



SSIP 2.0 and IIC 7.0

Bootcamp for School Students

during

Avinya 2025



Coordinators

Dr. K. L. Mokariya, Dr. R. C. Malan,
Dr. B. R. Sudani, Dr. R. V. Prajapati

GOVERNMENT ENGINEERING COLLEGE, VALSAD

3rd and 4th April -2025

OVERVIEW

A bootcamp is a specialized, intensive training program designed to rapidly increase or significantly affect a participant's knowledge, abilities, or both. Importantly, boot camp tasks provide participants with a wide range of practical skills depending on the topic, the level of intensity, and the length of time SSIP 2.0 boot camp outcomes for Institution perspective

- 1 how school students can get benefit thorough certain process, and 20000 rs for idea to poc journey
- 2 how the latest domains can be explained them in simple manner including IPR and startup
- 3 what is the usefulness of networking and network buildup
- 4 how to search that their idea is unique from free patent data base search
- 5 how to represent themselves at state level and national level event
- 6 invention, innovation, novelty, inventive step, industry application in simple terms
- 7 how GEC VALSAD represent in district as excellent service education unit

SSIP 2.0 boot camp: Industry perspective

Tech fests provide an opportunity for students to display their technical talents, learn from industry experts, and network with peers, eventually encouraging creativity and inspiring future engineers and technologists.

Here is a more extensive summary of the results of tech fests:

Skill Enhancement

Tech fests include workshops, hackathons, and coding challenges to enhance skills by teaching new technologies, tools, and programming languages.

Innovation and creativity

Participants can display their unique ideas and initiatives, promoting a culture of innovation and problem-solving.

Networking and collaboration

Tech fests provide opportunities for students to engage with industry professionals, future employers, and fellow enthusiasts, resulting in useful networks.

Leadership and teamwork

Participating in events and organising festivals can enhance students' leadership, teamwork, and communication abilities.

Career Opportunities

Tech fests provide students with internships, job offers, and other employment chances, and important research collaboration opportunities

Overall Objectives for SSIP 2.0 Perspective

This year, bootcamp students will also benefit from interactive sessions on the SSIP 2.0 benefits to students, Introduction to line follower Robot, and a visit to different projects and Events happening at our premises during the said Techfest. In this context, you are also invited to jointly

coordinate and organize an outreach programme for your students to inspire their innovation skills. The envisaged objectives of the camp are listed below, while students will be visiting our Institute.

- creating awareness about the opportunities and support available under SSIP 2.0 for students' start-up and innovation.
- Inspiring students for creative and innovative thinking
- Introduction to Robotics and Robot Making
- Connecting students with the innovation incubation centre of GEC, Valsad
- Spreading awareness about innovation, trends, and future areas to work on with the display of the project and Innovation

Techfest Team.

Sr no	Name of Dept	Name of faculty coordinator	Remarks
1	Electrical	Prof MA Chaudhari	
2	Mechanical	Prof S K Patel	
3	Chemical	Prof B M Pandya	
4	Civil	Prof Y K Tandel	
5	ASH	Prof V R Vishavalia	

Institute Coordinators :- Dr R V Prajapati, Prof Nainesh Patel

AVINYA 2025

ELECTRICAL ENGINEERING DEPARTMENT EVENTS AND OUTCOMES

Department Co-ordinator: -Prof. M.A. Chaudhari

❖ **Overview:**

The Electrical Engineering Department organized a series of technical events aimed at enhancing practical knowledge, fostering innovation, and encouraging team collaboration among students. These events provided a platform for participants to demonstrate their technical skills and creativity while gaining hands-on experience in core areas of electrical and electronics engineering.

1. Line Follower Robot

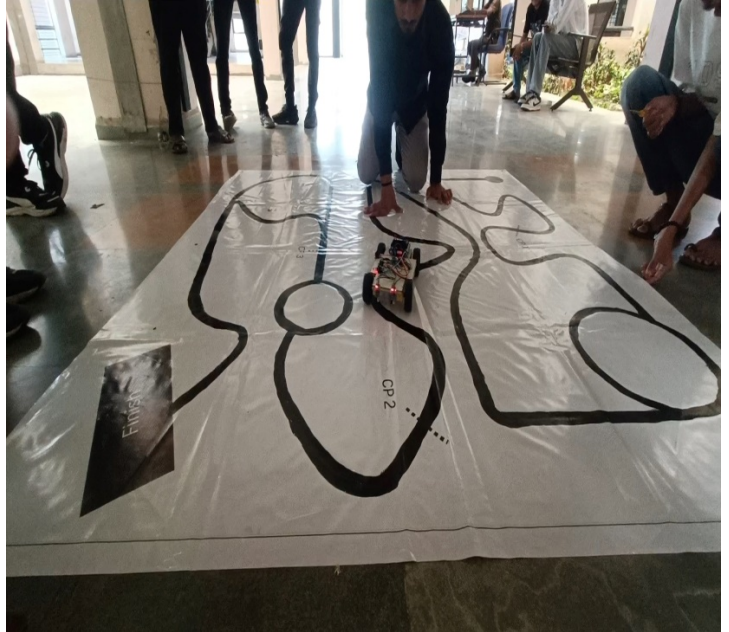
❖ **Event Coordinators:** Prof. N.I. Patel,
Prof. J.D. Patel

