

Government College of Engineering , Karad
Center of Excellence

• **Center of Excellence Certification Programs:**

Sr.No	Name	Details
1	AIoT	Combines Artificial Intelligence with IoT devices to enable smart automation, monitoring, and decision-making.
2	AR-VR	Uses Augmented and Virtual Reality technologies to create immersive learning and interactive digital experiences.
3	AIDSML	Focuses on Artificial Intelligence, Data Science, and Machine Learning techniques for intelligent data-driven solutions
4	Image Processing	Involves analyzing and enhancing images using algorithms for tasks like segmentation, detection, and feature extraction.
5	SAP	Enterprise software for managing business operations such as finance, HR, logistics, and analytics.
6	EV	Covers Electric Vehicle technology including battery systems, motor control, charging, and sustainable mobility concepts.

- **Center of Excellence Academic Courses:**

MDM Course	IOE Course
1. Image Processing	1. AIoT
2. Electric Vehicle i. EV-Mechanical ii. EV- Electrical	2. AIDSML
	3. SAP
	4. AR-VR

- **Internship Programs Conducted at CoE:**

Sr.No	Internship	Duration
1	AIOT	6 Months
2	CIM	6 Months
3	Data Analytics using Power BI	6 Months
4	Data Analytics using Power BI	1 Month
5	AIOT	1 Month

- **Training Programs Conducted at CoE:**

Sr.No	Training	Duration	Details
1	AIDSML	30 Hours	Covers AI, Data Science, and Machine Learning fundamentals with practical model-building.
2	Generative AI	30 Hours	Introduces AI tools that create text, images, and content using modern generative models.
3	Data Analytics using Power BI	60 Hours	Teaches data visualization, dashboard creation, and business analytics using Power BI.
4	Embedded System	30 Hours	Focuses on microcontrollers, sensors, and real-time applications in hardware systems.
5	AI Tools Automation	30 Hours	Uses AI tools to automate tasks, workflows, and productivity processes effectively.
6	CNC Operations & programming		Covers CNC machine operation, G-code programming, and practical machining skills.
7	Python	30 Hours	Provides basics of Python programming for automation, problem-solving, and applications.
8	SQL	45 Hours	Teaches database concepts, queries, data handling, and relational data management.
9	Excel	30 Hours	Includes formulas, charts, data analysis, and essential spreadsheet skills.
10	Foundations of AI	30 Hours	Introduces core AI concepts, history, techniques, and real-world applications.
11	Prompt Engineering	30 Hours	Focuses on designing effective prompts to interact with AI systems for better outputs.

- **Conducted Trainings at CoE:**

Sr.No	Name	Date	No. of Students
1	AIDSML	04/04/2025	70
2	PowerBI	23/06/2025	71
3	Python	14/07/2025	10
4	AI Tools Automation	02/08/2025	50

AIDSML Training Program

Introduction

The AIDSML (Artificial Intelligence, Data Science & Machine Learning) course was successfully conducted at **Karmaveer Bahurao Patil Institute Of Management Studies and Research Satara (KBPIMSR)** with the objective of enhancing students' competence in cutting-edge technological domains. The course integrated conceptual learning with practical laboratory sessions, providing students with a comprehensive exposure to data-driven methodologies and machine learning practices. This program aimed to strengthen students' analytical skills and prepare them for future academic and professional opportunities in AI and Data Science.

Objective's

- To impart comprehensive knowledge of Artificial Intelligence, Data Science, and Machine Learning frameworks.
- To enhance students' proficiency in Python-based data analysis and computational tools.
- To provide structured exposure to various machine learning algorithms, including regression, classification, and clustering methods.
- To develop students' capability to handle, preprocess, and analyse datasets using standardized methodologies.
- To promote experiential learning through practical lab sessions, project work, and performance assessments.
- To prepare students for higher studies, research, and industry roles in the domain of AI and Data Science.

