

Mr. Avinash D. Chavan

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**Career Objective:**

Dedicated and accomplished professional with a Master's degree in Product Design and Development, currently serving as an Assistant Professor at St. John College of Engineering and Management Palghar. Seeking to leverage expertise in product design, development, and innovation to establish a successful consultancy specializing in mechanical products.

EDUCATIONAL QUALIFICATIONS

Sr. No	Qualification	Class	Year of Passing	University
1.	Ph. D in Mechanical Engineering	Pursuing	-	Institute of Chemical Technology, Mumbai
2.	M.E.(Product Design & Development)	First Class with Distinction	2017	Mumbai University
3.	B.E.in Mech. Engg.	First Class with Distinction	2013	Govt College of Engg and Research, Pune, Pune University
4.	Diploma in Mech. Engg.	First Class with Distinction	2010	MSBTE

EXPERIENCE:**Total Experience: : 15 Years****✓ Academic Experience:****Total Academic Experience: 12 Years**

Sr. No	Organization	Designation	Duration
1.	St. John College of Engineering and Management, Palghar	Assistant Professor	June 2017- Till date
2.	Saraswati College of Engineering, Kharghar	Assistant Professor	January 2015 to June 2017
3.	Bharat College of Engg., Badlapur	Assistant Professor	June 2014 to January 2015
4.	BM Polytechnic, Badlapur	Assistant Professor	July 2013 to June 2014

✓ Industry Experience:**Total Industry Experience: 3 Years**

Sr. No	Organization	Designation	Duration
1.	L & T Powai, Mumbai	Machine shop Supervisor/ Machinist	August 2004 to August 2007

✓ Freelancing work Experience:**Freelancing work Experience: 3 Years**

Sr. No	Organization	Designation	Duration
1.	Sundaram Books, Palghar	Product Design Engineer	July 2023 till March 2024
2.	KLT Automotive, Palghar	Product Design Engineer	July 2018 to Feb 2019
3.	TPI Bearings, Thane	Product Design Engineer	December 2016 to January 2020

RECENT PROFESSIONAL CERTIFICATION

Sr. No	Certification
1.	Scrum Master Certification
2.	SAP-ABAP Certification

3.	Python (Beginner Level)
4.	CNC Programming , Auto CAD, Fusion 360

✓ **Roles and responsibilities handled/handling:**

>> **Academic:** Class Advisor, Subject In-charge, Exam Coordinator at department level

Class Advisor :

Academic guidance: Helping students understand their academic requirements and progress.

1. Personal support: Providing mentorship and counseling for personal and academic challenges.
2. Student advocacy: Representing students' interests to the college administration.
3. Career guidance: Assisting with career exploration, internships, and job placements.
4. Community building: Fostering a sense of belonging and organizing social activities.
5. Monitoring and reporting: Keeping track of students' progress and submitting reports.
6. Continuous improvement: Seeking feedback and staying updated on best practices.

As a Subject In-charge of Engineering Mechanics and Engineering Graphics in an engineering college, I involve in:

1. Curriculum Development :

- Designing and updating the course curriculum for Engineering Mechanics and Engineering Graphics to ensure alignment with academic standards and industry requirements.
- Incorporating relevant theoretical concepts, practical applications, and hands-on experiences into the course content.

2. Teaching and Instruction :

- Delivering lectures, conducting practical sessions, and facilitating discussions to impart knowledge and understanding of Engineering Mechanics and Engineering Graphics principles.
- Demonstrating problem-solving techniques, graphical representations, and engineering analysis methods to enhance students' comprehension.

3. Resource Management :

- Managing resources such as textbooks, reference materials, software tools, and laboratory equipment necessary for teaching the subjects effectively.
- Ensuring the availability and maintenance of instructional resources to support student learning and experimentation.

4. Assessment and Evaluation :

- Designing assessments, quizzes, assignments, and examinations to evaluate students' understanding and mastery of Engineering Mechanics and Engineering Graphics concepts.
- Providing constructive feedback to students to help them identify areas for improvement and enhance their learning outcomes.

5. Student Support and Guidance :

- Offering academic advising and mentorship to students pursuing Engineering Mechanics and Engineering Graphics courses.
- Providing assistance and clarification to students encountering difficulties with course material or assignments.

6. Collaboration and Coordination :

- Collaborating with other faculty members within the department and across disciplines to integrate relevant concepts and interdisciplinary perspectives into the curriculum.

