



Institutional Development Plan

(2024 - 2034)



1. INTRODUCTION

Adusumilli Aswardha Narayana Murthy and Vallurupalli Venkata Rama Seshadri Rao (AANM&VVRSR) Educational Society was established in 1981 with the objective of establishing general and Technical Education Institutions in Gudlavalleru, a village in Andhra Pradesh. The promoter society established a Polytechnic in 1981, an English Medium High School in 1988, an Engineering College in 1998, and a Pharmacy College in 2010. AANM&VVRSR Educational Society has been instrumental in making a rural village, Gudlavalleru, an educational hub and provided opportunities to many middle and lower-middle-class public to pursue their education. GEC offered four undergraduate B.Tech programs with an intake of 180 when it was established in 1998. This college offers 09 UG B.Tech programs, 05 PG M.Tech programs and MBA programs with an intake of 1476.

Founder of this college, Sri Vallurupalli Venkata Rama Seshadri Rao has been recognized posthumously with Edupreneurs Award 2013 by "Engineering Watch, a National Magazine, in New Delhi, under Vice-Chancellors choice for his contribution to Engineering Education in India. This is an indicator of the commitment and achievement for serving the cause of education.

AANM&VVRSR Educational Society resolved to rename GEC as SRGEC (Seshadri Rao Gudlavalleru Engineering College) in the memory of Late Sri VVR Seshadri Rao, who was called the father of GEC. Consequently, GEC applied to AICTE to rename the institution SRGEC in March 2021. AICTE accorded permission to rename GEC as SRGEC w.e.f July 10, 2021.

SRGEC is able to provide a rich learning experience to students by organizing various educational and personality development programs to enable the students to become responsible citizens. SRGEC gives priority to sports & games for a sound mind and health, social service activities to ignite social responsibility, and advanced training to make students industry-ready in human resources.

SRGEC built adequate infrastructure with a built-up area of 5,22,667 sqft. in its area of 14.47 acres to provide sufficient instructional areas, a state-of-the-art library and information centre, laboratories, skill development centres, a sports complex, and other amenities. The transparent policies and mechanisms of the college paved the way to having more qualified, experienced, and competent faculty to serve the student community.

Name and Address of the Institute	Seshadri Rao Gudlavalleru Engineering College, Seshadri Rao Knowledge Village, Gudlavalleru, Krishna District, Andhra Pradesh - 521356
Year of Establishment	1998
Type of Institute	Self Finance
AICTE Permanent ID	1-8998977
University Code	48
AISHE Code	C-18104
Status of the Institution	Autonomous Institute, Permanently Affiliated to JNTUK, Kakinada
Name of the Head of the Institution	Dr. Karuna Kumar Burra
Designation	Principal and Professor of Mechanical Engineering

Genesis and Growth of the College

Year of establishment: 1998Intake at the time of inception: 180 (EEE - 40, ME - 60, ECE-40, CSE-40)Present Intake (UG-1380, PG-90) : 1,470



PG: M.Tech		
SE	-	6
PEED	-	6
MD	-	6
VLSID&ES	-	6
CSE (AI&M	IL) -	6
PG: MBA	-	60

VISION

To be a leading institution of engineering and management education and research, preparing students for leadership in their fields in a caring and challenging learning environment.

MISSION

- To produce quality engineers by providing state-of-the-art engineering education.
- To attract and retain knowledgeable, creative, motivated, and highly skilled individuals whose leadership and contributions uphold the college tenets of education, creativity, research, and responsible public service.
- To develop faculty and resources to impart and disseminate knowledge and information to students and also to the society that will enhance the educational level, which in turn, will contribute to the social and economic betterment of society.
- To provide an environment that values and encourages knowledge acquisition and academic freedom, making this a preferred institution for knowledge seekers.
- To provide quality assurance.
- To partner and collaborate with industry, government, and R and D institutes to develop new knowledge and sustainable technologies and serve as an engine for facilitating the nation's economic development. To impart personality development skills to students that will help them to succeed and lead.
- To instill in students the attitude, values, and vision that will prepare them to lead lives of personal

Integrity and civic responsibility.

