Civil Engineering Department

Industrial Visits Reports

Ideal Institute ofTechnology, Wada organized its first 3-day industrial visit for B.E.(Civil Engineering) and students from March 25 Sep,2021 to 27 Sep, 2021. The companies visited wereDesign and construction of bridge across river mandobiwhich are situated inpanji Goa. A total of 55 students were a part of the industrial visit. Mr.RakeshRathoreand Ms.YoginiPatilfrom Civil Engineering were the faculty co-ordinators who accompanied 55 students.

Industrial Visit Outcomes:

- To provide an exposure to students about practical working Environment inDesign and construction of bridge across river
- To fulfil the gap between theoretical and practical learning in a real-life environment.
- To provide opportunities for interactive learning in-class as well as outside the classroom surroundings.
- To enhance professional skills.
- To widen students' viewpoint with experience to different workforces from different industries.

About bridge

The **Mandovibridge** is a set of two bridges. It carries four lanes over the Mandoviriver. It was Russian in design and the first to be used in this country. The first Mandovi bridge was built in 1971 and the second one in 1998.

On 5 July 1986 the first bridge collapsed. After the collapse, this project required the dismantling of the old bridge structure and strengthening with by filling M20 concrete. The total cost of construction was 20 million(US$250,000). The parallel bridges have a length of 600 metres each.
The 3rd bridge over the river Mandovi in Goa is an iconic bridge that connects Panaji in TiswadiTaluka and Porvorim in BardezTaluka in between the existing two bridges to ease traffic congestion along this route. It was declared open on January 27, 2019.

As one of the longest cable stayed bridges in India, the 4-lane, 21m-wide, 620m-long continuous span, 3.6 km Mandovi River Cable Stayed Bridge adds architectural beauty to Panaji, standing tall 70m above sea level with the central concrete pylons spaced at 150m, supported by 88 cables on a single plane, harp type cable stay arrangement.

Dextra supplied 1,170 sets of fully-threaded post-tensioning bar systems in diameter 25, 32, 40, 50 and 75mm, in grade 830/1030 for use in various applications.

Civil Engineering Department

Industrial Visits Reports

Ideal Institute ofTechnology, Wada organized its first 5-day industrial visit for B.E.(Civil Engineering) and students from Oct 31, 2021 to April 04, 2022. The Site visited wereSupa dam and power house which are situated indandelikarnatka.A total of 50 students were a part of the dam site visit. Mr.GovindGehlotand Ms.YoginiPatilfrom Civil Engineering were the faculty co-ordinators who accompanied 50 students.

Industrial Visit Outcomes:

To provide an exposure to students about practical working Environment indam and power house

- To fulfil the gap between theoretical and practical learning in a real-life environment.
- To provide opportunities for interactive learning in-class as well as outside the classroom surroundings.
- To enhance professional skills.
- To widen students' viewpoint with experience to different workforces from different industries.

About Dam

Located in JoidaTaluk of Dandeli, the Supa Dam marks its reputation as a hotspot for the travelers of Dandeli. Since ages, the Supa Dam has been acknowledged as one of the leading hydroelectric power generation plants in the town. The other significance of the dam construction has been availing the dam water to the nearby farmers to meet their irrigation needs.

So, if you are curious about how the irrigation system works, it is a golden opportunity for you to broaden the spheres of your knowledge reserves. You can get along with some technical expertise or even the local farmers to understand the mechanism of both hydroelectric power generation and irrigation facilities available here.

Apart from its commercial importance, the dam has been blessed with a picturesque backdrop to sit, relax, and unwind yourself. Due to its economic and cultural aesthetics, the location has become a popular sightseeing destination in town.

Civil Engineering Department

Industrial Visits Reports

Ideal Institute ofTechnology, Wada organized its first 3-day industrial visit for B.E.(Civil Engineering) and students from March 31, 2022 to April 02, 2022. The companies visited wereAdanipetronetport Pvt. Ltd which are situated inDahej Gujarat. A total of 46 students were a part of the industrial visit. Mr.RakeshRathoreand Mr.GovindGehlotfrom Civil Engineering were the faculty co-ordinators who accompanied 46 students.

Industrial Visit Outcomes:

To provide an exposure to students about practical working Environment in largest commercial ports

- To fulfil the gap between theoretical and practical learning in a real-life environment.
- To provide opportunities for interactive learning in-class as well as outside the classroom surroundings.
- To enhance professional skills.
- To widen students' viewpoint with experience to different workforces from different industries.

About company

Adani Ports and Special Economic Zone Limited (APSEZ) is the largest commercial ports operator in India accounting for nearly one-fourth of the cargo movement in the country. Its presence across 13 domestic ports in seven maritime states of Gujarat, Maharashtra, Goa, Kerala, Andhra Pradesh, Tamil Nadu and Odisha presents the most widespread national footprint with deepened hinterland connectivity. The port facilities are equipped with the latest cargo-handling infrastructure which is not only best-in-class, but also capable of handling the largest vessels calling at Indian shores. Our ports are equipped to handle diverse cargos, from dry cargo, liquid cargo, crude to containers.

Through its subsidiary Adani Logistics Ltd., APSEZ operates three logistics parks located at Patli in Haryana, Kila-Raipur in Punjab and Kishangarh in Rajasthan. With the ability to handle 500,000 twenty foot equivalent units (TEUs) annually, the Adani logistics business is growing at a rapid pace.

Over the years, APSEZ has evolved into a provider of integrated port infrastructure services, of which the Mundra SEZ in Gujarat is a landmark validation. Spanning over 8,000 hectares,

the Mundra Economic Hub offers investment options as the largest multi-product SEZ, Free Trade and Warehousing Zone (FTWZ) and Domestic Industrial Zone.

The Company's integrated services across three verticals, i.e. Ports, Logistics and SEZ, has enabled it to forge alliances with leading Indian businesses making APSEZ an undisputed leader in the Indian port sector.

Along with its expertise in providing end-to-end logistics solutions, operational excellence, low-cost operations and synergies through acquisitions, APSEZ was also certified as a Great Place to Work in FY 2021-22. The Company is backed by a young and dynamic workforce that propels it to greater heights.

