



INSTITUTIONS' INNOVATION COUNCIL

SESHDRI RAO

GUDLAVALLERU ENGINEERING COLLEGE

(An Autonomous Institute with Permanent Affiliation to JNTUK, Kakinada
Seshadri Rao Knowledge Village, Gudlavalleru-521356, Krishna (Dt), AP,
India



Annual Report 2022-23

IIC ID: IC201811918



By

SRGEC TECHDOC

Innovation and Incubation Cell

A. About IIC Institute:

The college is promoted by AANM & VVRSR Educational Society, Gudlavalleru and was established in 1998. The college is situated in Gudlavalleru, surrounded by lush green fields, providing serene atmosphere to learners. The college offers B.Tech. programmes in eight branches of Engineering viz, Civil, Electrical & Electronics, Mechanical, Electronics & Communication, Computer Science, Information Technology, Artificial Intelligence & Data Science, Internet of Things and CSE (Artificial Intelligence and Machine Learning) with a total intake of 1320. It also offers five PG programmes in Engineering (M.Tech.) and Business Management (MBA). The college is permanently affiliated to JNTUK, Kakinada and obtained the Autonomous status from U.G.C. in the year 2014 and the status is extended till 2025. All the eligible branches of engineering are accredited by NBA, New Delhi. The Institution is continuously striving for excellence by adopting changes to improve the systems, practices and performance levels.



➤ **Vision of IIC established at the Institute:**

To develop a world-class, self-sustaining startup ecosystem that fosters knowledge-based, technologically different, socially relevant ventures to make a positive economic impact in the region, state, nation, and the world.

➤ **Mission of IIC established at the Institute:**

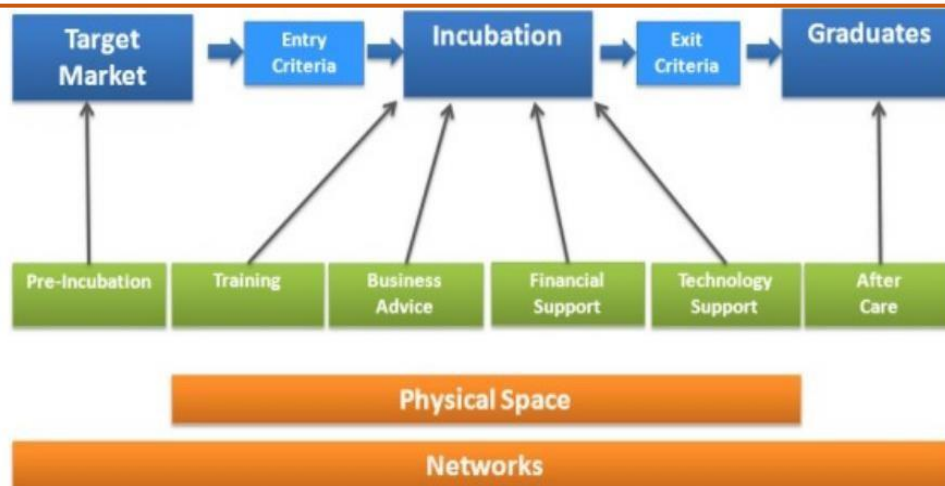
Aims to accelerate the creation of new businesses, employment and jobs in tech and non-tech sectors aligned with unique opportunities.

- Inspiring entrepreneurial spirit and promoting innovation.
- Identify, explore, and enhance regional competitiveness.
- The university and local institutes should better leverage their intellectual property for knowledge transfer and higher productivity.
- Linking universities, businesses, and research institutions.
- Assist emerging technology businesses with growth and success.
- Making the local economy more competitive.
- A support program for high-growth SMEs.
- Employment creation.
- Support for the development of clusters within certain industries.

➤ **Objectives**

To develop and nurture a culture of innovation and experimentation among students.

- To create an entrepreneurial ecosystem on campus to incubate and support new ideas innovations.
- To help translate innovative ideas into reality and upgrade them to the level of commercial value.
- To build a network of industry experts to mentor young startups.
- To partner with technology services to provide useful tech infrastructure for the development of products and services.
- To create promotional interventions to attract investors so that they may guide entrepreneurs on their journey to profitability.