- To promote a campus environment that welcomes and makes students of all races, cultures, and civilizations feel at home.
- Putting students face facing industrial, governmental, and societal challenges.

2. Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

- UGC- Autonomous Institute and have a permanent affiliation with JNTUK since 2006.
- All eligible UG B.Tech programs have been Accredited by the National Board of Accreditation (NBA), New Delhi under Tier–I for a period of three academic years from 2022-23 to 2024-25 of EEE, ME, ECE & IT and CE & CSE from 2021-22 to 2023-24. All eligible B.Tech programs were earlier accredited in 2008, 2013, 2016, 2019 and 2021 respectively.
- Institution is Accredited by NAAC with an "A" Grade for five years from 2016 March 29 to 2021March 21.
- Departments of CE, EEE, ME, ECE & CSE were recognized as Research Centers by the affiliating University JNTUK, Kakinada.
- Academic Strengthening and Advancement cell (AS&A) to ensure that the education offered in the institution would enable a student to perform to the best of his abilities in Academic, Competitive Examinations and Placement Tests.
- R&D cell for promoting research and development activities in the institution
- ELT Centre A resource and research centre; that promotes the continuing professional development of teachers of English; and conducts programmes for enhancing the communication skills of the GEC faculty.
- IT Enabled Central Lecture Theatre for interactive teaching to about 350 students at a time. Well-established laboratories, good sports facilities.
- **Power Backup**: About 695 kVA Generator Power backup is provided.
- **Solar:** A monthly average of 39000 to 40000 units generation through a 350 kVA power station with 4 inverters (each 100 kVA) connected to the main grid.
- Unnat Bharat Abhiyaan 2.0
- Recognized Nodal Center for Development of Virtual Labs in Optical Communication, Mechanics of Solids and Data Mining by IIT, Roorkee.
- Recognized NPTEL Chapter.
- MoUs with prominent industries and institutes

- The Skill Oriented Programming Laboratory, is a comprehensive and well-designed facility that aims to provide students with hands-on experience in various programming languages and tools. The lab has a capacity of 288 nodes.
- SRGEC TECHDOC, an innovation and incubation cell, is to provide a nurturing environment where novel ideas can flourish and transform into viable products or services.
- SRGEC's outstanding accomplishment of receiving a 3-star rating from the Innovation Cell, Ministry of Education, India.

Institutional Weakness

- The students at the entry level are with poor competencies.
- Being a rural Institution, peer group interactions are not contributing to learning. The Research & Development and Consultancy activities are not promising.
- Institution-Industry collaborations are not encouraging.
- Deficiency of faculty/officers/staff residences in campus.

Institutional Opportunity

- To cater to the educational needs of rural public.
- The Agri and Aquaculture of the surrounding area is providing scope for solving their engineering problems and develop product implements for their use.
- The automobile and other industries in the district are useful for internships and apprenticeships.
- The Institute can use the freedom of using academic autonomy and revise the course curriculum from time to time to meet the needs of the present scenarios.
- The Institute has the reputed higher level Institutions nearby to it like NIT AP, VIT-Amaravathi, and many industries in and around Vijayawada, whose interaction helps in improving the quality of research and education.
- The Institute being in the rural area has lot of scope in serving the society through community programs.
- Provide regular customized technical training on latest advancements to the working professionals from nearby region.

Institutional Challenge

- Exponential increase in intake in Deemed to be universities and mushrooming of engineering colleges.
- Reduced inclination of students to pursue Post Graduate Education.
- Non- availability of competent faculty in emerging areas.
- Mismatching of the cost of functioning the college and the revenue generated through Tuition Fee
- Farther distance from city environment is limiting the continuous exposure of students and faculty to industrial practices
- The institute is unable to fill all the seats especially in PG courses. The Institute being a private self financed college is finding difficulty in improving consultancy activities.
- Many students are preferring admission in deemed to be universities due to their strategic early admissions. Excess number of engineering colleges and newly started deemed to be universities in the state capital are also affecting the admission in the Institute.
- The Institute has major financial resource only in the form of tuition fee paid by the students and fee reimbursement from the state government.

