VIMAL JYOTHI ENGINEERING COLLEGE
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

NEWS LETTER
ELECTRICAL GNOSYS

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VISION

To evolve as a centre of excellence, to train students in contemporary technologies, to meet the needs of global industry and to develop them into skillful engineers instilled with human values and professional ethics.

MISSION

To produce competent and disciplined Electrical & Electronics Engineers through delivery of quality education to meet the ongoing global challenges in alignment with technical education system and society.

INSIDE THE ISSUE

NAAC Peer team visit

The peer team experts from the NAAC visited the college on 9th and 10th May 2024

NAAC Peer team visit

Alumni Meet

ചെന്നൈ വിമൽജ്യോതി എൻജിനീയറിങ് കോളേജിൽ 2007-2011 വർഷം ഇലക്ട്രിക്കൽ ആൻഡ് ഇലക്ട്രോണിക്സ് വിഭാഗത്തിൽ പഠിച്ച വിദ്യാർഥികളുടെ കുടുംബസംഗമത്തിൽ പങ്കെടുത്തവർ

S4 Industrial Visit

S4 Students along with two Faculty and a parent visited Pallivasal Hydro Electric power plant- KSEB Ltd. on 03/05/2024.

S6 Industrial Visit

S6 Students along with two Faculty and a parent visited Goa Diary farm on 02/05/2024

Technical Note- Electric mobility

Electric mobility is a transformative trend reshaping the landscape of transportation worldwide. With increasing concerns about climate change, air pollution, and energy sustainability, the shift towards electric vehicles (EVs) has gained significant momentum in recent years. This technical note delves into the key aspects of electric mobility, including its technological foundations, environmental impact, economic implications, and challenges ahead.

At its core, electric mobility revolves around the use of electric propulsion systems to power vehicles. Unlike traditional internal combustion engine vehicles that rely on fossil fuels, EVs are powered by electric motors fueled by electricity stored in batteries or other energy storage devices. This fundamental shift in propulsion technology holds immense potential for reducing greenhouse gas emissions, mitigating air pollution, and enhancing energy security.

One of the primary drivers behind the adoption of electric mobility is its environmental benefits. EVs produce zero tailpipe emissions, leading to a significant reduction in air pollutants such as carbon dioxide (CO2), nitrogen oxides (NOx), and particulate matter. By transitioning from fossil fuel-powered vehicles to EVs, cities can improve air quality, mitigate the adverse health effects of pollution, and combat climate change by reducing greenhouse gas emissions.

Moreover, electric mobility offers the opportunity to decouple transportation from fossil fuel consumption, thereby enhancing energy sustainability. As the electricity grid transitions towards renewable energy sources such as wind, solar, and hydroelectric power, the environmental footprint of EVs diminishes further. By integrating renewable energy generation with electric mobility, societies can achieve a more sustainable and resilient transportation system.

Technical Note- Electric mobility

From an economic standpoint, electric mobility presents both opportunities and challenges. While EVs typically have higher upfront costs compared to their conventional counterparts, they offer lower operating costs over the vehicle's lifetime. Electric vehicles benefit from simpler drivetrains with fewer moving parts, resulting in reduced maintenance and repair expenses. Additionally, the decreasing cost of battery technology is making EVs more affordable and competitive with internal combustion engine vehicles.

Furthermore, the electrification of transportation has significant implications for energy markets and infrastructure. As the demand for electricity to power EVs grows, there is a need for expanded charging infrastructure to support widespread adoption. This includes public charging stations, workplace charging facilities, and residential charging solutions. The development of a robust charging network is essential to address range anxiety, facilitate long-distance travel, and enable convenient charging options for EV owners.

Despite the promising prospects of electric mobility, several challenges must be addressed to accelerate its adoption. One key challenge is the limited range of current EVs compared to conventional vehicles, particularly for long-distance travel. While advancements in battery technology are extending the range of EVs, achieving parity with internal combustion engine vehicles remains a priority.

Another challenge is the availability and accessibility of charging infrastructure. In many regions, the charging infrastructure is still underdeveloped, hindering the widespread adoption of EVs. Governments, utilities, and private stakeholders must collaborate to invest in charging infrastructure deployment, incentivize charging station deployment, and streamline permitting processes to accelerate market growth.

