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*Shaping Excellence in Industrial & Production Engineering Since 1984*

Newsletter January 2026



## Education

In a world where technical skills are not enough anymore, engineering education should be aware to foster ethics, character, and professional responsibility. In line with Outcome-Based Education (OBE) and NBA Programme Outcomes PO6–PO8, this relates spiritual wisdom with professional values to facilitate ethical behaviour, social responsibility, and value-based professionalism on the graduates of the engineering profession. The chosen quotes are reflective and prescriptive in nature and they urge students and faculty to perceive education as a tool to help an individual develop in a holistic manner-to become a responsible engineer, caring leader, and a socially responsible citizen. The initiative enhances the value-based education and re-establishes the desire to graduate engineers with solid moral backgrounds and social consciousness.

In line with the above paragraph, here are **ten very famous quotes on education by spiritually enlightened masters**, blending wisdom, self-realization, and human development:

1. **Swami Vivekananda**  
*"Education is the manifestation of the perfection already in man."*
2. **Sri Aurobindo**  
*"The aim of education is to help the growing soul to draw out what is in itself."*
3. **Mahatma Gandhi**  
*"Education which does not mould character is absolutely worthless."*
4. **Rabindranath Tagore**  
*"The highest education is that which does not merely give us information but makes our life in harmony with all existence."*
5. **Jiddu Krishnamurti**  
*"The purpose of education is not to produce scholars, but integrated men and women."*
6. **Buddha**  
*"To understand everything is to forgive everything."  
(Often cited in education as the essence of wisdom and learning.)*
7. **Adi Shankaracharya**  
*"Knowledge is that which liberates."*
8. **Dalai Lama**  
*"The goal of education is not just knowledge, but the cultivation of a warm heart."*
9. **Kabir**  
*"True knowledge is not in books, but in self-realization."*
10. **Sathya Sai Baba**  
*"The end of education is character."*
11. **Sadguru**  
*"Education needs Inspiration, not just information. Only inspired human beings can transform their own lives and the lives around them."*

## Alumni Visit

Alumni Visit 9<sup>th</sup> January 2026



**Mr. Gitan Ginde** visited the department on 9<sup>th</sup> January 2026 and discussed changes that are taking place in Industrial and other sectors.

**Mr. Gitan Ginde** is Industrial and Production Engineering Graduate from Karnataka University & Certified Six Sigma Black Belt Champion from Mahindra Institute of Quality.

He is a technocrat with 27 years of experience in Mechanical Product Design & Development, Validation, Quality Planning and Vehicle Launch. He has worked with leading automotive OEM's, Tire-1 suppliers and Leading Engineering Consulting groups across multiple geographies like USA, South Korea and India.

He successfully delivered seven completely new Vehicle Programs from concept design to production (Mahindra Thar, KUV-700 , Scorpio-N, XUV-3X0, BEV-6E BEV-9E, ME-TREO ) and Lead the Engineering Release activity for 20+ completely new Vehicle and Major Refresh Programs.

He has trained around 2000+ working professionals across Indian industry on topics like, GD&T, Tolerance Stack, 3D-Variatioal Analysis, FMEA, DFM/DFA, Six Sigma, Etc,

Mr. Gitan Ginde had been Member of BOS for Basaveshwar Engineering College Bagalkot (IP Dept) and MIT- Manipal (Automotive and Aerospace Engineering) for the period of two years.

At Present he is working as Founder Director of Ganitharth Technologies (IT Company) and G-VACS India Private Ltd (Electronic and Mechatronics parts Design/Manufacturing startup) He has been associated with Mahindra & Mahindra at Research Valley Chennai as Head of Design Quality & Dimensional Engineering Function. In past he has worked with companies like Satyam Venture Engg Services

(Now Tech Mahindra), Lear Corporation, Tata- Johnson Controls. He also has worked with Whirlpool India, Snider Electricals, ABB-India, DRDO Labs as Engineering Consultant

## 15<sup>th</sup> GRADUATION DAY

10<sup>th</sup> January 2026

15<sup>th</sup> Graduation Day was conducted on 10<sup>th</sup> January 2026 and 10 students graduated from the department of Industrial and Production Engineering



Production engineering is no longer defined solely by mechanical efficiency and assembly line speed. We have entered an era where the "factory" is a living, thinking organism. The convergence of the **Industrial Internet of Things (IIoT)**, **Artificial Intelligence (AI)**, and **Big Data** has shifted the discipline from a focus on rigid mass production to a paradigm of intelligent, flexible, and human-centric systems.

### The Shift Toward "Cognitive" Production Methods

The hallmark of this new era is the move away from deterministic programming—where machines follow a fixed set of rules—toward **Cognitive Automation**. In this model, production systems use machine learning to adapt to real-time variables such as material inconsistencies, fluctuating energy costs, or sudden changes in consumer demand.

#### 1. Additive Manufacturing and Generative Design

Traditional subtractive methods (milling, turning) are being augmented or replaced by advanced **Additive Manufacturing (3D Printing)**. When paired with **Generative Design**, engineers no longer draw a part; they input constraints—such as weight, strength, and material—into an AI. The system then "evolves" thousands of design iterations, often resulting in complex, organic geometries that are impossible to manufacture via traditional means but are 40% lighter and significantly stronger.

