भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

Indian Institute of Technology Hyderabad
Standing Advertisement No. IITH/2019/Faculty/1

1.0 General Information:

This is a standing advertisement. There is no specific requirement on when a candidate can submit an online application. Online applications will be accepted throughout the year.

IIT Hyderabad invites applications from Indian nationals who are exceptionally bright and motivated, with an established record of independent, high quality research and commitment to teaching for positions of Assistant Professor, Associate Professor and Professor at IIT Hyderabad (www.iith.ac.in) in the following Departments.

- Biomedical Engineering
- Biotechnology
- Chemical Engineering
- Chemistry
- Civil Engineering
- Computer Science & Engineering
- Design
- Electrical Engineering
- Liberal Arts
- Mathematics
- Mechanical and Aerospace Engineering
- Materials Science and Metallurgical Engineering
- Physics
- Department of Entrepreneurship and Management

For specializations required in these departments please see below. **Interested candidates may apply through online portal and attach the relevant certificates/ documents asked.**

Women candidates are especially encouraged to apply.

Without any compromise on qualification, experience and competence, reservation as per Government of India rules – 15%, 7.5% and 27% for SCs, STs and OBCs, respectively, is applicable at entry level positions of Assistant Professor in Science and Technology departments. However, in recruitment of faculty posts in subjects other than science and technology, reservation shall also be applicable for the posts of Associate Professors and Professors. Necessary certificates must be enclosed with the application form. GOI policy on reservation of faculty positions also includes persons with Physical disability.

- If a candidate is interested in applying to more than one department, she/he should submit separate application for each of the department of interest.
- Applications are welcome throughout the year and they will be taken up for screening for interview from time to time.

Recruitment will be based on the need in given areas within the department. However, exceptionally meritorious candidates in any area of specialization pertaining to the said department will also be considered.

The institute reserves the right to fill or not fill any or all of the advertised posts. Mere fulfillment of the qualifications and experience requirement does not entitle the candidate to be called for an interview.

The Institute provides support to cover relocation expenses for a new faculty member, and also provides significant start-up research grant. In addition, the Institute provides Cumulative Professional Development Allowance (CPDA) of Rs.3 lakhs for every block of 3 years to meet the expenses for participating in international conferences, national conferences and paying the membership fee of

various professional bodies and contingent expenses. The faculty and their families are covered by an attractive Contributory Health Services Scheme.

2.0 Description of posts and required qualifications: (for all except applicants in the Department of Design, and Fine Arts applicants in the Department of Liberal Arts)

2.1 Assistant Professor Grade I:
As per 7th CPC, the minimum pay to be fixed at Rs. 1,01,500 (Matrix pay level of 12) along with allowances. After completion of 3 years of satisfactory service, they may be placed in matrix level 13A1 along with allowances.

Qualification: The candidate must have Ph.D. with consistently good academic record throughout.
Experience: At least 3 years industrial/research/teaching experience after completing PhD.

2.2 Assistant Professor Grade II:
Candidates without 3 years' industrial/research/teaching experience after completing PhD for direct recruitment as Assistant Professor Grade I, may be taken as Assistant Professor Grade II and the minimum pay to be fixed at Rs. 98,200 (Matrix pay level of 10) along with allowances. Once selected in this position, the candidate will be considered for the post of Assistant Professor Grade I upon reaching the required work-experience.

For Assistant Professor Grade II and Assistant Professor Grade I positions, the candidates should be preferably below 35 years of age.

2.3 Associate Professor:
As per 7th CPC, the minimum pay to be fixed at Rs. 1,39,600 (Matrix pay level of 13A2) along with allowances.

Qualification: The candidate must have Ph.D. with consistently good academic record throughout.
Experience: A minimum of 6 years teaching/research/professional experience, of which 3 years should be at the level of Assistant Professor, Senior Scientific Officer/Senior Engineer in a research organization or industry.

Candidates should be preferably below 45 years of age.

2.4 Professor:
As per 7th CPC, the minimum pay to be fixed at Rs. 1,59,100 (Matrix pay level of 14A) along with allowances.