❖ **Description:**

This event challenged participants to design and build a robot that can autonomously follow a predefined path using sensor-based navigation.

❖ **Outcomes:**

- Improved student understanding of sensor integration and control systems.
- Encouraged teamwork and innovation in robotics.
- Sparked interest in automation and embedded systems among students.



2. Arduino Arena

❖ **Event Coordinators:** Prof. D.N. Tandel, Prof. A.N. Parmar

❖ **Description:**

Participants used Arduino microcontrollers to create real-time projects, showcasing their programming and circuit design skills.

❖ **Outcomes:**

- Strengthened practical knowledge of microcontroller applications.
- Boosted confidence in coding and prototyping.
- Led to the creation of several innovative student projects using Arduino.



3. Circuitrix

❖ **Event Coordinators:** Prof. A.S. Mishal,
Prof. C.D. Thakor

❖ **Description:**

A circuit design and debugging competition where participants solved electrical circuit challenges under time constraints.

❖ **Outcomes:**

- Enhanced problem-solving and analytical skills.
- Improved circuit analysis and troubleshooting techniques.
- Promoted interest in core electrical subjects.



4. Electro Genius

❖ **Event Coordinator:**
Prof. D.C. Parmar

❖ **Description:**

A technical quiz covering a wide range of topics from basic electrical concepts to recent technological advancements.

❖ **Outcomes:**

- Refreshed theoretical knowledge of electrical engineering students.
- Motivated self-learning and research in advanced electrical topics.
- Developed quick-thinking and teamwork under pressure.



The events successfully engaged students in experiential learning and contributed to their technical and personal development. The department looks forward to organizing more such initiatives to foster innovation and skill-building.

AVINYA 2025

CHEMICAL ENGINEERING DEPARTMENT

Department Co-ordinator: -Prof. H. M. Jariwala

Overview: The Chemical Engineering Department organized a series of technical events aimed to highlight emerging tech trends and career paths through expert talks or panel discussions. Inspire startup culture through pitch competitions, Project-modeling events, or ideations. These events provided a platform for participants to demonstrate their technical skills and creativity while gaining hands-on experience in core areas of chemical engineering.

Project Showcase:

Description: This event aims to connect students with industry professionals who can offer insights, mentorship, or collaboration opportunities. Showcase projects addressing global/local challenges (e.g., sustainability, healthcare, education) to emphasize tech's role in social good.



Outcomes: The event allows participants to exhibit their technical skills, problem-solving abilities, and mastery of tools/technologies through their projects. Participation to the event motivate students to apply theoretical concepts learned in classrooms to tangible, real-world problems. Also, recognize exceptional projects for awards, internships, or funding opportunities.

The events successfully engaged students in experiential learning and contributed to their technical and personal development. Encourage participants to strive for excellence through healthy competition and recognition. The department further anticipate to connect students with industry professionals who can offer insights, mentorship, or collaboration opportunities.

MECHANICAL ENGINEERING DEPARTMENT EVENTS AND OUTCOMES

Department Co-ordinator: -Dr.S.K.Patel

□ **Overview:**

The Mechanical Engineering Department organized a series of technical events aimed at enhancing practical knowledge, fostering innovation, and encouraging team collaboration among students. These events provided a platform for participants to demonstrate their technical skills and creativity while gaining hands-on experience in core areas of mechanical engineering.

1. 3D DREAM SPACE

□ **Event Coordinators:** Prof. S. T. Patel

□ **Description:**

This is a core technical event in which participants must have knowledge about CAD and 3D Printing. This event challenged participants to design and create a CAD file for an L-bracket, having low weight and high strength, which is subsequently 3D printed and tested for its strength and density.



□ **Outcomes:**

- Improve student's understanding of mechanical design and CAD modelling approach.
- Encouraged teamwork and innovation in mechanical design and manufacturing.
- Spark interest in design for additive manufacturing among students.



2. Measure mania

□ **Event Coordinators:** Prof. V.S. Patel

□ **Description:**

This is a core technical event in which participants must have basic knowledge about measurement tools and their least count.



