

COMEP

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E-News Letter – Department of Computer Engineering

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Department of Computer Engineering

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Vision

To develop competent computer engineers to accept challenges based on technical skills, professional ethics and social responsibility.

Mission

M1. To provide learning environment from fundamental to emerging trends in computer engineering.

M2. To impart technical education to meet the requirements of the IT industry and society.

M3. To develop in students a sense of professional ethics and social responsibility.

“Focus on education is a big strength. I want to see young people focus on creativity and take more risks.”

Sundar Pichai

Programme Educational Outcomes (PEOs) given by MSBTE:

1. Provide socially responsible, environment friendly solutions to Computer engineering related broad-based problems adapting professional ethics.
2. Adapt state-of-the-art Computer engineering broad-based technologies to work in multi-disciplinary work environments.
3. Solve broad-based problems individually and as a team member communicating effectively in the world of work.

Programme Specific Outcomes (PSOs) given by MSBTE:

PSO1. Computer Software and Hardware Usage: Use state-of-the-art technologies for operation and application of computer software and hardware.

PSO2. Computer Engineering Maintenance: Maintain computer engineering related software and hardware systems.

MESSAGE FROM HOD



Welcome to Department of COMPUTER Engineering, Department of Engineering was established in 2006. The Department seeks to combine excellence in education with service to the industry. Our vision is to develop competent computer engineers to accept challenges based on technical skills, professional ethics and social responsibility. Our goal is to provide students with a balance of intellectual and practical experiences that enable them to serve a variety of societal needs. The department has a team of well qualified, experienced and motivated faculty members to prepare the young minds of our students for global competition.

The department regularly organizes various professional development activities and grooms its students with the communication classes and personality development program. Sports, co-curricular and extra-curricular activities takes place at institute level and students participate in various intra-colleges, inter-college, inter-university fests/competitions. Department constantly works for overall growth of students and inculcate the qualities/features that are required and acceptable by Society.

Through innovative teaching-learning process and leadership building experience at the Department, students gain vital communication and critical-thinking skills. The Department has always been providing a platform for the students to enhance their employability skills through Industry-Department Collaboration with MoUs. Turning a student in to a good and proficient citizen is the prime aim of the department. We are confident that our students will emerge as assets not only to this institution but also to the entire society at large. All the Best.

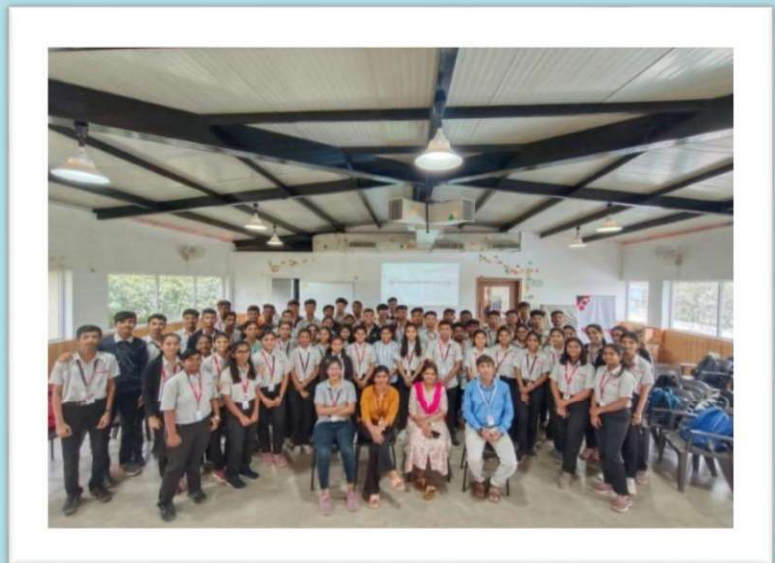
Mr. S.P. Kholambe

HOD

INDUSTRIAL VISITS

INDUSTRIAL VISIT AT SUMAGO INFOTECH 25TH AUGUST 2023

The company specializes in offering Web Designing, Web Application Development, Mobile Application Development, Software Development, Digital Marketing, Software Testing, Quality Assurance services, and many more. The aim of visit was Students got information regarding different applications like web designing, digital marketing, etc. and also know the work culture in Industry, responsibilities of team leader, etc.



