School of Electrical, Electronics and Communication Engineering

Dr. B. Mohapatra, (Prof. & Dean)
(MIEEE, LMIETE, LMISTE, LMOBA)
Programs Offered

- **B.Tech | 4 Year Programme|**
  - Electrical Engineering
  - Electrical and Electronics Engg.
  - Electronics and Comm. Engg. *(NBA Accrediated)*
  - Electronics and Comm. Engg. *(Biomedical Engg.)*

- **M.Tech | 2 Year Programme|**
  - VLSI Design
  - Communication Engineering
  - Power Systems Engineering
Department of Electronics and Communication Engineering

Vision
To be recognized globally as a premier department of Electronics and Communication Engineering for value based education, interdisciplinary research and innovation.

Mission
• To produce skilled professional in the field of Electronics and Communication Engineering to meet the requirement of Industry 4.0.
• To setup Center-of-Excellence for design simulation and product development.
• To provide opportunities for students to work on real world problems and develop sustainable solutions.
• To collaborate with industry and professional bodies to design up-to-date curriculum as per the industry need.
Department of Electronics and Communication Engineering

Program Educational Objectives
The Graduate shall
PEO1: Exhibit their professional knowledge in the field of Electronics and S/W areas.
PEO2: Demonstrate their research skills in multidisciplinary environment and in higher studies.
PEO3: Emerge as a potential entrepreneur and contribute to the development of the society.

Program Specific Outcome
PSO1: Electronic System Development: Develop real time applications using Printed Circuit Board and Integrated Circuits.
Why to Study B.Tech in Electronics & Communication Engineering

• Electronics and Communication Engineering (ECE) jobs represent over 50% of all available jobs in engineering.

• An ECE graduates can enter in to the job market of Computer engineering, Electrical Engineering, Instrumentation Engineering, Control Engineering, Robotics, VHDL, VLSI.

• The most important benefits of ECE branch that Electronics and Communication branch provides the freedom to choose between hardware field and software field.

• Also the reason that a lot of industries choose to prefer Electronics and Communications engineers over other engineers
Department of Electrical Engineering

Vision
To be known globally as a premier Department offering value-based education in Electrical Engineering through interdisciplinary research and innovation.

Mission
• To provide high quality education in the field of Electrical Engineering.
• Establish state-of-the-art facilities for design and simulation.
• To provide effective solution to the industries in Energy and allied areas through research and consultancy.
• Immunize the students with knowledge and experience in their field of specialization to contribute in the making of professional leaders.
Program Educational Objectives
The Graduate shall

PEO1: Develop skills and proficiency in core areas of Electrical and related multidisciplinary Engineering fundamentals.

PEO2: Demonstrate technical competence to tackle problems in the field of industry using emerging technologies, innovation and entrepreneur skill.

PEO3: Pursue higher education, research and development in electrical engineering and allied areas of science and technology.

Program Specific Outcome

PSO1: Demonstrate their knowledge in analysis and design of industrial drives for utilizing renewable energy sources.

PSO1: Develop sustainable solutions for electrical engineering problems using Machine Learning, Artificial Intelligence and IoT.
Why to Study B.Tech in Electrical Engineering

• Electrical Engineering is the root of all circuit branches.
• It is a broad field that offers exciting career opportunities where one will be creative, problem solve problems and can explore how things work in real life.
• Electrical Engineers are constantly in high demand, especially in today’s world, where, all are looking for alternate sources of energy.
• Graduate has a fantastic employment prospects.
Electrical Engineering: The Backbone

Typical AC Power Supply System (Generation, Transmission and Distribution)
Department of Electrical & Electronics Engineering

Vision
To be known globally as a premier Department offering value-based education in Electrical and Electronics Engineering through interdisciplinary research and innovation.

Mission
• To provide high quality education in the field of Electrical and Electronics Engineering.
• Establish state-of-the-art facilities for design and simulation.
• Provide opportunities to students to work on real world problems and develop sustainable ethical solutions.
• Immunize the students with knowledge and experience in their field of specialization to contribute in the making of professional leaders.
Department of Electrical & Electronics Engineering

Program Educational Objectives
The Graduate shall

**PEO1**: Develop skills and proficiency in core areas of Electrical and Electronics and related multidisciplinary Engineering fundamentals.

**PEO2**: Demonstrate technical competence to tackle problems in the field of industry using emerging technologies, innovation and entrepreneur skill.

**PEO3**: Pursue higher education, research and development in electrical and electronics engineering and allied areas of science and technology.

Program Specific Outcome

**PSO1**: Apply the technical skills in the design and development of IOT based device to contribute towards digital India and smart city.

**PSO2**: Demonstrate their knowledge in analysis and design of industrial drives for utilizing renewable energy sources.
Why to Study B.Tech in Electrical & Electronics Engineering

• EEE is a branch s a wonderful combination of Electrical Engineering and Electronics Engineering.