Qualification: The candidate must have PhD with consistently good academic record throughout.
Experience: A minimum of 10 years teaching/research/professional experience, of which at least 4 years should be at the level of Associate Professor in an academic institute or equivalent position in a research organization or industry.

The candidate should have demonstrated leadership in research in a specific area of specialization in terms of guidance of MTech and PhD students, and has a strong record of sponsored research, publications in reputed journals and referred conferences, patents, laboratory/course development and other recognized relevant professional activities.

Candidates should be preferably below 50 years of age.

3.0 Recruitment Call for Assistant Professors in the Department of Design:

Department of Design currently offers an undergraduate degree, Bachelor of Design (BDes), a postgraduate degree, Master of Design (MDes), and PhD. MDes is a full-time two-year program providing a broad-based understanding of design along with student-driven specializations in varied domains.

The BDes Program aims to offer a design foundation during initial courses while branching off into specializations based on student interests.

The MDes in Visual Design, focuses on creative thinking, building elements and history of Design from a predominantly visual perspective. Additional specialized courses allow students to diversify into domains like interaction design, experience design, moving images, contemporary photography, design education, design for well-being, collaborative design, urban environments, managing creative industries, and mobility design.

PhD in Design provides a unique platform to pursue practice-based and practice-led research in art, design, culture, creative practices and related areas. The doctoral program aims to infuse the practice-oriented spirit into research in/through/on design, alongside other more traditional modes of doing research in design. The department plans to intervene creatively in the space between technologies and people. This involves engaging in key emergent areas such as: adapting technology to socio-cultural needs, enabling of rights-based and equitable development work, user-operated technologies, participatory and collaborative design, professional ethics/ sustainability, product systems and services, design and education, wellness and crowd-sourced design.

Our faculty and students have jointly created a culture of stepping beyond strict disciplinary boundaries to collaborate with various other departments at IIT and elsewhere. We have also diligently cultivated an atmosphere of free thinking and experimentation within which we hope the very idea of Design can be re-conceptualized. At the same time, we have invested considerable energy into engaging pragmatically with local and concrete design problems, placing equal emphasis on theory and practice. The result has been the establishment of a community of teachers and learners who strive constantly to achieve a mode of public being within which creativity, social commitment and critical thinking constitute a seamless and organic unity.

For more about the department and its various engagements, please visit **https://design.iith.ac.in/index.html**

The Department of Design, Indian Institute of Technology Hyderabad, seeks candidates with exceptional academic and research records and professional design work to join our faculty team as Assistant Professors. We invite applications in broader domains of Industrial Design and Communication Design. The tentative specializations under Industrial Design Are Product Design and Furniture Design. Specializations under Communication Design are Visual Communication, Art, Interaction Design, Photography and Film-making.

Minimum eligibility: A Ph.D. in design-related discipline from a leading Institute/University.

Doctoral Degree in any of the dimensions or domains of Creative Arts/ Film/ Design. The candidate will be required to demonstrate excellent research credentials. Candidates who have submitted and are awaiting PhD defence are also encouraged to apply. Candidates with doctoral degree would be required to share peer-reviewed publications done as part of their research work.

The domains/areas that the candidate is expected to have impressive and extensive academic, research and professional work experience in:

Product Design: design of Tangible products of different kinds, production, roll-outs, Simple to Technically Complex Product Design, Product semantics and Systems design.
Furniture Design: design of furniture, with experience in production, roll-outs, and interior design.
Visual Communication: Typography and Publication Design in both Print and Digital media, with flair for multi-disciplinary explorations between visual arts, graphics and digital interfaces.
Interaction Design: Substantial experience in Usability, User Interface Design, tangible, embedded and embodied dimensions of interaction design, preferably with some experience in Augmented Reality, Virtual Reality and/or Game Design.
Film-making: Practice-based knowledge of all aspects of film production like cinematography, editing, direction, scripting, production design, VFX, and animation.