3. Goals:

- To become centre of excellence for engineering education and Innovation Hub
- To become Teaching and Research Intensive Institution
- To obtain deemed to be University Status
- To be ranked below 100 by NIRF
- To be accredited by NBA under Tier 1 for all eligible departments for six years
- To be accredited by International Agencies

Strategies:

- Prioritize student focussed approach and provide optimal learning environment and support for students
- To empower faculty with motivation and autonomy and enhance their skills for better educational outcomes
- Foster entrepreneurship and experimental learning among students and faculty
- To promote research, innovation and consultancy
- Holistic development focusing on academic, research excellence and its reinforcement
- Equip students to become global citizens by internationalizing education
- To develop students good human beings possessing scientific temper and ethical standards

4. Plan for 2024-2034

Criterion 1 Academic Enabl	ers		
Key Indicator1: Curriculum			
Metric/Goal	Present Status	Strategy	Expected Outcome
Programs catering to professional/future requirements	UG programs in AI&DS, AI&ML and IoT are introduced.	Some more new programmes, as per the future requirements, will also be introduced.	Professional and future requirements will be accomplished
Curriculum Enrichment: Curriculum focussing on Skill development & employability, emerging technologies, industry requirements and life skills	These courses are already in place	To monitor and update the curriculum regularly to suit the contemporary industry changes and professional requirements	To make the students industry ready and cater to the dynamic requirement of employment landscape
Key Indicator 2 : Teaching- Lear	ning Process and Evaluation		
Metric/Goal	Present Status	Strategy	Expected Outcome
Virtual labs development	For a few experiments virtual labs are developed and being used	Training to be given and develop virtual lab contents	At least one virtual lab per program per department so that students and faculty will get familiarity in using ICT tools in these labs
E content development to encourage self learning	Learning material is developed for all courses	Video lectures to be developed	Enhance the self-learning capabilities of students

Interdisciplinary/Multidisciplinary approach in teaching	Interdisciplinary courses and Minor degrees are introduced in the curriculum. Open electives are offered	Encouraging the students to acquire minor degrees and. Promoting them to do Interdisciplinary projects.	Students are able to solve interdisciplinary problems
Innovative teaching methods	Teaching using ICT, blended mode of teaching, project based learning, online and e learning and cooperative learning are being used	Flipped class rooms, simulation based learning and activity based learning etc	Learner centric curriculum delivery is strengthened
Academic bank of credits	Not existing	Formulate the procedures to implement	Flexibility in doing courses/programs
Integration of Indian Knowledge System/ Personality development programs	Activities /programs are conducted on these.	To introduce these courses in the curriculum	Value based education will be reinforced among the students
Multiple entry and exit options	Not existing	Curriculum to be modularized to facilitate this	Facility to go for employment while studying
Earn while learning & Flexibility	Not existing	Course designs need to be varied, multidisciplinary in nature	Develops working skills for the students with responsibility and supports financial needs
Certificate programs	Not existing	To offer certificate programs by having MoUs with industries and reputed organizations	Expertise in particular areas will be enhanced

