

Action Taken Report for AY 2022-23

Department of Chemical Engineering

Action Taken Report

Gap Analysis

The PAC Committee systematically conducted a thorough analysis to identify gaps in the existing syllabi on a regular basis. This analysis integrated input from faculty members, collected feedback from students, and utilized benchmarking against industry standards with insights from alumni and industry experts.

Identification of Gaps:


The identified gaps primarily pertained to:

- **Emerging Trends:** Emerging trends and technologies were not adequately covered in the existing syllabus.
- **Industry Readiness:** Industry experts suggest that specific topics and courses require modifications /inclusion of certain topics to better prepare students for readiness in the industry.


Action Steps Taken:

To address these gaps, the following actions have been taken:

1. **Syllabus Revision:** A comprehensive gap analysis report is submitted to the University and requested to take necessary steps in the upcoming syllabus revision.
2. We have taken the following measures to minimize the gaps in most of the subjects.


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(Principal)

- **Through MPR and Projects**

Students are encouraged to work on emerging trends and technologies in the mini-project and BE Project.

- **Through Internships**

Students engage in 4 to 6-week field internships, gaining hands-on experience that hones practical skills and imparts industry insights. (details available in criterion 1)

- **Through Participation in Technical Events**

The department hosts the annual technical festival "Chemergence," motivating students to take part in diverse technical events. Additionally, students are urged to engage in various national and international-level technical competitions, including quiz competitions and paper/poster presentations.

Department Technical Festival


Year	Title of Activity	Link to the Activity report
2022-23	Chemergence	https://drive.google.com/file/d/18GImtcoLU2neGtj4L0N2VP9Q0oIGUEZC/view?usp=drive_link

- **Through Expert Lectures**


The department organizes webinars and expert lectures featuring our alumni and industry leaders, offering valuable guidance for students in preparing for placement opportunities. These sessions provide insights into current trends, helping students explore their interests in higher studies, research, or job opportunities. (Refer to annexure A2)

List of Alumni Webinars and Expert Lectures

S.No.	Topic	Date	Proof
2022-23			
1	Chemical Engineering in Composite	27/08/2022	https://drive.google.com/file/d/18GImtcoLU2neGtj4L0N2VP9Q0oIGUEZC/view?usp=drive_link


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



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	materials: New Avenues		A8tOhgnzvarM7vP1X8vCR5JD1/view?usp=drive_link
2	Pump Hydraulics	24/09/2022	https://drive.google.com/file/d/1PDwxkFm76Nr3dNjR1d3T09CZm_YwMb/view?usp=drive_link
3	Reactive Extraction	10/09/2022	https://drive.google.com/file/d/1vM8BkS3q4lvqrJAVQBNoY-KYfBdE3eJK/view?usp=drive_link
4	Demonstration of Fire Extinguisher	29/08/2022	https://drive.google.com/file/d/13upp4wU1oTmgekP8UasO6o2V5k3t1SZ-/view?usp=drive_link
5	Insights of Heat Exchangers	08/10/2022	https://drive.google.com/file/d/18mjKiuhaeaL_Lm82ar5hgszQfIRNt5-0/view?usp=drive_link
6	Introduction to Process Engineering	24/01/2023	https://drive.google.com/file/d/189M5WXIDErPHdYgjVvk4-yxKsg1Ruwt_/view?usp=drive_link
7	Bioreactors: An overview	20/03/2023	https://drive.google.com/file/d/1nSSaTzcpq6P50o_6XC9exFvl8_OG2kdt/view?usp=drive_link
8	Fluid fluid reactions: Importance in Chemical Industry	04/04/2023	https://drive.google.com/file/d/1r5GIRYUUV3aurSbZx5i3Dc8aMMg1fhz/view?usp=drive_link
9	Solvent resistant membranes	15/04/2023	https://drive.google.com/file/d/1Y9I6RAPIZsL-YVRdWgX9KxL2wyhdtOKW/view?usp=sharing
10	Orientation to Petrosim	10/02/2023	https://drive.google.com/file/d/1ea5yQawrL29DfDODEuU83GnLPBoKzjmY/view?usp=sharing
		17/02/2023,	
		03/03/2023,	
		31/03/2023	

Monitoring and Evaluation:

A plan for monitoring and evaluation has been implemented to gauge the impact of conducted activities. Regular feedback loops with students and faculty are in place, and necessary actions are taken based on the feedback received.


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DEPARTMENT OF INFORMATION TECHNOLOGY GAP ANALYSIS REPORT (R-19 Syllabus)


Gaps in the R-19 syllabus of IT Engineering are identified and mentioned in table below. These topics are recommended for inclusion in syllabus.

Semester 3:


Sr. No.	Course ID	Course Name	Gaps Identified
1	ITC305	Paradigms and Computer Programming Fundamentals	Subject suitable at a higher semester due to the complexity involved in understanding the subject
2	ITL303	Computer programming Paradigms Lab	Subject suitable at a higher semester due to the complexity involved in understanding the subject


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
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Semester 5:


Sr. No.	Course ID	Course Name	Gaps Identified
1	ITC501	Internet Programming	Front end technologies and Back end technologies are properly covered in R19 (current) syllabus. To create complete web application database connectivity (MongoDB) should be included in the syllabus.
2	ITC502	Computer Network Security	1. Network attacks at different layers need to be included. It can be included in module IV along with various security protocols mentioned in the syllabus. 2. Key Management: Key exchange algorithm like Diffie Hellman key exchange algorithm and concept of Key Distribution center for symmetric cryptosystem should be included.
3	ITC504	Software Engineering	All UML diagrams needs to be included for understanding software blue print. More case study for better understanding of concepts/hands on experience for live project.
4	ITL501	IP Lab	Database Connectivity should be included to help students in obtaining complete knowledge
5	ITL503	DevOPs Lab	Industry expertise support is needed for the concept of Docker, containerisation etc. More exposure to the live projects.
6	ITL504	Advance DevOPs Lab	More exposure to the live projects. Industry expertise support for understanding concepts of Docker, Containerizatio .

Semester 6:

Sr. No.	Course ID	Course Name	Gaps Identified
1	ITC601	Data Mining & Business Intelligence	Text mining, which enables students to understand different categories of text mining and various techniques used to analyze text in the field of social media , web based data etc. The process of deriving high-quality information from text. Information Extraction , Information Retrieval, Categorization, Text summarization are the most popular techniques in the field of social media analytics.
2	ITC604	AI and DS - 1	<p>Interdisciplinary Approach: Consider integrating more interdisciplinary aspects, such as connecting AI and data science to other fields like domain-specific knowledge, business applications, or other scientific disciplines.</p> <p>Time Series Analysis: As many real-world problems involve time-dependent data, a section on time series analysis could provide insights into handling temporal data and making predictions.</p> <p>Deployment and Scalability: Understanding how to deploy AI models into real-world applications and making them scalable is a valuable skill that could be included.</p>
3	ITL601	BI Lab	Scope for Integrating with Live Projects and Industry Projects


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

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Semester 7:


Sr. No.	Course ID	Course Name	Gaps Identified
1	ITC701	AI and DS –II	<p>Explainable AI (XAI): As AI systems become more complex, the ability to interpret and explain their decisions becomes important. Including topics related to explainable AI methods can help students understand how to make AI models more transparent and interpretable.</p> <p>Reinforcement Learning: While the curriculum mentions learning concepts, specifically addressing reinforcement learning, a subfield of machine learning that deals with decision-making in dynamic environments, could provide insights into creating AI systems that learn through interaction.</p>
2	ITDO7024	Information Retrieval System	Classes of Automatic Indexing, Statistical Indexing, Natural Language, Concept Indexing, Hypertext Linkages to understand the importance of Indexing and thereby effective Information retrieval system
3	ITL701	Data Science Lab	<p>Interdisciplinary Applications: Integrate interdisciplinary applications of AI and Data Science in fields such as healthcare, finance, marketing, and natural language processing. This will expose students to diverse use cases and demonstrate the versatility of these technologies.</p> <p>Advanced Machine Learning Techniques: Consider expanding the curriculum to cover more advanced machine learning techniques, such as deep learning, reinforcement learning, and generative adversarial networks (GANs). These techniques are increasingly relevant in modern AI applications.</p> <p>Big Data and Scalability: Address the challenges and solutions related to working with big data, including distributed computing, parallel processing, and scalable algorithms. This knowledge is crucial as data sizes continue to grow.</p>

Semester 8:

Sr. No.	Course ID	Course Name	Gaps Identified
1	ILO8011	Project Management	Real time project exposure to inculcate complete analysis, modelling and by in large entire project management life cycle


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TSEC/BE/IT/23/182

 Date: 28th November 2023

 To,
 The Pro-Vice Chancellor
 University of Mumbai
 Fort, Mumbai

 मुंबई विद्यापीठ
 आवक विभाग साभार पोच
 30/11/2023

Sub: Gaps Identified in B E - Information Technology Syllabus(R-19, C Scheme)


Respected Sir,

Please find herein enclosed the document wherein we have identified the gaps in various subjects in the syllabus of Bachelor of Engineering (Information Technology) Revised in 2019, C Scheme.

We have prepared the gap analysis document after consulting all the stake holders (Teachers, Students and Industry).


You are requested to take the required measures to impress upon the BoS IT to take cognizance of our proposal.


Thanking you and Regards


 Dr. G T Thampi
 Principal, TSEC

CC:

1 Registrar

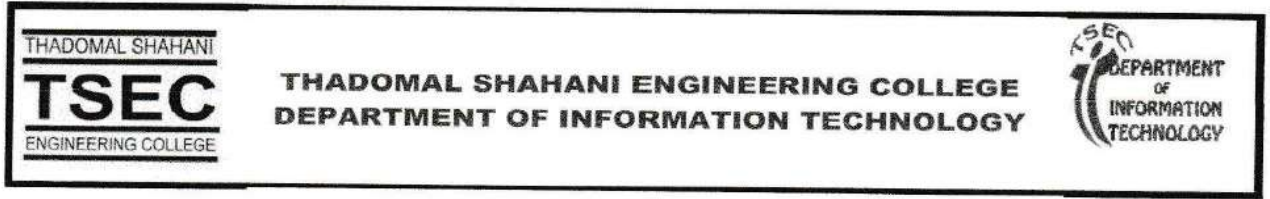

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Various other measures taken to minimize the gaps in most of the subjects are as follows.

- Incorporation of Practical Modules: New practical modules have been introduced to ensure that students gain hands-on experience and develop skills applicable to their future careers.
- Faculty Training: Faculty members have undergone training sessions to familiarize themselves with the revised syllabus, ensuring effective delivery of the updated content.
- Stakeholder Feedback: Feedback sessions were conducted with students to gather their input on the proposed changes. Adjustments were made based on this feedback to ensure the relevance and effectiveness of the updated syllabus.
- Through MPR and Projects
- Few subjects like DMBI, IoT and AIDS are having subject oriented mini project implementations and case studies demonstrations.
- Also the students have to build a team of 3 members and implement a Mini Project every semester starting from semester three onwards. Here the students are expected to implement the Mini Project on the Course mentioned in the syllabus, additionally the students are nudged to work on topics which are important for the course but not a part of the current syllabus.
- Through Internships - Students enroll for various field internships for the duration of 4 to 6 weeks where they understand the significance of live project requirements and learn to acquire more technical skills.
- Through Hackathon and Technovation like national level events help our students to take many miles ahead in developing their technological skills.
- Guest Lectures were effectively conducted to relate curriculum aspects to industry standards.
- Experiment beyond syllabus and content beyond syllabus are taken to the fullest scope.
- Monitoring and Evaluation - A monitoring and evaluation plan has been established to assess the impact of the changes. Regular feedback loops with students and faculty are taken and actions are made as necessary.



GAP Analysis and Action Taken

Subject: Internet Programming Lab
Syllabus: R19

Subject Code: ITL501

Sr. No	Identified Gap	POs improved if incorporated	PSOs Improved, if incorporated
1	Front end technologies and Back end technologies are properly covered in R19 (current) syllabus. To create complete web application data base connectivity (MongoDB) should be included in the syllabus.	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO12	PSO1, PSO2, PSO3, PSO4

Action Taken: Extra lab is conducted to show the Mongoddb connectivity with Express.

Name of Faculty Member: Sanober Shaikh

Dr. Shanthi Therese

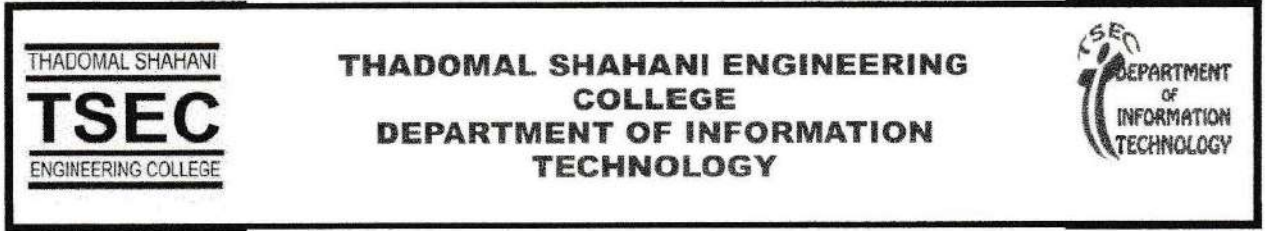
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Sanober
 26/10/23

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Guest Lecture Report

Date: 26/08/2023

Subject: Internet Programming Subject Code: ITC501

Syllabus: R19


Sr. No	Topic Covered	POs to be mapped	PSOs to be mapped
1	Detailed hands-on REST API implementation with a dedicated backend and dedicated frontend <ol style="list-style-type: none">1. Creation of backend using Python2. Creation of frontend using Javascript3. Establishing connection for successful method handling4. Management of CORS5. Deployment of machine learning application with REST	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO12	PSO1, PSO2, PSO3, PSO4