Website URLhttps://www.adaniports.com/About-us

USING ICT TOOLS FOR LEARNING

CIVIL ENGINEERING DEPARTMENT

Mr. Rahul chaudhari

Fluid mechanics-II

Semester-IV

S. no	Topics	You-tube links
1	Flow through pipes	https://www.youtube.com/watch?v=f0TRQq8k3Vc
2	Loss of head through pipes, Darcy-Weisbach equation, Major and minor losses.	https://www.youtube.com/watch?v=Al2ZHHahznU
3	Hydraulic gradient line and Total energy gradient line	https://www.youtube.com/watch?v=LoGZOmZCqCM
4	pipes in series,equivalent pipes, pipes in parallel, flow through laterals, flow through Branched pipes	https://www.youtube.com/watch?v=7d4OTjI5N6o
5	Three reservoir problem, siphon.	https://www.youtube.com/watch?v=Dj1tqNzSfUg
6	Hardy cross method, water hammer in Pipes-Gradual closure and instantaneous closure of valve control measures	https://www.youtube.com/watch?v=7BzsKmdQa7Q
7	Power transmitted through nozzle, condition for maximum power transmitted,diameter of nozzle for maximum transmission of power	https://www.youtube.com/watch?v=PTR-6kIZ4lk
8	Reynolds experiment, critical velocity, laminar flow through circular pipes, flow between two parallel plates: stationary and moving.	https://www.youtube.com/watch?v=DgV8rNqR3A4
9	Causes of turbulence, shear stress in turbulent flow, Reynolds's stresses, Prandtl's mixing length Theory, Hydro dynamically smooth and rough boundaries	https://www.youtube.com/watch?v=5BISGTJd9ws
10	velocity distribution in smooth and rough pipes, Karman-Prandtl's velocity distribution equation.	https://www.youtube.com/watch?v=EmLBypzS4nQ
11	Development of boundary layer over flat surfaces. Boundary layer thickness, energy thickness and momentum thickness	https://www.youtube.com/watch?v=pYczyN35mIw
12	Boundary layer separation and control. Introduction to flow around submerged body, drag and lift, terminal velocity of body, Magnus Effect.	https://www.youtube.com/watch?v=9njAGk_DcFg
13	Momentum principle, Moment of momentum principle	https://www.youtube.com/watch?v=qUhqjdDvFSg
14	Dimensional homogeneity, Buckingham's π theorem, Rayleigh's method, dimensionless	https://www.youtube.com/watch?v=tV3ShM1fo5Y

	numbers and their significance	
15	Model (or similarity) laws, application of model laws: Reynolds's model law, Froude's model law, Euler's Model law, Weber's Model law, Mach model law, scale effect in models.	https://www.youtube.com/watch?v=hHzjwrMixsc

Organizing Department	**: Computer Science & Engineering**
Name of Activity	**: Guest Lecture on Internet Security & Ethical Hacking**
Date of Activity	**: 21 August 2023**
No. of Participants	**: 57**
Resource Person	**: Mr. Hariom Awasthi**

Introduction:

Ideal Institute of Technology had the privilege of hosting an insightful guest lecture on the crucial topics of Internet Security and Ethical Hacking. The lecture was designed to equip students with an understanding of cyber security threats and ethical hacking practices, providing valuable insights into the rapidly evolving landscape of online security.

Guest Speaker:

The guest speaker for the session was Mr. Hariom Awasthi Associate Professor CSMU Panvel, Navi Mumbai, Maharashtra, a renowned expert in the field of cybersecurity. With a wealth of experience and expertise, Mr. Hariom Awasthi brought a dynamic and practical perspective to the topics of internet security and ethical hacking.

Session Highlights:

Understanding Cybersecurity Threats:

The session commenced with an overview of the current cybersecurity landscape, highlighting the prevalent threats and challenges faced in the digital realm. Mr. Hariom Awasthi emphasized the importance of staying informed about potential risks to safeguard personal and organizational data.

Ethical Hacking:

A significant portion of the lecture was dedicated to ethical hacking – a practice aimed at identifying vulnerabilities in computer systems to strengthen security. Mr. Hariom Awasthi explained the ethical hacker's role in proactively testing systems for weaknesses and implementing robust security measures.

Cybersecurity Best Practices:

The lecture provided practical insights into cybersecurity best practices, covering topics such as password management, secure online behavior, and the importance of regular software updates. Mr. Hariom Awasthi emphasized the role of individuals in maintaining a secure online environment.

Real-Life Case Studies:

To illustrate the practical application of ethical hacking, Mr. Hariom Awasthi shared real-life case studies where ethical hacking techniques were employed to identify and rectify security vulnerabilities. These case studies provided valuable insights into the complexities of

cybersecurity.

Interactive Q&A Session:

The session included an interactive Q&A segment where students had the opportunity to engage with Mr. Hariom Awasthi, seeking clarification on various aspects of internet security and ethical hacking. This interactive format facilitated a deeper understanding of the subject matter.

Feedback and Engagement:

Following the lecture, students were encouraged to provide feedback on the session, expressing their thoughts and insights gained. The engagement and enthusiasm demonstrated by the students reflected the success of the guest lecture in capturing their interest and fostering a keen interest in cyber security.

Closing Remarks:

The guest lecture on Internet Security & Ethical Hacking concluded with closing remarks from Mr. Hariom Awasthi, expressing gratitude to Ideal Institute of Technology for the opportunity to share knowledge with the students. Mr. Hariom Awasthi, encouraged students to delve deeper into the field of cybersecurity, emphasizing its critical role in the digital age.

Conclusion:

The guest lecture on Internet Security & Ethical Hacking proved to be a valuable addition to the academic experience at Ideal Institute of Technology. The knowledge shared by Mr. Hariom Awasthi empowered students to navigate the digital landscape responsibly, understanding the importance of cybersecurity practices and ethical hacking in ensuring a secure online environment. The institute looks forward to organizing similar engaging sessions to further enrich the learning experiences of its students.

Photos:

Ms. Manasvi Patil
Event Coordinator

Professor (Dr.) Vikas Narain
Principal

Subject: Computer Network

Faculty Name:

Sr.No	Topic	YouTube URL
1	Computer Networks and Security	https://youtu.be/JFF2vJaN0Cw?si=U4UX5mdg0PJm5Ppq
2	Introduction to Computer Network	https://youtu.be/4D55Cmj2t-A?si=l18UCo6EJCuHUnWQ
3	LAN, MAN, WAN, PAN , CAN	https://youtu.be/n0iaPtsnmxQ?si=rhl-AnJmSIfeUPfv
4	TCP/IP Protocol Suite	https://youtu.be/GfaHdjApnhU?si=nFPfSYyp3Iw3_FLe
5	Physical layer in computer networks	https://youtu.be/lg-f92uY1Lc?si=YMX6176ZXCRqj99H
6	Topologies Mesh, Star, Hub, Bus, Hybrid	https://youtu.be/uDulBxDb7GM?si=_zE5789zXLkMGpsx
7	Manchester encoding and differential Manchester encoding	https://youtu.be/3IaB2a8tXLA?si=pJy-m-dflf2aIw3b
8	Various Devices In Computer Networks | Hardware and Software Devices | Communicating devices	https://youtu.be/YxyLN3N5w9s?si=kZ-E2UagxO2gJQcZ
9	Types Of Cables Coaxial, twisted pair, fibre optic cable	https://youtu.be/wuI6FGsOFZU?si=vwwzxZIITdIRUwdN
10	Repeaters Physical layer devices	https://youtu.be/mf4bRP_puNQ?si=nMHloJPGdFsTLAGC