#### 2. The Digital Twin Framework

Perhaps the most transformative method is the implementation of **Digital Twins**. This is not just a 3D model; it is a dynamic virtual replica of a physical production line, synced in real-time via sensors.

- **Predictive Maintenance:** Instead of "preventative" maintenance (changing a part every 6 months), AI analyzes vibration and heat data to perform "predictive" maintenance, identifying a failure weeks before it occurs.
- **Scenario Testing:** Engineers can run "what-if" scenarios on the digital twin to optimize throughput without ever touching the physical equipment.

#### 3. Collaborative Robotics (Cobots)

The "Dark Factory" (fully autonomous) is becoming a reality for some, but the "Intelligent Factory" focuses on **Human-Robot Collaboration**. Modern **Cobots** are equipped with advanced computer vision and tactile sensors, allowing them to work safely alongside humans without safety cages. They handle the repetitive, ergonomically taxing "dull, dirty, and dangerous" tasks, while humans provide the high-level critical thinking and "soft" customization that AI still lacks.

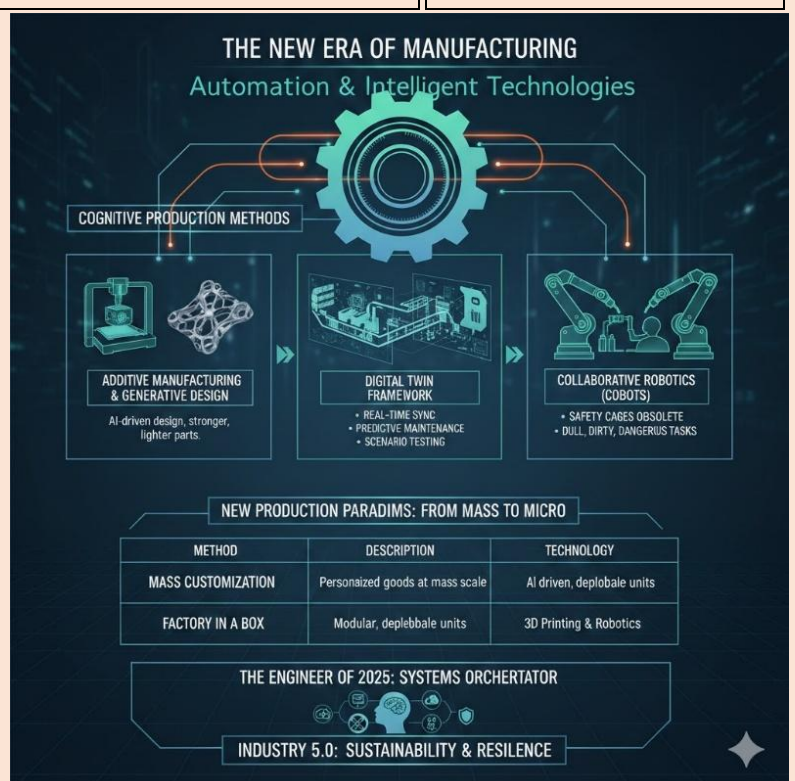
### New Production Paradigms: From Mass to Micro

The "New Era" has birthed two distinct manufacturing philosophies that are reshaping the global supply chain:

| Method             | Description                                                                           | Primary Technology                 |
|--------------------|---------------------------------------------------------------------------------------|------------------------------------|
| Mass Customization | Producing unique, personalized goods at the cost and speed of mass production.        | AI-driven Modular Production Lines |
| Factory in a Box   | Modular, self-contained manufacturing units that can be shipped and deployed locally. | Edge Computing & IoT               |
| Micro-factories    | Small-scale, highly automated urban facilities that reduce transport emissions.       | Additive Manufacturing & Robotics  |

### Conclusion: The Engineer of 2026

The role of the production engineer has evolved into that of a **Systems Orchestrator**. Technical proficiency now requires a blend of mechanical expertise, data science, and cybersecurity. As we move from Industry 4.0 into **Industry 5.0**, the focus is expanding beyond pure efficiency to include **Sustainability** and **Resilience**. The successful production methods of tomorrow will be those that not only maximize output but do so with a minimal carbon footprint and maximum adaptability to a volatile global market.



**1. Title of the Programme: *Pathways to Serve the Nation: Engineering Careers in the Indian Army***

This seminar aims to inform engineering graduates about the diverse career opportunities in the Indian Army, focusing on the importance of engineering skills in military operations, the various entry schemes, roles, career growth prospects, and the preparation process, with the goal of motivating students to consider serving the nation.

**2. Title of the Program: *Business Plan Presentation Contest (BPPC)***

The Business Plan Presentation Contest (BPPC) seeks to inspire students to develop innovative business ideas and refine their skills in creating and presenting business plans, while providing networking opportunities with industry experts and potential investors to foster entrepreneurial spirit and innovation.

**COLLEGE**

**Vision**

To be an institution of excellence in education, research and innovation for sustainable future

**Mission**

- Develop globally competent professionals for future talent requirements
- Nurture a culture of research, Innovation and entrepreneurship
- Promote collaborations, extension and outreach programs for addressing industrial and societal needs

**DEPARTMENT**

**Vision**

To achieve excellence in education and research in Industrial and Production Engineering for a sustainable future

**Mission**

- Develop globally competent professionals in Industrial and Production Engineering by imparting quality education
- Nurture a culture of research, innovation, and entrepreneurship through collaboration with institutes and industries

**Editorial Board**

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