□ **Outcomes:**

- How to use Vernier, micrometre, Vernier height gauge, bevel protector and basic knowledge of its parts.
- Students obtain measurement knowledge of the given instrument..



3. Fold It and Make It

□ Event Coordinators:

Prof.H.N.Patel

□ Description:

In this event, participants are supposed to create various objects by using their knowledge of engineering graphics and drawing. By attending this event, they will gain knowledge about applying theoretical knowledge to make practical things. This event is a combination of fun and knowledge

□ Outcomes:

- Understand Surface Development Concepts
- Apply Development Methods
- Draw Accurate Developments of Solids
- Use Surface Development in Real-World Applications
- Visualize and Improve Spatial Thinking



4. Lath -O-Mania

□ Event Coordinator: Prof. B.C. Patel

□ Description:

This is a core technical event in which participants must have basic knowledge about lathe machining and its tools. For example, how to operate lathe machine tool and some basic machining operations. Participants will have to perform some machining operations on lathe machine tool.

□ Outcomes:

- Hands-on Experience with Lathe Machine Tools.
- Understanding of Basic Machining Operations
- Improved Precision and Measurement Skills
- Skill Development for Manufacturing & Mechanical Roles



5. Harmony carve

□ **Event Coordinator:** Prof.N.S.Patel

□ **Description:**

Join our hands-on workshop where participants will craft their own flutes from raw materials under the guidance of experienced artisans. Learn essential techniques such as cutting, measuring, drilling, and decorating. This event is designed to focus on craftsmanship while providing a creative and engaging experience for all skill levels.

□ **Outcomes:**

- Hands-On Craftsmanship Skills
- Boost in Creativity & Artistic Expression
- Increased Knowledge of Music & Instrument Design
- A Sense of Accomplishment



The events successfully engaged students in experiential learning and contributed to their technical and personal development. The department looks forward to organizing more such initiatives to foster innovation and skill-building.

AVINYA 2025

CIVIL ENGINEERING DEPARTMENT EVENTS AND OUTCOMES

Department Co-ordinator: - Dr. Yogendra Tandel

❖ **Overview:**

The Civil Engineering Department organized a series of technical events aimed at enhancing practical knowledge, fostering innovation, and encouraging team collaboration among students. These events provided a platform for participants to demonstrate their technical skills and creativity while gaining hands-on experience in core areas of civil engineering.

1. CiviSetu

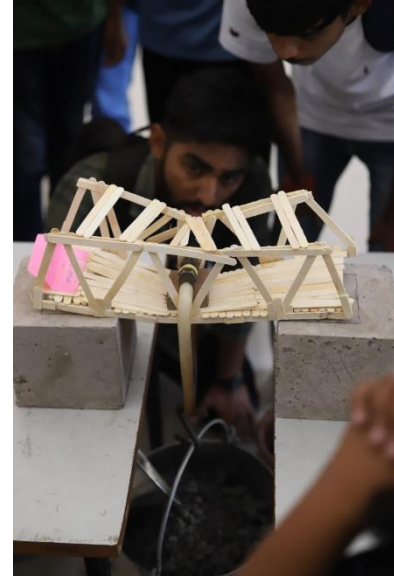
❖ **Event Coordinators:** Prof. Viral Patel

❖ **Description:**

This event challenged participants to build bridge from ice-cream sticks.

❖ **Outcomes:**

- Improved student understanding of constructing bridge.
- Encouraged teamwork and innovation in construction of bridge.



2. Crane-O- Gagana

❖ **Event Coordinators:** Prof. Priyanka Patel

❖ **Description:**

This event challenged participants to build tower crane from ice-cream sticks..

❖ **Outcomes:**

- Improved student understanding of constructing tower crane.
- Encouraged teamwork and innovation in construction of tower crane.



3. ReinVajra

❖ **Event Coordinators:** Prof. Keval Tandel

❖ **Description:**

This event challenged participants to perform reinforcement detailing of cantilever beam.

❖ **Outcomes:**

- Enhanced problem-solving and analytical skills.
- Promoted interest in reinforced concrete design engineering subjects.



4. Prasnavali

❖ **Event Coordinator:** Prof. Neha Patel

❖ **Description:**

A technical quiz covering a wide range of topics from basic electrical concepts to recent technological advancements.

❖ **Outcomes:**

- Refreshed theoretical knowledge of civil engineering students.
- Motivated self-learning and research in advanced civil engineering topics.
- Developed quick-thinking and teamwork under pressure.

The events successfully engaged students in experiential learning and contributed to their technical and personal development. The department looks forward to organizing more such initiatives to foster innovation and skill-building.