

## **M.Tech Programme in “Power Systems”- M.Tech (PS)**

### **VISION**

*To excel in Education, Technology and Research in Electrical and Electronics Engineering leading to sustainable socioeconomic development of the nation*

### **MISSION**

*Excellent teaching learning environment imbued with professional ethics and social responsibility in promoting quality education*

*Promoting research through industry collaborations and innovative projects*

### **About the Department:**

Master of Technology in Power Systems is a two-year post-graduate programme dedicated to enlightening students with the research oriented knowledge and skilled as per the societal needs. Power Systems Program has a Research Centre recognized by JNTU Hyderabad (The Affiliating University). Well qualified and experienced faculty ably supported by highly skilled and competent technicians are the strength of the program in the department. The Department has 37 faculty members in various specializations. Department is reinforced with 21 Doctorates and four faculty are guiding 19 Ph.D. Scholars as supervisors. 50% of the Doctorates are specialized in Power Systems.

### **Programme Level:** Post Graduate

**About the Programme:** VNRVJIET Hyderabad has been offering 2-years regular Post graduate - Master of Technology (M.Tech) degree programme in “Power Systems” (PS) with sanctioned intake of 18 from the academic year 2014-2015. The duration of the course is divided into four semesters.

The objective is to prepare students to undertake careers involving innovation and problem solving using computational techniques and technologies, or to undertake advanced studies for research careers or to take up Entrepreneurship.

The candidates need to have a valid score in one of the top competitive exams like GATE and PG CET. The course subjects comprise core courses and electives and also a mini and a major project. The course is designed to equip students with the

knowledge and skills required by the modern computing industry to innovate and tweak systems according to the proper requirements M.Tech (PS) is a highly recommended industry relevant programme in the field of Power Systems focusing on practical implementation of Power Systems concepts in real time applications.

### **Program Educational Objectives (PEOs):**

The Post Graduates of Power Systems program will

- ❖ Be eminent power engineers capable of playing significant role in the private and public power sectors or carrying out related research activities at academic and research institutions.
- ❖ Apply their knowledge and skills of power system engineering with an understanding of realistic constraints for the overall benefit of the society.
- ❖ Work and communicate effectively in inter-disciplinary environment, either independently or in a team and demonstrate leadership qualities.
- ❖ Engage in life - long learning and professional development through self-study, continuing education or professional and doctoral level studies.

### **Program Outcomes for M.Tech Power System (PS) Program:**

Upon completion of the M.Tech Power System (PS) programme, students will be able to

- P01:** An ability to independently carry out research /investigation and development work to solve practical problems.
- P02:** An ability to write and present a substantial technical report/document.
- P03:** Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.
- P04:** Design advanced level power system, components, or processes to meet identified needs within economic, environmental and social constraints.
- P05:** Demonstrate knowledge of contemporary issues in the area of power system engineering.
- P06:** Use the techniques, skills and modern engineering tools necessary for the design and development of power systems and engage in lifelong learning.

### **Programme Highlights:**

- ❖ M.Tech. Power Systems is a PG Programme is approved by UGC, AICTE and JNTU Hyderabad.
- ❖ The programme is of four semesters that makes the student to explore contemporary technologies and makes the student industry ready with a focus towards research and promotes self-learning.
- ❖ Dedicated faculty with rich experience to provide exploration of good opportunities.
- ❖ The programme offers a set of core courses and elective courses, allowing students to specialize in advanced technologies.
- ❖ Improves the research methodology and self-learning using Technical seminars and project works.
- ❖ Advanced softwares' like PSCAD/ EMTDC, MATLAB, CASPOC, MiPOWER, USB hardware lock, ETAP 14.0, LABVIEW and MULTISIM versions are available in Computer Simulation Laboratories to carry out M.Tech projects and research work in the PG Program.
- ❖ Department has MoUs with 8 Industries to promote Knowledge Sharing and strengthen the Institute Industry Interaction through which the internships may be provided to the students.
- ❖ Department is sanctioned with Rs.56,68,000/- worth research funding projects from UGC, Department also received grants from AICTE (MODROBS, SDP, SEMINAR GRANT, CONFERENCE), DST (FIST) worth Rs.53.63 lakhs.
- ❖ The Dissertation (Major Project Work) in the third and final semester enables students to closely work with faculty with funded projects with good stipend / work with industry using internships that enables the student to see many opportunities after the graduation.
- ❖ The programme uses a Continuous Evaluation System, mentoring and monitoring by a dedicated programme coordinator who will assist the students in the entire journey of 2 years of the programme and motivates the students towards the dreams accomplishment. Uses the latest teaching methodologies like WIT & WIL, Course Based Projects, Learning by Doing, Lab Protocol, story board that escalates the learning process of the students.

- ❖ Visit to industry premises in regular time that stimulates the students to be ready for industry orientation / research promotion.

### **Curriculum & Course Structure:**

The programme curriculum has been developed with the support of Industry and academia with prime focus on Industry 4.0 courses. The detailed curriculum and course structure is available in <http://www.vnrvjiet.ac.in/msb1.php>

This programme also ensures that the student graduating from the programme not only know the core concepts of Power Systems but also develop an equal appreciation of research and human ethical values.

### **Infrastructure and R & D Facilities Available:**

Program has all infrastructural facilities required for imparting high quality education and is structured to meet the present day needs of the society.

The department is equipped with facilities like Advanced softwares' like PSCAD/EMTDC, MATLAB, CASPOC, MiPOWER, USB hardware lock, ETAP 14.0, LABVIEW and MULTISIM versions are available in Computer Simulation Laboratories to carry out B.Tech and M.Tech projects and research work.

Department has MoUs with 8 Industries to promote Knowledge Sharing and strengthen the Institute Industry Interaction.

Department is sanctioned with Rs.15,96,500 worth research funding projects from UGC, Department also received grants from AICTE (MODROBS, SDP, SEMINAR GRANT, CONFERENCE), DST (FIST) worth Rs.53.63 lakhs.

### **Eligibility Criteria for Admission:**

- ❖ The candidate shall be an Indian National / NRI
- ❖ BE/B.Tech/AMIE in CSE/CSIT/Electronics and Computer Engineering/IT and Computer Science and Engineering or Equivalent
- ❖ The candidate should have completed 21 years of age as on 31st December of the academic year for which the admissions are being conducted
- ❖ The candidate should have passed the qualifying examination (BE/B Tech) or equivalent as on the date of admission recognized by University, Telangana State.

- ❖ Seats in the programme are classified into Category A and Category B as per the G.Os.

**Category - A Seat:** These seats shall be filled through counselling as per the rank in the Common Entrance Test (PGCET) conducted by the State Government and as per other admission criteria laid down in the G.Os.

**Category - B Seat:** These seats shall be filled by the Institute as per the G.Os issued by the State Government from time to time.

**Admission Process:** Entrance exams GATE/PGCET based and also Merit based

**Course Fee:** INR 1, 30, 000-00 and INR 11,700-00 per annum

**Top Recruiting Companies:** Hyundai Mobis, Quest Services (MATLAB Programmer), ECIL, Onmobile, VST Industries, Servo Medha Drives, HES, Pennar Industries Ltd., Government sectors, Wells Fargo, WIPRO, Tata Consultancy Services (TCS), Lecturer/Professor etc.

**Principal**  
**VNRVJIET**