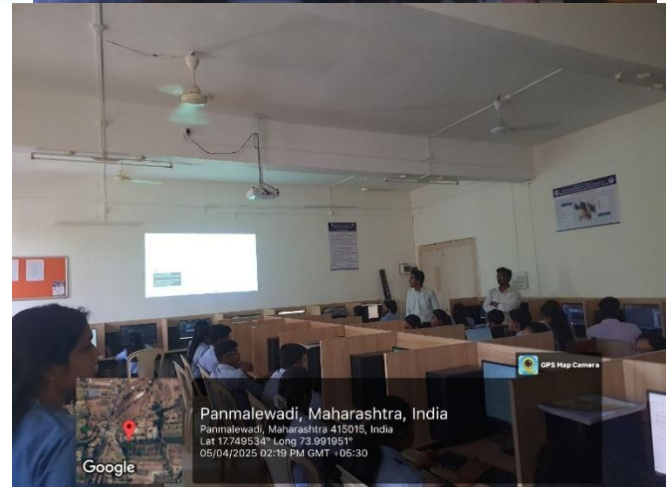
Methodology

- Offline Classroom teaching
- Hands-on lab sessions
- Real-time demonstrations
- Test for assessment

Student Participation

A total of 70 students participated in the course. Students actively engaged in practical sessions, completed assignments, and contributed to discussions.

Photographs of sessions



Power BI Training Program

Introduction

The Power BI Training Program was successfully conducted at **Karmaveer Bahurao Patil Institute Of Management Studies and Research Satara (KBPIMSR)** as part of an academic collaboration aimed at enhancing students' data analytics and business intelligence capabilities. The program focused on equipping learners with practical skills in data modeling, visualization, and dashboard creation using Microsoft Power BI. This report outlines the training activities, objectives, and outcomes achieved during the program.

Objectives

- To provide hands-on training in Microsoft Power BI for data analysis and reporting.
- To enable students to understand and apply business intelligence concepts.
- To develop skills in data cleaning, transformation, and visualization.
- To teach students how to design interactive dashboards for real-time insights.
- To enhance employability by providing exposure to industry-standard BI tools.

Methodology

- Classroom/Online sessions with live demonstrations
- Hands-on practice using real datasets
- Step-by-step dashboard building exercises
- Individual and group assignments
- Question-and-answer interactions and doubt-solving sessions

Student Participation

A total of 50 students participated in the course. Students actively engaged in practical sessions, completed assignments, and contributed to discussions.

Photographs of sessions



Python Programming Course

The **Government College of Engineering, Karad – Center of Excellence** successfully conducted a **Python Programming Course** designed for **Class 12 and above** students with the aim of introducing young innovators to the world of programming.

Course Overview

The course focused on:

- Practical introduction to Python
- Hands-on programming sessions
- Core concepts needed for real-world applications
- Skill development for beginners

Students received:

- Hands-on practice
- Course materials
- Certificate upon completion

Achievements

- Successfully completed **two batches** of the Python Programming Course.
- Trained students in fundamental Python concepts and practical coding skills.
- Awarded **certificates** to all participants who completed the training.
- Received positive feedback highlighting the usefulness and interactive nature of the sessions.

Future Plan

Based on the enthusiastic response and successful outcomes, the Center of Excellence plans to:

- Conduct **more batches** of the Python Programming Course.
- Introduce advanced and specialized modules in programming and technology.

Enrolled and Certified Students:

Sr.No	Name	Qualification	School/College
1	Soniya shubham ghodake	B.E(E&TC)	Dr daulatrao Aher college of engineering
2	Aryan Ravindra Bhandare	12 pass	Chate institute of iit and neet u
3	Sneha Bharat Nalawade	FY B.Tech	D Y Patil college, Talsande
4	Abhinav Laxman Nalawade	12th pass	Ligade patil junior college of science
5	Tamim Farukh Mulla	FY	SGM College
6	Tanzim Juber Mulla	FY	SGM College
7	Sakib Pathan	FY	SGM College
8	Yashashri Pore	BCS	SGM College



• Certification Exams Conducted at CoE

AIDSML Global Certification Examination

Introduction

The AIDSML (Artificial Intelligence, Data Science & Machine Learning) course aims to equip students with globally relevant technical competencies through structured training and certification opportunities. As part of this initiative, students were encouraged to pursue the Microsoft Azure AI Fundamentals (AI-900) certification, an internationally recognized qualification that validates foundational knowledge in artificial intelligence and cloud-based AI services. This report highlights the successful achievement of global certification by one of our students, demonstrating the effectiveness of the course and the institute's commitment to fostering internationally competitive talent.