Total Number of students Present: 110


Name of Faculty Member: Sanober Shaikh

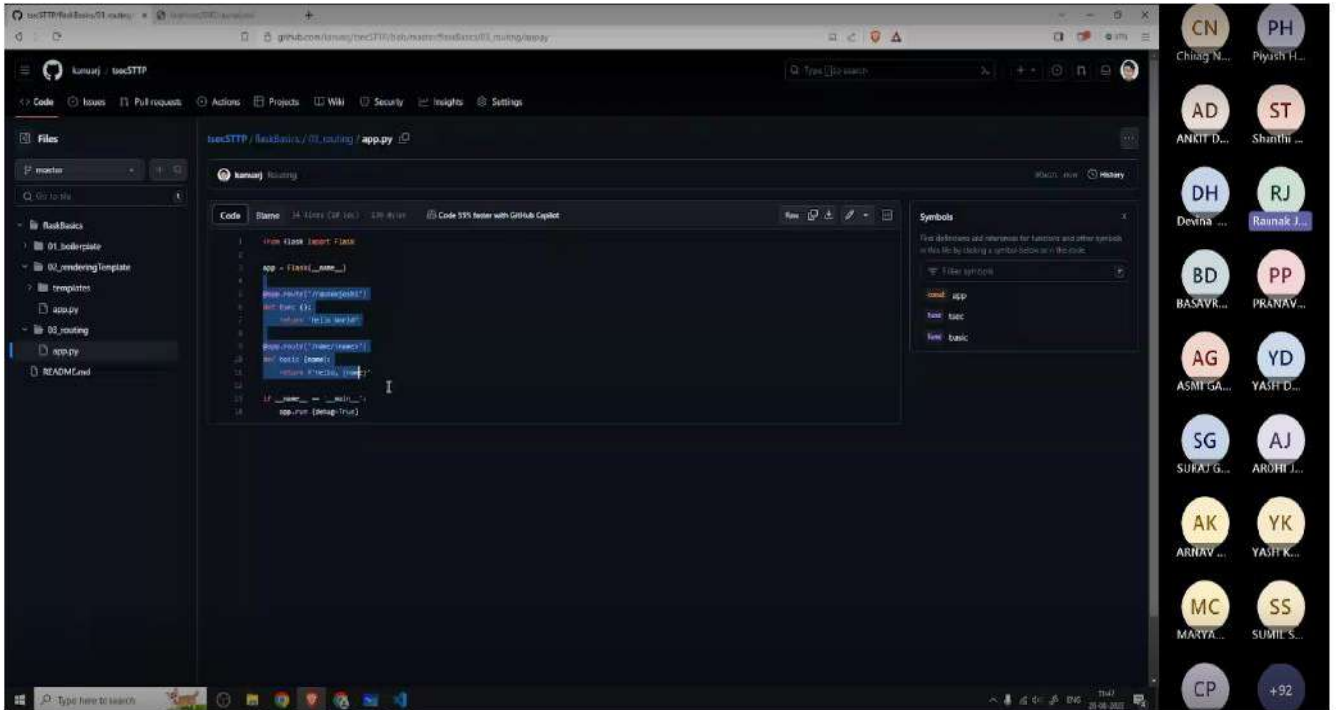
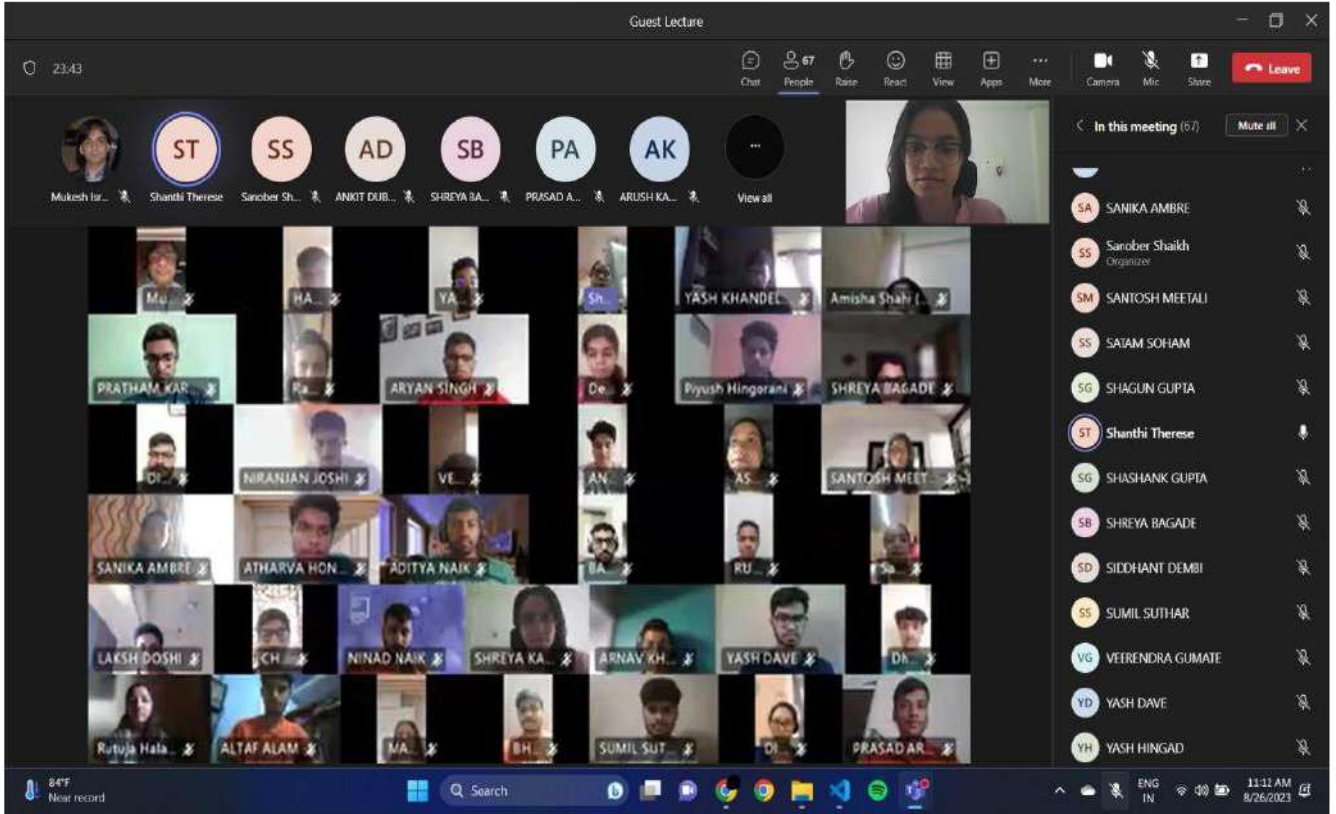
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
Sanober
28/08/23