11	Hub	https://youtu.be/3N5a9cHYzCM?si=bRtFqwNbksRysNRM
12	Bridges	https://youtu.be/dDP36_ZBs6A?si=Zy2Jv8UO6jqpwgXP
13	Switch, Hub & Bridge Explained – What's the difference?	https://youtu.be/vdtqEPKYB5M?si=qlEfT8KoSEsgDhnT
14	Routers	https://youtu.be/JhBnOamc_8s?si=yejWweyZAibKE_8V
15	Collision Domain Vs. Broadcast Domain | Repeater, Hub, Bridge, Switch, Router | Networks	https://youtu.be/301XUVtn-6s?si=0bQP0CFBbkcBy26a
16	What is Circuit Switching	https://youtu.be/Cug52cpjM_g?si=WqsOEFkConKJtCjv
17	atagram Switching Vs Virtual Circuit Switching in Packet Switching	https://youtu.be/-S-NThI_79o?si=AIfx21PROvrUtM4v
18	What is Message Switching	https://youtu.be/T1rSrLPHLLI?si=_LpRBWShMw5NVdjV
19	Unicast, Broadcast & Multicast	https://youtu.be/EcWhJbEWxHU?si=uiAkt0O7-08C4mZD
20	Data link layer	https://youtu.be/JRgmPco0KWI?si=-HzqZWkl4xUWzy-7
21	Stop and Wait ARQ protocol	https://youtu.be/YIX1NfaUpsU?si=1VFk65H6h4BqNw8L
22	Various Flow Control Protocols | Stop&Wait , GoBackN & Selective repeat in Data Link Layer	https://youtu.be/yNedVgNyE8Q?si=MTxW6IjbMt5NuxsI

23	Framing in Data Link Layer | Bit Stuffing vs Byte(Character) Stuffing	https://youtu.be/2U6kPu0dfqI?si=gA8yRnABcOppMvK8
24	Introduction to Error detection and Correction	https://youtu.be/U7-h2hyM1Dc?si=-h8KXS19BMvVVmXk
25	Single Bit Parity along With Hamming Distance Concept	https://youtu.be/U09cNsiYpc8?si=BPgzLjS05aR_9h71
26	Cyclic Redundancy Check(CRC) for Error Detection and Correction	https://youtu.be/5Q-Yv6_0Qcw?si=UOXs94EjuDwnDgJx
27	Hamming Code for Error Detection & Correction	https://youtu.be/V5Iu52tbZEQ?si=-mM0wInjOadD72uJ
28	Various Medium Access Control Protocols in Data Link Layer	https://youtu.be/G0h0dC4Zycs?si=sVQmMoSIIo0Rgavf
29	MAC Layer Protocol	https://youtu.be/WYM9nFYnYAg?si=wg9x9ycv3zcUot0a
30	Pure Aloha Vs Slotted Aloha	https://youtu.be/ggdeb2_z240?si=PpmPOKiqSHSbOlJj
31	Carrier Sense Multiple Access CSMA	https://youtu.be/lftFvfSywCQ?si=UjSQGqk7rO764Obo
32	Carrier Sense Multiple Access/ Collision Detection |	https://youtu.be/v_z888gQWq0?si=NtSXiyNTTtKDXs1m

	CSMA/CD	
33	Token Ring (IEEE 802.5)	https://youtu.be/-u4Dzu63eZc?si=qVxti6A2sEr05wL6
34	Network Layer | Responsibilities of Network Layer | OSI Model	https://youtu.be/rW1jPlYgp_0?si=J-nvicOExYT8FBBa
35	The Transport Service: Transport service primitives, Berkeley Sockets, Connection management (Handshake), UDP, TCP, TCP state transition, TCP timers	https://www.youtube.com/watch?app=desktop&v=vrPRMAvOcH0
36	TCP Flow control (sliding Window), TCP Congestion Control: Slow Start	https://www.youtube.com/watch?v=4l2_BCr-bhw
37	DNS: Name Space, Resource Record and Types of Name Server. HTTP, SMTP, Telnet, FTP, DHCP	https://youtu.be/CMBQFmEuOO0

USING ICT TOOLS FOR LEARNING

DEPARTMENT OF MECHANICAL ENGINEERING

Design of machine Element

Semester-VIIth

S. No	Topic	YouTube Link
1	Methodology & Morphology of design	https://www.youtube.com/user/EngineeringExplained
2	Design of Transmission Gear Box	https://www.youtube.com/channel/UCqZQJ4600a9wIfMPbYc60OQ
3	Design of Hoisting Mechanism	https://www.youtube.com/channel/UCzICf5DrXK5oBvtaB6A1zZw
4	Design of Belt Conveyors	https://www.youtube.com/channel/UCRr7eTpxcCJz1SPpIi-Jw3Q
5	Engine Design (Petrol and Diesel)	https://www.youtube.com/user/EngineeringExplained
6	Design of Pump	https://www.youtube.com/channel/UCqZQJ4600a9wIfMPbYc60OQ
7	Design of main components of gear pump	https://www.youtube.com/channel/UCqZQJ4600a9wIfMPbYc60OQ
8	Design of main components of Centrifugal Pump	https://www.youtube.com/channel/UCqZQJ4600a9wIfMPbYc60OQ

USING ICT TOOLS FOR LEARNING

CIVIL ENGINEERING DEPARTMENT

Mr. Rahul chaudhari

Fluid mechanics-II

Semester-IV

S. no	Topics	You-tube links
1	Flow through pipes	https://www.youtube.com/watch?v=f0TRQq8k3Vc
2	Loss of head through pipes, Darcy-Weisbach equation, Major and minor losses.	https://www.youtube.com/watch?v=Al2ZHHahznU
3	Hydraulic gradient line and Total energy gradient line	https://www.youtube.com/watch?v=LoGZOmZCqCM
4	pipes in series,equivalent pipes, pipes in parallel, flow through laterals, flow through Branched pipes	https://www.youtube.com/watch?v=7d4OTjI5N6o
5	Three reservoir problem, siphon.	https://www.youtube.com/watch?v=Dj1tqNzSfUg
6	Hardy cross method, water hammer in Pipes-Gradual closure and instantaneous closure of valve control measures	https://www.youtube.com/watch?v=7BzsKmdQa7Q
7	Power transmitted through nozzle, condition for maximum power transmitted,diameter of nozzle for maximum transmission of power	https://www.youtube.com/watch?v=PTR-6kIZ4lk
8	Reynolds experiment, critical velocity, laminar flow through circular pipes, flow between two parallel plates: stationary and moving.	https://www.youtube.com/watch?v=DgV8rNqR3A4
9	Causes of turbulence, shear stress in turbulent flow, Reynolds's stresses, Prandtl's mixing length Theory, Hydro dynamically smooth and rough boundaries	https://www.youtube.com/watch?v=5BISGTJd9ws
10	velocity distribution in smooth and rough pipes, Karman-Prandtl's velocity distribution equation.	https://www.youtube.com/watch?v=EmLBypzS4nQ
11	Development of boundary layer over flat surfaces. Boundary layer thickness, energy thickness and momentum thickness	https://www.youtube.com/watch?v=pYczyN35mIw
12	Boundary layer separation and control. Introduction to flow around submerged body, drag and lift, terminal velocity of body, Magnus Effect.	https://www.youtube.com/watch?v=9njAGk_DcFg
13	Momentum principle, Moment of momentum principle	https://www.youtube.com/watch?v=qUhqjdDvFSg
14	Dimensional homogeneity, Buckingham's π theorem, Rayleigh's method, dimensionless	https://www.youtube.com/watch?v=tV3ShM1fo5Y