Criterion 2 Human Resources Enablers

Key Indicator 1 : Staff

a. Faculty

Metric/Goal	Present Status	Strategy	Expected Outcome
Faculty student Ratio	Around 1:20	Recruiting quality faculty	AICTE and other regulating bodies norms will be met
Faculty retention	Good faculty retention Faculty retention ratio for the last five years: 8.1	Providing incentives to improve the faculty retention	Expertise of the quality faculty will be retained for long time
Faculty enrichment	AS&A cell is established to enhance the technical knowledge and professional skills of the faculty ELT cell is established to improve the communication/soft skills of the faculty	Conducting more programs/activities by AS&A and ELT cells	Faculty are empowered with technical and communication skills
Staff welfare measures	Welfare measures like Accidental insurance, maternity leave, ESI and so on existing	Construction of staff quarters and conducting more health camps	Availability of the staff in the campus. Having good health, efficiency of the staff will be improved
b. Non Teaching Staff			
Staff skill up gradation	A few skill up gradation programs are being conducted Needs improvement	Conductingmoreskillupgradationprogramsandsponsoringthestafftoparticipateinskilldevelopment	20% of staff in each dept. per year will be upgraded.

		programs	
Key Indicators 2 : Student support and progression			
Metric/Goal	Present Status	Strategy	Expected Outcome
Student diversity	Most of the Students are from AP and Telangana	ConductingNationallevelcompetitionsandcreatepromotion in other states	At least 5% of the students per year will be attracted /admitted from other states
Quality Placements	Reputed software industries are recruiting most of the students. Average percentage of placements for the last five years:75.2 Highest annual package:31.7 lakhs	Conducting more training programs to improve the technical, computational and soft skills of the students and to place more students in reputed industries including core companies.	Average percentage of placements and highest annual package will be improved
Students participation in competitive exams and higher studies	In-house GATE coaching is provided for advanced learners. But still needs improvement in providing coaching for competitive exams like GATE, CAT and soon	Providing vigorous training by in-house faculty and external agencies on competitive exams. Conducting regular mock tests	At least 30% of students will be placed and pursued higher studies
Merit based scholarships and financial assistance	Providing scholarships in various capacities. But still needs improvement	Providing more financial assistance by increasing the amount and number of scholarships to the meritorious and economically weaker sections/freebies	At least 10% of the students will get benefitted

Success rate	The present success rate is 82.38%	Conducting more no of tutorial and revision classes to slow learners	Success rate will be improved to 90%
Participation in research activities	Needs improvement	Encouraging students to do research oriented projects and to publish the outcomes of their projects as quality research papers in reputed journals and convert them to patents.	At least 10% of the total intake of students will publish quality research papers and produce patents.

Criterion 3: Resources Infrastructures

Key Indicators 1: Physical Enablers				
Metric/Goal	Present Status	Strategy	Expected Outcome	
Laboratory Up gradation	Already followed	Purchasing of new and state of art equipment as per the up gradation of curriculum and contemporary technologies and upgrading Project lab.	Students will have hands on experience on latest technological developments. At least 20% of students will be able to develop innovative projects	
Improvement in computing facility	Continuous up gradation is followed	Establishing new computing labs to meet the future requirements	At least 10% improvement in utilization of computing facility every year.	
Smart class rooms	ICT enabled class rooms available Recording studio is available	Establishing smart class rooms Up gradation of recording studio	One smart class room for every department	

Up gradation of Sports infrastructure facilities and fitness centre	Sports and games facilities like basket ball, volley ball, table tennis, gymnasium and so on are existing	Establishing cricket ground, 400 m running track, indoor stadium and up gradation of Fitness centre and other sports facilities to conduct national level events	20% of the total students will utilize and 1% will get certificates
Canteen and Cafeteria	Canteen facility is existing	Up gradation of canteen and establishing new dining facility for both students and staff and new cafeterias at strategic locations	10% of total students and staff able to utilize
Liquid waste management	Not existing	Establishing sewage plant	Liquid waste will be recycled
Solid waste management-Biogas plant	Not existing	Establishing biogas plant	Wet waste will be managed
Library	Well established library facility but needs improvement	Establishing RF ID based library automation, increasing the plinth area, e journals.	Utilization will be improved
Class rooms, seminar halls and auditorium and staff cabins	Existing as per the requirement	Establishing these proportional to the future intake	Future requirements will be met
Reprographic facility	Existing but Limited Needs improvement	Improving the facility	40% students will utilize the facility
Medical centre	Existing with one bed facility but needs improvement	Providing space accommodating four beds separately for gents and ladies with AC facility for patients Accoutre with more items of medicines and medical instruments like oxygen cylinder Allotting one resident doctor and medical assistant	Health of students and staff is taken care of.