Objective of Certification Initiative

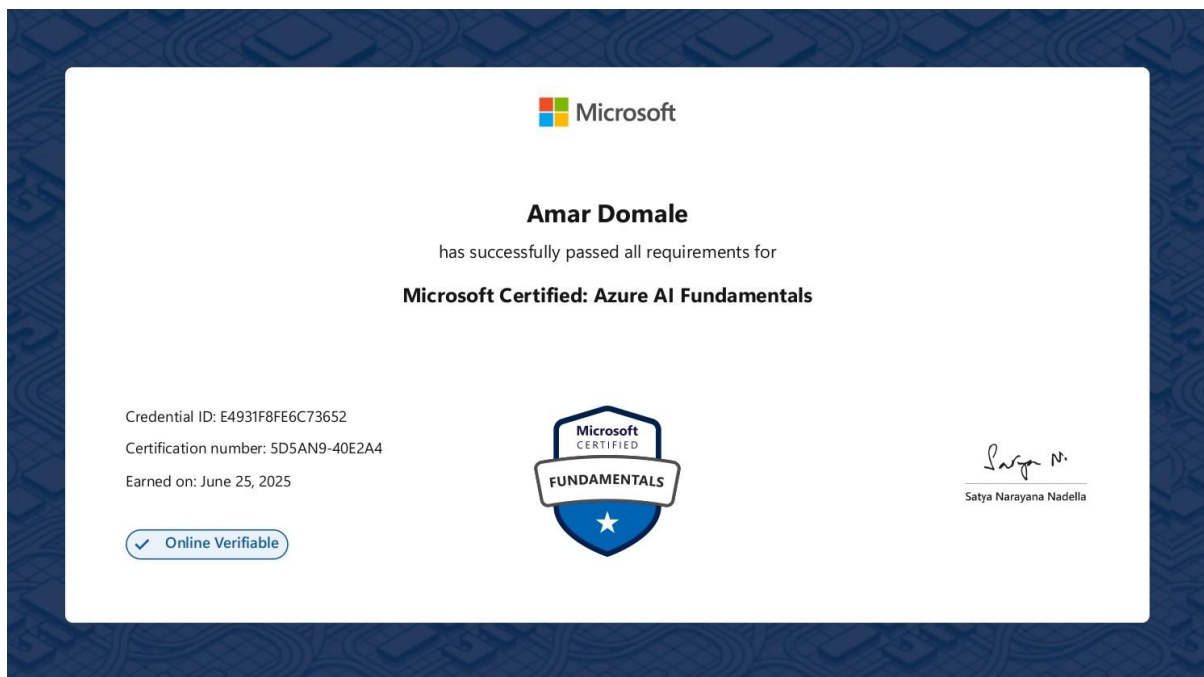
- To provide students with global-level exposure in Artificial Intelligence and cloud technologies.
- To validate foundational AI knowledge through an industry-recognized certification.
- To enhance students' employability and readiness for advanced AI/ML roles.
- To encourage students to participate in international skill-based examination

Result :