	numbers and their significance	
15	Model (or similarity) laws, application of model laws: Reynolds's model law, Froude's model law, Euler's Model law, Weber's Model law, Mach model law, scale effect in models.	https://www.youtube.com/watch?v=hHzjwrMixsc

USING ICT TOOLS FOR LEARNING

DEPARTMENT OF MECHANICAL ENGINEERING

Industrial Electronics

Semester-IVth

S. No	Topic	YouTube Link
1	Semiconductor Devices	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D9i6tzf-4RZw
2	Phase Controlled Rectifiers and Bridge Inverters	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D0iCq5G_Za8g
3	Operational Amplifiers and 555 Timer	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D0uH3OfixSG8
4	Digital Logic and Logic Families	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DbXU8X5aO6Cw
5	Microprocessor and Microcontrollers	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DI-MFuG0A0PQ
6	Motors	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DYiNJUu8UPHE
7	Semiconductor Devices	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D9i6tzf-4RZw

USING ICT TOOLS FOR LEARNING

DEPARTMENT OF MECHANICAL ENGINEERING

Mechanical Measurement and Control

Semester-Vth Sem

S.No	Topic	YouTube Link
1.1	Introduction to Metrology and Limits, Fits, and Tolerances	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DpAXZiCUpxz4
1.2	Principles of Interference, Surface Texture Measurement, Screw Thread Measurement, Gear Measurement	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3De4owZ_GuOwo
2	Significance of Mechanical Measurements and Static Characteristics	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D0tYHmo9eAeo
3.1	Displacement Measurement and Strain Measurement	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D8v9V1X2F_mw
3.2	Pressure Measurement and Flow Measurement	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DhIv-JQFeH7I
3.3	Temperature Measurement and Introduction to Control Systems	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DvHRKbX9KqfQ
4.1	Mathematical Modelling of Control Systems	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DVQHLWQiLdck
4.2	Transient and Steady State Analysis of Control Systems	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DQjWMFnhW5UM
5.1	Stability Analysis and Experimental Determination of Frequency Response	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DdO_B6OJqnoM
5.2	Stability Analysis using Root Locus and Bode Plot	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DCvG0KDzrvMg

USING ICT TOOLS FOR LEARNING

DEPARTMENT OF MECHANICAL ENGINEERING

Mechanics

Semester-Ist

S.No	Topic	YouTube Link
1	System of Coplanar Forces	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DMy9dDNoHRqE
2	Centroid	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3Ddzv2wGt_H5M
3	Equilibrium of System of Coplanar Forces	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3Dxj1kCj14fbE
4	Equilibrium of Beams	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DD0GXtLa7vcQ
5	Friction	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DZJ9XfqlGvjA
6	Kinematics of Particle	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DdkGX8AG7Z4A
7	Kinematics of Rigid Body	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3Di0jVIl1vBUw
8	Kinetics of a Particle: Force and Acceleration	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D9kwOSt

		_F5QA
9	Kinetics of a Particle: Work and Energy	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DvXXwLZ7n_7M
10	Kinetics of a Particle: Impulse and Momentum	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DVHGRlXkjnzE

USING ICT TOOLS FOR LEARNING

DEPARTMENT OF MECHANICAL ENGINEERING

Smart Materials

Semester-VIIIth

S.No	Topic	YouTube Link
1	Introduction to Smart Materials	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DyBoKRQhPbvc
2	Important Concepts of Smart Materials	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D_-uJNNqlZWA
3	Overview of Piezoelectric Materials, Magnetostrictive Materials, Shape Memory Alloys, Electroactive Polymers	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D51OOjYDwu1k
4	Overview of Ferrofluids, Soft Matter, Carbon Nanotubes, Thermoelectric Materials	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DdQw4w9WgXcQ
5	Smart Materials for Energy Applications	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DdQw4w9WgXcQ
6	Manufacturing Techniques for Smart Materials	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DdQw4w9WgXcQ

USING ICT TOOLS FOR LEARNING

DEPARTMENT OF MECHANICAL ENGINEERING

Strength of Material

Semester-IIIrd Sem

S.No	Topic	YouTube Link
1	Introduction to Stress and Deformation	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D6RV4qYMs6Og
2	Shear Force and Bending Moment in Beams	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DLVnFbhJbL90
3	Stresses in Beams	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DLohLpGCtC0o
4	Deflection of Beams	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DOJ9Joh1CkRw
5	Torsion	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DH9p9eYl9jLg
6	Thin Cylindrical and Spherical Shells	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DnNKGWc1JYDc
7	Strain Energy	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D2IaEiEe1p9s
8	Columns	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DDL-FfZsbBn4

USING ICT TOOLS FOR LEARNING

DEPARTMENT OF MECHANICAL ENGINEERING

Turbo Machinery

Semester-VIth

S. No	Topic	YouTube Link
1.1	Steam Generators	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3Dzj8o7H4TvQI
1.2	Introduction to Turbo Machines	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3Dcu5o4jH3qqw
2	Hydraulic Turbines	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D8-vDU1czsVk
3	Pumps	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DX2BnYpxs2Zw
4	Air Compressor	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3Dv-5Y6PwvVTk
5	Steam Turbine	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D7v27m9A6vzA
6.1	Gas Turbines Applications	https://www.youtube.com/supported_browsers?next_url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DDy8QUxf3qHg

Civil Engineering Department

Industrial Visits Reports

Ideal Institute ofTechnology, Wada organized its first 5-day industrial visit for B.E.(Civil Engineering) and students from Oct 31, 2021 to April 04, 2022. The Site visited wereSupa dam and power house which are situated indandelikarnatka.A total of 50 students were a part of the dam site visit. Mr.GovindGehlotand Ms.YoginiPatilfrom Civil Engineering were the faculty co-ordinators who accompanied 50 students.

