310249: Seminar and Technical Communication (Guidelines and Log Book)

Third Year Computer Engineering

Year 2025 - 2026

Seminar ID:

Name of Student: Sonawane Sagar Sanjay

Mobile No.: 9673155623 e- Mail ID:

Seminar Title : Emerging Global Trends in IOT

Seminar Guide : N.R.Kakade

Area of the Seminar:

Department of Computer Engineering
Matoshri Education Society's
Matoshri College of Engineering and Research Centre, Nashik
Eklahare, Near Odha Gaon, Aurangabad Road, Nashik
Affiliated to
Savitribai Phule Pune University, Pune

This booklet is supportive document to rules and a regulation provided by affiliated university curriculum providing recommendations, guidelines and is record of all related activities associated with seminar. This booklet is provided with the genuine intent to bring uniformity and to systematize the seminar work and to keep the audit of the work undergone by each student.

Work Book Development Project

Project Institution	Department of Computer Engineering Matoshri College of Engineering and Research Centre, Nashik
Support & Guidance	Dr. Gajanan K. Kharate, Principal, Matoshri College of Engineering and Research Centre, Nashik
Concept and Design	Dr. Varsha. H. Patil BoS Coordinator Computer Engineering , SPPU, Pune Vice Principal, Matoshri College of Engineering and Research Centre, Nashik
Coordinator	Mrs. Swati A. Bhavsar Assistant Professor, Matoshri College of Engineering and Research Centre, Nashik
Technical Committee Members	1. 2. 3.
Date	
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Savitribai Phule Pune University, Pune
Computer Engineering

Program Educational Objectives

1. To prepare globally competent graduates having strong fundamentals, domain knowledge, updated with modern technology to provide the effective solutions for engineering problems.
2. To prepare the graduates to work as a committed professional with strong professional ethics and values, sense of responsibilities, understanding of legal, safety, health, societal, cultural and environmental issues.
3. To prepare committed and motivated graduates with research attitude, lifelong learning, investigative approach, and multidisciplinary thinking.
4. To prepare the graduates with strong managerial and communication skills to work effectively as individual as well as in teams.

Program Outcomes

Students are expected to know and be able –

1. To apply knowledge of mathematics, science, engineering fundamentals, problem solving skills, algorithmic analysis and mathematical modeling to the solution of complex engineering problems.
2. To analyze the problem by finding its domain and applying domain specific skills
3. To understand the design issues of the product/software and develop effective solutions with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.
4. To find solutions of complex problems by conducting investigations applying suitable techniques.
5. To adapt the usage of modern tools and recent software.
6. To contribute towards the society by understanding the impact of Engineering on global aspect.
7. To understand environment issues and design a sustainable system.
8. To understand and follow professional ethics.
9. To function effectively as an individual and as member or leader in diverse teams and interdisciplinary settings.
10. To demonstrate effective communication at various levels.
11. To apply the knowledge of Computer Engineering for development of projects, and its finance and management.
12. To keep in touch with current technologies and inculcate the practice of lifelong learning.

Program Specific Outcomes (PSO)

A graduate of the Computer Engineering Program will demonstrate-

PSO1: Professional Skills-The ability to understand, analyze and develop computer programs in the areas related to algorithms, system software, multimedia, web design, big data analytics, and networking for efficient design of computer-based systems of varying.

PSO2: Problem-Solving Skills- The ability to apply standard practices and strategies in software project development using open-ended programming environments to deliver a quality product for business success.

PSO3: Successful Career and Entrepreneurship- The ability to employ modern computer languages, environments, and platforms in creating innovative career paths to be an entrepreneur, and a zest for higher studies.

Prologue

Seminar is the first formal curricular activity at the UG level, where students are supposed to exhibit their skills and knowledge by undertaking the study of the chosen topics. For standardization in the process of Seminar conduction, an effort to provide comprehensive and meticulous guidelines helping the learners to perform with respect to certain processes and evaluation criteria.

The logbook will surely help the learner from the very first step of topic selection to the final seminar delivery. Proper recording of the activities necessarily maintains the track of progress of the learner along with neat and clear planning helping to proceed on the right path and proper documents preparation. As per the individual learner's domain interest the selected topic can be explored with determined perspective and definite methodology helping the learner to develop scientific and methodical approach in the study. In the course of the topic exploration various skills are built, directly and indirectly contributing to the development of learner.

The documentation provided in the form of the logbook will help to standardize the process with phenomenal transparency in evaluation guidelines, giving fair idea to learner and evaluator, minimizing the possibility to err. The documented logbook will hopefully answer even the slightest queries those may arise during the whole process of the activity conduction during the semester. So, it is our joint responsibility to stick to the basics to help the learner in character building not solely aiming at the grade in performance but aiming at all-round development in this regard.