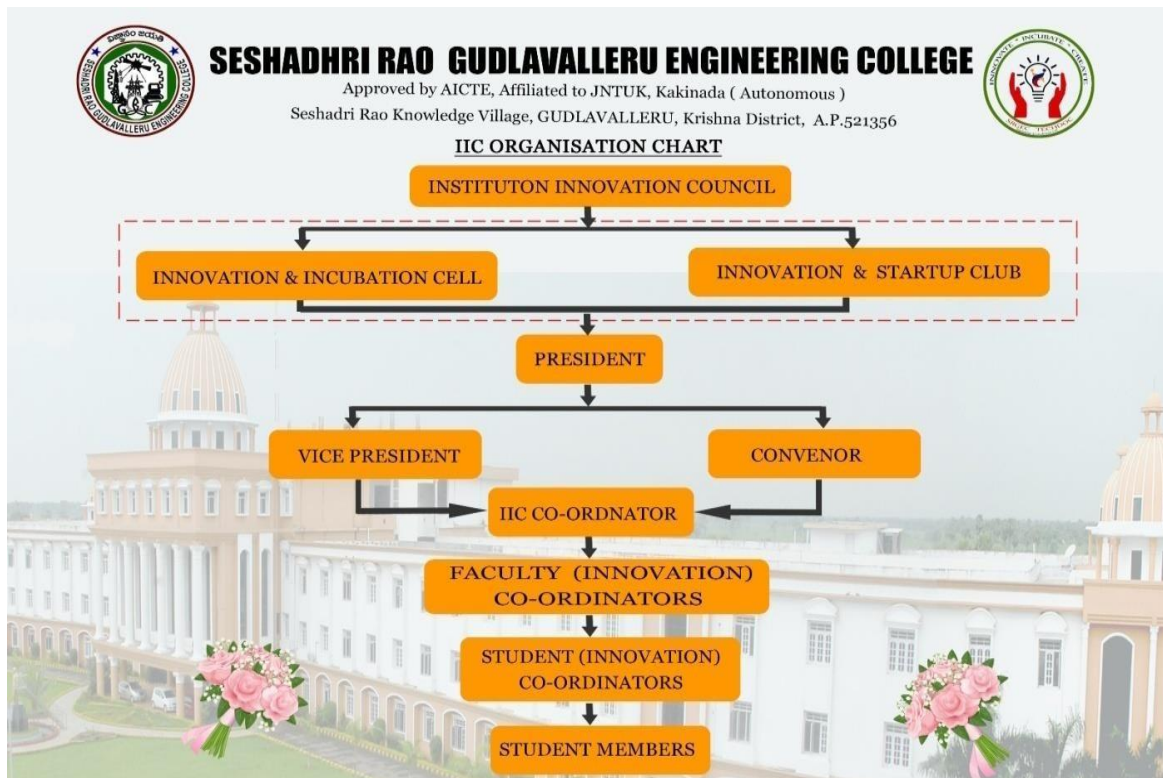
➤ **Journey of IIC established at the Institute:**

- IIC was established in the College during the academic year 2019-20 immediately on receiving the instructions from MHRD to start up IIC in the higher education institutes.
- IIC at Seshadri Rao Gudlavalluru Engineering college (SRGEC), Gudlavalluru started in August 2019
- IIC SRGEC TECHDOC Secured 2 star ranking in 2019-20 and 3.0 star ranking in 2021-22 and aiming for 4.0 star ranking in 2022-23.

- Till date SRGEC TECHDOC has conducted 50+ Innovation related activities, Idea competition, project competitions, boot camps etc.



- **Diversified representation in the IIC established at the institute from industry, Interdisciplinary & Departments/ Units etc.**
SRGEC TECHDOC, IIC has representation from various departments in the College, industry, Alumina etc.