- Coordinating with laboratory staff, teaching assistants, and support personnel to ensure smooth implementation of practical sessions and experiments.

7. Professional Development :

- Engaging in continuous learning and professional development activities to stay abreast of advancements in the field of Engineering Mechanics and Engineering Graphics.

- Participating in workshops, conferences, and seminars to enhance teaching methodologies, pedagogical techniques, and subject matter expertise.

8. Quality Assurance :

- Monitoring the quality of instruction, course delivery, and student outcomes through regular assessment and feedback mechanisms.

- Implementing improvements and refinements to instructional strategies and course materials based on feedback and evaluation results.

>> **Extracurricular:** Placement Coordinator , Various Technical as well Cultural Events Coordinator

>> Additional Key Roles:

Industry Liaison Officer: Contacting industry people and make bond between institute and industry, Creating opportunities for internship and placement,

Competitive Exam Coordinator: To conduct JEE, CET, CAT, GATE exams in campus and monitor activities throughly.

Internship Coordinator (increased count of Mechanical Department by good numbers)

Industrial Visit coordinator

Student Induction Program Coordinator: As per updated curriculum planning and scheduling of various events like guest lectures, Yoga sessions,

Institute Level UHV (Universal Human Values) Trainer

✓ Courses I like to taught:

Engineering Graphics, Engineering Mechanics, Strength of Material, Production Process, Production Technology, Product Lifecycle Management, Machine Design, Theory of Machine.

✓ Courses I like to teach:

Product Design and Development, Industrial Design, Product Lifecycle Management, Design for manufacturing and Assembly, Design for X, Applied Ergonomics, Polymeric Material and Processing, Value Engineering, Ergonomics, Concurrent Engg, Cad/Cam, Design For Quality, Failure Mode Effect Analysis, Design Of Experiments, Reliability Engineering, Design For Six Sigma, Process Modeling And Product Design, Rapid Prototyping And Tooling (3D Printing), Creativity In Design, Die Design And Development, Reverse Engineering, Product Marketing, Engineering Graphics, Engineering Mechanics, Strength of Material, Production Process, Production Technology.

✓ Innovation in Teaching:

Developed new methods to teach Engineering Graphics

Introduced new experiments in Engineering Mechanics.

✓ Awards:

Best Research Paper Award in “International Conference on Sustainable Deelopment in Design & Manufacturing, January 2017”

✓ External Funding:

Design of Date Pulp Forming Machine (Funded by Mumbai University under Mini Research Proposal)

Grant Amount: Rs.35000

MEMBERSHIP OF PROFESSIONAL BODIES

✓ Lifetime Membership of ISTE (Indian Society for Technical Education) - Membership Number: LM118719

AREA OF INTEREST

- ✓ Product Design & Development
- ✓ Rapid Prototyping
- ✓ AutoCAD, 3D Modelling, Drafting, Rendering in Pro-E, Creo 3.0, Solidworks.
- ✓ CNC Programming & Computer Aided Manufacturing

ONLINE COURSES WITH CERTIFICATION

Sr. No	Name of Course	Platform
1.	Product Design Using Value Engineering	<u>Swayam</u> <u>NPTEL, IITs</u>
2.	<u>Patent Drafting for Beginners</u>	
3.	<u>Product Design and Innovation</u>	
4.	<u>Product Design and Development</u>	
5.	Programming for Everybody (Getting Started with Python)	<u>University of Michigan</u> Coursera

RESEARCH

✓ Journal Publications:

Sr. No.	Paper Title	Journal	Volume
1.	Revolutionizing Connectivity: Advancements, Challenges, and Future Prospects of Wearable IoT Devices," has been published in International Journal of Mobile and Cloud Systems Engineering	International Journal of Mobile and Cloud Systems Engineering	Volume 1, Issue 1, Year 2025.
2.	Advancements in Mobile Technology: Innovations in Cloud Computing And IOT Connectivity	International Journal of Mobile and Cloud Systems Engineering	Volume 1, Issue 1, 2025
3.	AI-Driven Smart Waste Management: A Sustainable Approach to Urban Sustainability	Journal of Instrumentation and Innovation Sciences	Volume 10, Issue 1, Year 2025.
4.	Design and Fabrication of 3D Printer of Size (600x600x600) mm ³ using IoT for the Industrial Requirement	International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056 p-ISSN: 2395-0072	Volume: 08 Issue: 09 Sep 2021
5.	Enhancement Of Date Pulp Forming Machine	International Research Journal Of Modernization In Engineering Technology And Science	IRJMETS/Certificate/Volume 3/Issue 5/624933 Issue Date: 03/06/2021
6.	Stopper Mechanism for Conveyor, Literature, Review. Application	Research Journal of Multicon 2020, Thakur College of Engineering and Technology, Mumbai.	Multicon, 28-29 Feb. 2020
7.	Design & Fabrication of Economic Electric Car	International Journal for Science and Advance Research in Technology	IJSART - Volume 4 Issue 2 – JUNE 2018
8.	Experimental Design Development And Analysis Of Helical Coil Tube	International Journal for Science and Advance Research in Technology	IJSART - Volume 3 Issue 6 – JUNE 2017
	Quality Function Deployment for Designing Bottle Holder	International Journal of Scientific & Engineering Research (ISSN 2229-5518)	Volume 8, Issue 3, March-2017
	Product Development Techniques Implementation for Bottle Holder	Journal of Emerging Technologies and Innovative Research (ISSN-2349-5162)	Volume 3, Issue 4, April 2016
	Product Development Techniques implementation for Bottle Holder	International Journal of Scientific & Engineering Research (ISSN 2229-5518)	Volume 6, Issue 12, December-2015

✓ Conferences/ Proceedings:

Sr. No.	Paper Title	Conference	Period
1.	Stopper Mechanism for Conveyor, Literature, Review. Application	Multicon 2020, Thakur College of Engineering and Technology, Mumbai.	28-29 Feb. 2020

2.	Quality Function Deployment for Designing Bottle Holder	International Conference on Sustainable Development in Design & Manufacturing	ICSDDM 2017 January, 2017
3.	Product Development Techniques Implementation for Bottle Holder	International Conference on Advances in Science & Technology, Kharghar, Navi Mumbai	ICAST 2015 December, 2015
4.	Inertia Wheel Power Generator- An Innovative Model Base Approach	International Conference on Advances in Mechanical Engineering	ICAME 2013 May, 2013

STTP/WORKSHOPS**✓ STTP/Workshops Participated:**

SR. No.	Title	Duration	Held At
	NEP 2020 and Autonomy in HEI	Dec 18-23, 2023	SIES Graduate School of Technology, Navi Mumbai
	Recent Trends in Electric Vehicles	Dec 13-19, 2023	Rizvi College of Engineering, Bandra West, Mumbai
1.	Electric Vehicle: Design to Product Development	Sep 1- 5, 2021	A. P. Shah Institute of Technology, Thane. AICTE Training and Learning (ATAL) Academy
2.	"Productivity Enhancement"	23-27 August 2021	North-Eastern Hill University. AICTE Training and Learning (ATAL) Academy
3.	Internet of Things: Product Design, Development and Implementation	2-6 August 2021	Shri Gajanan Maharaj College of Engineering, Shegaon, Maharashtra. AICTE Training and Learning (ATAL) Academy
4.	National Webinar of English for Employability	30 Jul 2021	English Language Teachers Association of India
5.	"Inculcating Universal Human Values in Technical Education"	19-23 August, 2020	AICTE (Online Mode) F.No AICTE/FDP SI/OnlineWorkshop/217/37122
6.	"Potential Research Areas in Mechanical Engineering"	15 th - 20 th June, 2020	VITS, Hyderabad
7.	"Futuristic Technologies in Mechanical Industries"	5 th -9 th June, 2020	D.Y. Patil IEMR, Pune
8.	"MOOC: e- learning the road ahead"	18 th April, 2020	Live Session by MUKTA, Mumbai University.
9.	"Teacher is a source of Entrepreneur"	12 th April, 2020	Live Session by MUKTA, Mumbai University.
10.	"Research Methodology and Intellectual Property Rights"	24 th -29 th Feb. 2020	Thakur College of Engg, Mumbai
11.	"Seven Day Faculty Development for Student Induction"	18 th -24 th June,	A.P. Shah IT, Thane.
12.	"Three Day Faculty Development for Student Induction"	6 th -8 th June, 2019	A.P. Shah IT, Thane.
13.	"Design Thinking and Patenting"	23 rd May, 2019	St. John College of Engineering, Palghar