Industrial Visit Outcomes:

To provide an exposure to students about practical working Environment indam and power house

- To fulfil the gap between theoretical and practical learning in a real-life environment.
- To provide opportunities for interactive learning in-class as well as outside the classroom surroundings.
- To enhance professional skills.
- To widen students' viewpoint with experience to different workforces from different industries.

About Dam

Located in JoidaTaluk of Dandeli, the Supa Dam marks its reputation as a hotspot for the travelers of Dandeli. Since ages, the Supa Dam has been acknowledged as one of the leading hydroelectric power generation plants in the town. The other significance of the dam construction has been availing the dam water to the nearby farmers to meet their irrigation needs.

So, if you are curious about how the irrigation system works, it is a golden opportunity for you to broaden the spheres of your knowledge reserves. You can get along with some technical expertise or even the local farmers to understand the mechanism of both hydroelectric power generation and irrigation facilities available here.

Apart from its commercial importance, the dam has been blessed with a picturesque backdrop to sit, relax, and unwind yourself. Due to its economic and cultural aesthetics, the location has become a popular sightseeing destination in town.

IDEAL INSTITUTE OF TECHNOLOGY, WADA

Industrial Visit for Computer science Engineering 7th Sem. Students

Introduction:

Computer Science arranged one day Industrial Visit for 7th Semester students to "**COMMTEX Solutions**" dates 10 August 2023 for the better technical knowledge enhancement of students.

The visit is important especially in the field of Engineering as the practice of engineering has an inherent (and unavoidable) impact on society. Being India's First Skill Collage it is our prime focus on practical and skills. This program can be a powerful tool to constitute a positive industrial climate and can range from basic understanding to development for students.

Overall, this visit aims to train the students to adapt to changing scenarios of technology. After the visit students can identify their efficiency and performance which is important for their career, improving work efficiency and confidence.

Purpose:

Industrial visits are an integral part of Engineering and acknowledgement of technology upgrades. The purpose of industrial visits for students is to provide technical knowledge with the technological development in the industry and to understand the gap between theoretical and practical knowledge that could be passed in future.

This experience can help students to provide information regarding the functioning of various industries and associated problems and limitations.

Company Profile:

COMMTEX Solutions is established in 2005, IT System Custom Software Development Mumbai, Maharashtra.

Commtex Solutions (Commtex) is state-of-the-art information technology consulting, services and products organization founded for empowering individuals and corporate gain, maximum business benefits and seamless operating advantage in the information technology age.

Commtex Solutions provides ERP, CRM, SFA and SAAS based Platforms and systems and is a value added reseller for Cloud based ERP Solution - Microsoft Dynamics ERP, Acumatica, Epicor and OEM Partner of Salesforce.

What do We Learn?

There are various departments in the industry. COMMTEX Solutions has a big training centre where new employees get trained and older ones learn new technologies. It also hosts a big library that has more than 200 books on new technologies along with a digital library. They also have a dedicated block for clients where the meetings. Conferences, discussions with clients take place.

There were questions from the students about the deployment of projects, career, growth and project flow and distributions which were answered by the attendees there and hence many queries of students were solved.

Student Experience

It was our immense pleasure to visit the dream company COMMTEX Solutions **on 10th August 2023, Thrusday.** Being a future software engineer it was a great opportunity for students of **B. Tech CSE 4th year** to visit the industry for the first time and groom ourselves into corporate professionals and acquire more innovative skills.

We visited the industry to interact and understand the latest technologies related to hardware and software. COMMTEX Solutions campus is a state-of-the-art facility with a distinct style that blends local culture and aesthetics with several world-class features.

We wish that someday we are there working and being called as **'proud youth of India'.**

Conclusion:

From this visit, we got the information and practical knowledge about different departments/sectors in the IT Industry. As COMMTEX Solutions is completely working on Agile methodology. Students got the idea of what is this methodology and it's working. About 30 students of 7th Semester computer sciences Engineering Technology and faculty mentors Mr. Vikas Kumar and Deeksha Joshi benefited from this visit as they got a chance to discuss with the centre head and other engineers working at COMMTEX Solutions. Students learned the atmosphere and working culture which is shows the success of this visit

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IDEAL INSTITUTE OF TECHNOLOGY, WADA

INDUSTRIAL VISIT REPORT

HMT, Ajmer, Rajasthan

Acompletereportonindustrialvisitorganizedby**Ideal institute of Technology**,forthestudentsof**MechanicalEngineering[3rd SEM]**inordertogetthepractical knowledgeabout“advancedtechnologyusedinmanufactureofsophisticated moulds, dies and tools” carried out by HMT

INDEX:

- DETAILSOFJOURNEY
- COMPANYPROFILE
- GROUPOBSERVATION
- CONCLUSION

DETAILSOFJOURNEY

Tdeal institute of Technology had organized an industrial visit on 14 August ,2021toGTTClocatedinRajasthanindustrialEstateforthestudentsofMechanical Engineering.

ThevisitwasorganizedbyHODofMechanicalengineeringbranchProf.Pramod Kumar Prof.Rajnish Kumar& Sunil M. Tupeweretheco-ordinatorsFacultyfortheindustrialvisit.

We started travelling from the college campus at 10:30 am via our collegebus. Totally **22 students** along with **2 coordinators faculty** were there in thejourney.

COMPANYPROFILE

GovernmentTool Room&TrainingCentre

ASocietyofGovernmentofKarnataka

HMT was established in 1953 at Ajmer with the participation of the RajasthanStateGovernment,incollaborationwiththeGovernmentofDenmarkundertheCentral Government. The excellent performance of HMT Ajmer, proactive Central government which saw the need for expansion,

Proliferation of technology for development of the industries with supply of skilledmanpoweristhekeytomeettheneedsoftheglobalrequirement.WiththisGovernmentof Central to start more centers to train in the area of toolanddiemaking invariouspartsofIndia.

HMTisanautonomoussociety,andarecognizedScientificandResearchOrganizationbyth eGovernmentofIndia.Govt.ToolRoom andTrainingCentre(is serving industry by way of precision tooling and providing in well trainedcraftsmentheareaoftoolanddiemaking.

Today, the HMT have acquired mastery in mould and die making technology andhaveblossomedintoanepitomeofprecisionandqualityinthedevelopmentandmanufactur eofsophisticatedmoulds,diesandtools.

Fully aware of the rapid advancement in technology theworld over,HMTisperiodically adding new technologies to the existing set of advanced equipment likeCAD / CAM, CNC machines for tooling, Precision Components, Laser for Industries,Rapidprototyping,vacuumcasting etc.