Presently internet BW 810 Mbps	IGB	norms
	improving the bandwidth to	Neet the regulating bodies
Present Status	Strategy	Expected Outcome
ablers		
Available, But needs improvement	Three interview panel rooms and two rooms for group discussion each with capacity of 20. And providing separate seminar / Board room	Enhancement in Placement activities
The following clubs, Green Club, Music & Photography Club, Literary & Dramatic Club, Coding Club, Electronics Hobby Club, Drone Club, Electoral Literacy Club are existing	Providing separate space and infrastructure for the existing clubs and establishing new clubs like Mental Club, Clean & Smart campus Club etc	Strengthening of Co curricular and extracurricular activities
Boys and girls hostels available Need expansion of Boys hostel	Constructing another block for boys hostel with capacity of 500 with all facilities	Improvement in accommodation for boys
Presently 6 halls are available. Need some more halls	Providing two more well furnished waiting halls	Waiting hall facility will be improved
Existing Needs improvement	Establishing separate botanical park/children park including sitting facilities, outdoor gym facilities	Face-lifting the institution with enhanced greenhouse environment
Not existing	Providing subsidized items to the staff	Diurnal needs of staff are met at reduced prices
Available Needs improvement	Providing exclusive parking area for four wheelers and two wheelers	Parking facility is enhanced
	Available Available Needs improvement Not existing Existing Needs improvement Presently 6 halls are available. Need some more halls Boys and girls hostels available Need expansion of Boys hostel The following clubs, Green Club, Music & Photography Club, Literary & Dramatic Club, Coding Club, Electronics Hobby Club, Drone Club, Electoral Literacy Club are existing	Available Needs improvementProviding exclusive parking area for four wheelers and two wheelersNot existingProviding subsidized items to the staffExisting Needs improvementProviding subsidized items to the staffPresently 6 halls are available. Need some more hallsProviding two more well furnished waiting hallsBoys and girls hostels available Need expansion of Boys hostelProviding separate block for boys hostel with capacity of 500 with all facilitiesThe following clubs, Green Club, Music & Photography Club, Literary & Dramatic Club, Coding Club, Electronics Hobby Club, Drone Club, Electoral Literacy Club are existingProviding separate space and infrastructure for the existing clubs and establishing new clubs like Mental Club, Clean & Smart campus Club etcAvailable, improvementBut needs improvementThree interview panel rooms and two rooms for group discussion each with capacity of 20. And providing separate seminar / Board roomblersPresent StatusStrategy

		points with new access points of	
		latest version	
	Existing	Continuous up gradation as per	Better presentation of the
Institute website	Needs improvement	the requirements	institution
Media centre	Existing but needs improvement	Social media based promotions	Perception of the institution at
			national level will be improved

Criterion 4: Research & Development and Consultancy Enablers

Key Indicators 1 : Research & Development and Consultancy			
Metric/Goal	Present Status	Strategy	Expected Outcome
Sponsored Research/Projects	Few external funding projects are available. Seed money is also provided to encourage initial research	Encourage PhD-holding faculty members to submit at least one project proposal to external funding agencies each year.	Every faculty member with PhD qualification will possess one sponsored Research project
Sponsored Programs by external funding agencies	They are existing but need improvement	Encourage the faculty members to submit proposals and the institution will provide matching grants	All the departments will conduct at least one sponsored program every year
Publications (Journals and Books)	Presently the total publications in peer reviewed journals for the last five years: 1335 Total publications in SCI/Scopus/ Web of Science/ESCI for the last five years: 443 Total Books Published for the last five years: 495 Incentives are provided to publications Needs improvement	Encourage faculty members to publish papers in SCI/Web of Science/ESCI/Scopus. Faculty member with PhD qualification should publish one research paper in SCI per year. Others in Scopus.	Every faculty member will have one research paper in SCI/Scopus every year
Improvement of Citation index	Faculty members have good citations in Google scholar	Encouraging interdisciplinary research and publishing papers	Average citation index per faculty member will be

