EEE Department Started with an intake of 60 Seats

Received ISO certification

M.E. Applied Electronics Started with an intake of 18 Seats

Recognized as Research Centre by Anna University, M.E. (Applied Electronics) - Part time Started

Increase in intake from 60 - 120 seats - Accredited by NBA for 3 yrs

Established Centre for Research on Green Energy and Environment

Received Autonomous Status

Accredited by NAAC

Re-accredited by NBA - AICTE for 2 years

Established ASIC Centre of Excellence

Established IAEMP Student Chapter, Organised International Conference on Renewable Energy and Sustainable Environment

Renewal of Research Centre, Commencement of Suryamitra - Skill Development Programme

Dr. MAHALINGAM
COLLEGE OF ENGINEERING AND TECHNOLOGY
Autonomous Institution; Approved by AICTE and Affiliated to Anna University, Chennai;
Accredited by NAAC with 'A' Grade ISO 9001:2008 Certified
Udumalai Road, Pollachi, 642 003. Tel: 04259-236030/40/50 www.mcet.in

CONTACT
Head of the Department
www.mcet.in
Phone: +91-9942955520
Mail ID: hod_eee@drmcet.ac.in

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
about the department

Department of Electrical and Electronics Engineering was established in the year 2002 and offers BE (EEE), ME (Applied Electronics) and PhD programmes, approved by AICTE, affiliated to Anna University & accredited by NBA. The department provides an excellent atmosphere for students to learn and acquire necessary skills that are required by the industry. The department has experienced faculty members who are fully committed to teach, carry out research and impart quality education to the students. Students have access to well-equipped, state-of-the-art laboratories. A wide range of research activities undertaken in the department allows students to gain contemporary knowledge about real-life problems in the industry. Hence the department endeavours to provide hands-on education to all of its students. The department has brought out outstanding engineers in the past and will continue its service in the years to come.

vision

Emerge as the world leader for the Electrical and Electronics Engineering Education and Research for the application of knowledge to the society.

mission

The EEE Department believes that every student is unique and is in process of continuous growth. In order to foster growth and empowerment, we commit ourselves to

- Provide a stimulating learning environment with a Technological orientation to maximize individual potential
- Continuous pursuit of Quality and Excellence
- Provide appropriate know-how and up-to-date knowledge
- Nurture creativity and ambition for research

programme educational objectives (peos)

- PED 1. Actively apply technical and professional skills in engineering practices to face industrial challenges around the globe.
- PED 2. Own their professional and personal development by continuous learning and apply to create new knowledge.
- PED 3. Conduct themselves in a responsible, professional and ethical manner supporting sustainable economic development which enhances the quality of life.

organisational structure

Programmes Offered
B.E - Electrical and Electronics Engineering
M.E - Applied Electronics
Ph.D. - Recognized Research Centre by Anna University, Chennai

international collaboration

- Two Faculty members of the department participated in the Canada-India summit held at Cape Breton University, Canada during October, 2012.
- Department organised India-Canada Project summit on Energy and Environment to promote international collaborative research during 2013.
- Dr. A. Saktivel worked as Research Trainee in Energy Projects at Verschuren Centre for Sustainability in Energy and Environment (VCESE) in Cape Breton University, Canada withabbatical.

serving the community

- "Suryamitra" - Skill Development program supported by Skill Council for Green Jobs(SCGJ), an initiative by Government of India is conducted by the department through TUV Rheinland, sponsored by Ministry of New and Renewable Energy (MNRE), Government of India.
- The main objective of this training programme is to train 10+2 passed, ITI/diploma holders to execute and successful implementation of National Solar Mission across the country.
- Currently two batches of students are given training related to Solar Energy. Each batch consists of 30 Students and the duration of training is 3 months.

Programmes Coordinators:
- Dr. G.K. Balasubramanian
- Dr. Anitha Arivappan
- Dr. T. Paul Mathew
- Dr. G. Sathyamoorthy
- Meera
- Students

HIGHLIGHTS OF THE DEPARTMENT

- Industry Oriented Curriculum with Outcome Based Education
- Qualified faculty members with 6 doctorates and 26 PG Holders.
- Teaching - learning in collaboration with industries through One Credit Courses.
- Potential Students are given special training to get placement in core companies.
- Good Placement Record.
- Encouraging students to undergo In-Plant Training and Internship.