S.No.	Name	Association	Position
1	Mr. D. Anvesh	Effectronics Pvt. Ltd	Industry Member
2	Mr. T. Prem Chand	SBI Bank/Investor	Industry Member
3	Udyan Bakshi	Academic Innovations	External Member
4	Mr. Himanshu Kumar	Indwell Automation	Industry Member
5	Mr. G. Alok	KL- ACIC Center	External Member
6	Mr. Nandha Kishore	BHEL	Industry Member

B. Brief mention of key functionaries at the IIC Institute:



Dr. G.V.S.N.R.V.Prasad, SRGEC TECHDOC and our Incubation Cell's annual report reflect a year of innovation and collaboration. From enhancing tech documentation to nurturing startups, we're driving change together. Here's to progress, partnerships, and a future filled with possibilities.



Dr. M.R.Ch.Sastry, In our annual report, SRGEC TECHDOC and the Incubation Cell stand out as pillars of innovation. Nurturing ideas, advancing documentation, and propelling startups reflect our commitment. Grateful to all contributors for shaping a dynamic academic ecosystem.



Dr. P. Kodanda Rama Rao, This annual report highlights SRGEC TECHDOC and the Incubation Cell as drivers of innovation. From refining tech documentation to fostering startups, we're dedicated to transformative growth. We extend heartfelt appreciation to all partners for cultivating a vibrant academic environment.



Dr. B. Mahesh Baabu, as we unveil the annual report, SRGEC TECHDOC and the Incubation Cell take center stage, exemplifying innovation's power. Through refined tech documentation and thriving ideations, we celebrate progress. Gratitude to our collaborators for enriching the academic landscape.

➤ **IIC Members for the Academic Year 2022-23**

S.No.	Name	Designation	Position
1	Dr. G.V.S.N.R.V.Prasad	Principal	President
2	Dr. M.R.Ch.Sastry	Vice Principal Academics	Vice President
3	Dr. P. Kodanda Rama Rao	Vice Principal Administration	Convener
4	Dr. Ch. Balaswamy	Professor of ECE	Coordinator, ARIIA
5	Dr. B. Rajasekhar	Associate Professor of ECE	Coordinator, IPR & NIRF
6	Dr. B. Mahesh Babu	Associate Professor of EEE	Coordinator, Innovation
7	Dr. T. Srinivasa Rao	Associate Professor of CSE	Coordinator, Startup
8	Dr. G. Kamal	Assistant Professor of MBA	Coordinator, Internship
9	Dr. D.N.V.S.L.S. Indira	Associate Professor of IT	Coordinator, social media
10	Dr. Eswar Sala	Assistant Professor of CE	Member
11	Mr. V. Naga Babu	Assistant Professor of EEE	Member
12	Mr. D. Kishore Babu	Assistant Professor of ME	Member
13	Mr. Ch. Suresh	Assistant Professor of ECE	Member
14	Mr. G. Srikanth	Assistant Professor of CSE	Member
15	Mr. Ch.Venkateswara Rao	Assistant Professor of IT	Member
16	Mr. Tadiparthi Mothilal	Assistant Professor of AI&DS	Member
17	Mr. P. Rama Krishna	Assistant Professor of IoT	Member
18	Dr. T. Govinda Rao	Assistant Professor in Maths, BS&H	Member
19	Mr. P. Raj Kiran	Assistant Professor in English	Member

C. Portfolio/graphical/Tabular representation of Resource strength (human capital and Physical capital) of the IIC institution:

Total No. of IIC Members	Total No. of IAs	Total No. of faculty Mentors	Pre-Incubation Units, If any	From Portal Incubation Units, If any	IP Facilitation Unit, If any
156	12	12	-	1	1

D. Highlight Facilities, Infrastructure of Pre-Incubation & Incubation kind and Student bodies/clubs engaged in promotion of Innovation and Entrepreneurship in the campus:

The Facilities, Infrastructure of Pre-Incubation & Incubation is given in the following link:

https://drive.google.com/file/d/1gLP055ehn8mCupXHNvRFD5CFUXPnJAJ/view?usp=drive_link

The following clubs offer ample opportunity to students to showcase their innate talents in innovation and incubation, entrepreneurial and startup activities.