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



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```

frontEnd > JS script.js > predictSpam > then() callback
6   let text = document.getElementById('textarea_1').value
7
8   fetch ('http://localhost:5000', {
9     method: 'POST',
10    headers: {
11      'Content-Type': 'application/json'
12    },
13    body: JSON.stringify({
14      'firstname': text
15    })
16  })
17  .then(response => response.json())
18  .then(data => {
19    document.getElementById('output').innerHTML = '<div>
20  }
21 }
  
```


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CONTENT BEYOND SYLLABUS REPORT 2023-24

Subject: Computer Network Security Subject Code: ITC502 Syllabus: R19

Sr. No	Content Beyond Syllabus Topic	POs to be mapped	PSOs to be mapped
1	TCP/IP vulnerabilities and attacks : vulnerabilities present at <ul style="list-style-type: none"> Data link layer, Network layer, Transport layer of TCP/IP protocol suit and attacks possible due to them at each layer were explained. 	PO1, PO2, PO3, PO6, PO7, PO8	PSO1, PSO2
2	PGP Protocol: <ul style="list-style-type: none"> Services provided by PGP in email security Concepts of public and private key rings Web of trust in PGP 	PO1, PO2, PO3, PO6, PO7, PO8	PSO1, PSO2
3	Presentations on <ul style="list-style-type: none"> various types of Malwares, their functioning and preventive measures, Various cipher techniques like hill cipher, ECC were given by students. Technical papers published in previous three years covering various Security related research topics 	PO1, PO2, PO3, PO4, PO6, PO7, PO8, PO12	PSO1, PSO2
4	Guest Lecture on topic "Security Organization Industry PoV"	PO2, PO4, PO, PO8, PO12	PSO1, PSO2

Name of Faculty Member: Dr. Shachi Natu

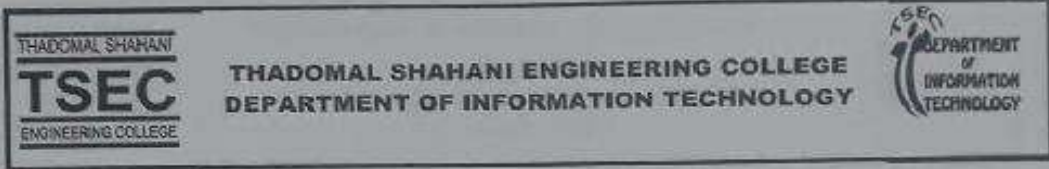
Signatures with Date:

Shachi Natu
05/12/23

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(Coordinator IQAC)



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GAP Analysis and Action Taken

Subject: Computer Network Security Subject Code: ITC502 Syllabus: R19

Sc. No	Identified Gap	POs improved if incorporated	PSOs Improved, if incorporated
1	Key exchange algorithm like Diffie Hellman key exchange algorithm and concept of Key Distribution center for symmetric cryptosystem should be included.	PO1, PO2, PO3, PO6, PO7, PO8, PO12	PSO1, PSO2
2	Network attacks at different layers need to be included. It can be included in module IV along with various security protocols mentioned in the syllabus.	PO1, PO2, PO3, PO6, PO7, PO8	PSO1, PSO2

Action Taken:

1. Diffie Hellman Key exchange algorithm and Key Distribution center for symmetric cryptosystem was covered in lecture.
2. Network attacks at different layers are covered in lecture.

Name of Faculty Member: Dr. Shachi Natu

Signatures with Date:

Shachi Natu
05/12/23

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GUEST LECTRE REPORT 2023-24

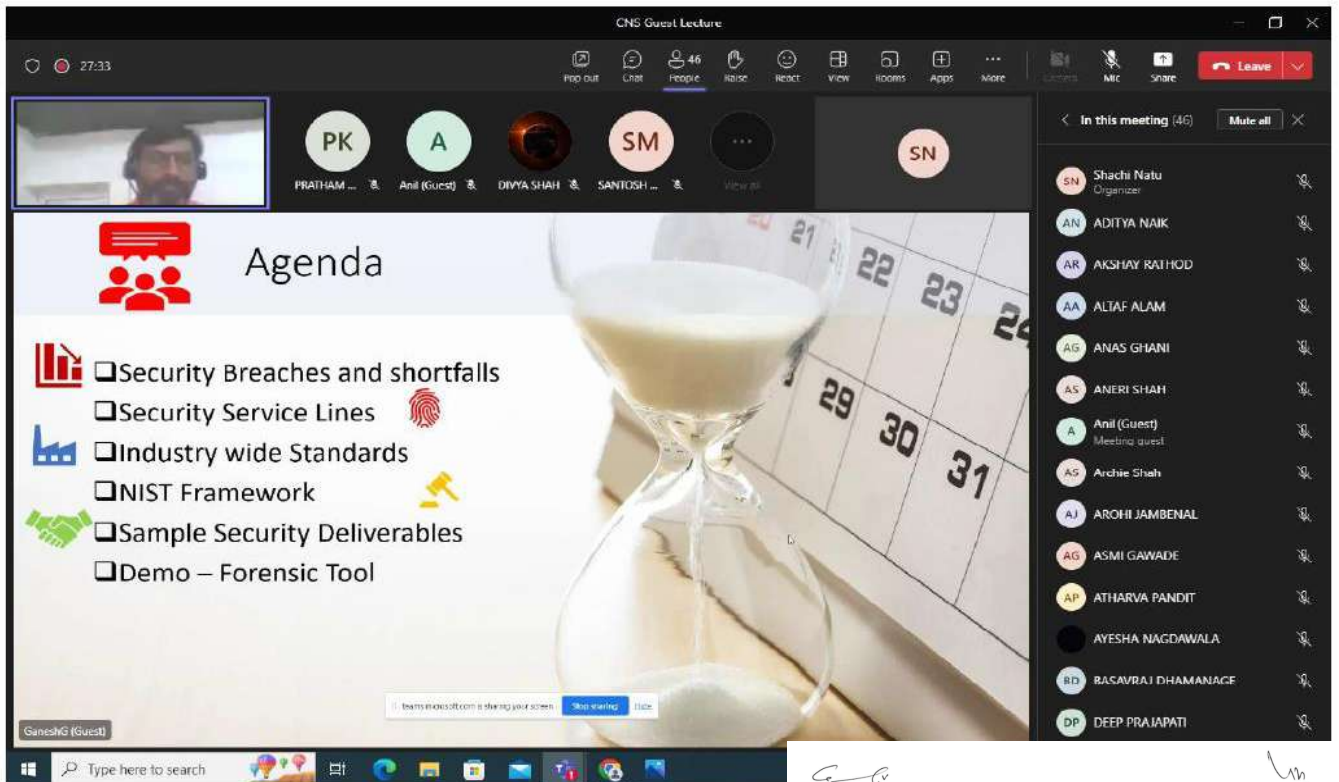
Subject: Computer Network Security Subject Code: ITC502 Syllabus: R19

Date: 7th October 2023

Resource Person: Mr. Ganesh Ghungarde, Mr. Anil Kasture

Sr. No.	Topic	CO Covered	POs mapped	PSOs mapped
4	Guest Lecture on topic “Security Organization Industry PoV”	CO5	PO2, PO4, PO, PO8, PO12	PSO1, PSO2

Screenshots of Guest Lecture conducted:



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Agenda

- Security Breaches and shortfalls
- Security Service Lines
- Industry wide Standards
- NIST Framework
- Sample Security Deliverables
- Demo – Forensic Tool

Gartner Report

Gartner Predicts 30% of Critical Infrastructure Organizations Will Experience a Security Breach by 2025

Top Trends in Cybersecurity, 2022

- 01 Attack surface expansion
- 02 Identity system defense
- 03 Digital supply chain risk
- 04 Vendor consolidation
- 05 Cybersecurity mesh
- 06 Distributed decisions
- 07 Beyond awareness

Top Cybersecurity Trends in 2023

- Responsive Ecosystems**
 - Threat Exposure Management
 - Identity Fabric Immunity
 - Cybersecurity Validation
