of inquiries that turn into applications, thus indicating the effectiveness of recruitment efforts.

Yield Rate: This measures the percentage of admitted students who decide to enroll, providing insight into the attractiveness of the institution once students receive acceptance letters.

Market Segmentation: Understanding the demographics and psychographics of the applicant pool, including geographic and ethnic diversity, informs marketing strategies and recruitment efforts.

9.3.2 Faculty Professional Quality

To ensure high-quality education, the institution will prioritize improving faculty professional standards. Key metrics to evaluate faculty effectiveness include:

Faculty Credentials: Tracking the educational qualifications and professional experiences of faculty members (e.g., advanced degrees, certifications) can indicate the potential quality of instruction provided.

Teaching Assessments: Student evaluations and peer reviews can be instrumental in determining teaching effectiveness and engagement in pedagogical methods.

Research Output: Monitoring publications, research grants, and involvement in academic conferences can serve as indicators of faculty productivity and intellectual contribution to their fields.

9.3.3 Student Achievement

Enhancing student achievement is vital for the institution's reputation and its graduates' impact on society. Metrics used to measure success include:

Graduation Rates: This metric reflects the percentage of students completing their programs within the expected timeframe, showcasing the effectiveness of academic support structures.

Post-graduation Employment Rates: Tracking the employment status of graduates and their earnings compared to their peers can highlight the institution's role in preparing students for the workforce.

Retention Rates: This measures the percentage of students who continue their studies from one year to the next, indicating overall satisfaction and the effectiveness of student support services.

9.3.4 Community Improvement and Development

The institution also aims to contribute to its surrounding community through targeted improvements. Metrics for assessing community engagement and development include:

Volunteer Participation Rates: This measures how many students engage in community service activities, reflecting their commitment to social responsibility and civic engagement.

Impact Assessment: Collecting data on the results of community initiatives can provide insights into the effectiveness of programs designed to improve local conditions.

Stakeholder Satisfaction Surveys: Gathering feedback from community members on institutional engagement efforts can guide future initiatives and strengthen partnerships.

9.3.5 Sustainability of Business Model

Finally, the sustainability of the institution's business model is crucial for long-term viability. Important financial metrics include:

Cost-Per-Enrolment: This calculates the total marketing and outreach expenses divided by the number of new enrolments, helping to assess the efficiency of recruitment strategies.

Revenue Growth Metrics: Such as Monthly Recurring Revenue (MRR) and Customer Lifetime Value (LTV), which can indicate financial health and scalability.

Cost Savings from Sustainability Initiatives: Monitoring reductions in energy usage, waste management improvements, and the adoption of green practices can enhance operational efficiencies and reduce costs.

By focusing on these specific metrics, the institution can effectively target its objectives in student enrollment growth, faculty quality, student achievement, community involvement, and

business model sustainability, ultimately leading to a proactive and responsible academic environment.

10. PRESENT SWOT/SWOC ANALYSIS (2023)

10.1 Strengths

- It is a self-financing private college having substantial functional autonomy with AICTE approval and ISO Certification
- Committed management, qualified and experienced faculty and dynamic staff to ensure the quality in all aspects
- UEC provides excellent infrastructure and ICT facilities including classrooms, library, transportation system and Wi-Fi etc.
- Maintains a good student-faculty ratio and essential staff retention ratio
- Has a very active and vibrant internal training team & placement cell.
- Implements value added programmes, such as NSS and IEDC.
- CCTV monitoring system for safe and secure campus.
- Faculty members are encouraged to organize and participate in workshops, seminars, FDP and STTPs for quality improvement
- Scholarship schemes are provided to meritorious/economically weak students.
- Effective committees/cells for student grievance redressal.
- Physical Education Department creating a constructive physical learning environment
- Performance enhancement and to develop social responsibility.
- Institution has tied up with nearby hospitals for medical emergencies.
- Induction/ orientation/UHV programmes are conducted.
- Institution promotes experiential learning.
- ICT enabled teaching-learning process is practised.
- MoUs with various national/international organizations.
- Student activities, such as fests are conducted and students are encouraged to participate in various competitions and tournaments

10.2 Weaknesses

- Very limited Industry- academy interaction for projects, consultancy works and extension activities

- Lack of funded projects and patents.
- Limited subscription to Quality journals and publications
- Limited Interdisciplinary and collaborative Research
- Lack of student/faculty exchange programmes.
- Insufficient Smart classrooms and ICT enabled learning
- Inadequate institutional branding
- Need to improve basic amenities such as Gym, canteen, auditorium, and waste management to become sustainable