Technical Note- Electric mobility

Furthermore, the integration of EVs with the electricity grid poses technical challenges related to grid stability, peak demand management, and load balancing. Smart charging solutions, vehicle-to-grid (V2G) technology, and grid-scale energy storage systems can help optimize the interaction between EVs and the grid, maximizing the benefits of electric mobility while minimizing its impact on grid operations.

Policy support and regulatory frameworks play a crucial role in driving the transition towards electric mobility. Governments worldwide are implementing incentives such as tax credits, rebates, and subsidies to encourage EV adoption, accelerate the deployment of charging infrastructure, and stimulate research and development in electric vehicle technology.

In conclusion, electric mobility represents a paradigm shift in transportation, offering significant environmental, economic, and social benefits. By transitioning from fossil fuel-powered vehicles to electric vehicles, societies can reduce greenhouse gas emissions, improve air quality, enhance energy security, and foster innovation in the automotive industry. However, addressing the challenges associated with electric mobility requires a coordinated effort from governments, industry stakeholders, and civil society to realize its full potential and create a sustainable transportation future.

Mr. Jithin Nair, S6 EEE

2020-24 Batch Farewell

2020-24 Batch Farewell

2020-24 Batch- Group Photo

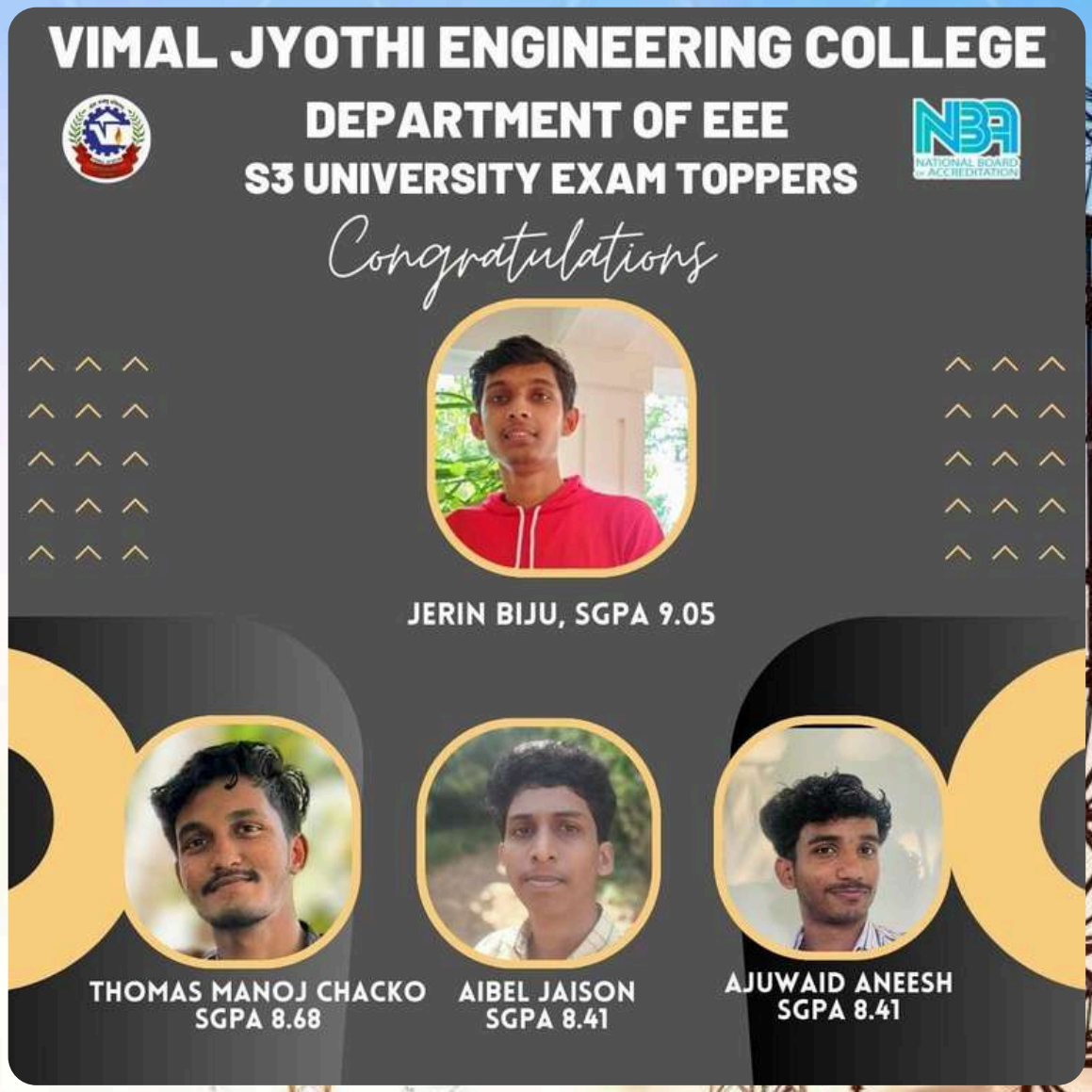
Wishing you all the best in your future endeavors and new chapter in life! May you approach everything with the same positive attitude and good fortune that you have always shown. We're proud of you, good luck!

