Jawaharlal Nehru Technological University Hyderabad
Kukatpally, Hyderabad - 500 085, Telangana, India

ADMISSION TO EXTERNAL Ph.D./ M.Phil./ M.S. RESEARCH PROGRAMMES - 2012

Admissions will be made to External Ph.D./M.Phil./M.S. Research Programmes offered by the J.N.T. University Hyderabad in the following faculties.

1. Ph.D :

CIVIL ENGINEERING:

Structural Engineering, Rehabilitation of Structures, Special Concretes, Static and Dynamic Analysis of structures, Bridges, Buildings using FEM, Pile foundations, Dynamic behavior of soils and Geo-environmental Engineering, Expansive Soils, Earthquake quake Analysis, Soil structure interaction, Modeling & Reclamation. Transportation Engineering, Traffic Analysis, Pavements, Hydraulics, water Resources and allied fields. Environmental Engineering, Air Pollution and waste water treatment.

MECHANICAL ENGINEERING:

I.C. Engines, Heat transfer, Thermodynamics Analysis of cycles, Fuels, Turbo machinery, CAD/CAM, Geometric modeling, Manufacturing, Optimization, Metal Cutting, Machine design and Industrial Engineering. Smart composites and allied fields.

ENERGY SYSTEMS :

Conventional, Non-conventional energy systems and allied fields.

ELECTRONICS AND COMMUNICATION ENGINEERING:

Digital signal processing, VLSI, Computers Networks, digital circuits, Neural Networks, Micro Electronics, Image processing, Low Power design, Fault tolerance, Communications, Microwave Antennas, EMI/EMC, Computer Vision, Pattern Recognition and allied fields.

ELECTRICAL AND ELECTRONICS ENGINEERING

Power Electronics, Drives and Power systems, FACTS, Intelligent Systems, Control Systems, High Voltage Engineering, Instrumentation and allied fields.

COMPUTER SCIENCE ENGINEERING

Data warehousing and mining, Computers Networks and Information Security, Software Engineering, Image Processing, Speech recognition, mobile computing, Artificial Intelligence, Wireless Sensor Networks, Information Security, Natural Language Processing, Cloud computing, Information Retrieved and allied fields.

METALLURGY

Material Development, Material Testing, High temperature materials, Metal Forming, Metal Casting, Ceramics & Composites, Powder metallurgy, Surface Engineering, Extraction, Non-Destructive Testing and Welding, Extractive Metallurgy.

BIO-TECHNOLOGY

Microbial Biodiversity, Animal Cell Technology, Microbial Enzymes/ Products, Plant Bio-Technology, Industrial Bio-technology and allied fields.

SPATIAL INFORMATION TECHNOLOGY

Remote Sensing, Spatial Information Technology, GIS, GPS, Geodesy, Digital Image processing, Digital Photogrammetry, Topographical Surveying, Data Mining, Knowledge Management, Atmosphere-Earth Radiation Interaction and allied fields.

WATER RESOURCES

Surface Hydrology, Water treatment, Water quality, Water Pollution, Ground Water exploration, Water Resources Management, Rain Water Harvesting and allied fields, watershed management, water and soil conservation, Environmental impact of water resources projects.

ENVIRONMENTAL SCIENCES.

Bacterial Diversity & Bio prospecting, waste characterization and treatment, hydrogen production and storage, aromatic compound biodegradation & bioremediation, microbes for environmental management, environmental geomatics, water quality assessment, modeling and mapping.

PHARMACEUTICAL SCIENCES

Pharmacology, Pharmaceutics, Pharmacogonosy and Pharmaceutical Chemistry.

NANO SCIENCE & TECHNOLOGY

Nano Science and Technology

PHYSICS

Fiber Optics & Sensors, Nuclear Radiation Physics, Bio-Physics, Solid State Physics, Material Science, Thin film Technology, Plasma Physics, Space Physics, High Voltage Engineering, Particles and Fields, Condensed matter Physics, Liquid Crystalline Phase Transitions, Ferro Electric and Anti-Ferro Electric liquid crystals, Switching times and Viscosity, Molecular Spectroscopy and allied fields.

CHEMISTRY

Organic Chemistry, Inorganic Chemistry, Analytical Chemistry, Environmental Chemistry, Physical Chemistry, Bio-inorganic Chemistry, Pharmaceutical Chemistry, Bio-Chemistry and Applied Chemistry.

MATHEMATICS

Number Theory, Operations Research, Non linear dynamical systems, Mathematical modeling, data and knowledge extraction and allied fields.

MANAGEMENT STUDIES

Management Studies, Accounting, Human Resource management and allied fields.

EARTH & ATMOSPHERIC SCIENCES

Atmospheric Science and Technology: Aerosol- Cloud Interactions: Precipitation Processes, Studies on Atmospheric, Boundary Layer, Studies on Clouds over Continental Tropical Convergence Zone: Formation, Lifecycle, Dissipation, Changing Trends in the Extreme Weather Events. Weather Modification Technology: Rainfall Enhancement, Hail Suppression, Fog Dispersal, Micro Climate Modification.