- Restructuring Approaches**
 - Cybersecurity Platform Consolidation
 - Security Operating Model Transformation
 - Composable Security
- Rebalancing Practices**
 - Human-Centric Security Design
 - Enhancing People Management
 - Increasing Board Oversight

Sustainable Balanced Cybersecurity Programs

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CNS Guest Lecture

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Security Service Lines

- **Security Operations Center**
 - Security Incident and Event Management
 - OT/ IOT Security
 - Endpoint Security
 - Threat Intelligence
 - Cloud Security
 - Network Security
 - Application Security
- **Identity and Access Management**
 - Privileged Access Management
- **Governance Risk and Compliance**
 - Security Architecture
 - Data Security
 - Regulatory driven (e.g. HIPPA, teams.microsoft.com is sharing your screen. Stop sharing Hide)
 - Framework driven (e.g. NIST, ISO 27001, CIS)

GaneshG (Guest)

A PK
 Anil (Guest) PRATHAM ...
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CNS Guest Lecture

55:31

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Industry wide standards


- **Standards:**
 - NIST CSF
 - National Institute of Standards and Technology Cyber Security Framework
 - FIPS
 - Federal Information Processing Standard
 - Specifies the security requirements for cryptographic modules that protect sensitive information
 - ISO 27001
 - international standard to manage information security.
 - PCI-DSS
 - Payment Card Industry Data Security Standard
 - CIS Center for Internet Security
 - Inventory and Control of Enterprise Assets
 - Data Protection
 - Audit Log Management
 - Malware Defenses
 - Penetration Testing
- **Attack Framework**
 - MITRE
 - MITRE ATT&CK® is a knowledge base that helps model cyber adversaries' tactics and techniques—and then shows how to detect or stop them.
 - <https://attack.mitre.org/>
 - Cyber kill Chain
 - Developed by Lockheed Martin, the Cyber Kill Chain® framework is part of the Intelligence Driven Defense® model for identification and prevention of cyber intrusions activity. The model identifies what the adversaries must complete in order to achieve their objective.
 - The seven steps of the Cyber Kill Chain® enhance visibility into an attack and enrich an analyst's understanding of an adversary's tactics, techniques and procedures

Reconnaissance 10 techniques
 Resource Development 8 techniques
 Initial Access 9 techniques
 Execution 14 techniques
 Persistence 19 techniques
 Privilege Escalation 13 techniques
 Defense Evasion 42 techniques
 Credential Access 17 techniques
 Discovery 31 techniques
 Lateral Movement 9 techniques
 Collection 17 techniques


GaneshG (Guest)

A PK
 Anil (Guest) PRATHAM ...
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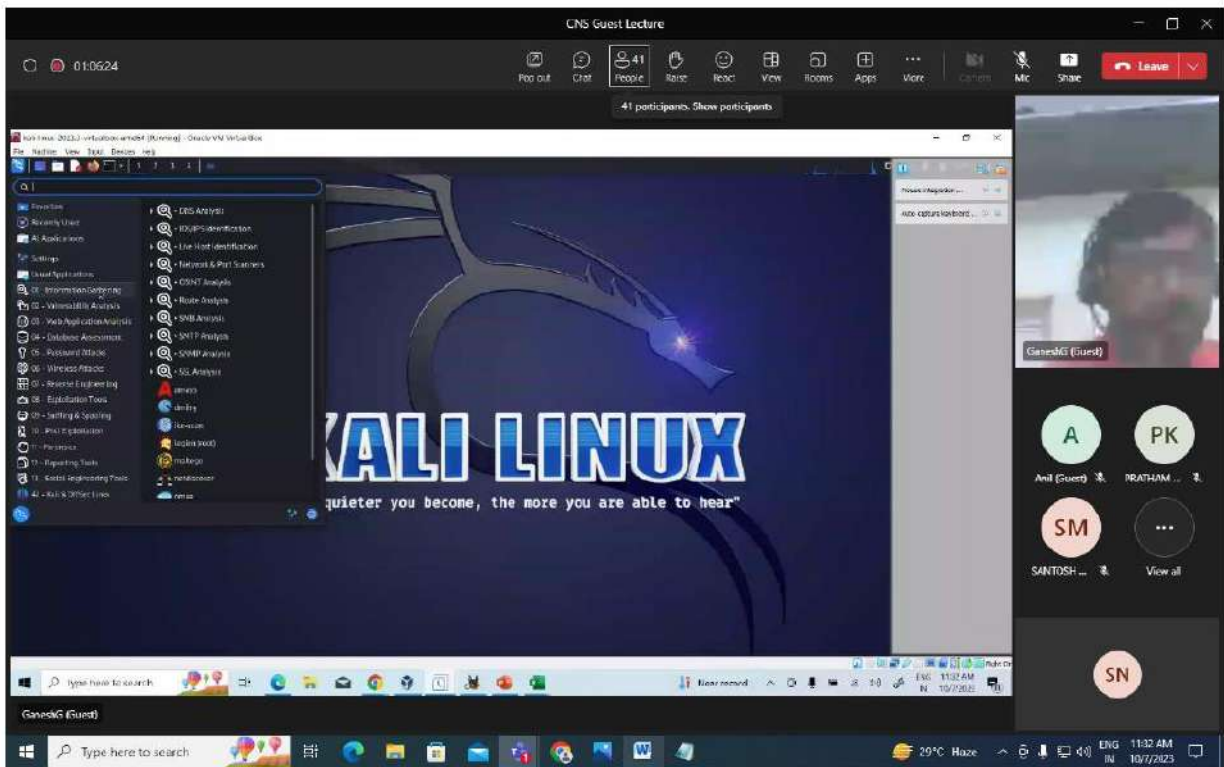
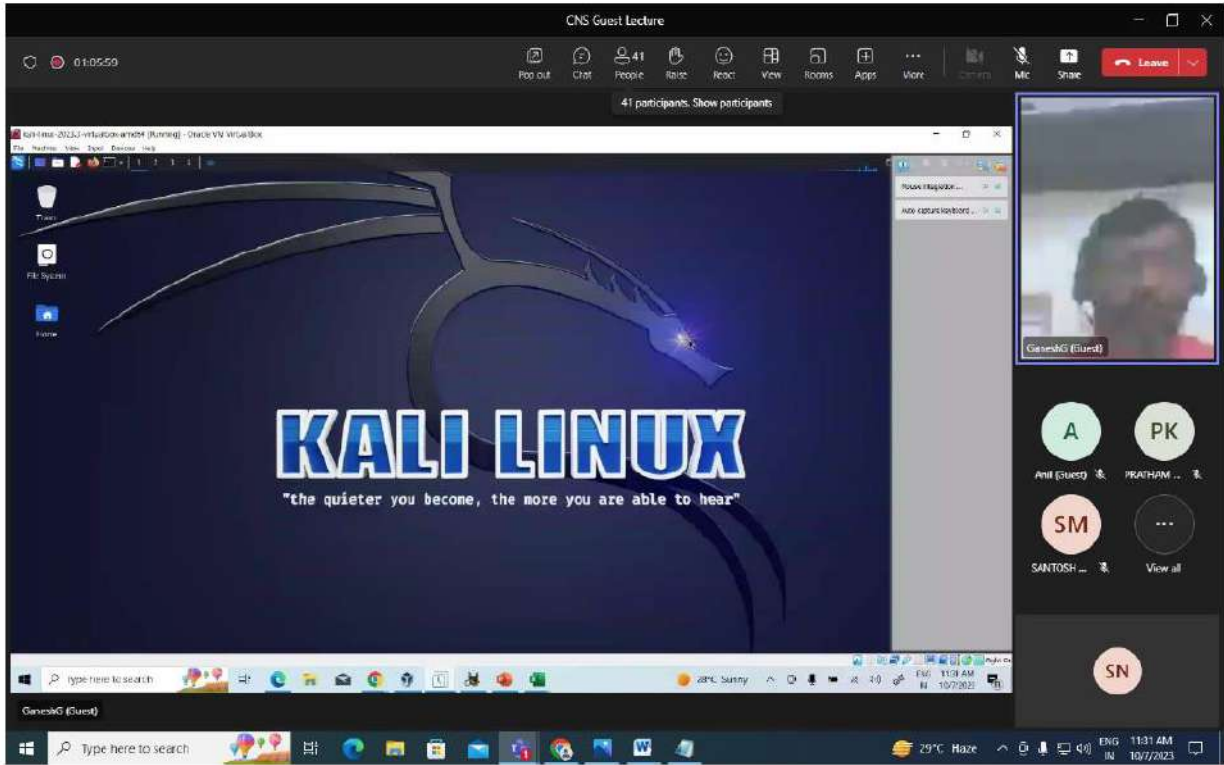
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CNS Guest Lecture

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NIST Framework

NIST Cyber Security Framework

Identify (1)
 Asset management, Business environment, Governance, Risk assessment, Risk management strategy

Protect (2)
 Access control, Awareness training, Data security, Information protection, Processes and procedures, Protective technology

Detect (3)
 Anomalies and events, Security continuous monitoring, Detection processes

Respond (4)
 Response planning, Communications, Analysis, Mitigations, Improvements

Recover (5)
 Recovery planning, Improvements, Communications

HiSlide.io Templates | Cyber Security | 21

GaneshG (Guest)

Participants: Anil (Guest), PRATHAM..., SM, SANTOSH..., View all, SN

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CNS Guest Lecture

01:15:11

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Function	Category	Subcategory	Informative References
Identify (ID)	Identify (ID.AM)	ID.AM-1: Physical devices and systems within the organization are inventoried	CIS CSC 1 COBIT 5 BA109.01, BA109.02 ISA 62443-2-1:2009 4.2.3.4 ISA 62443-3-3:2013 SR 7.8 ISO/IEC 27001:2013 A.8.1.1, A.8.1.2 NIST SP 800-53 Rev. 4 CM-8, PM-5