Dr. Varsha H. Patil
Coordinator, Board of Studies (Computer Engineering)
SPPU, Pune

Table of Contents

1. About Seminar

The word *seminar* is derived from the Latin word *seminarium*, meaning "seed plot". It refers to a course of intense study relating to the student's major intended for the improvement of technical knowledge of student. The ability to articulate ideas is an important life skill which will be required outside the academic world in the world of work, for interviews, consulting experts, getting and understanding advice and giving work presentations etc. Seminars give practice in these general skills and help students to develop confidence. It is an important way of learning - by discussing and questioning issues, students can clarify their own ideas and also learn from each other. (Ref: https://en.wikipedia.org/wiki/Seminar)

Keeping this in mind each student of Third Year Computer Engineering has to deliver the seminar under the head "SEMINAR AND TECHNICAL COMMUNICATION" that is Term Work of 50 marks in second semester.

As per the individual learner's domain interest the selected topic can be explored with determined perspective and definite methodology helping the learner to develop scientific and methodical approach in the study. In the course of the topic exploration various skills are built, directly and indirectly contributing to the development of learner.

To aid both student and faculty this booklet provides the guidelines for preparation of topic, report, presentation, evaluation.

a. Objectives and Outcomes

Objectives -

To explore the basic principles of communication (verbal and non-verbal) and active, empathetic listening, speaking and writing techniques

To expose the student to new technologies, researches, products, algorithms, services

Outcomes -

On completion of the course, student will–

- be able to be familiar with basic technical writing concepts and terms, such as audience analysis, jargon, format, visuals, and presentation.
- be able to improve skills to read, understand, and interpret material on technology.
- improve communication and writing skills

b. Guidelines for selection of Seminar Topic

- Each student will select a topic in the area of Computer Engineering and Technology preferably keeping track with recent technological trends and development beyond scope of syllabus avoiding repetition in consecutive years.
- The topic must be selected in consultation with the institute guide.
- Each student will make a seminar presentation using audio/visual aids for duration of 20-25 minutes and submit the seminar report prepared in Latex only.
- Active participation at classmate seminars is essential.
- Softcopy(CD) must include copy of synopsis, report, PPT, reference material and related.

c. Recommended Guidelines for Evaluation

Panel of staff members along with a guide would be assessing the seminar work based on these parameters-

- Topic
- Contents and Presentation
- regularity, Punctuality and Timely Completion
- Question and Answers

- Report, Paper Presentation/Publication
- Attendance and Active Participation.

(Kindly note that these guidelines provided for selection, evaluation, presentation and documentation are recommended to follow. However it is suggested to refer the guidelines prescribed in respective course of syllabus by SPPU)

3. Review and Visit Log

Sr. No.	Date	Details of Discussion/ Remark	Signature of Guide/ Seminar In charge
1.		Topic Finalization	
2.		Preparing draft of proposal of seminar	
3.		Submission of Proposal	
4.		Review	
5.		Review	
6.		Preparing for presentation	
7.		Preparing for presentation	
8.		Seminar Report rough draft Preparation	
9.		Seminar Report finalization	
10.		Seminar Report submission	

4. Seminar Evaluation Sheet (Internal)

Table 1.1 Evaluation Sheet

Sr. No.	Contents and Presentation (Table 1.2)	Punctuality and Timely Completion (following of deadline)	Seminar Report	Attendance and Active participation	Question and Answers	Paper Publication and Participation at Conference (Bonus)	Total
	25	**05**	**10**	**05**	**05**	**05**	**50**
1.							
	Whether the seminar is delivered as per schedule(yes/ no): **(If no, mention the reason)**						

Table 1.2 Contents and Presentation

Slide Layout	Verbal Skill	Confidence	Eye Contact	Contents	Timely Completion	Total
5	**5**	**5**	**5**	**5**	**5**	**25**

Name and Signature of Evaluation Committee:

1. **Prof.**

2. **Prof.**

Mrs.N.R.Kakade
Guide

Dr. S A Bhavsar
Head

(Refer Rubrics – page number 08)

5. Paper Publication/ Participation at Conference

Sr. No.	Name of Organizer	Date	Certificates/ Prizes won if any
1.			
2.			
3.			
4.			