10.3 Opportunities

- Located in a rural area, near the capital city of Andhra Pradesh, there is a great scope to
- provide quality education to the rural students
- Availability of land for expansion of academic programmes and building new infrastructure for teaching, training and other facilities - incubation centres etc.
- Improving access through road connectivity to highway
- NRI management provides scope for placements in MNCs
- Enhancing green initiatives for sustainable development of society.
- Potential to create awareness among youth for competitive examinations such as UPSC, GATE, CAT, GMAT, TOFEL, GRE.
- Leverage Alumni for collaboration, network building and funding.
- Increase regional recognition through socially relevant regional projects
- Develop entrepreneurial skills through internships, hands on training and practical experience
- Possibility of forging linkages with international organizations and industries.
- More candidates showing interest in opting for emerging fields in engineering, there by scope to offer new courses in demand driven areas.
- More platforms are opened by government/universities to promote research activities, which offers more convenient places for research.
- Environmental challenges need more engineering-based studies, which seems to be an opportunity for the budding engineers.

10.4 Challenges

- Maintaining good rank among engineering colleges and to scale greater heights.
- Attract and retain expert faculty at all levels.

- Media and peer-group influence negatively affecting the academic orientation of students.
- Changing admission scenario in the field of Engineering and technology
- Updation in teaching-learning process with rapid change in technology
- Non-availability of visiting and adjunct faculty from industry
- Remoteness of the college from the major industrial cities and facilities such as airport, railway station.

11. Strategic Plan and Goals

11.1 Strategic Plan

The college follows a multipronged approach focusing on the following aspects:

1. Curricular Aspects
2. Teaching – Learning
3. Research and Development
4. Entrepreneurship
5. Extensions and Collaborations
6. Infrastructure
7. Student Support
8. Governance
9. Accreditation & Ranking
10. Alumni Interaction
11. Industry Interaction / Collaboration
12. Environment-friendly Initiatives

It is the fervent wish of the Management to make the college a strong center for academics as well as research which would have its social impact.

Curricular Aspects

- To introduce new skill & career-oriented programmes like B.Tech in Artificial Intelligence and Data Science, Artificial Intelligence and Machine Learning, Cyber Security, Internet of Things and Data Science etc.
- To offer value added courses pertaining to academics and life skills to help students to become employable.
- Holistic development of student by having dynamic and updated curriculum.

- Every student to complete at least two Skill Based Courses / Add-on / Certificate Courses during the time of graduation.
- Increasing the percent passing results in all Programs.
- Promote academic projects and internships beyond the syllabus.
- Strengthen placements for all graduating students.

Teaching – Learning Process

- To motivate staff for acquiring doctoral degree as well as post-doctoral fellowship.
- To strengthen ICT based teaching - learning.
- To encourage the teachers and students for undergoing SWAYAM, NPTEL, COURSERA, Massive Online Open Courses.
- Students will be encouraged for wider use of learning resources in the library.

Research and Development

- To encourage the faculty members for submitting the research proposals to various funding agencies like DST, SERB, MOEF, UGC, ICCR, TISS etc. To encourage staff and research students to boost quality publication / Research.
- To enhance the Academia Industry Linkages
- To explore the collaborations with academic institutions / industries/other agencies of professional and social relevance.
- Establish and develop Laboratories with more research facility
- Applying for patents.
- Encourage Students for research paper publication/ presentation in Journal/ Conference from each department.

Accreditation and Ranking

- NBA accreditation of 100% of UG programs by 2028
- NAAC accreditation with A++ Grade by 2029
- Autonomous status by 2024
- NIRF ranking
Within top 250 Engineering Institutes by 2025
Within top 200 Engineering Institutes by 2029.

Entrepreneurship

- Setting up Incubation Centers for promotion of innovation.
- Establishment of Entrepreneurship Development Cell

- Effective functioning of entrepreneurship development Cell
- MoU's with organizations for entrepreneurship development Providing training & guidance for entrepreneurship development
- Bringing more experts of the field for seminar, lecture, workshop for entrepreneurship development
- Establishing incubation centers
- Promoting, sponsoring and facilitating entrepreneurship development.

Extensions and Collaborations

- Initiate programs for community welfare.
- Strengthening of extension and outreach activities with the help of NSS / NCC/Red Cross / Youth Red Cross (YRC) in collaborations with industry, community, NGOs.
- Counseling and social consultancy in slum areas.
- To enter into MOUS with educational and industry partners to fill industry academia gaps and to get hands-on experience.
- To join hands with various government bodies to carry out social missions.