INDUSTRIAL VISIT AT PROFOUND 25TH AUGUST 2023

Profound Edutech provides services in the area of IT training, Consulting, Staffing etc. Profound Edutech is an institute driven by the agenda to equip students with the right mix of a sound understanding of the fundamentals and a good comprehension of the newest in Information Technologies, thereby increasing their Employability Quotient. The IT field is one of the most 'happening' areas with new tools and techniques coming up at a fast pace. Understanding the technological mismatch this creates, Profound is mandated to update the knowledge and skills of those in the Industry through tailor-made courses.



INDUSTRIAL VISIT AT WATER FILTER PLANT 6TH NOVEMBER 2023

Wastewater treatment is a process which removes and eliminates contaminants from wastewater and converts this into an effluent that can be returned to the water cycle.



GUEST LECTURES

Topic- "AI AND ML FUTURE OF TECHNOLOGY"

Resource Person- Ms. Jyoti Labhade,

Date- 1st November 2023

Beneficiaries- All Third Year Students

Co-ordinators- Prof. P. B. Khairnar, Prof. J. B. Mhaske.

Chief Coordinator- Prof. S. P. Kholambe.

Venue- MET, BKC, IOT-Poly Seminar Hall.



Topic- "SOFT SKILL & PERSONALITY DEVELOPMENT"

Resource Person- Mr. Pranav Kumar,

Date- 18/11/2023, Wednesday, 11.00am to Onwards

Topics Cover

- With increased globalization and rapid changing business expectation, employers are looking for wide cluster of skills to cater to the changing demand.
- Personality traits and soft skills playing key role in student carrier.
- Cooperate houses looks for the soft skills that supplement hard work skills.

Co-ordinators- Prof. P. B. Khairnar, Prof. J. B. Mhaske

Chief Coordinator- Prof. S. P. Kholambe.



AMRIT MAHOTSAV PLEDGE



PARENTS MEET

Date and Time - 25/11/2023, Saturday, 9.30am to 12.30 pm

Objectives

- For improving the overall academic performance of students, parent-teacher meetings play an important role and will help the parents learn about their children's academic performance and problems.
- Through this parent-teacher meeting, parents come to know the behaviour of their children as well. As we observed, these days' teachers and parents do not come in contact with each other frequently.

Parents Meeting Covers

- Detailed discussion with the parents regarding the academic progress of students and efforts made

by the department for their improvement

- Got suggestions from the parent's and knew their viewpoints
- Percolated the Institution Educational policies to the parents
- Appreciated the efforts of student achievers (Brighter Students) for their academic success



Name of Organisers - Mr. A. P. Bhuse , Mr D. J. Ugale and All Staff of Computer Department.

CAMPUS TO INDUSTRIAL CAREER PROGRAM



FACULTY SPEAK

World Environment Day 2024

In the contemporary era, environmental protection and the fight against climate change have become critical imperatives for the survival and well-being of all life forms on Earth. As human activities increasingly exert pressure on natural ecosystems, the balance that sustains biodiversity and supports life is threatened. This document aims to foster awareness about the environment, elucidate the intricacies of ecosystems, and underscore the urgency of implementing protective measures. Understanding the interplay between our actions and the environment is the first step towards cultivating a more sustainable and resilient future.

This comprehensive guide highlights practical measures that households, communities, and industries can adopt to protect the environment and mitigate climate change. By exploring both

individual and collective actions, it emphasizes the significant impact that mindful practices can have on preserving natural resources, reducing pollution, and fostering ecological balance. Furthermore, this document delves into the proactive steps taken by Bharat (India) over the past decade, showcasing the nation's commitment to environmental conservation and sustainable development. From policy initiatives to community-driven projects, the efforts made by Bharat serve as an inspiring example of how coordinated actions can lead to meaningful environmental progress.

वृक्षादिकेषु यः पन्थाः, प्रजापालनकर्मणि।

वने चरति यो धर्मः, स धर्मः सततं मम ॥

VRKṢĀDIKEṢU YAḤ PANTHĀḤ, PRAJĀPĀLANAKARMAṆI

VANE CARATI YO DHARMAḤ, SA DHARMAḤ SATATAṀ MAMA ॥

This shloka underscores the duty of humans to protect trees and plants and care for the environment, highlighting the ethical and moral responsibility to uphold these principles as part of one's eternal duty.