- Established Centre of Excellences - ASIC and CRSEE to promote hands on experience in IC design and Power Quality Engineering.
- Eight faculty members received certificate from IARCCentre for UN in International Paris Climate Summit Program.
- Established 66.5 kWp Solar Power Plant with Data logging system to promote Research on Green Energy.
RESEARCH AND DEVELOPMENT ACTIVITIES

Few Industries undertaken consultancy work:

- Received AICTE MODRIBS grant of Rs.5,90,000/- for Power Electronics Laboratory.
- Received a grant of Rs. 2,33,000/- from UGC for the project titled “Design and Development of Absorption Photometry and Photo Acoustic based Non-Invasive Blood Glucose Measuring Instrument”.
- Received a grant of Rs. 31,000/- from MNRE for conducting Seminar on “Advanced Microgrids Using Hybrid Renewable Sources”.
- Received a grant of Rs. 5,65,000.00 from DST, ISTE and Industry for organizing an International Conference on RES2’15.
- Faculty members of the department conducted workshops and training programmes for external participants and generated an amount of Rs. 79,000/- and Rs. 1,18,750/- during the Academic Years 2014-15 and 2015-16 respectively.
- An amount of Rs. 5,49,800/- has been generated through Power Quality and Energy Auditing during the Academic years 2014-15 and 2015-16.

PROGRAMME OUTCOMES (POs)

Graduates of Electrical and Electronics Engineering Programme will be able to:

- PO 1. Apply the knowledge of Mathematics, Science and Engineering to solve problems in the field of Electrical and Electronics Engineering.
- PO 2. Identify, formulate, model, analyze and solve complex problems in the field of Electrical and Electronics Engineering.
- PO 3. Design an Electrical / Electronic System / Component, or Process to meet specified purposes with due consideration for economic, environmental, social, political, ethical, health and safety issues.
- PO 4. Design and conduct experiment, analyze and interpret data to provide valid conclusions in the field of Electrical and Electronics Engineering.
- PO 5. Apply appropriate techniques and modern tools for design and analysis of Electrical/ Electronic systems with specified constraints.
- PO 6. Apply contextual knowledge to provide engineering solutions with societal, professional & environmental responsibilities.
- PO 7. Provide sustainable solutions within societal and environmental contexts for problems related to Electrical and Electronics Engineering.
- PO 8. Comply with code of conduct and professional ethics in engineering practices.
- PO 9. Work effectively as an individual or as a member/leader in multi disciplinary team to find solutions for engineering problems.
- PO 10. Communicate effectively to engineering community and society with proper aids and documents.
- PO 11. Demonstrate knowledge and understanding of the engineering and management principles to manage projects in multi disciplinary environment.
- PO 12. Recognise the need for, and have the ability to engage in independent and lifelong learning.

OUTCOME-BASED EDUCATION (OBE)

MCET has stepped into Outcome-Based Education to meet out the global standards and expectations from its stake-holders in all its engineering programmes. The goal of MCET is to create entrepreneurs, innovators, engineers and scientists with good ethical and professional values by adopting OBE. The shift to outcome-based education at MCET is analogous to the quality revolution in industrial sectors. Concerns that the education system cannot adequately prepare students for life and work in the 21st Century have prompted MCET to explore new ways of designing education. To achieve and to enhance the learning outcomes, Outcome Based Educational Program at MCET continuously develops and raises the capabilities of teaching, learning and evaluation.

Initiatives:

- Faculty members attended Teaching Learning Seminar series I & II on “Analysis, Design, Development, Implementation and Evaluation of Assessments” facilitated by Dr. John Rymler, University of Calgary.
- Tie up with TVS Motor company, Hosur to enhance Outcome based Education.
- Five Faculty members undergone workshop on OBE at TVS Motor, Hosur.
- Many Faculty members attended Mission 10X Faculty Empowerment program conducted by Wipro Ltd.
- Four Faculty members received an honour code certificate on “Educational technology for Engineering Teachers” from IIT Bombay to enhance the teaching learning process.
- Two faculty members have participated in AICTE sponsored FDP on “Use of ICT in Education for online and Blended Learning” conducted by IIT Bombay.
- Cambridge International Certificate for Teachers and Trainees certificate at Professional level with Distinction awarded to Ms. J. Aruntha at Mission 10X Wipro Ltd.