• EEE course the candidate is capable for various career opportunities in the fields like Electric Power generation, Transmission and Distribution, Semiconductor and other electronic component manufacturing, Electric Vehicle, electro medical instruments, control & instruments manufacturing.
Tracks @ SEECE

✓ IoT
✓ VLSI
✓ Signal Processing
✓ Communication and Networking
✓ Biomedical Engineering and Health care
✓ Control Engineering
✓ Power Engineering
✓ Energy Engineering
✓ Processing and Computing Techniques
Major Laboratories

✓ Integrated Circuit Lab
✓ VLSI Lab
✓ Control & Instrumentation Lab
✓ Microwave and Optical Communication Lab
✓ Basic Electrical and Electronics Lab
✓ Communication Engineering Lab
✓ Embedded and Microprocessor Lab
✓ Digital Design Lab
✓ IoT Lab
✓ Machine Lab
✓ Power System Engineering Lab
International Conference Organized

- International Conference on Electrical and Electronics Engineering (**ICEEE-20**, Feb. 28-29, 2020)
List of Professional Societies

✓ Institute of Electrical, Electronics Engineering (IEEE), USA
✓ Institute of Electronics and Telecommunication Engineers (IETE), India
Career Prospects

✓ **Top Government Organizations**
Indian Railway, BEL, ISRO, DRDO, Defense, ITI and BSNL, NTPC, NHPC, BHEL, NALCO, ONGC etc..

✓ **Top Private Recruiters**
Texas Instruments, Ericson, Phillips, Samsung, LG, Motorola, ST Microelectronics, Nokia, TCS, Tech Mahindra, Infosys, Wipro, HCL, L&T, BPL Healthcare, Siemens, Blue Star, GE-Medical etc.

✓ **Research & Higher Studies**
Graduates can pursue Masters or Doctoral degree after completions of the B.Tech. degree.

✓ **Entrepreneurships**
Galgotias University also provides opportunities and encourages students to establish their own start-ups during their studies.
# Courses on Emerging Areas in ECE/EEE/EE

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<td>Automation and Robotics</td>
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<td>Deep Learning Algorithms</td>
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<td>Object Oriented Programming</td>
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<td>Virtual Reality</td>
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<td>Introduction to Arduino programming and its applications</td>
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<td>MEMS</td>
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<th><strong>Communication and Networking</strong></th>
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<td>Mobile Ad Hoc Networks</td>
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<td>Mobile Computing</td>
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<td>Microwave Engineering</td>
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<td>Information Theory and Coding</td>
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<td>Radar Guidance and Navigation</td>
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<td>Optical Communication</td>
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<td>Wireless Sensor Networks</td>
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<td>Opto Electronics</td>
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# Courses on Emerging Areas in ECE/EEE/EE

## Signal Processing
- Image and Video Signal Processing
- Multimedia Signal Processing and Networking
- Speech and Audio Processing
- Machine learning
- Image Processing using MATLAB
- Introduction to Scilab and its applications
- Human Computer Interface
- Advanced Digital Signal Processing
- Soft Computing
- Mixed Signal Circuit Design
- Neural Networks and Fuzzy Control
- Neural Networks and Deep Learning Algorithms

## Control Engineering
- Title of the Elective
- Advanced Control System
- Industrial Automation and Control
- Industrial Instrumentation and Automation
- Power System Operation and Control
- Digital Control
- Automation and Robotics
- Introduction to PLC and SCADA
### Energy Engineering

- Non-conventional Energy Resources
- Energy Assessment and Audit
- Utilization of Electrical Energy and Traction System
- Power Electronics applications in Renewable Energy
- Special Electrical Machine
- Energy Modelling Simulation Using MATLab

### Processing and Computing Techniques

- Machine learning
- Image Processing using MATLab
- Introduction to Scilab and its applications
- Human Computer Interface
- Digital Signal Processing
- Soft Computing
- Neural Networks and Fuzzy Control
- Neural Networks and Deep Learning Algorithms
# Courses on Emerging Areas in ECE/EEE/EE

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<td>Electric Drives</td>
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<td>FACTS and HVDC</td>
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<tr>
<td>Electrical and Hybrid Vehicle</td>
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<tr>
<td>Power System Deregulation</td>
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<tr>
<td>Special Electrical Machine</td>
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<tr>
<td>High Voltage Engineering</td>
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# Our Alumuni:

<table>
<thead>
<tr>
<th>Name</th>
<th>Higher Study/ Job</th>
<th>Place</th>
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<tbody>
<tr>
<td>Sneha Verma</td>
<td>Ph.D.</td>
<td>City University of London</td>
</tr>
<tr>
<td>Ashish Ranjan Srivastav</td>
<td>M.S</td>
<td>Macquarie University, Sydney, Australia</td>
</tr>
<tr>
<td>Shubham Waliya</td>
<td>Works at Jaguar Land Rover Engineering Centre</td>
<td>Warwickshire, United Kingdom (UK)</td>
</tr>
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Placements