Some inspiring quotes on environmental protection:

1. "The Earth does not belong to us: we belong to the Earth." — Marlee Matlin
2. "We do not inherit the Earth from our ancestors; we borrow it from our children." — Native American Proverb
3. "The greatest threat to our planet is the belief that someone else will save it." — Robert Swan
4. "Nature is not a place to visit. It is home." — Gary Snyder
5. "What we are doing to the forests of the world is but a mirror reflection of what we are doing to ourselves and to one another." — Mahatma Gandhi
6. "The environment is where we all meet; where we all have a mutual interest; it is the one thing all of us share." — Lady Bird Johnson
7. "One of the first conditions of happiness is that the link between man and nature shall not be broken." — Leo Tolstoy
8. "The Earth is what we all have in common." — Wendell Berry
9. "He that plants trees loves others besides himself." — Thomas Fuller
10. "The environment is everything that isn't me." — Albert Einstein
11. "We won't have a society if we destroy the environment." — Margaret Mead
12. "To cherish what remains of the Earth and to foster its renewal is our only legitimate hope of survival." — Wendell Berry
13. "A nation that destroys its soils destroys itself. Forests are the lungs of our land, purifying the air and giving fresh strength to our people." — Franklin D. Roosevelt
14. "Look deep into nature, and then you will understand everything better." — Albert Einstein
15. "There are no passengers on spaceship Earth. We are all crew." — Marshall McLuhan
16. "The proper use of science is not to conquer nature but to live in it." — Barry Commoner
17. "Only when the last tree has died and the last river been poisoned and the last fish been caught will we realize we cannot eat money." — Cree Indian Proverb
18. "In every walk with nature one receives far more than he seeks." — John Muir
19. "We have forgotten how to be good guests, how to walk lightly on the Earth as its other creatures

do." — Barbara Ward

20. "Live in each season as it passes; breathe the air, drink the drink, taste the fruit, and resign yourself to the influence of the Earth." — Henry David Thoreau

21. These quotes can serve as a powerful reminder of our responsibility to protect and preserve our environment.

Individuals and households

Individuals and households can make significant contributions to environmental protection through various daily practices. Here are some effective measures that can be adopted:

Energy Conservation

1. Use Energy-Efficient Appliances: Choose appliances with high energy efficiency ratings, such as those with the ENERGY STAR label.
2. Switch to LED Lighting: Replace incandescent bulbs with energy-efficient LED bulbs.
3. Unplug Devices: Unplug electronic devices when not in use to prevent energy waste from standby power.
4. Adjust Thermostats: Set thermostats to energy-saving temperatures, and use programmable thermostats to optimize heating and cooling.

Water Conservation

5. Fix Leaks: Repair dripping faucets and leaking toilets to prevent water wastage.
6. Install Low-Flow Fixtures: Use low-flow showerheads and faucets to reduce water consumption.
7. Efficient Landscaping: Use native plants that require less water and practice xeriscaping.
8. Shorten Showers: Take shorter showers to conserve water.

Waste Reduction

9. Recycle: Sort and recycle materials such as paper, glass, plastics, and metals.
10. Compost: Compost kitchen scraps and yard waste to reduce landfill waste and create nutrient-rich soil.
11. Reduce Single-Use Plastics: Use reusable bags, bottles, and containers instead of single-use plastics.
12. Buy in Bulk: Purchase items in bulk to reduce packaging waste.

Sustainable Transportation

13. Use Public Transport: Opt for public transportation, carpool, or bike instead of driving alone.
14. Walk More: Walk or bike for short trips instead of driving.
15. Electric Vehicles: Consider using electric or hybrid vehicles to reduce carbon emissions.

Sustainable Food Choices

16. Eat locally and seasonally: Choose locally grown and seasonal produce to reduce the carbon footprint associated with transportation.
17. Reduce Meat Consumption: Eat less meat and more plant-based meals, as meat production has a higher environmental impact.
18. Avoid Food Waste: Plan meals, store food properly, and use leftovers to minimize food waste.

Household Practices

19. Eco-Friendly Cleaning Products: Use biodegradable and non-toxic cleaning products.
20. Conserve Paper: Use both sides of paper and opt for digital documents whenever possible.
21. Support Sustainable Brands: Purchase from companies that prioritize sustainability and ethical practices.
22. Second-Hand Goods: Buy second-hand clothes, furniture, and other items to reduce the demand for new products.

Home Improvement

23. Insulate Homes: Properly insulate homes to reduce the need for heating and cooling.
24. Install Solar Panels: If possible, install solar panels to generate renewable energy.
25. Rainwater Harvesting: Set up a rainwater harvesting system to collect and use rainwater for gardening and other non-potable uses.