Congratulations S5 Toppers

Your hard work, dedication, and commitment have paid off, and you've achieved an incredible milestone. Your achievement deserves recognition. Keep reaching for the stars.
Congratulations S5 Toppers...

Congratulations S3 Toppers

Your hard work, dedication, and commitment have paid off, and you've achieved an incredible milestone. Your achievement deserves recognition. Keep reaching for the stars.
Congratulations S3 Toppers...



Alumni Interaction

Mr. Awsin Bhaskar, Senior RPA Developer, Billennium India interacted with S4 and S6 students

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

-GRADUATES WILL ACHIEVE BROAD AND IN-DEPTH KNOWLEDGE OF ELECTRICAL & ELECTRONICS ENGINEERING RELATING TO INDUSTRIAL PRACTICES AND RESEARCH TO ANALYZE THE PRACTICAL PROBLEMS AND THINK CREATIVELY TO GENERATE INNOVATIVE SOLUTIONS USING APPROPRIATE TECHNOLOGIES.

-GRADUATES WILL MAKE VALID JUDGMENT, SYNTHESIZE INFORMATION FROM A RANGE OF SOURCES AND COMMUNICATE THEM IN SOUND WAYS APPROPRIATE TO THE DISCIPLINE.

-GRADUATES WILL SUSTAIN INTELLECTUAL CURIOSITY AND PURSUE LIFELONG LEARNING NOT ONLY IN AREAS THAT ARE RELEVANT TO ELECTRICAL & ELECTRONICS ENGINEERING, BUT ALSO THAT ARE IMPORTANT TO SOCIETY

-GRADUATES WILL ADAPT TO DIFFERENT ROLES AND DEMONSTRATE LEADERSHIPS IN GLOBAL WORKING ENVIRONMENT BY RESPECTING DIVERSITY, PROFESSIONALISM AND ETHICAL PRACTICES

PROGRAM SPECIFIC OUTCOMES (PSOS)

APPLY THE KNOWLEDGE OF ELECTRICAL FUNDAMENTALS, CIRCUIT DESIGN, CONTROL ENGINEERING, ANALOG & DIGITAL ELECTRONICS TO THE FIELD OF ELECTRICAL & ELECTRONICS SYSTEMS IN INDUSTRY.

DEVELOP TECHNICAL KNOWLEDGE, SKILL, AND COMPETENCE TO IDENTIFY COMPREHEND AND SOLVE PROBLEMS IN RESEARCH AND ACADEMIC RELATED TO POWER SYSTEM ENGINEERING, INDUSTRIAL DRIVES & CONTROL.