Microsoft Certified Students			
Sr.No	Name	Department	Score
1	Sumit Prashant Kumbhar	Information Technology	900
2	Aditya Ramdas Mali	Mechanical Engineering	889
3	Arati Dadaso Khande	Mechanical Engineering	857
4	Suyash Shivaji Halvankar	Mechanical Engineering	857
5	Amar Balasaheb Domale	Information Technology	857
6	Samarth Gajanan Fatake	Information Technology	850
7	Anvayi Sanjay Phadatare	Information Technology	842
8	Shreyas Ashok Pawar	Electronics and Telecommunication	842
9	Devyani Prasad Mane	Information Technology	839
10	Sai Shahaji Zimare	Information Technology	824
11	Swapnil Vijaykumar Shinde	Information Technology	810
12	Pranali Ajit Jamdade	Information Technology	810
13	Shambhuraje Shahaji Bhosale	Mechanical Engineering	810
14	Samruddhi Shivaji Sutar	Information Technology	798
15	Sharvari Sandip Kadam	Information Technology	789
16	Sahil Dipak Lonkar	Information Technology	778
17	Omkar Somnath Pawar	Electrical Engineering	763
18	Snehal Sandip Patil	Mechanical Engineering	756
19	Mayur Suresh Patel	Mechanical Engineering	754
20	Jaydip Vilas Patil	Electrical Engineering	750

AIDSML Certification Exam Report			
Sr. No.	Department	Number of Students	Total Number of Certified Students
1	Civil	4	0
2	Electrical	9	2
3	E&TC	12	1
4	IT	16	11
5	Mechanical	9	6
Total		50	20

Certification



Conclusion

The successful global certification of **20** in **Azure AI Fundamentals** is a significant achievement for both the student and the institute. This accomplishment highlights the quality and impact of the AIDSML training program and reinforces our commitment to providing globally competitive education.

SAP MM

Overview:-

SAP ERP Enterprise Resource Planning is commercial software that will integrate all information altogether in a single software considering various factors like time and cost. Organizations can easily meet their business demands with the help of SAP.

SAP Business Process :-

SAP MM is known as SAP Material Management system. SAP MM role in business process is as follows:

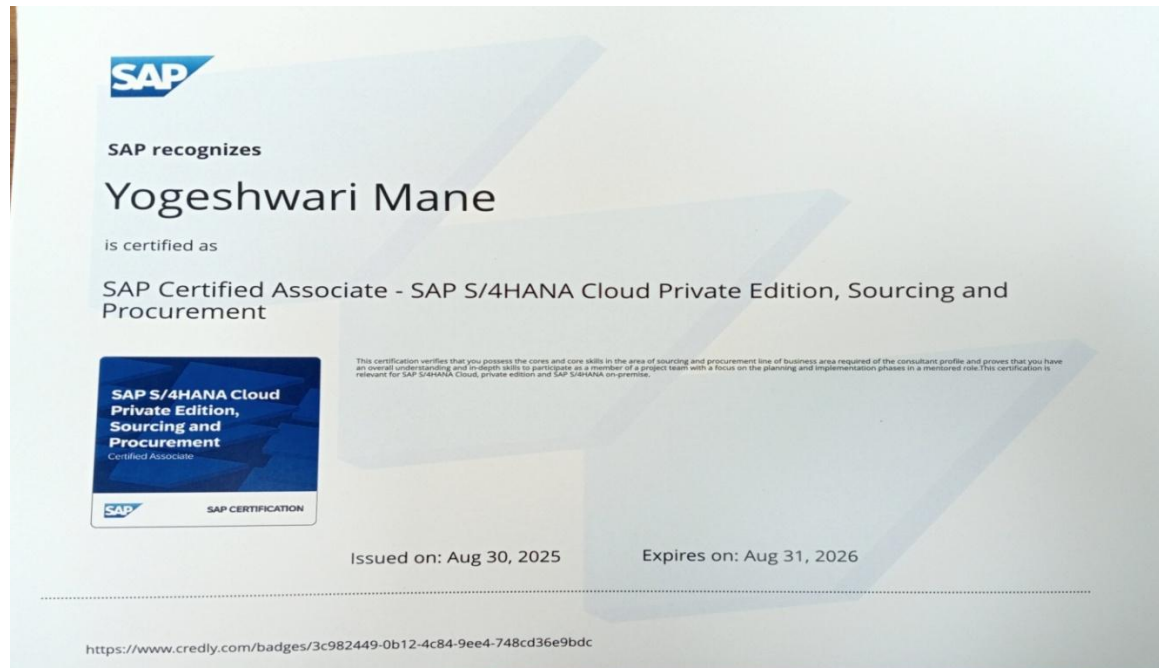
- A business process in SAP is termed as “Module”.
- SAP Materials Management MM is a part of Logistics area and helps to manage the procurement activity of an organization from procurement.
- It supports all aspects of material management planning, controletc.
- It is the backbone of the Logistics area which incorporates modules like Sales and Distribution, Production Planning, Plant Maintenance, Project Systems, Warehouse Management which are extremely obsessed on Materials Management module.