Infrastructure

- Use of ICT for academic and administrative purposes.
- Safe campus through CCTV.
- Optimum use of existing infrastructure and learning resources.
- Availability of adequate number of clean washrooms for all with special provision of differently abled persons.
- Infrastructure building development & modification
- More number of Subscription of E-Journal & E-books
- Library infrastructure development.
- Smart Class rooms, Tutorials, Seminar halls
- Safety & Security management
- Water facility
- Medical facility
- Developing sports (indoor/outdoor) facilities
- Plantations

Student Support

- Endorse Student exchange programs for academic and research promotion MOUS and collaboration with National and international organizations and agencies for academics, research and extension activities.
- To plan training and financial support for students to participate in international events and competitions.
- To organize more placement drives
- To promote health consciousness among students.
- To strengthen the student mentoring system.
- Involve student community towards national goals of pesticide free farming.
- Motivating the students to participate in inter and intra college activities.
- To register the Alumni Association.
- To strengthen the Alumni Association for its contribution in academic matters, student support as well as mobilization of resources - both financial and non-financial.

Governance

- To implement e-governance system in administration, finance, accounts, student admission, support and examination.
- Adoption of quality management strategies in all academic and administrative aspects.
- Planning and optimum utilization of finance as well as mobilization of resource.
- Regular internal and external audits.

Environment-friendly Initiatives

- Green and eco-friendly Campus
- Plastic-free Campus
- Promote production of eco-friendly products
- Promotion of organic farming at Institution.
- No Vehicle Day every month
- Promotion of paperless administration

Industry Interaction / Collaboration

- More no. of MoUs with industries
- Support for internships, visits, trainings, guest lectures
- Identifications of industry needs and advice on Curriculum for extra courses apart from curriculum.

- Providing career guidance
- Establishing Innovation Centers.

Alumni Interaction

- Data base creation, Regular interactions with alumni and networking Recognition of successful alumni
- Leverage for guest lecturers/internships/placements/training/ entrepreneurship
- Exploring Contributions/Sponsorships/scholarships/fund generation

11.2 Goals (2024-2029)

11.2.1 Short Term Goals

1. *To modernize class rooms and laboratories.*
2. *To strengthen the teaching –learning process.*
3. *To depute supporting staff for training.*
4. *To enable automation of the administrative and academic sections.*
5. *To conserve natural resources and develop sustainable sources of energy and protect the green and clean environment.*
6. *To attain NAAC Accreditation by the year 2023*
7. *To promote “Swacch St. Marys” further*
8. *To Improve Placements in Core Sector.*
9. *To improve Industry Institute Interactions.*

11.2.2 Long Term Goals

In order to improve the quality standards of the institution, it has set the following goals to be achieved in the coming five years.

I. Teaching-Learning Process

1. To encourage Students to take part in national / International Conferences and publish their Research work.
2. Strengthening of academic and R & D programs in collaboration with reputed Universities and industry.
3. Develop an alumni scholarship program.

II. Accreditation and Ranking

1. To attain NBA Accreditation by the year 2028.
2. To attain NAAC Accreditation up gradation with A++ by the year 2029.

3. To attain Autonomous status by the year 2024.
4. To attain NIRF ranking within top 250 Engineering Institutes by 2025 and within top 200 Engineering Institutes by 2029.

III. Infrastructure and Development

1. Establish a dedicated research and innovation centres.
2. Implement a sustainability plan to promote energy efficiency, waste reduction, and green initiatives across campus.
3. Promoting, sponsoring and facilitating entrepreneurship development.
4. To emerge as the Centre of excellence in Engineering and Technology and to setup incubation centers.

12. Integrated Implementation, Monitoring And Review

Since the IDP is an Action Plan for 5-7 years it needs to be constantly followed up and reviewed for ensuring proper implementation. For this purpose, some internal monitoring mechanisms must be in place. Some of the mechanisms are:

1. Before finalising the IDP, it is desirable to seek public/stakeholder feedback. It democratises the strategic planning exercise and lends validation to this major exercise.
2. Regular review meetings must be taken by the Steering Committee or Task Force or Coordination committee assigned the IDP formulation & monitoring
3. Create a Project Monitoring Unit (PMU) to ensure integrated and coordination actions.
4. Develop a dashboard for online monitoring of the IDP, with a user-friendly interface for the responsibility/anchoring person /unit/ agencies must be developed. This would enable transparency and good governance and minimise risks of lack of institutional memory and also enable sustained review towards effective implementation.
5. Evaluation studies must feed into the implementation cycle to make midcourse corrections in the IDP.

13. Conclusion

The IDP is a dynamic, evolving live document that will help all HEIs transform themselves to develop a competitive advantage in the challenging global environment and meet the requirements of a competitive knowledge economy.

Acknowledgements

This IDP is the outcome of a collective effort through a participatory exercise with meetings and faculty workshops. The management, core team members, faculty of UEC and other stakeholders represented through the PTA were all a part of this reflective effort.