6. Rubrics

A) Contents and Presentation

Grade (Grade Point)	Excellent (10-9)	Very Good (6-8)	Fair (3-5)	Poor (1-2)
Parameter				
Slide Preparation				
Verbal Skills				
Confidence				
Eye Contact				
Contents				

B) Overall performance

Grade (Grade Point)	Excellent (10-9)	Very Good (6-8)	Fair (3-5)	Poor (1-2)
Parameter				
Punctuality and Timely Completion				
Question and Answers				
Attendance and Active Participation				
Seminar Report				
Paper publication & presentation				

Annexure i: Format for Synopsis

1) Cover Page:

Name of the Student:Sonawane Sagar Sanjay

Roll No: 66 Branch: Computer

Email ID:-

Mobile:9673155623

Title of the topic:Emerging Global Treands in IOT

Area of topic

Abstract:

The Internet of Things (IoT) is transforming the world by connecting billions of devices, people, and systems through smart sensors and communication networks. This presentation explores IoT concepts, benefits, applications, and challenges across industries. It highlights how IoT enables automation, efficiency, and smarter decision-making, while also raising concerns about security, privacy, and governance. Emerging technologies, trends, and future prospects of IoT are also discussed, offering insights into its role in shaping a smarter and more connected world.The Internet of Things (IoT) represents a revolutionary paradigm that enables everyday objects, devices, and machines to connect, communicate, and exchange data through the internet without human intervention. It integrates sensors, embedded systems, cloud computing, and advanced communication technologies to create a network of smart devices capable of monitoring, analyzing, and responding to real-world conditions.

2) Briefs about Contents:

The Internet of Things (IoT) is transforming the world by connecting billions of devices, people, and systems through smart sensors and communication networks. This presentation explores IoT concepts, benefits, applications, and challenges across industries. It highlights how IoT enables automation, efficiency, and smarter decision-making, while also raising concerns about security, privacy, and governance. Emerging technologies, trends, and future prospects of IoT are also discussed, offering insights into its role in shaping a smarter and more connected world.The Internet of Things (IoT) represents a revolutionary paradigm that enables everyday objects, devices, and machines to connect, communicate, and exchange data through the internet without human intervention. It integrates sensors, embedded systems, cloud computing, and advanced communication technologies to create a network of smart devices capable of monitoring, analyzing, and responding to real-world conditions. IoT is widely applied in various domains such as healthcare, agriculture, transportation, smart homes, and industrial automation, where it enhances efficiency, safety, and convenience. The technology brings significant benefits like

improved decision-making, reduced operational costs, enhanced customer experiences, and optimized resource utilization. However, IoT also introduces challenges related to security, privacy, interoperability, and governance that must be addressed for sustainable deployment.

3) Applications areas, if any:

The Internet of Things (IoT) has a wide range of applications across various sectors. Some major application areas include:

1. **Smart Homes**
   - Home automation systems for lighting, temperature, and security.
   - Devices like smart speakers, thermostats, and connected appliances.
2. **Healthcare (IoT in Healthcare / IoMT)**
   - Remote patient monitoring using wearable devices.
   - Smart medical equipment and health data analytics.
3. **Industrial IoT (IIoT)**
   - Predictive maintenance of machinery.
   - Process automation and performance optimization in manufacturing.
4. **Smart Cities**
   - Traffic management, waste management, and energy-efficient street lighting.
   - Smart parking and environmental monitoring systems.

4) References / Bibliography

List of books/ web/ Journal/ Magazine etc referred.

[1]. IEEE Internet of Things Journal – Published by IEEE, focuses on IoT technologies, systems, and applications.

[2]. Internet of Things (Elsevier) – Elsevier's journal dedicated to research on IoT technologies, data, and applications. 3. Wireless Networks (Springer Nature) – Covers wireless technologies and networks, including IoT applications.

[4]. Sensors (MDPI) – Open-access journal, widely used in IoT and sensor-based research.

[5]. International Journal of Computer Applications in Technology (IJCAT) – Published by Taylor & Francis; includes IoT and related technologies.

[6]. Wireless Communications and Mobile Computing – Published by Hindawi; includes papers on IoT, 5G, and wireless systems.

Annexure ii: Format for Seminar Report

Each student is required to write a comprehensive report about the seminar. The report should be in the format as described below. It is important that you adhere to these guidelines

A. Seminar report should be arranged as

1. Title Page with Title of the topic, Name of the candidate with Exam Seat Number / Roll Number, Name of the Guide, Name of the Department, Institution and Year & University
2. Seminar Approval Sheet/Certificate
3. Abstract and Keywords
4. Acknowledgements
5. Table of Contents, List of Figures, List of Tables and Nomenclature
6. Chapters Covering topic of discussion- Introduction with section including organization of the report, Literature Survey/Details of design/technology/Analytical and/or experimental work, if any/ …..,Discussions and Conclusions ,Bibliography/References
7. Plagiarism Check report
8. Report Documentation page