Certified Student List :-

Sr No.	Branch	No. of Students	No. Certified Student
1	Civil	7	7
2	Electrical	4	4
3	ENTC	1	1
4	IT	4	4
5	Mechanical	11	11
6	Faculty	6	6
7	Total	33	33

Sr No	Name of Student	Branch	SAP Exam Marks	Results
1	Shruti Sambhaji Deshmukh	Civil	67%	Passed
2	Pranav prakash kanse	Civil	69%	Passed
3	Kishor Sayaji Dhane	Civil	74%	Passed
4	Anjali Sanjay Shinde	Civil	73%	Passed
5	Shubham Dhananjay Valivadekar	Civil	76%	Passed
6	Shraddha shailendra chivate	Civil	74%	Passed
7	Apurva Balasaheb Veer	Civil	76%	Passed
8	Prajwal Bajirao Sajane	Electrical	65%	Passed
9	Abhishek Anil Verma	Electrical	65%	Passed
10	Yogeshwari kiran mane	Electrical	71%	Passed
11	Prajwal Bajirao Sajane	Electrical	65%	Passed
12	NIKHIL NARWADE	Electronics and Tele. Commn.	68%	Passed
13	Swati Rambabu Gupta	IT	68%	Passed
14	Onkar Dnyanoba Saudagar	IT	74%	Passed
15	Sujal Adhik Pawar	IT	69%	Passed
16	Aditya Shivaji Pawar	IT	75%	Passed
17	Yash Vijay More	Mechanical	72%	Passed
18	Pranav Dadabhau Hivarkar	Mechanical	74%	Passed
19	Ishaan Sanjay Solankar	Mechanical	71%	Passed
20	Atharv Nandkumar shelar	Mechanical	75%	Passed
21	Prasad Prakash Wangekar	Mechanical	75%	Passed
22	Sanket Santosh Jagdale	Mechanical	73%	Passed
23	Shubham Maruti Palakhe	Mechanical	64%	Passed
24	Swapnil Sambhaji Gavhane	Mechanical	73%	Passed
25	Rushikesh Mali	Mechanical	71%	Passed
26	Gaurav Maruti Ghatage	Mechanical	75%	Passed
27	Nikhil Dhanaji Patil	Mechanical	76%	Passed

Certification



27 Students got SAP Global Certification from TY B Tech

IEEE AIOT Certification

Sr. No	Branch	No. of Students	No. Certified students
1.	Civil	3	3
2.	E&TC	22	22
3.	Electrical	13	13
4.	IT	15	15
5.	Mechanical	10	10
6.	Faculty	6	6
7	Total	69	



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Certificate of Completion

Congratulations!