Ocean Science and Technology: Ocean Color Applications, Sea Surface Height Variations, Air-Sea Interactions- Monsoon Dynamics: Sea Surface Temperature, Wind, Water Vapor, Liquid Water Content.

Earth System Science and Technology: Carbon Sequestration and Deposition in Fossil Fuel Reservoirs, Geo- Exploration of Hydrocarbons & Minerals, Plate Tectonics, Earth Quakes.

CHEMICAL ENGINEERING

Petro Chemicals, Fluidization Engineering

PHYSICAL EDUCATION:

Bio Mechanical Studies in Physical Education, Analytical Studies in Physical Education, Discriptive Studies in Physical Education, Psychological Studies in Physical Education, Case Studies in Physical Education, Exercise physiology Related Studies

ENGLISH

(English Language Teaching), Indian Writing in English, American Literature, British Literature, Commonwealth Literature and Applied Linguistics.

2. M.Phil. : Mathematics, Physics, Chemistry and Management Science.

3. M.S. : Civil Engineering, Electrical & Electronics Engineering, Electronics & Communication Engineering, Mechanical Engineering, Computer Science, Pharmaceutical Sciences, Biotechnology and Spatial Information Technology.

I. METHODOLOGY OF RESEARCH:

As per the UGC Revised Guidelines, a course work of one semester is compulsory. The course work includes

- Two subjects at PG level with attendance and examinations.
- One subject "Research Methodology" with compulsory attendance and internal auditing.

Apart from the abvove course work, the Pre-Ph.D. examinations are also compulsory. The details of evaluation procedure of Ph.D. research work will be available in JNTUH website.

1. Educational Qualifications: **For Ph.D. and M.Phil.**

(i). Candidates must have a Post Graduate Degree in concerned discipline with a minimum of 55 percent marks in aggregate. For SC / ST candidates the aggregate shall be 50%.
For Ph.D. programme in Management Science, candidates possessing MBA are eligible. The candidates possessing
Post Graduate qualification in any other subject with 5 years of experience in managerial capacity are also eligible.

MCA or M.Sc. qualified candidates are not eligible for Ph.D. programmes in Computer Science and other Engineering Streams.

(ii). In Multi disciplinary areas:

(a) Water Resources : Any Post Graduate degree in the field of Water Resources / Hydrology / Watershed Management / Geology / Geophysics / Geo-Engineering / Meteorology / Agricultural Engineering / Agricultural Meteorology / Solid Sciences (Water resources aspects) and Agronomy.

(b). Spatial Information Technology : Post Graduate Degree in Spatial Information TechnologyMathematics / Physics / Chemistry / Geology / Geography / Engineering / Agriculture / Atmospheric Sciences / Space Sciences.

(c). Biotechnology : Post Graduate Degree in Biotechnology / Chemical Engineering / Food Technology / Bio Chemical Engineering / Bio Chemistry / Microbiology / Life Sciences (Zoology, Botany, Genetics, Agricultural Sciences) / Pharmacy / Environmental Science and Technology.

(d). Energy Systems : Post Graduate degree in Energy Systems / Mechanical EngineeringElectrical and Electronics Engineering / Chemical Engineering orTechnology.

(e). Environment : Post graduate degree in Physical Sciences / Natural Sciences / Life Sciences / Environmental Sciences / Biotechnology / Environmental Engg. / Agricultural / Computer Sciences.

(f). Nano Technology: M.E. / M.Tech. in Chemical /Mechanical /Aeronautical/ Electronics / Electrical / Metallurgical / Computer Engg./ Bio-Technology/ Material Science or Equivalent degree

(or)

M.Sc in Chemistry / Physics / Earth Sciences/Environmental Science & Technology or equivalent degree.

(iii) For M.S. : Candidates must have a B.E. / B.Tech. / B. Pharmacy degree or its equivalent with a minimum of 55 percent marks in the aggregate in the concerned branch and for SC / ST candidates the aggregate shall be 50% only. M.S. is essentially a research programme for candidates in service. It is not a regular session based M.Tech. course.

EMPLOYMENT :

Candidates who are working in a well equipped Educational / Scientific / R&D / Industrial / Governmental Organisations and in Colleges affiliated to the Universities and engaged in Scientific / Technological / Engineering / Managerial activities, as the case may be, are eligible for admission as external candidates and shall continue to work in their own organizations. Faculty members of the J.N.T. University Hyderabad and its constituent colleges shall be admitted as internal candidates.

Candidates working in colleges affiliated to the universities are eligible.

VIII. MODE OF SELECTION : Based on Entrance Examination and Interview.

INTERVIEW: Interview will be conducted for the candidates qualified in the

Entrance examination conducted by JNTUH, Hyderabad.

- **The candidates who qualify the NET / SLET need not write the written test however they should get through in the interview process.**

FEE:

On selection for admission, candidates shall be required to pay the prescribed admission fee **Rs. 200/-** , Registration fee of **Rs. 20,000/- per annum and other admissible fee prescribed by the University for External Research Programme**. Thereafter the fee has to be paid every semester till the successful completion of the programme and submission of thesis or cancellation of the admission which ever the case may be.

DIRECTOR, ADMISSIONS