14.	"Comprehensive Induction on Best Practices for Effective Teaching Learning Process" (STTP Approved by	7 th -12 th May, 2018	St. John Institute of Pharmacy , Palghar
15.	"Design Validation & Case studies of Machine Elements using Solidworks & Ansys." (STTP	3rd – 7th July,2017	St. John College of Engineering, Palghar
16.	"Art to Part: Integrated Product Design & Development"	21 st - 22 nd March, 2017	Bharti Vidyapeeth College of Engineering, Navi Mumbai.
17.	Modern Product Design Approach- Fusion 360 (Workshop)	December, 2016	Milestone, PLM, Vashi
18.	"Recent Trends in Mechanical Engineering" (STTP	6 th – 10 th June,2016	Saraswati College of Engineering, Navi Mumbai.
19.	"Introduction to NAAC" (STTP Approved by ISTE)	6 th – 10 th June,	Saraswati College of Engineering, Navi Mumbai.
20.	"Vipassana" Meditation Course	7th-16 th January, 2014	Dhamma Giri, Igatpuri, Maharashtra

EXPERT LECTURES/SEMINARS DELIVERED:

S.R. No.	Topic	for	Held At	Date
	Powder Metallurgy	TE Diploma Mech	SJCEM, Palghar	February, 2019
1.	"Product Development Process"	1 st year ME Students	YTCEM, Karjat	March, 2017
2.	"CNC Programing"	SE Mech	SCOE, Kharghar	April, 2017
3.	"Introduction to Auto CAD"	FE Students	YTCEM, Karjat	February, 2016
4.	"Introduction to Auto CAD"	First Year Diploma	YTCEM, Karjat	February, 2016

Details of Industrial Training Program attended:

S.R. No.	Industry	Duration
1.	Tokeheim Pvt Ltd. Koparkhairane	May, 2018
2.	Reliance Ltd.,Nagothane	December, 2013
3.	Garware Ltd., Aurangabad	August, 2013

PATENTS:

S.R. No.	Title of the invention	Patent No.	Authority	Status
1.	Development Of Bio Materials Process For Engg. Production And Control	202241000069 A	IP, India	Published on 4 th February, 2022
2.	Intelligent Headlight Brightness Auto-Adjustment System for Vehicle	202241032604	IP, India	Applied on 7 th June, 2022
3.	Related with Solar Techonolgy	-	IP, India	In Process

PROJECT WORK :

✓ Funded Projects :

Design of Date Pulp Forming Machine (Funded by Mumbai University under Mini Research Proposal)

✓ Guided UG Projects:

2021-2022

Design and Fabrication of Solar Powered Electric Go- Kart

Design and Fabrication of Mechanical Stilt

Design and Fabrication of Forearm Power Generator

2020-2021

Enhancement of Date Pulp Forming Machine

Development IOT based 3D Printing Machine

Design and Development of Corner Shot Gun

2019-2020

Design And Fabrication Of Date Pulp Forming Machine

Design And Fabrication Of Glass Crusher Machine

Design and analysis of Mobile Pressure Vessel Carrier as per ASME Sec VIII Div I

2018-2019

Design and Fabrication of Electric Go- Kart

✓ Self Projects:

Bottle Holder Development (ME Project)

The bottle holder is designed and developed for Complete work from customer survey to Design modification is performed. Simple and economic design is introduced after implementing set of principles of Kano Model, QFD, and Pugh Matrix.

Mobile Stand (Practice Project)

The mobile stand is designed and developed which is suitable to hold mobile as well as tablet. It is equipped with telescopic arrangements for adjusting center of gravity of the holder and gadget.

Inertia Wheel Power Generator (BE Project)

A device is developed in order to obtain energy from renewable energy source with excitation force amplification. For amplification a specific spring mass system is designed.

Automatic Vegetable & Cheese Cutting Machine (Diploma Project)

The machine having multiple blades having capacity to cut large amount of vegetables with maintaining hygiene. It is specially designed for cutting vegetables and cheese in large amount at hotels and restaurants.

✓ Involvements in Social Activity:

- ❖ Used to go as Writer for Blind Students in Entrance/competitive exams.
- ❖ Regular Blood Donor
- ❖ Volunteer for Padraksha – that works for donating foot wares to students in tribal area in Palghar.