Abhay Dattatray Gadhave

Has Successfully Completed

Certificate Program in AI/ML, IoT & Cloud Computing Full Stack Developer

10/16/25



Tamper-proof verification

Verify Document



IEEE
blended
learning
PROGRAM
Learn - Apply - Build

IEEEGROKGCEK0003

Certificate Number



Srikanth Chandrasekaran
Country Head, IEEE India Operations

AloT IEEE Certification Exam Report

Sr.NO	Student Name	Score	Grade
1	Aasavari Kulkarni	47	Pass
2	Abhay Dattatray Gadhave	39	Pass
3	Adarsh Sugatanand Tayade	47	Pass
4	Amit Dilip Mudukshiware	46	Pass
5	Amruta Nitin Patil	55	Pass
6	Anuj Vishnu Jadhav	42	Pass
7	Anuja Popat Kumbhar	42	Pass
8	Arpita Balaso Karande	50	Pass
9	Atharva Vinod Pisalwar	45	Pass
10	Bhagyashri Pandurang Patil	38	Pass
11	Dhananjay Yuvraj Jadhav	45	Pass
12	Dhanshri Daji Mali	49	Pass
13	Diptesh Dilip Dange	44	Pass
14	Gayatri Sanjay Pawar	44	Pass
15	Hemant Kallappa Shete	53	Pass
16	Kadam Pratik Mangeshrao	50	Pass
17	Kamble Rushikesh Sharad	54	Pass
18	Kashish Meshram	50	Pass
19	Khan Rehan Sajid	45	Pass
20	Khurram Abdulhameed Kureshi	57	pass
21	Kripa Singh	45	Pass
22	Mansi Hemant Taru	50	pass
23	Mrunal Hiraji Deshmukh	44	Pass
24	Ojas Bhalchandra Tamhankar	57	Pass
25	Om Sachin Shah	45	Pass
26	Paramane Basaling Hemant	57	Pass
27	Paras Shekhar Mane	40	Pass
28	Prajakta Mallikarjun Mali	51	pass
29	Pranali Udaykumar Salunkhe	37	Pass
30	Pranoti Jagannath Mane	39	Pass
31	Prashant Dhyanu Patil	50	Pass
32	Prathamesh Ankush Pawar	48	Pass
33	Prathamesh Suhas Nalawade	41	Pass

34	Pratik Balaso Kshirsagar	40	Pass
35	Prerana Sudhir Kupade	44	Pass
36	Raj Ravindra Chavan	43	Pass
37	Ratan Anandrao Jadhav	47	Pass
38	Riya Deepak Pudat	42	Pass
39	Rushikesh Chougule	37	Pass
40	Rutuja Tatyaso Patil	43	Pass
41	Sanika Sambhaji Jadhav	47	Pass
42	Saniya Mussali Bagwan	42	Pass
43	Sarvesh Rajshekhar Bendre	42	Pass
44	Sejal Arvind Mane	45	Pass
45	Shardul Sudhir Kumbhar	48	Pass
46	Shivam Sunil Deshmukh	57	Pass
47	Shreya Sambhaji Sadale	47	Pass
48	Shrinivas Rajendra Sonwane	42	Pass
49	Shriyasha Shahajirao Jagadale	55	Pass
50	Shubharaj Balakrushna Jare	53	Pass
51	Siddhesh Dinkar Pawar	54	pass
52	Soham Vinod Patil	44	Pass
53	Somnath Rayappa Kitture	42	Pass
54	Somnath Sakharam Yewale	45	Pass
55	Suhas Sachin Sutar	40	Pass
56	Sujata Vijay Kudale	44	Pass
57	Sumit Ashok Khot	42	Pass
58	Swaranjali Shivaji Pawar	57	Pass
59	Tanveer Jakirhusen Mulla	47	Pass
60	Tejal Ashok Patil	49	Pass
61	Tejaswini Vijay Salunkhe	52	Pass
62	Vaishnavi Prakash Patil	44	Pass
63	Vivekanand Raghunath Shirdhone	36	Pass
64	Vyankatesh Pradip Dhotre	48	Pass
65	Yashraj Uttam Borkar	44	Pass
66	sonali vishal Patil	56	pass
67	shubham suresh chavan	54	pass
68	Viraj Chandrakant Jagdale	55	pass

- **Ongoing Projects**

Sr.No	Name of project	Faculty	Application	Insustry
1.	Enhancement of Teeth Ligament Rubber Ring Clamping Gun	Prof. Hemant Shete	Rubber Ring Mounting	
2.	Welding Robot prototype	Prof. Hemant Shete	Welding of intricate components	The sky
3.	Machine Utilization Mobile app	Prof. Sonali Patil	Monitoring of machine	The sky
4.	Department audit conduction mobile app	Prof. Sonali Patil	Generation of Audit reports	The sky
5.	Chat Bot for the subject conducted at COE	Prof. Hemant Shete Prof. Sonali Patil	Academics purpose	COE
6.	Leather bag price Tagging & Scanning system	Miss. Shriysha jagdale	Merchant Application	Manik Bag's