PROGRAM OUTCOMES (POS)

1.ENGINEERING KNOWLEDGE

2.PROBLEM ANALYSIS

3.DESIGN/ DEVELOPMENT OF SOLUTIONS

4.CONDUCT INVESTIGATIONS OF COMPLEX PROBLEMS

5.MODERN TOOL USAGE

6.THE ENGINEER AND SOCIETY

7.ENVIRONMENT AND SUSTAINABILITY

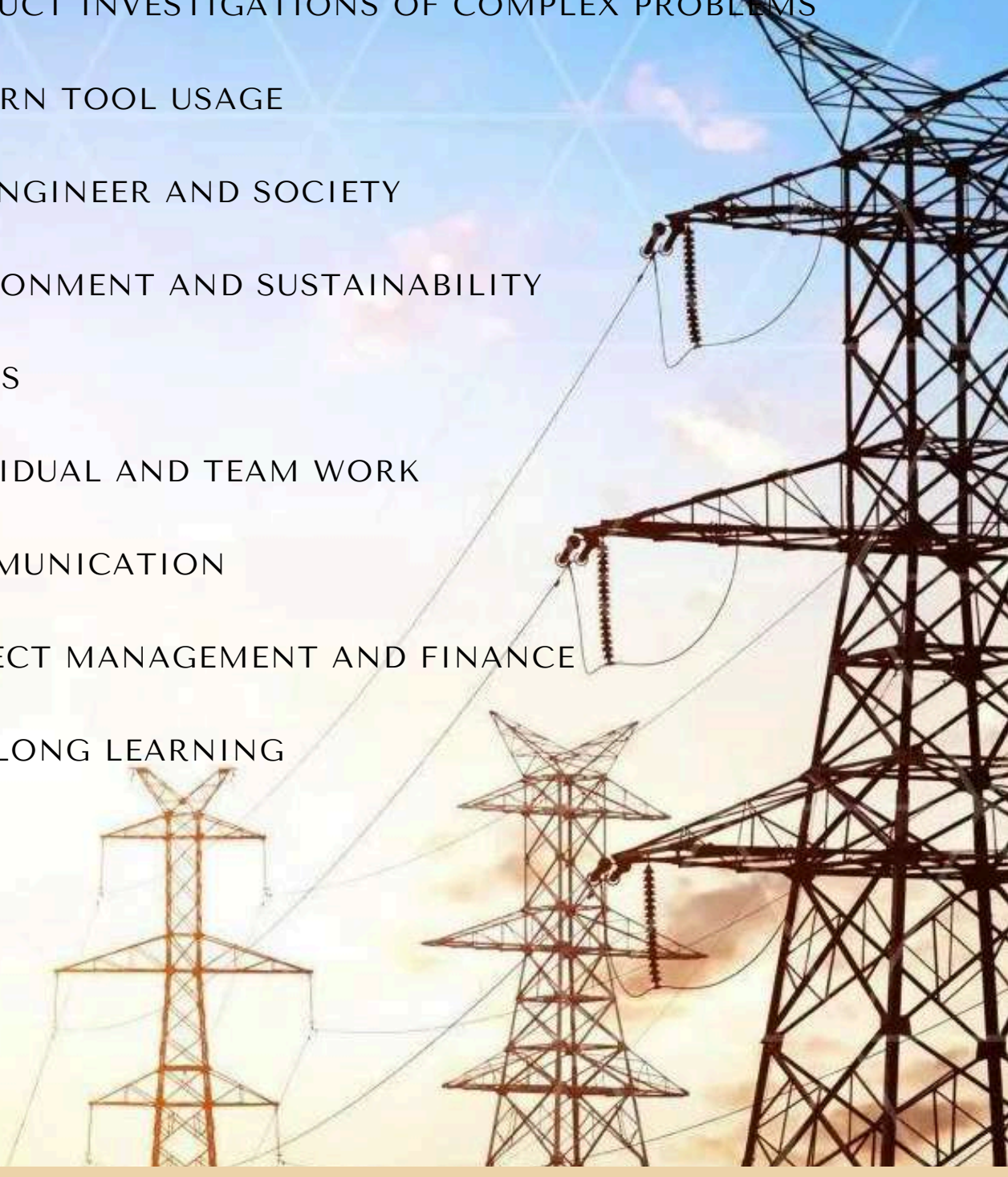
8.ETHICS

9.INDIVIDUAL AND TEAM WORK

10.COMMUNICATION

11.PROJECT MANAGEMENT AND FINANCE

12.LIFE-LONG LEARNING



Congratulations

VJEC is Accredited with a CGPA of 3.15 on a seven point scale at A Grade valid for a period of 5 years from 16 - 05 - 2024.

EDITORS

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