Community Involvement

26. Participate in Local Cleanups: Join community efforts to clean up parks, beaches, and other local areas.
27. Plant Trees: Participate in tree-planting initiatives to increase green cover.
28. Advocate for Change: Support and advocate for environmental policies and initiatives at local, national, and global levels.

Educate and Raise Awareness

29. Stay Informed: Keep up-to-date with environmental issues and solutions.
30. Educate Others: Share knowledge about environmental protection with family, friends, and the community.
1. By incorporating these practices into daily life, individuals and households can significantly reduce their environmental impact and contribute to a healthier planet.

Measures to be taken by Industries

Industries play a significant role in mitigating climate change. Here are several measures that industries can adopt to reduce their carbon footprint and contribute to climate change mitigation:

Energy Efficiency and Conservation

1. Implement Energy-Efficient Practices: Use energy-efficient machinery and equipment. Regularly maintain and upgrade systems to ensure optimal performance.
2. Energy Audits: Conduct regular energy audits to identify areas where energy consumption can be reduced.
3. Optimize Production Processes: Streamline operations to minimize waste and reduce energy consumption.

Renewable Energy Adoption

4. Renewable Energy Sources: Invest in renewable energy sources such as solar, wind, and hydroelectric power to reduce reliance on fossil fuels.

5. On-Site Renewable Energy Generation: Install solar panels or wind turbines on-site to generate clean energy for industrial operations.

Emission Reductions

6. Carbon Capture and Storage (CCS): Implement technologies to capture and store carbon emissions before they are released into the atmosphere.
7. Switch to Low-Carbon Fuels: Replace high-carbon fossil fuels with lower-carbon alternatives such as natural gas or biofuels.
8. Improve Industrial Processes: Adopt cleaner and more efficient industrial processes that emit fewer greenhouse gases.

Waste Management

9. Waste Reduction and Recycling: Minimize waste production through efficient use of materials and recycle whenever possible.
10. Circular Economy Practices: Design products and processes to reuse materials and reduce the need for raw material extraction.

Sustainable Supply Chain

11. Green Procurement: Source materials and products from suppliers that adhere to sustainable practices.
12. Transportation Optimization: Optimize logistics to reduce fuel consumption and emissions from transportation.

Water Conservation

13. Water-Efficient Technologies: Use technologies that reduce water usage and recycle water within industrial processes.
14. Rainwater Harvesting: Implement rainwater harvesting systems to supplement water needs and reduce pressure on freshwater sources.

Pollution Control

15. Air Pollution Control Technologies: Install scrubbers, filters, and other technologies to reduce air pollution from industrial activities.
16. Effluent Treatment: Treat industrial effluents to remove harmful substances before releasing them into water bodies.

Innovation and Research

17. Research and Development: Invest in R&D for new technologies and processes that reduce environmental impact.
18. Adopt Green Technologies: Stay updated on and implement emerging green technologies that improve efficiency and reduce emissions.

Policy and Compliance

19. Adhere to Regulations: Comply with environmental regulations and standards set by governments

and international bodies.

20. Environmental Management Systems (EMS): Implement EMS like ISO 14001 to systematically manage and improve environmental performance.

Corporate Responsibility

21. Sustainability Reporting: Regularly report on sustainability initiatives and progress toward reducing environmental impact.

22. Employee Training and Engagement: Educate employees on the importance of sustainability and encourage participation in green initiatives.

Carbon Offsetting

23. Purchase Carbon Credits: Offset unavoidable emissions by investing in projects that reduce carbon dioxide in the atmosphere, such as reforestation or renewable energy projects.

Collaboration and Advocacy

24. Industry Collaboration: Collaborate with other industries, governments, and NGOs to develop and implement best practices for sustainability.

25. Advocate for Policy Change: Support and advocate for policies and regulations that promote climate change mitigation and environmental protection.

26. By adopting these measures, industries can significantly reduce their environmental impact and contribute to global efforts to mitigate climate change.

Last Decade of Bharat – Steps towards Environment Conservation and Climate Change Mitigation

Bharat (India) has undertaken numerous measures in the past decade to protect the environment and mitigate climate change. Here are some of the significant initiatives:

Renewable Energy Initiatives

1. National Solar Mission (2010): Launched to promote solar energy, the mission aimed to establish India as a global leader in solar energy by increasing the capacity to 100 GW by 2022.