1. Green club
2. Coding club
3. Innovation and start up club
4. Electronics hobby club
5. Media Club
6. Drone Club



Latitude 16; 21; 11.80200000000034
Longitude 81; 2; 30.846000000001955...
Altitude 67
Research Centre (N-404)



Latitude 16; 21; 1.32600000000009574
Longitude 81; 2; 31.8119999999762442
Altitude 67
Project Lab: C04A



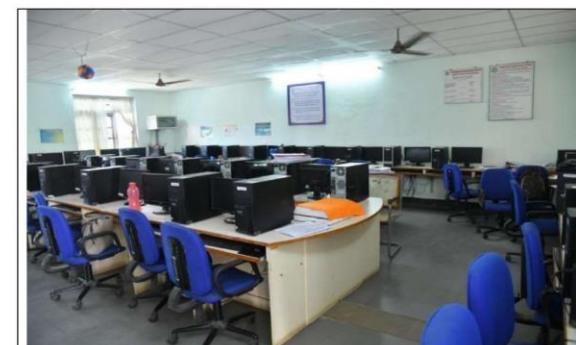
Latitude 16; 21; 11.790000000000...
Longitude 81; 2; 30.9120000000011...
Altitude 65
Modelling and Analysis Lab : N-211



Latitude 16; 21; 8.957999999998...
Longitude 81; 2; 32.843999999982...
Altitude 68
Material Testing Research Centre: B-09



Latitude 16; 21; 4.584000000000253272
Longitude 81; 2; 33.28200000000065264
Altitude 67
R&D Lab: M204



Latitude 16; 21; 1.16399999999707...
Longitude 81; 2; 28.080000000001630...
Altitude 67
CSE R&D Projects Lab (M-304)



E. Achievements:

S. No	Title	Total
1	Number and different types of I&E and IPR activities conducted	54
2	No. of Students and Faculty ideas generated	450
3	No. of Students and Faculty Innovation/ Prototypes developed	450
4	No. of IPs generated, Published and Granted	25
5	No. of Student and Faculty Start-ups / Ventures established	3 (yet to register)
6	Amount spent on promotion and awareness generation on innovation Entrepreneurship in the campus	30 lakhs i.e 1% of college budget is Allocated
7	Amount grant or fund supported to student and Faculty lead Innovations, Start-ups and IPR	25 lakhs from in-house seed money and external funding
8	No. of Technology Transfer and Commercialization happened	3 (yet to register)

E. Highlight few best IIC Faculty/Student members and their achievements/ Rewarded for the innovations at different forum:

❖ Faculty members:

Details of Patents Received by the Faculty of the SRGEC			
S.No.	Title of the Patent	Agency which has awarded the patent	Year
1	Experimental Investigation of Partial Replacement of Fine Aggregate by Stuck Stone Dust and Maguni (Published)	Intellectual Property India	2022
2	Fiber Glass Based System for reinforcing Concrete Panels (Published)	Intellectual Property India	2022
3	Smart construction for concrete composition and building materials (Published)	Intellectual Property India	2022
4	A self sharpening cone-roller drill bit and method of sharpening the same (Published)	Intellectual Property India	2022
5	Artificial Intelligence in Smart farms (Published)	IPR, India	2022
6	Design Of Real Time Control of launch vehicles using wireless sensor Network (Published)	IPR, India	2022

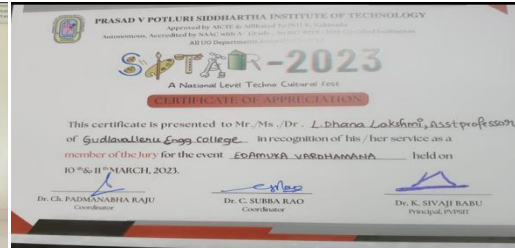
7	Improve Learning Possibilities Using Block chain & AI (Published)	IPR, India	2022
8	Multi Speed Drone for Remote Field Monitoring System (Published)	IPR, India	2022
9	Hybrid & Electric Vehicles Charging at Running Time (Published)	IPR, India	2022
10	Cursor Controlling System for Information Processing Devices (Published)	IPR, India	2022
11	System for Resisting Gas Flow (Published)	IPR, India	2022
12	An integrated and smart dual Power cooking system with inter-changeable configurations and Method Thereof (Published)	IPR, India	2022
13	Lathe and Miller Structural Assembly (Published)	Intellectual Property India	2022
14	Hydroformed Axle Assembly with Weldless Brake Flange (Published)	Intellectual Property India	2022
15	Artificial Intelligence (AI) Based System for Neural Networking (Published)	Intellectual Property India, Official Journal of the Patent Office, GOI, India	2022
16	Health Based Monitoring System and Method Thereof (Published)	Intellectual Property India, Official Journal of the Patent Office, GOI, India	2022
Awarded/Received			
17	Multiple Compartments of Smart Trolley with Automatic Separation Means (Under Examination)	IPR, India	2022
18	Intelligent Customer Care Center (Under Examination)	Indian patent office, Chennai	2022
19	Electromagnetic Separating Means of a Smart Trolley for Multiple Compartments and Method There of (Under Examination)	Indian patent office, Chennai	2022