		ID.AM-2: Software platforms and applications within the organization are inventoried	CIS CSC 2 COBIT 5 BA109.01, BA109.02, BA109.05 ISA 62443-2-1:2009 4.2.3.4 ISO/IEC 27001:2013 A.8.1.1, A.8.1.2, A.12.5.1 NIST SP 800-53 Rev. 4 CM-8, PM-5
		ID.AM-3: Organizational communication and data flows are mapped	CIS CSC 12 COBIT 5 DS905.02 ISA 62443-2-1:2009 4.2.3.4 ISO/IEC 27001:2013 A.13.2.1, A.13.2.2 NIST SP 800-53 Rev. 4 AC-4, CA-3, CA-9, PL-8
		ID.AM-4: External information systems are	CIS CSC 12 COBIT 5 APO02.02, APO10.04, DSS01.02

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GaneshG (Guest)

Participants: Anil (Guest), PRATHAM..., SM, SANTOSH..., View all, SN

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Sample Risk Management Report

Figure 6 – Business Risk Scores

Risk	Likelihood	Impact	Score
Critical IT failure	Medium	High	4
IP theft	Low	High	3

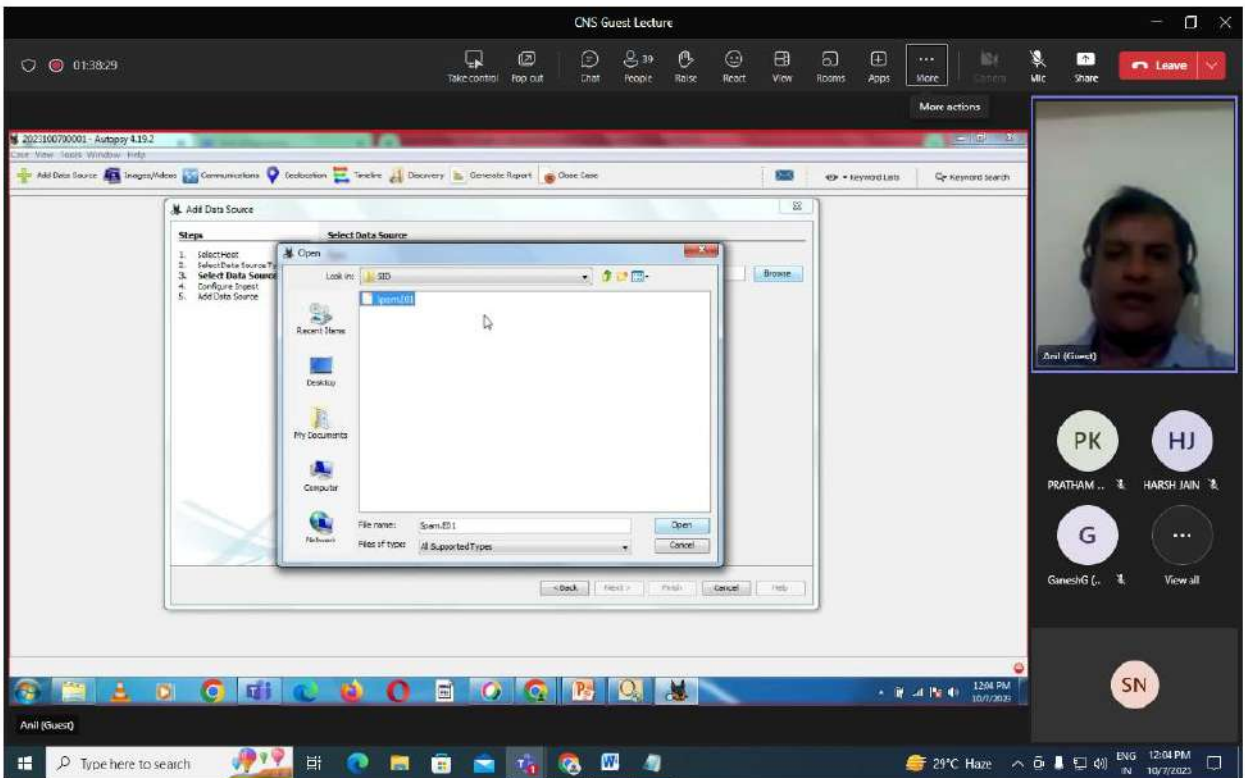
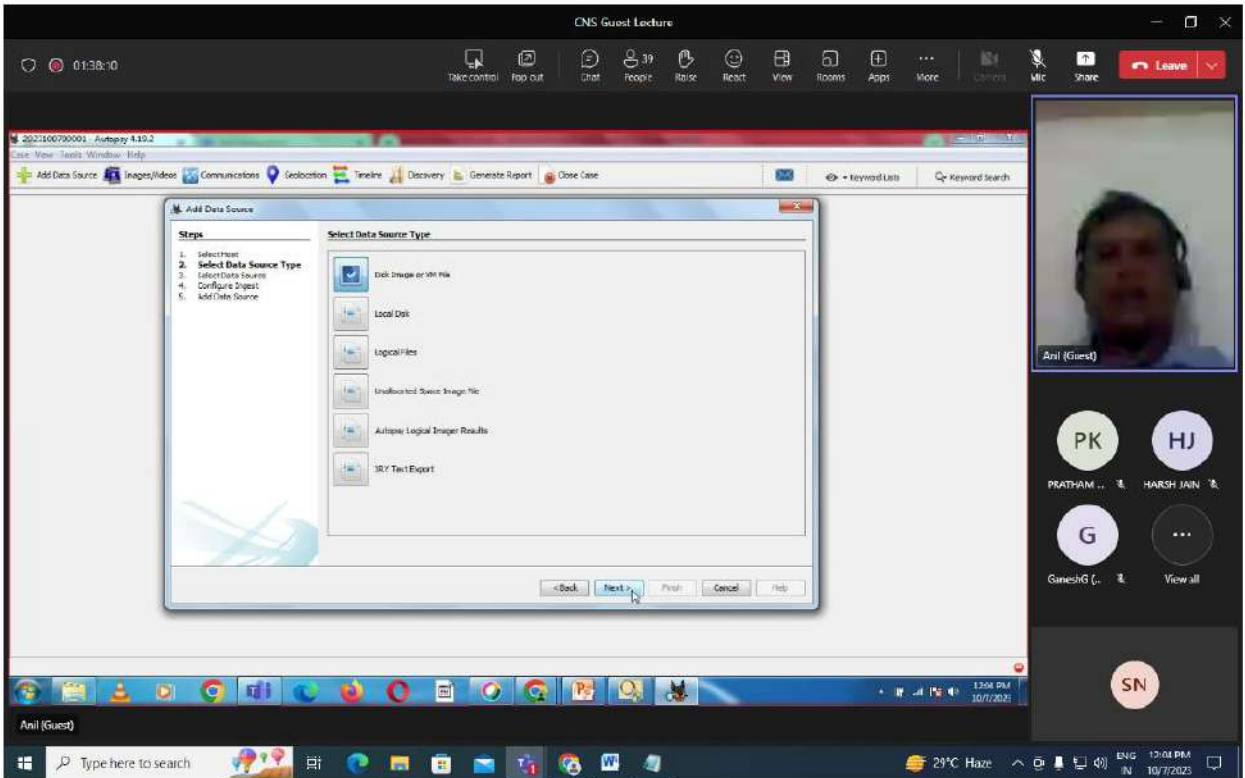
Visualize completeness by 4 functions

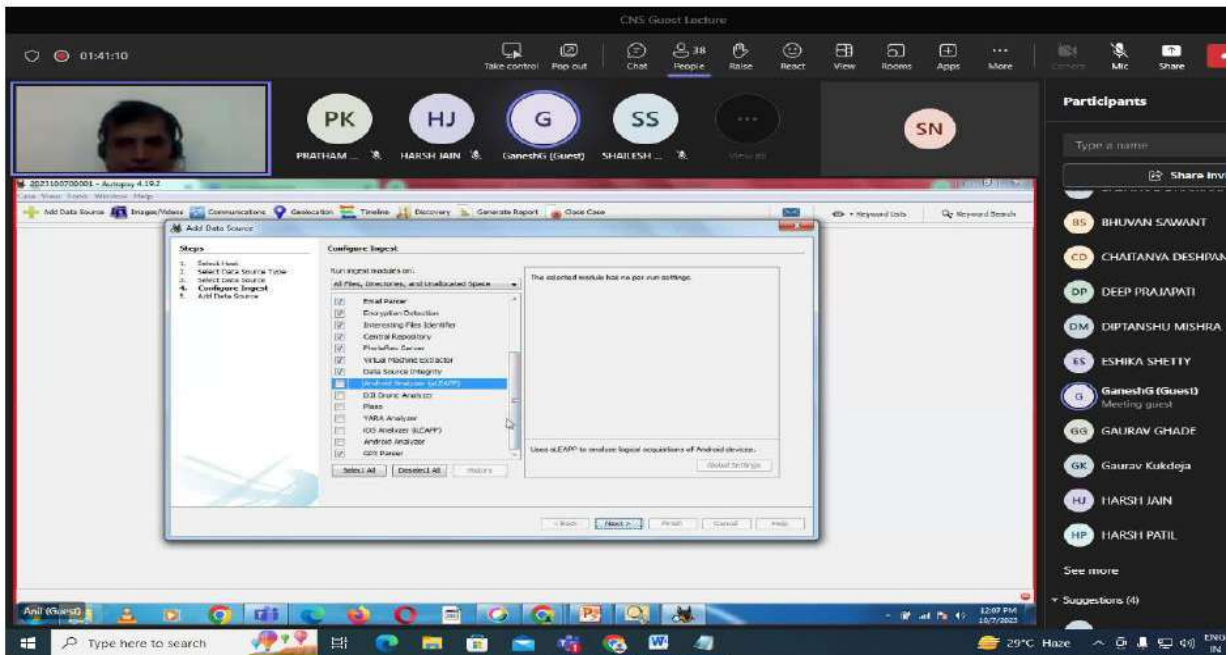
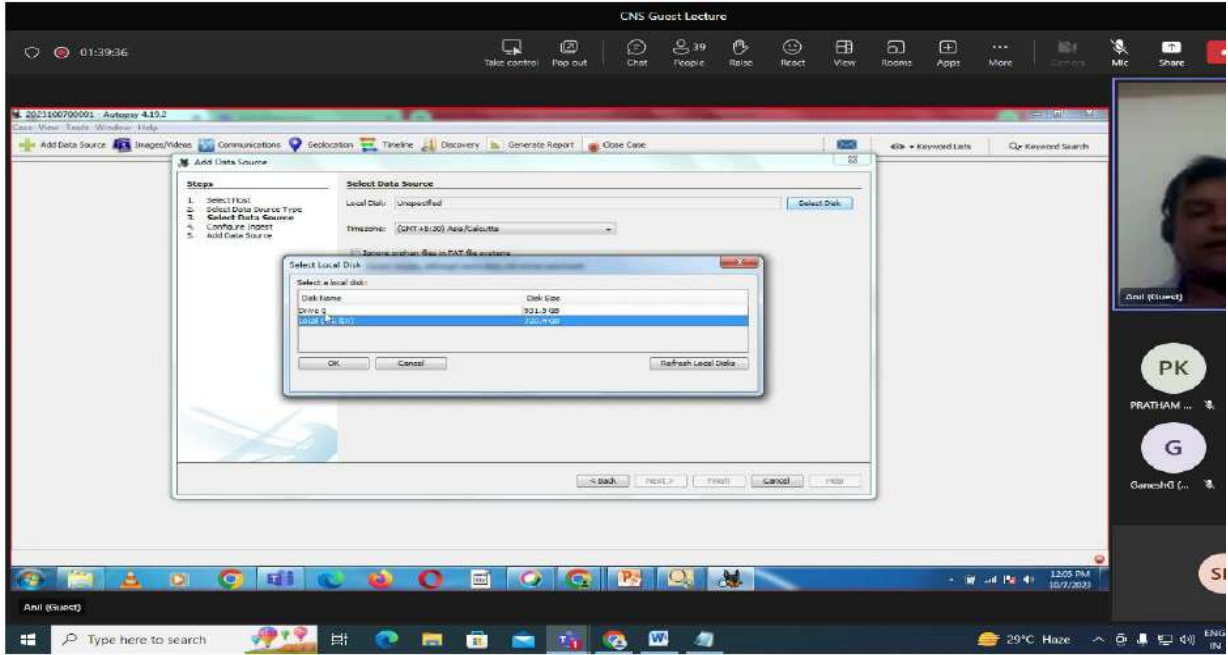
- ✓ **Identify** : Risk Identification
Determine cybersecurity policy as an organization and identify risks
- ✓ **Protect** ; Prevention
Control or prevent the risk itself
- ✓ **Detect** ; Discovery
Detect incident or its possibility quickly and accurately
- ✓ **Respond/Recover** ; Response
Minimize damage at an incident, promptly investigate the cause, and recover

Map practical options for each category and evaluate duplication or deficiency
 Classify hearing items of NSF for each category

Demo – Forensic Tool

- ✳️ **Tool Name:** Autopsy
- ✳️ **License:** Opensource
- ✳️ **Features Supported:**
 - Hash Analysis
 - Keyword search
 - Registry Analysis
 - Disk Image support
 - Local Drive support
- ✳️ **Tool Description:**
 - Digital Forensic Investigation Tool
 - Autopsy® is a digital forensics platform and graphical interface to The Sleuth Kit® and other digital forensics tools. It is used by law enforcement, military, and corporate examiners to investigate what happened on a computer. You can even use it to recover photos from your camera's memory card.





What you can do?

- <https://www.sans.org/course-preview/>
- <https://www.eccouncil.org/cybersecurity-exchange/cyber-novice/free-cybersecurity-courses-beginners/>
- <https://www.udemy.com/topic/cyber-security/free/>
- <https://www.isc2.org/landing/1mcc> FREE Entry-level Cybersecurity Training + Certification Exam

Name of Faculty Member: Dr. Shachi Natu

Signatures with Date: *Shachi Natu*
05/12/23

G. Pardesi
Dr. Gopal Pardesi
(Coordinator IQAC)



G. T. Thampi
Dr. G. T. Thampi
(Principal)

Event Name : JavaGenix 2022(28TH October 2022)

- **Event Convener** : Dr. Shanti Therese
- **Event Coordinator** : Prof. Sanober Shaikh
- **Event held under the guidance of** : Dr. Arun Kulkarni(HOD-IT)
- **Event Description** :

JavaGenix 20223 was a technical event organised by the Information Technology Department of Thadomal Shahani Engineering College. It was a competition where in students showcased their Java Based Mini Projects which are a important part of their Sem 3 curriculum. The event had two rounds- In the first round the students had to show demo of their working projects, based on which top 10 teams were selected for the final round. In the final round each team was allotted 10mins to present their problem statement and show the working of the solution they came up with in the form of Java Based project. The team with the most innovative idea and efficient solution was declared as the winner. The judging panel included the most experienced and knowledgeable teachers of I.T department which guided the students throughout the semester and motivated them to come up with the best projects possible.

Winning Teams:

1. Winner :

Team Members :-

1. Rugved Mairal

2. Pratiksha Limbulkar

3.Samarth Shanbhag

Project title :- Cafe management system