B. Preparation Format

1) **Report Size:** Limit your seminar report to preferably 25- 40 pages.
2) **Footer:** The footer "Department of Computer Engineering, MCERC, Nashik" should be included. It should be TIMES NEW ROMAN 10 pt. and right justified.
3) **Header:** The header "Seminar Title" centered and page numbers on right should be included. **Start numbering from Introduction.**
4) **Paper Size :** A- 4 size bond paper
5) **Margins : Mirrored**
    1. **Top :** 1 inch
    2. **Bottom :** 1 inch
    3. **Inside :** 1.25 inch
    4. **Outside :** 1 inch
6) **Line Spacing:** 1.5 lines
7) **Title of Chapter**
    i. ***Font*** *: Arial (Bold face, capital)*
    ii. **Size :** 16 point **Alignment :** centered
8) **All Topics Headings**
    i. **First Order Heading :** (for example – **1. INTRODUCTION**)
        1. **Font :** Times New Roman (Bold Face)
        2. **Size :** 14 point
    ii. **Second Order Heading:** (for example – **1.1. Evolution**)
        1. **Font :** Times New Roman (Bold Face)
        2. **Size :** 12 point
    iii. **Third Order Heading:** (for example – **1.1.1.** Image Processing)
        1. **Font :** Times New Roman (Normal Face)
        2. **Size :** 12 point
9) **Text:**
    i. **Font :** Times New Roman
    ii. **Size :** 12 point

10) **Figures and Tables:**
    i. **Caption:** (for figures below the figure and for tables above the table)
        1. **Font :** Garamond (**Bold**)
        2. **Size :** 11 point
        3. **Alignment :** Center

11) **References:**

    i. **Book**
    Author name(s), Book Title, Publisher, Copyright Year, page nos. if any.

ii. **Journal/ Magazine/ Periodical**

Author name(s), paper name, Journal/ Magazine/ Periodical name, issue no., page nos.

iii. **Web Resources**

Complete URL including File name.

Annexure iii: Format for Cover Page

Seminar Report

On

Emerging Global Trends In IOT

By

Sonawane Sagar Sanjay
Roll No:66
Div:B

Under the guidance
of

N.R.Kakade

DEPARTMENT OF COMPUTER ENGINEERING
Matoshri College of Engineering and Research Centre, Nashik
Eklahare, Near Odha Gaon, Aurangabad Road, Nashik
Pin No.:422105
Savitribai Phule Pune University
[2025-2026]

Annexure iv.: Certificate

Department of Computer Engineering,
Matoshri College of Engineering and Research Centre, Nashik

CERTIFICATE

This is to certify that **Sonawane Sagar Sanjay** from **Third Year Computer Engineering** has successfully completed his / her seminar work titled Emerging Global Trends in IOT at Matoshri College of Engineering and Research Centre, Nashik in the partial fulfillment of the Bachelors Degree in Engineering.

N.R.Kakade Guide	Dr. S A Bhavsar Head of the Department	Dr G K Kharate Principal

Annexure v: Report Documentation

Seminar Report Documentation	
Report Code: CS-TE-Seminar	**Report Number:**
Report Title: Emerging Global trends In IOT	

Address (Details):
Matoshri College of Engineering and Research Centre, Eklahare, Nashik
Pin – 422 105, M.S. INDIA.

E-mail :Sonawane Sagar Sanjay

Roll: 66

Cell No:-

Year:
Branch: Computer Engineering

Type of Report: FINAL	Report Checked By:	Report Checked Date:	**Guides Complete Name: N.R.Kakade**	Total Copies

Abstract:

The Internet of Things (IoT) is transforming the world by connecting billions of devices, people, and systems through smart sensors and communication networks. This presentation explores IoT concepts, benefits, applications, and challenges across industries. It highlights how IoT enables automation, efficiency, and smarter decision-making, while also raising concerns about security, privacy, and governance. Emerging technologies, trends, and future prospects of IoT are also discussed, offering insights into its role in shaping a smarter and more connected world.The Internet of Things (IoT) represents a revolutionary paradigm that enables everyday objects, devices, and machines to connect, communicate, and exchange data through the internet without human intervention. It integrates sensors, embedded systems, cloud computing, and advanced communication technologies to create a network of smart devices capable of monitoring, analyzing, and responding to real-world conditions. IoT is widely applied in various domains such as healthcare, agriculture, transportation, smart homes, and industrial automation, where it enhances efficiency, safety, and convenience. The technology brings significant benefits like improved decision-making, reduced operational costs, enhanced customer experiences, and optimized resource utilization. However, IoT also introduces challenges related to security, privacy, interoperability, and governance that must be addressed for sustainable deployment. With the rise of artificial intelligence, 5G, and edge computing, IoT is evolving rapidly, creating new opportunities for innovation and economic growth. This presentation explores the fundamentals of IoT, its applications, challenges, and future trends.