❖ **Student members:**

- Two Teams were into finals of **Smart India Hackthon 2022**
- Three Teams were selected for **National Innovation Challenge-2023**
- Indian Institute for Technical Education (ISTE), Andhra Pradesh Division, announced Ms. J.Deepthi of ECE in Best Student Innovator category at function held at Aditya Engineering College, Tekkali, Srikakulam. Recipients received awards from the Chief Guest of the programme, Prof.K.Hemachandra Reddy, Chairman, AP State Council for Higher Education.



- The second-year students of CSE, Y. Saibhargavi (Roll No. 21481A05P5) and T. Pujitha (Roll No. 21481A05P5), from SRGEC participated in SITARA 2K23, a fest organized by PVPSIT in Vijayawada on March 10, 2023. They participated in the event "Edumuka Vardhamana" and secured the second position, receiving a cash prize of Rs. 1000/- and an appreciation certificate. The event judge, Ms. Y. Dhana Lakshmi from the Department of CSE at SRGEC, awarded the prizes to the winners.



- Mr Vijay Rohith of III. B.Tech of Dept. of ECE own FIRST PRIZE in Electronic Debate held at VR Siddhartha Engineering College, Kanuru Vijayawada on 24.02.2023. College Officials congratulated the winner.



- Dept. of ECE: Mr. MVS Karthik and Mr.K. Dhanesh of III B.Tech got SECOND PRIZE in Poster Presentation competition held at NRI Institute of Technology, Agiripalli on 27 Feb 2023. College Officials congratulated the winners.

- Teja, mani, subhash and his team, Department of IOT, SRGEC studying III B.Tech have participated for Drone competition, ON OCCASSION OF ANNUAL FEST OF VR SIDDHARTHA ENGINEERING COLLEGE, they won second prize - 2000/- (cash prize) with certificate.



- One of the first prize to students of AI&DS, SRGEC for AI based smart attendance monitoring system. This is further selected in national innovation challenge-2023.

- One of the second prize to students of AI&DS, SRGEC at KL-ACIC center and Third prize of innovation challenges in AY 2022-23 at other neutral venues.
- Grabbed four first, six second and eight third prizes in intra and inter smart Hackthons / Ideathons.

G. Highlight selected best Innovations & images with mention of inventor/innovation name:



1. Technology Developed: Low cost Electrical golf cart by Students of EEE
Faculty Mentors: Dr. B. Dasu, Dr. B. Madhu Kiran and Dr. K. Kalyan Raj,
Students Members: Jannu sai deepak (19481A0225), Garapati tejaswi (19481A0217), Konakalla durga bhavani (19481A0237), Kondeti venkata dasu (19481A0238), Segu sri harshitha (19481A0275), Potu subbarao (19481A0267) Pathuri ajay (19481A02264, Pilli teja (19481A0266), lingam kavya(19481A0244), abdul kabir(19481A0202), kota anusha(19481A0240), k keerthana(19481A0239), mocharla pavani (20485A0220), venkata raghavendra prabhu chimata (19481A0283), maganti gayathri devi(19481A0246), mamidi durga rao(19481A0247).