Description:

It is a system based on the Java language that digitizes the entire process of ordering and bookkeeping for retail stores, specifically cafes while also printing out bills

2. Runner Up :

Team members:-

1. Ninad Naik
2. Anas Khan
3. Ayesha Nagdawala,


Project title: PassVault - password manager

Description: An intuitive and secure password manager. Java, Swing, MySQL Password Manager built for the next million people connecting to the internet for the first time, uses hashing and AES-256 encryption. Supports random password generation, periodic reminders and more.


3. Second Runner up :

Team Members:-

1. Sumil suthar
- 2.Sarthak Tanpure
- 3.Om Pathak



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(Principal)

Project title: Universal Healthcare System




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(Coordinator IQAC)




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(Principal)


Event Name : Machine Intelligence 2.0 2023 (6TH April 2023)

- **Event Convener** : Dr. Shanti Therese
- **Event Coordinator** : Prof. Sanober Shaikh
- **Event held under the guidance of** : Dr. Arun Kulkarni(HOD-IT)
- **Event Description** :


Machine Intelligence 2.0 20223 was a technical event organised by the Information Technology Department of Thadomal Shahani Engineering College. It was a competition where in students showcased their Machine Learning Based Mini Projects which are an important part of their Sem 3 curriculum. The event had two rounds- In the first round the students had to show demo of their working projects, based on which top 10 teams were selected for the final round. In the final round each team was allotted 10mins to present their problem statement and show the working of the solution they came up with in the form of Machine Learning Based project. The team with the most innovative idea and efficient solution was declared as the winner. The judging panel included the most experienced and knowledgeable teachers of I.T department which guided the students throughout the semester and motivated them to come up with the best projects possible.

Winning Teams:

1. Winner :


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(Coordinator IQAC)




Dr. G. T. Thampi
(Principal)


Team Members :-

1. Mokshit Surana
2. Archit Rathod
3. Gargi Sathe
4. Omkar Bhostekar


2. Runner Up :

Team members:-

1. Siddesh Shetty
2. Prateek Vishwakarma
3. Swapnil Vishwakarma
4. Veer Pariawala


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BANDRA (WEST), MUMBAI - 400 050


3. Second Runner up :

Team Members:-

1. Aadi Vora
2. Siddharth Yadav
3. Abhishek Shirke
4. Sandeep Sinha


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(Coordinator IQAC)




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Curriculum Gaps Identified and Action Taken

Course	Gap Identified	Action Taken
DWM	Practical approach of warehouse design is not given in syllabus	Students are given various case studies and asked to design warehouse using oracle
	Need to enhance the understanding of the evaluation of classification and clustering algorithms	Several scenarios discussed in class were solved and students were given practice problems
	Spatial data topic not covered in details	Taken extra lecture
BDA	Syllabus covers only theoretical aspects of Nosql database	Use of nosql databases such as MongoDB is demonstrated during the class
CSS	Standard Viruses and Cryptographic algorithms are only given in syllabus	How to create new virus and own cryptographic algorithm is taken during lecture
CG	In Syllabus only basic primitives implementation is mention. They should provide introduction to Graphics library functions as a separate module. So students will get confidence in practicing graphics objects	In first lab we have given introduction to graphics library and how to use these functions with the TurboC help options.