Faculty Publications

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>25</td>
</tr>
<tr>
<td>2014-15</td>
<td>21</td>
</tr>
<tr>
<td>2015-16</td>
<td>21</td>
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<td>2016-17</td>
<td>22</td>
</tr>
<tr>
<td>2017-18</td>
<td>8</td>
</tr>
<tr>
<td>2018-19</td>
<td>9</td>
</tr>
</tbody>
</table>

Industry Attached Courses

- Control Systems for Wind Energy
- Android Application for Power Monitoring
- Embedded Programming using Arduino Microcontroller
- Energy Auditing
- Electrical Solution- A Practical approach
- Electronic System Design
INFRASTRUCTURE DETAILS

The novelty of the department is well-furnished, ventilated class rooms with multimedia projector, individual faculty cabin, exclusive seminar hall with audio video system and well equipped laboratories both for UG and PG. The laboratories of the department are:

- DC Machines Lab I & II
- AC Machines Lab I & II
- Digital & IC Power Electronics and Drives Lab
- Control Systems Lab
- Microprocessor and Microcontroller Lab
- Power System Simulation Lab
- Programming/Computer aided Design Lab
- Electronics/Circuits & Devices Lab
- Engineering Practices Lab
- Department Library

STUDENT INVOLVEMENT IN PAPER PRESENTATION, PROJECT PRESENTATION, WORKSHOP AND SEMINAR

![Bar chart showing student involvement in paper presentation, project presentation, workshop and seminar from 2013-14 to 2015-16.]

STUDENT INVOLVEMENT IN EXTRA-CURRICULAR ACTIVITIES

![Bar chart showing student involvement in NCC, NSS, Sports from 2013-14 to 2015-16.]

HIGHLIGHTS OF STUDENT ACTIVITIES

- Mr. M Arun, 2013-17 Batch received ‘B’ Grade certificate in NCC and participated in “Snow Skiing and Mountaineering” in a National Camp held at Gulmarg, Srinagar from 19.03.2016 to 25.03.2016.
- Mr. C. Kavabik Narayanan and Mr. S. Charan Raj of 2013 – 17 Batch got “Best Student Member Award” from IAEMP Student Chapter during April, 2016.
- An amount of Rs. 7,400/- has been sanctioned to the students Mr. R. Senthya, Mr. V. Karthik and Mr. E. Noor Ahmed Khan of 2010-14 Batch by Tamil Nadu State Council of Science and Technology for the project titled “Smart Sensoric Security System for Two Wheelers and Riders”. 
ACADEMIC STUDENT PERFORMANCE

**University Rank Holders**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Name</th>
<th>Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Arthi G</td>
<td>2009-13</td>
</tr>
<tr>
<td>4</td>
<td>Baby Usha T</td>
<td>2010-14</td>
</tr>
<tr>
<td>8</td>
<td>Bhanu Priya V</td>
<td>2011-15</td>
</tr>
<tr>
<td>35</td>
<td>Aswin Mohan T</td>
<td>2012-16</td>
</tr>
<tr>
<td>45</td>
<td>Vignesh K S</td>
<td>2009-13</td>
</tr>
<tr>
<td>46</td>
<td>S. Bhuvaneswari</td>
<td>2010-14</td>
</tr>
<tr>
<td>46</td>
<td>Manoj Kumar M</td>
<td>2011-15</td>
</tr>
<tr>
<td>48</td>
<td>Kayalvi S</td>
<td>2012-16</td>
</tr>
</tbody>
</table>

**PLACEMENT DETAILS**

Our Major Recruiters......