- **Project Completed**

Sr.No	Name of Project	Faculty	Application	Industry
1.	Pneumatic leakage Detection system (solution provided)	Prof. Hemant Shete	Industrial application	The Sky
2.	Alexa controlled Light System at IoT Lab	Miss. Amruta Patil	Demonstration	COE AIOT Lab
3.	Weather Station	Mr. Shubham chavan	Display of weather parameters	COE
4.	Mini Embedded AI Vision Board	1.Prof.Hemant Shete sir 2. Mrs. Sonali Patil 3. Mr.Mussadik 4.Mrs.Amruta Patil 5.Mr.Rehan 6.Mrs.Shriyasha Jagdale	AI vision system for Real-time product Label Analysis	MMCOE,Pune

- **Appreciation Letter**

<mdmgcek@gmail.com>

Sent: Friday, November 21, 2025 5:27 PM

To: sonali Patil

<sonali.patil@gcekarad.ac.in>

Subject: Thanks for Your Support and Guidance in my Daughter's project

Dear,

1. Prof.Hemant Shete sir

2. Mrs. Sonali Patil and 3. Ms. Amruta Patil

I wanted to take a moment to sincerely thank you for your invaluable help in guiding and supporting my daughter (2nd year E&TC student of MMCOE Pune) with her project in "AI vision system for Real-time product Label Analysis and Consumer Health Risk Detection. . Your patience, expertise, and encouragement throughout the process have made a tremendous difference. It's clear that your guidance not only helped her complete the project successfully but also boosted her confidence in her own abilities.

We truly appreciate the time and effort you dedicated to assisting her, and I am grateful for the positive impact you've had on her learning experience.

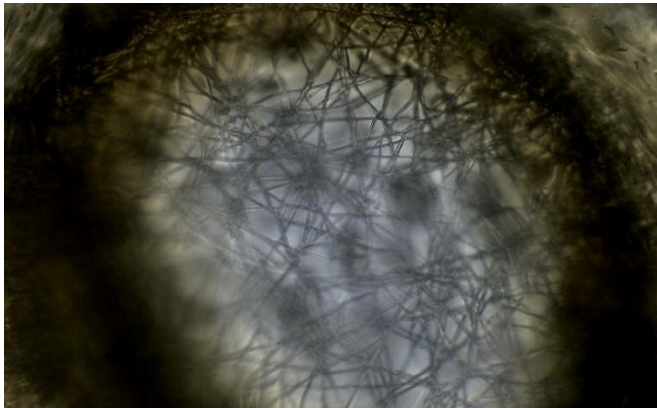


Once again, thank you for being such an inspiring and supportive mentor. We feel fortunate to have had your help during this time.

Warm regards,

Prof. Mahananda D. Malkauthekar,

MCA Department,GCE Karad

- **Image Processing Particle Analysis Reports:**

Sr.No	Sample Name	Sample Photo	Receiver
1.	Nano Fiber Material for wound healing applications		Mrs. Swapnali S. Patil PhD Krishna Institute of Pharmacy,KVV,Karad
2.	Nano Emulsion for ocular drug delivery (Eye Drop)		Mr. Gopal Doiphode M.Pharm Krishna Institute of Pharmacy,KVV,Karad
3.	Nano Sponges for CNS Drug Delivery		Mrs. Megha Mane PhD Krishna Institute of Pharmacy,KVV,Karad

Report Demo:

Government College of Engineering, Karad
Center of Excellence



Analysis Report

Report ID: 061125/115301

Instrument ID: GCEK1

Method Name: Sample C new

A.R.No/Sample ID: c

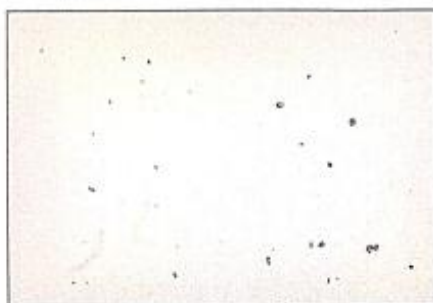
Analysis Type: Slide

Analysis Name: Sample C new-1-c-28-10-2025 11:10:56

Preparation Type: C-1

Batch No.: 1

Method Type: Particle Identification



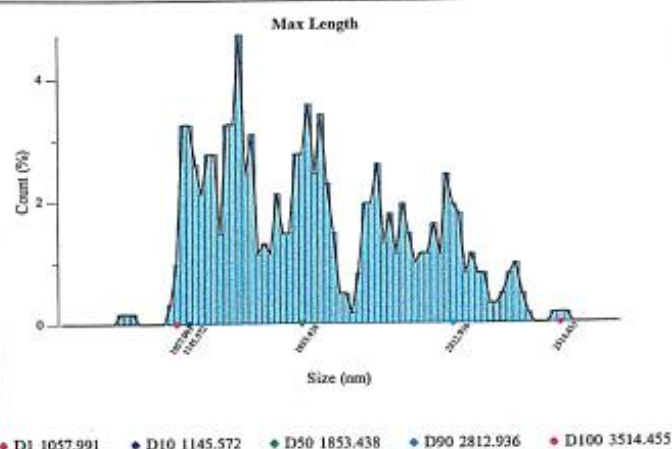
Analysis Parameters

Objective	4X, 10X, 40X, 100X
Size Range (nm)	0 - 10000, 0 - 10000, 0 - 10000, 0 - 500
Calibration Factor (nm/px)	1.988009, 0.791557, 0.196464, 0.078989

Input Parameters/Summary

Fields	16 - Captured
Fields Area (sq mm)	12.905197
Total Particle Count	205

Numeric Distribution (All)



D10 D50 D90 Values

Parameters	D10 (nm)	D50 (nm)	D90 (nm)	Span
Particle	1145.572	1853.438	2812.936	0.9
Total	1145.572	1853.438	2812.936	0.9

Statistics

Parameters	Min Length (nm)	Max Length (nm)	Average Length (nm)	Median Length (nm)	Standard Deviation	Aspect Ratio	Count	Percentage (%)
Particle	878.614	3514.455	1940.035	1853.438	613.5	0.612	205	100
Total	878.614	3514.455	1940.035	1853.438	613.5	0.612	205	100

Size Range Details

Size Range (nm)	Count	Percentage (%)
0-2.5	0	0
2.5-5	0	0
5-10	0	0

Analysed by: Prof. Supriya Diwan

Analysis Date/Time: 29-1-2025 11:53:01

Reviewed by: Prof. Deepak Harke

Page 1 of 1

Printed by: Mrs. Sonali Patil

Print Date/Time: 06-11-2025 11:54:39

Sample Details:

Sr.No	Name	Qty	Description
1	Mrs. Swapnali S. Patil	3	Nano Fiber Material for wound healing applications
2	Mr. Gopal Doiphode	8	Nano Emulsion for ocular drug delivery (Eye Drop)
3	Mrs. Megha Mane	1	Nano Sponges for CNS Drug Delivery

Development of Metal Testing Laboratory

Development of metal testing service lab established at Centre of Excellence for metal testing. services to the industries. **Metal Testing Services** are essential for ensuring the quality, safety, and performance of metal materials used across various industries such as construction, automotive, aerospace, manufacturing, and infrastructure. These services help identify the mechanical, chemical, and physical properties of metals, including their hardness. The primary need for metal testing arises from the requirement to meet industry standards, specifications, and regulatory compliance. Future plan to certify this with **NABL** Accreditation

Aiming above mentioned following machines has been purchased to serve the nearby Industry along with student training for enhancing their knowledge

Sr. No.	Description	Application
1	Advanced Touch Screen Load Cell-Based Digital Universal Hardness Tester with Brinell, Rockwell, Rockwell Superficial, and Vickers test methods	Hardness testing of Metal
2	Digital Impact Testing Machine with All Standard Accessories	Impact Testing Machine
3	Double Disc Polishing Machine Polishing-STD with All Standard Accessories	Sample Preparation