OOP	Immediately after C programming in sem 2 , students are mapping their programming concept with Java programming i.e Object oriented programming. We should have C++ procedure and object oriented lanaguge before learning JAVA	In classroom start with C ,C++ to clear base as a introductory lecture and then in every lecture discuss difference between C, C++ and JAVA
CN	Ethernet 802.3 and Back-off Algorithms	Topic was taught in the lecture

Department of Computer Engineering

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



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DBMS	Connectivity to databases and data handling and manipulation	Given demonstration and covered in practical
DS	Syllabus lacks connecting concepts with real time applications like use of data structures in networks, social media, CAD simulation, Machine learning etc.	During several lectures throughout the semester, students were made aware of various applications of data structures and how they will be used in different topics in the higher semesters.
	Introduction to some advanced data structures like heaps, advanced BST trees like RB tree is missing, which would have given student direction for exploring more on data structure	Theory assignment 2 was created with the goal of generating curiosity in students by focusing on advanced, off-the-shelf topics.
AOA	Students were encouraged to study advanced algorithm concepts like computational geometry, flow networks etc.	Assignment 2 for the theory component was designed to pique students' curiosity by delving into advanced, off-the-shelf topics.
SPCC	Directed acyclic graph and Topological Sorting should be there in syllabus	Covered these topics in lecture
DSGT	Set theory is not covered in detail	Problems on operations and properties of Set theory given for solving
	Inference Rules have less examples	Solved Problems on Inference Rules were given
	More variety of problems are missing	Solving GATE questions
TCS	The subject curriculum mentions the Term Work of 25 marks where, students are to submit 06 written assignments. There should be a structure / provision of one hour session per batch for the students to write assignments in a supervised manner inside classrooms.	To complete the demand of Term work, the students were given with assignments and the same were collected and corrected later. The expected answers were all discussed with all the students in class after correction of every assignment.
SMA	The concept and content of subject is placed in much theoretical manner. Different tools like Network Analytics tools, Hyperlink Analytics Tools, Search Engine Analytics Tools, Location Analytics Tools are mentioned in the syllabus with no one to one connection to the Lab work	The students were provided with demonstration of such tools during a lecture in the classroom
PY	Method Resolution Order is important concept in multiple inheritance which is not a part of syllabus	Extra lecture conducted on topic Method Resolution Order
	For building a good website, advanced concepts of Django should be there in syllabus	Extra lecture conducted on advanced Django



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Conclusion

The implementation of various actions in response to the feedback analysis, including gap analysis, enrichment of content beyond the syllabus, and guest lectures, has yielded significant positive outcomes. The proactive steps taken to address the identified areas for improvement have contributed to the overall enhancement of the educational experience. The commitment to continuous improvement is evident in the institution's response to feedback, and this culture has become embedded in the educational framework. Regular reviews and updates to teaching methodologies, course content, and engagement strategies demonstrate a proactive approach to staying ahead of educational trends. The actions taken in response to the feedback analysis have positively impacted the educational experience, aligning it more closely with the needs of students and the demands of the professional world.



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