**INTERNSHIP DETAILS**

<table>
<thead>
<tr>
<th>Batch</th>
<th>2010-14</th>
<th>2011-15</th>
<th>2012-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>47%</td>
<td>87%</td>
<td>91%</td>
<td></td>
</tr>
</tbody>
</table>

**CENTRE OF EXCELLENCE**

ASIC Centre of Excellence was established in the year 2013 in collaboration with Cadence Design Systems, Ireland, who are market leaders in Electronic Design Automation. The primary objective of the centre is to impart skill sets in custom IC and Reconfigurable FPGA designs on par with the present semiconductor industry needs to students, research scholars and Faculty members.

**Strength**

- Offers one credit courses and Value Added Courses on Custom Analog and Digital IC design.
- Continuous interaction with industries like Media Tek, Intel Ltd, for student Internship and placement.
- Two UG Students got placed in Intel Ltd, Bangalore.
- Two PG Students got Internship at Intel Ltd, Bangalore

**CENTRE FOR RESEARCH ON GREEN ENERGY AND ENVIRONMENT**

This Centre contributes to the research base in the areas of green energy and environment that helps in protecting our natural world, while clearly defining the opportunities that arise as we shift towards a greener economy.

**Strength**

- Conducted 3 Exhibitions on Green Energy Technologies.
- Installed 60kWp Solar Power Plant and 6kWp solar LED street light system.
- Research Collaboration with Centre for Sustainable Energy and Environment, Cape Breton University, Canada.
- Offering One Credit Courses on Energy Auditing & New and Renewable Energy Systems for the students.
- Offering consultancy services to industry in the area of Green Energy, Power Quality and Energy Conservation.

**CONSULTANCY OFFERED TO**

- Sakshi Suyas Ltd
- ABT Industries Ltd - Dairy Division
- Sri Venkatesa Processors Ltd
- Suguna Foods Ltd
- India pistons Ltd (Ring Plant II)
- Sree Ambal Processors Ltd
- Vankadakiri Spinning Mills Ltd and more...

**PROFESSIONAL BODIES**

Students and Faculty members are provided with opportunity to join as members in professional societies such as IEEE, ISTE and IAEMP. IEEE Student Branch received certificate of appreciation for the activities conducted during 2015.

**DEPARTMENT STUDENT ASSOCIATION- AVERA**

The department association AVERA provides additional technical input for the students by arranging guest lectures, seminars and symposia.
PROGRAMMES ORGANIZED
The Department has organized various workshops, guest lectures, conferences in the field of Renewable Energy, Embedded Systems, VLSI, etc. and the few list of above activities from 2013 onwards includes:
- Workshop on the title “CMOS Layout Design Using I’mWind”
- Faculty Training Program on “IC Design Using Cadence EDA Suite”
- Workshop on “Energy Auditing for Practicing Engineers”.
- MNRE sponsored two day National Seminar on “Advanced Micro Grids using Hybrid Renewable Energy Sources”
- Workshop on “Custom Analog IC design using Cadence EDA Suite”.
- Workshop on “System design using FPGA and Cadence EDA Tools”.
- Workshop on “Custom Digital IC design using Cadence EDA Suite”.
- Workshop on “Embedded design and Microcontroller Applications”.
- Hands on training in “Arduino Programming”.
- Workshop on “Embedded Robotics using Advanced Microcontroller”.
- Hands on training in “FPGA tools, Motor performance diagnosing with power analyzer- Electrical Energy Audit & Conservation Practices”.

RESE 2015 - INTERNATIONAL CONFERENCE
- DST, IEEE and industry Sponsored International Conference on “RENEWABLE ENERGY AND SUSTAINABLE ENVIRONMENT (RESE 2015)” was conducted in collaboration with Cape Breton University, Canada.
- Over 100 delegates participated in the Conference.
- About 11 speakers delivered lectures.

Academic partners of RESE 2015 were NITTTR, Kannur University and Periyar Marianmraj Institute of Science and Technology. The Knowledge partner was Society for Educational and Entrepreneurship Development (SEED) and the media partner was THE HINDU who promoted the conference.

The three major objectives of the conference were
- To bring research scholars and eminent experts together to share their expertise in the fields of renewable energy and sustainable environment.
- To promote collaborations with industries for the mutual benefits of both.
- To explore and promote the possibilities of business incubation in these areas.