HMT is concentrating on the Integrated Development of the related segments ofindustries by way of providing international quality tools, trained personnel andconsultancy in tooling and related areas. In future, the focus would be more onturnkey projects in Tooling, Aerospace components & their assemblies, and also tosupportthedevelopmentofsmallandmediumscaleenterprises.

GROUPOBSERVATION

- ThisIndustrialvisitisveryhelpfulinourfuturepractical

Life & bring a positive change in our thinking & practical behavior regardingEducation&specializingourtechnicalskills.

- Gotpracticalknowledgeabouttheadvancementintechnologyofmac

hines.

- UseofprogramminginfieldofMechanicalengineering.

- Precise cuttingand surfacefinishingof thejobs.

- Informationondifferentparts&useofCNCmachineswithmultiplecuttin

gtools.

- Makingofplasticobjectsusing“Injectingtechnology“ofplastic.

- Differenttypesofmachinesavailablefortool&diemaking

- Managementofmanpowerandmachines.

- Differentcoursesofferedbytrainingsection

CNCLatheMachine

LatheMachine&BenchVISE

CNC LatheMachine-Programming

MillingMachine

CONCLUSION

We are thankful for all our faculties for organizing such an Informative event forus in crucial for development of our practical skills regarding tool & die making &otheractivities.

We got the knowledge on different types of machines used in HMT and had anopportunityto researchonit.

Wehopetogetmorechancesfurthertohavesuchaninformative&wonderfulexperienceso fvisiting differentindustries.

IDEAL INSTITUTE OF TECHNOLOGY, WADA

A Report on

Industrial Visit for Mechanical Department 7th Sem. Degree Students

At

TECNIK FLUID CONTROLS PVT.LTD

Visit Coordinator (College):

Mr. Ketan Vishnu

(Department of Mechanical Engineering)

Event Coordinator (Industry):

Mr. Nilesh J. Modle

Organized & Managed By:

Department of Mechanical Engineering

Ideal Institute of Technology, Wada

Date: 8th August, 2019

Introduction:

Department of Mechanical engineering from Ideal Engineering

College arranged one day Industrial Visit for 7th Semester Degree students to "Progressive Engineeering Works ", DAHANU, PALGHAR,MAHARASTRA INDIA, dated 8th August, 2019 for better technical knowledge enhancement of students. Visit is important especially important in the field of Engineering as the practice of engineering has an inherent (and unavoidable) impact on society. These programs can be a powerful tool to constitute a positive industrial climate and can range from basic Fabrication system programs for students. Overall, the aim of all these visit to trains the students to adapting to changing scenario of technology. After visit students can identify their own efficiency and performance which important for their career, improving work efficiency and confidence.

Purpose:

Industrial visits are an integral part of Engineering andacknowledgment of technological up gradation. The purpose ofindustrial visit for students is to provide technical knowledge with thetechnological development in the industry and to understand the gapbetween the theoretical and practical knowledge that could be passed infuture. This experience can help students to provided informationregarding functioning of various industries and associated problems andlimitations.

Interfacings with the industry also provide a chance to build networks and hone their communication skills. Moreover, the participating organizations also gain by getting refined students from the respective institute which could also help in improving their economy.

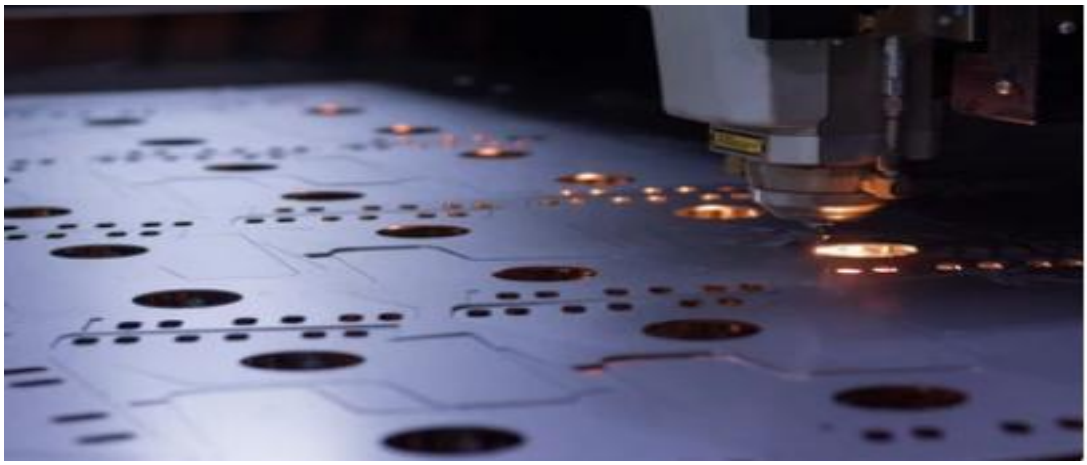
Company Profile:

Progressive is established in 2009 as a supplier of Self Structure, Sheet metal parts Progressive Engineering Works is striving hard with fullest of dedication, since 2009 to continuously improve the product quality & range as per the customers requirement.

What We Learn? :

On 8th August, 2019 We reached at PEW (Dahanu) by 10:15 AM. We got the entry at 11:30 AM.There are various departments in the industry. Generally two products have been made by the industry and that are Sheet metal and Fabrication We have seen the variousdepartments like casting department, Finishing, and Quality and Inspection Department.

Various Products of Company :



Conclusion:

From this visit, we got the information and practical knowledge about Sheet Metals Parts and Fabrication Parts. Students got the knowledge about testing of Fabrication Parts or sheet metals parts . They got the idea how to made fabrication parts are made in industry and About 40 students of 8rth Semester Mechanical Engg. Of Ideal Institute of Technology & faculty named Mr. Ketan Vishnu

benefited from this visit as they got chance to discussion with in charge officer and other engineers working at industry. Students were eagerly to say organizing this type of industrial visit for practical exposure which is shows the success of this visit.

The students are identified in terms of their current caliber based on

1. continuous internalassessment,
2. performance and
3. class room participation.

As per the guidelines of AICTE, an induction program is organized before commencement of classes of IYear engineering courses in which students are informed about

- Institute policyregarding discipline,
- attendance,
- examination,
- placement etc.

During this programme, many physical andskill development activities are conducted to make students comfortable in the new environment and alsoto access their level of learning.

Methodology for slow learner.

Some of the students are comparatively slow in terms of their grasping power.Counseling sessions areconductedtohelpsuchstudentstoovercomethepsychologicalandpedagogicalproblems. To improve their academic performance,

- Remedialclasses are conducted where critical questions and/ or topics are being taken up and explained.
- Frequentabsenteeism is conveyed to parents by respective batch counselors.
- Students are given placement relatedtraining and a set of mock interviews are also conducted to prepared students for their placement drive.

Along with that additional study material, subject notes, tutorialsheets, assignments etc are also provided to them.

Methodology for advance learner.