2. Technology Developed : Low cost Electrical Bike by Students of ME
Faculty Mentors: Sri. T. Naga Raju, Sri. K. Ramaknth



3. Technology Developed: Onsite Generation based Electrical Tricycle
Inventor: Dr. B. Mahesh Babu, Associate Professor of EEE



H. Highlight selected start-ups established by students/faculties with mention of founder/cofounder name:

- SRGEC Techdoc, IIC to introduce an economical Electrical Golf Cart, merging affordability and eco-friendliness. This collaboration aims to make electric mobility accessible to a broader range of people, showcasing innovation and sustainability in an affordable package in next six months.
- SRGEC Techdoc, IIC is planning to launch an affordable Electrical Bike. This venture reflects their commitment to economical yet eco-conscious transportation solutions. Anticipate a fusion of expertise, delivering a budget-friendly electric bike that's both sustainable and accessible.
- SRGEC Techdoc, IIC Introducing "Krishak," a pioneering agriculture-based app. Designed to transform farming practices, it offers vital insights, weather updates, market trends, and expert guidance. Krishak empowers farmers with actionable information, fostering improved yields and sustainable growth in the agricultural sector.
- Kidz by eVirtual Experimentation is an innovative edtech solution. It revolutionizes learning through virtual experiments, engaging young minds in interactive scientific exploration. With hands-on experiences and captivating simulations, Kidz sparks curiosity and deepens understanding, making education exciting and effective for students everywhere.

I. List if any break through Innovations / Technology Developed at the Institute:



Electrical golf cart by Students of EEE



Electrical Bike by Students of ME

J. Participation of IIC-institute in various programs of Central and Stage Govt. Highlighting especially for the schemes or programs:

- ❖ On behalf of SRGEC, Dr. B. Mahesh Babu, IIC coordinator and Dr. T Srinivasa Rao attended APSCHE – Quality Assurance Cell – Request to Participate in Regional Workshop on "The Preparation of a Roadmap and an Action Plan for EISCs Established at Universities and Colleges in the State" for the EISC Directors/Coordinators of the Universities and Colleges of Guntur Cluster on 09.06.2023 at VIT-AP University, Amaravati.
- ❖ On behalf of SRGEC, Dr. B. Mahesh Babu, IIC coordinator attended State Level one day workshop on Specialized Skilling Solutions at PB Siddarth College, Vijayawada, an initiative of QAC, APSHE and NSDC, on July 20, 2023.



K. Detail of social media & Connections of IIC institute:

- 
<https://twitter.com/GecGudlalleru>
- 
<https://www.facebook.com/SRGECGudlalleru>
- 
<https://www.youtube.com/@srgecgudlalleru/videos>
- 
<https://www.instagram.com/gecgudlalleru>
- 
<https://www.linkedin.com/company/seshadri-rao-gudlalleru-engineering-college>

L. Testimonials from IIC members and external about IIC institute and IIC of MoE's Innovation Cell:



Mr. K. Ashok Reddy M.Tech, (Ph.D)
Assistant Professor AI&DS

The Innovation and Incubation Cell has catalysed a paradigm shift in how our college approaches AI and data science education." As a machine learning faculty member, I am very pleased by the hands-on learning experiences made possible by this cell. Students aren't just learning about theoretical concepts; they're actively experimenting with AI algorithms, investigating data sets, and creating insights that fuel innovation. The emphasis on incubation and entrepreneurship in the cell enables students to apply AI-driven solutions to real-world situations, cultivating a feeling of purpose and impact.



K. Raghavendra, AI&DS Student

Through immersive projects, workshops, and mentorship, I've had the opportunity to fuse theoretical AI concepts with practical applications. The incubation component has allowed me to take my data-driven ideas and shape them into real-world solutions with the guidance of experienced mentors. It's not just about data; it's about turning data into actionable insights.

The detailed Testimonial review is given in:

<https://drive.google.com/file/d/1rEFnLjhY8dAtbHEElQpO-a38t6vGdTg-/view?usp=sharing>

N. Images



The full details of activity report for the academic year 2022-23 with images is given in link below:
<https://drive.google.com/file/d/1oXZ2CqSGVRh7bMuOlcvQEE-9EPsWJPFd/view?usp=sharing>

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