2. Wind Energy Development: India has become one of the largest wind energy producers, with substantial investments in wind farms and supportive policies.

3. International Solar Alliance (ISA) (2015): Co-founded by India, the ISA aims to promote solar energy use globally and reduce dependence on fossil fuels.

Energy Efficiency

4. Perform Achieve and Trade (PAT) Scheme (2012): A market-based mechanism to improve energy efficiency in energy-intensive industries through tradeable energy saving certificates.

5. Ujala Scheme (2015): Promoted the distribution of LED bulbs to reduce electricity consumption and greenhouse gas emissions.

Forest and Biodiversity Conservation

6. Green India Mission (2014): Part of the National Action Plan on Climate Change (NAPCC), it aims

to protect, restore, and enhance India's diminishing forest cover and respond to climate change.

7. Compensatory Afforestation Fund Act (2016): Established a fund for afforestation and regeneration of forest cover to compensate for forest land diverted to non-forest use.

Air Pollution Control

8. National Clean Air Programme (NCAP) (2019): A comprehensive strategy to tackle air pollution in 102 cities with a goal to reduce PM2.5 and PM10 levels by 20-30% by 2024.
9. Bharat Stage VI (BS-VI) Emission Norms (2020): Implemented stricter emission standards for vehicles to reduce air pollution.

Waste Management

10. Swachh Bharat Abhiyan (Clean India Mission) (2014): Launched to improve waste management and sanitation across the country, aiming for an open-defecation-free India and better solid waste management practices.
11. Plastic Waste Management Rules (2016): Strengthened regulations for the management and recycling of plastic waste, including a ban on single-use plastics.

Water Conservation

12. Atal Mission for Rejuvenation and Urban Transformation (AMRUT) (2015): Focuses on water supply, sewerage, and urban transport to improve the quality of urban life.
13. Jal Shakti Abhiyan (2019): A campaign for water conservation and rainwater harvesting, promoting efficient water use.

Climate Change Adaptation and Mitigation

14. National Adaptation Fund for Climate Change (NAFCC) (2015): Supports adaptation activities in sectors vulnerable to climate change, such as agriculture, water resources, and forestry.
15. State Action Plans on Climate Change (SAPCC): States have developed their own action plans in line with the NAPCC to address region-specific climate challenges.

Sustainable Agriculture

16. Paramparagat Krishi Vikas Yojana (PKVY) (2015): Promotes organic farming and improves soil health through the use of natural inputs.
17. Pradhan Mantri Krishi Sinchai Yojana (PMKSY) (2015): Aims to enhance water use efficiency in agriculture through the adoption of precision-irrigation techniques.

Electric Mobility

18. FAME India Scheme (2015): The Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) aims to promote electric vehicles to reduce dependence on fossil fuels and cut down on vehicular emissions.

Policy and Regulatory Framework

19. Climate Action Plan (2015): India submitted its Intended Nationally Determined Contributions (INDCs) to the Paris Agreement, committing to reduce the emissions intensity of its GDP by 33-

35% by 2030 from 2005 levels.

20. National Mission for Enhanced Energy Efficiency (NMEEE): Focuses on improving energy efficiency across various sectors of the economy through innovative policy mechanisms.

Reforestation and Afforestation

21. Urban Forestry: Initiatives to increase green cover in urban areas through the planting of trees and creation of green spaces.

1. Public Awareness and Participation

22. Eco Clubs: Established in schools to educate students about the environment and involve them in environmental protection activities.

23. Green Good Deeds Campaign (2018): A public awareness campaign urging people to adopt small, environmentally friendly practices in their daily lives.

These measures reflect India's comprehensive and multi-faceted approach to environmental protection and climate change mitigation, involving policy, technology, public participation, and international collaboration.

The urgency of environmental conservation and climate change mitigation cannot be overstated. As we navigate the challenges of the 21st century, it is imperative that individuals, communities, and industries collectively embrace sustainable practices to protect our planet. This document has outlined actionable steps at various levels to foster a healthier, more resilient environment. Moreover, the efforts undertaken by Bharat over the past decade exemplify the significant progress that can be achieved through dedicated policies and community engagement. By committing to these practices, we not only safeguard the natural world for future generations but also enhance our quality of life today. Let us all strive to be stewards of the environment, nurturing the ecosystems that sustain us and ensuring a harmonious balance between human activities and nature.

Written and Compiled by

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