Advance learners have a high level of interaction during classroom teachings and in the laboratories.

- Expert sessions from academic and industry are organized for widening the horizon of these students.T
- These students are motivated to take up MOOCs for enhancing their knowledge.
- The syllabus is alsosupplemented with the several experiments beyond syllabus. Some of the experiments on virtual lab arealso referred to broaden the spectrum knowledge of quick learners.
- Such students are encouraged topresent/write articles and assist in preparation of

institute's magazine, Different cells likeTraining&PlacementCell,Incubationcentre,areestablishedfortheiroveralldevelopment. Many clubs are being run by students. The institute conducts CRT Programme and Softskillstrainingwhichisexclusivelydesignedforthestudentspreparingtogetjobsinvariousindustries.TheT&P cell organizes virtual campus drives to trace the career interest of students.

2.1 Teaching- Learning Process

2.1.1 Student centric methods, such as experiential learning, participative learning and problemsolving methodologies are used for enhancing learning experiences

Theinstitutehasadoptedstudentcentricmethodstoboosttheirinvolvementasapartofexperientiall earning, participative learning and problem-solving methodology.

Experiential learning:

1. The institutefocusesonimparting knowledgewhichenhancescritical thinkingandgivesscope forcreative imagination among students.
2. Allthelaboratorieshaveastateofartinfrastructureequippedwithadequatenumber ofexperimental set-ups, computers & peripherals.
3. Theinstitutehasanincubationcentrewhichprovidesaplatformtostudentstoconvert theirinnovative ideas into reality.
4. The institute has recognized centre of excellence in IoT and Transportation engineering.
5. There are MOUs with Microsoft and Infosys to give experiential learning on Business intelligence,cloudcomputingandInternetofThing(IoT),withcorporatetouchtostudentsandtogiveexperiential knowledge to students
6. Faculty members and students are encouraged to do courses on MOOCs..
7. Students are sent to industry for visits and to undergo internships to understand how industryfunctions and its requirements.
8. robotics lab is set up in the Institute with the support of e -yantra,
9. Besidesthepracticalworkinlaboratories,theinstitutealsoorganizesfieldsurveycamp

toenhancethe ability of students for collection and analysis of raw data with appropriate approaches andmethods.

Participative learning:

1. Thestudentsopenupandputforththeirviewsonsubject(s)tocontribute,whichimprovestheir analytical ability.
2. Thestudentsareencouragedtoparticipateindebatesandpresentationswheretheyexpressthe irdifferent opinions on a particular topic and present their learning.
3. Theinstitutehasanumberoftechnical/non-technicalclubswhicharemanagedbystudents.Students are encouraged to join clubs of their choice and also to participate in various events.
4. Projectsareassignedtoagroupofstudentswhichencouragethemtoworkinateamandalsoenh ance their learning.

Problem solving Methodologies:

1. Agroupof30studentsisformedforatutorialclass.Theseproblemsolvingclassesareplanned with the regular time table.
2. NumericalproblemsoccurringintheUniversityexaminationandothertypicalproblemsared iscussed in lecture and tutorial classes.
3. Assignmentshavingstandardandapplicationbasedproblemsaregiventostudentsandafters ubmission, these are assessed by the faculty members.
4. Projectsbasedonreal-worldproblemsandchallengesaregiventostudentswhichencouragethemto find creative and innovative solutions.

Special GATE classes for advanced learners are conducted by experienced faculty members.

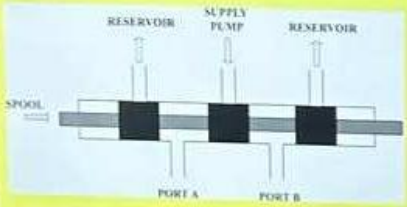
2.3.2 Teachers use ICT enabled tools for effective teaching-learning process.

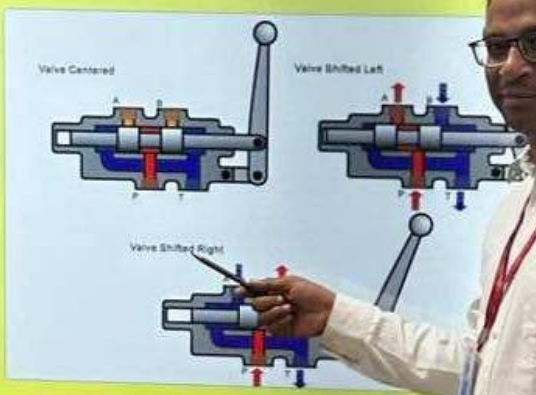
Response:

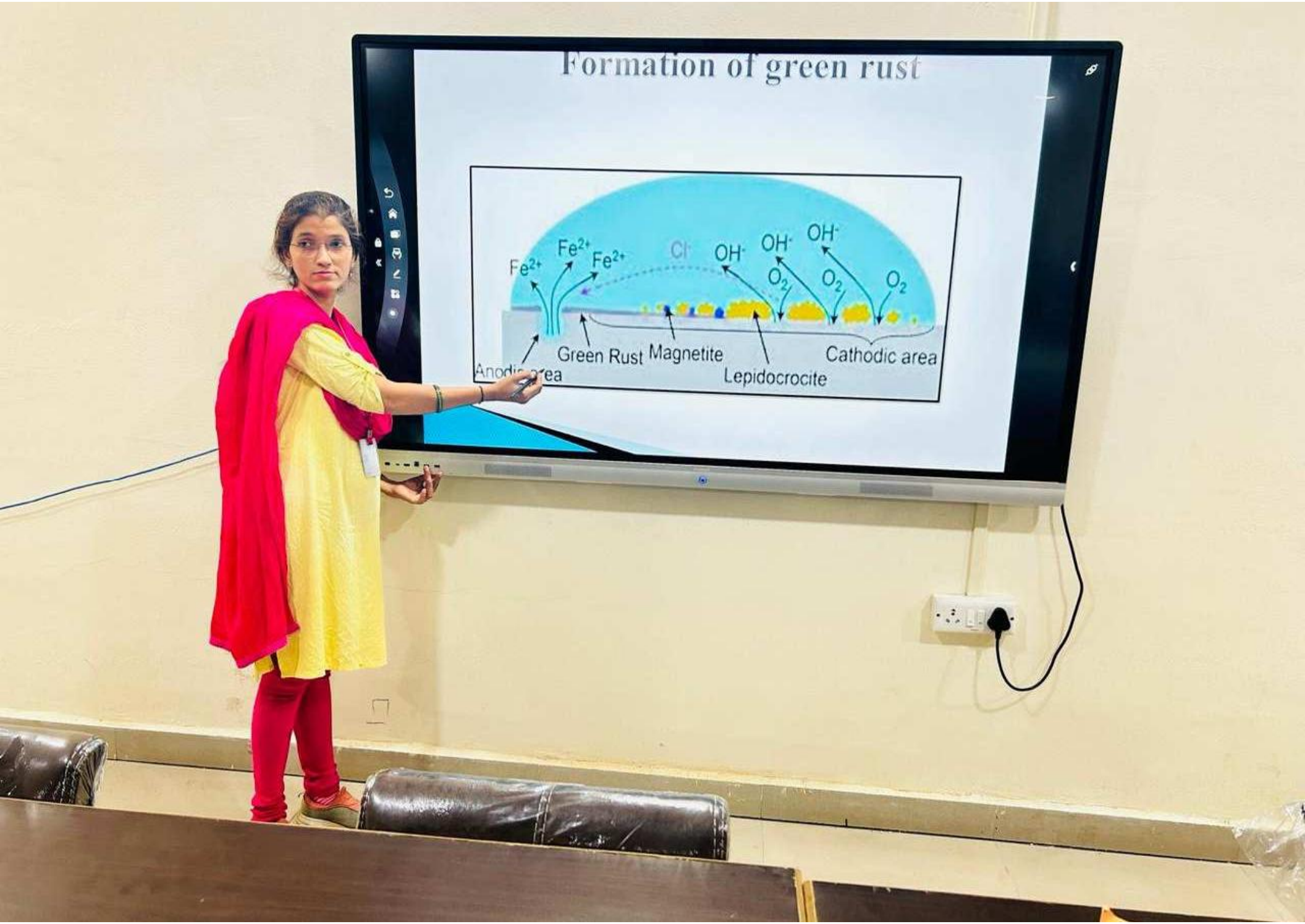
The Teaching – Learning environment is always very challenging and exciting. There are newer ways todig out for making this process interesting and meaningful. The institute has implemented ICT enabledteaching in addition to the traditional classroom education to improvise teaching learning process in themost creative and innovative way:

1. ITenabledlearningtoolssuchasPowerPointPresentations(PPTs),videolectures,onlineso urceslikeMOOCs,NPTEL,SWAYAMetc.,inadditiontoconventionalchalk-boardmethodareusedby

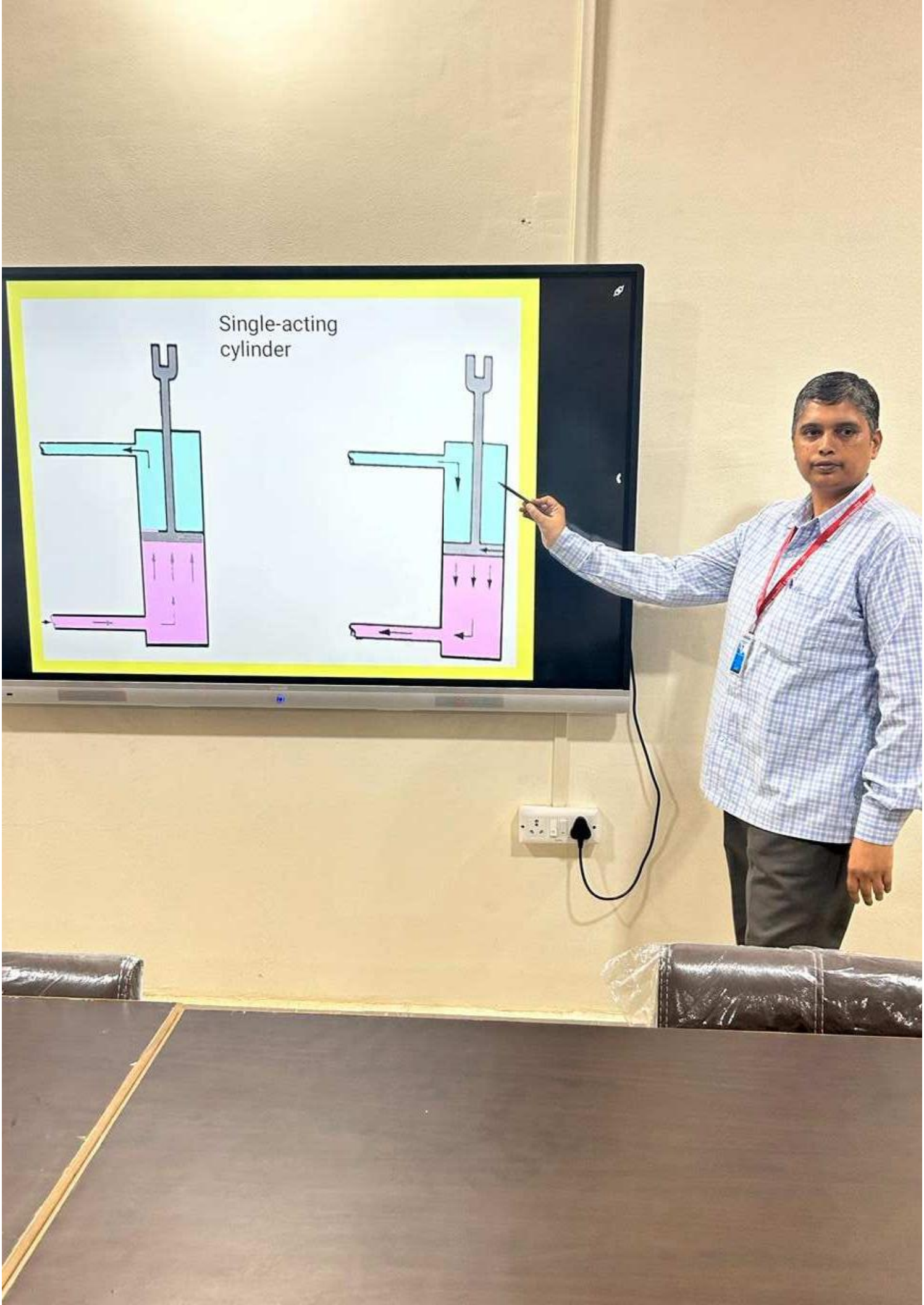
Controls direction of flow of fluid in a hydraulic system to cause the different parts of the system to function.






Formation of green rust
Fe2+
Fe2+
Fe2+
Cl-
OH-
OH-
OH-
O2
O2
O2
Green Rust
Magnetite
Lepidocrocite
Cathodic area

Computer-Networks-Network
Home
Insert
Play
Design
Transitions
Animation
Pen
Packet Switching
To improve the efficiency of transferring information over a shared communication line, messages are divided into fixed-sized, numbered packets
Network devices called routers are used to direct packets between networks
Sent message
Packet 1
Packet 2
Packet 3
Packet 2
Packet 3
Packet 1
Received message
Figure 15.4
Messages sent by packet switching
Message is divided into packets
Packets are sent over the Internet by the most expedient route
Packets are reordered and then reassembled
15-18


Single-acting
cylinder