		in quality journals	improved
Collaborative Research	Not existing	Encouraging the faculty members to do collaborative research within the departments and with other premier institutions and organizations. Establish a network accordingly. And also encouraging the faculty members to do PDF by providing financial assistance	Improvement in Collaborative research with other R&D organizations and premier institutions. At least one faculty member per department will have PDF.
Patents/IPRs	In the last five years No. of Patents published:67 No. of Patents granted: 4 Incentives are provided Needs improvement	Encourage the faculty and students to convert their discoveries into patents and offer administrative and consultancy assistance.	15–20 patents published and 2– 5 patents granted every year
Centre of excellence	Drone Centre of Excellence, Generative Artificial Intelligence, CM Skill Excellence Centre are existing in the college.	Basing on the emerging technologies, departments are encouraged to establish centers of excellence	Every department will have one centre of excellence so that students and faculty will be exposed to latest trends
Establishing research labs and Research centers	Recognized Research centers are existing in 5 departments. In all these departments. research labs are existing	Remaining eligible departments are encouraged to establish research centers. Encourage to establish research labs in major streams of all the departments	All the deptarments will have research centers and more no. of scholars could be registered for PhD
Improve consultancy	During the last five years revenue generated: 66.7 lakhs Needs improvement	All the departments are encouraged to identify consultancy areas and provide services.	Average revenue generated per annum is improved

Criterion 5: Networking and Collaboration Enablers

Key Indicators 1 : Innovation and Incubation					
Metric/Goal	Present Status	Strategy	Expected Outcome		
Infrastructure for IIC (Innovation and Incubation-SRGEC TECH DOC)	Presently IIC of 2200 Sqft is available Needs improvement	Establishing Fabrication lab, Idea Centre, Design lab and Co working space, a seminar hall and office room	Innovation, incubation, patents and start ups will be enhanced		
Key Indicators 2 : Entrepreneur	ship				
Metric/Goal	Present Status	Strategy	Expected Outcome		
Entrepreneurship Development cell	No separate space is available	Providing a separate EDC cell with plinth area of 400sqft	Entrepreneurship and IPR activities will be enhanced		
Key Indicators 3 : Alumni					
Metric/Goal	Present Status	Strategy	Expected Outcome		
Alumini Engagement through Association -AAGEC	DISHA program is conducting every year for 1 st year students. Needs improvement in activities and required separate space for these activities.	Providing a separate space of 400sqft for AAGEC and secretarial assistance . Adopting one batch of students for providing career guidance Identifying and involving various industries to provide internship and employment opportunities.	Alumni activities will be improved. And improvement in career development		
Key Indicators 3 : Integrated Collaboration					
Partnerships across industry, academia and communities through MoUs	MoUs with nearby industries and premier academic institutions are existing Needs improvement	To encourage diverse collaboration for research, curriculum design and community engagement initiatives with National and International Academia and industry by having MoUs			

Key Indicators 4 : Community Engagement					
Metric/Goal	Present Status	Strategy	Expected Outcome		
Society Based Projects	Executing society based projects as part of the curriculum	Identification of major societal issues to be solved by technology and developing the products for commercialization	Societal issues will be solved		

Criterion 6: Governance and Finance Enablers

Metric/Goal	Present Status	Strategy	Expected Outcome
Data Management System	Partial e management system for some areas is existing Needs improvement	Full ERP implementation with centralized data collection and maintenance to be established	Automated data management system will be established
Exploring new avenues for fund raising	Needs improvement	Establish industry sponsored centers Attract Corporate Social Responsibility funds Increasing funds from research projects and consultancies	At least 3 sponsored centers from industry At least one externally funded R&D project per each department