Fine Art/Painting/Print making/ Sculpture/ Applied Art: Active engagement in the production of art preferably with experience in multi-media productions like interactive installations and physical computing.

For Assistant Professor (contract) and Assistant Professor the candidate should preferably be below the age of 35 years.

4.0 Description of posts and required qualifications for applicants in Fine Arts: (in the Liberal Arts Department):

IIT Hyderabad is looking for dynamic, bright and motivated faculty in the area of Fine Arts in the Department of Liberal Arts at the level of Assistant Professor.

Areas of Interest: Graphic Arts, Drawing and Painting, and Sculpture, Art History, Dance, Music, Theater. Nevertheless, outstanding candidates in any area of Fine Arts may be considered.
Qualification: A PhD in Fine Arts from a leading Institute/University.

For Assistant Professor Grade I and II, the candidate should preferably be below the age of 35 years.

5.0 Particulars of specializations required in each department:

Note: IITH reserves the right to focus on specific areas for its recruitment. The fields mentioned below are meant to be indicative of the departments' current requirements, which may change without notice. However, outstanding candidates in any field relevant to the department will also be considered.

5.1 Biomedical Engineering: Candidates from all engineering and applied physics backgrounds who have done substantial and outstanding research work in biomedical engineering in their doctoral thesis and thereafter will be considered. The areas for consideration are:

- Biomedical Instrumentation, Devices, Imaging, and Image and Signal Processing
- Experimental and Computational Biomechanics, Systems Biology
- Neurophysiology, Neural Engineering, Cognitive Neuro Sciences

5.2 Biotechnology:
Assistant Professor: Candidates with PhD in Biotechnology or any allied life sciences subject with research experience in Immunology, Plant Biotechnology, Pharmaceutical Biotechnology§, Neurobiology, Systems Biology, Industrial Biotechnology, Developmental Biology, Stem cell Biology, Computational Neurosciences and Infectious Disease Microbiology through proven publication record in the respective research areas.

§ Requires PhD in Pharmacology

Associate Professor and Professor: Candidates with outstanding research records in any area of Biotechnology may apply.

5.3 Chemical Engineering: Candidates who have done outstanding and significant research work in the areas of:

- Colloids and Surfaces
- Micro fluidics
- Molecular dynamics/monte carlo simulations
- Process control/process system engineering
- Process intensification/design

- Particulate technology/mineral processing
- Experimental fluid mechanics
- Membrane technology

The applications must have BTech/BE in Chemical Engineering

5.4 Chemistry: Applications are invited from candidates working in the areas of Organic Synthesis – Preferably, Total Synthesis of Natural Products, Polymer Chemistry, Fuel Cells and Materials Chemistry (Experimental). Candidates with outstanding research work in all other areas of Chemistry may also apply.

5.5 Civil Engineering: Transportation Engineering/Construction Management/Geotechnical Engineering/Water Resources/Environmental Engineering. Candidates with outstanding academic records in other areas of Civil Engineering may also apply.

5.6 Computer Science and Engineering: Invites applications in all areas of computer science, especially in the following ones: Theoretical Computer Science, Information Security, VLSI, Embedded systems, Data Science, Networks and Mobile Systems, HPC, Cloud Computing, Distributed systems, Programming Languages and Software Engineering.

5.7 Design: Particulars are given in section 3.0.

5.8 Electrical Engineering: The Department of Electrical Engineering at IIT Hyderabad invites applications for faculty positions at the Assistant, Associate Professor level in all areas of Electrical Engineering with particular emphasis on

Control Engineering Systems Theory, Power electronics, Electromagnetics and antennas, Communication systems hardware, Signal Processing, Queuing Theory, Quantum, Information Theory, Machine Learning and Big Data, Analog, mixed signal circuit and system design, Monolithic Microwave Integrated Circuits, Digital VLSI Chip design, Radio Frequency & Analog VLSI Chip design, Microsystems and Nano devices, Integrated Quantum photonics, Cognitive computing and machine learning VLSI systems, Memory Design, Hardware Security, Quantum Computing.

5.9 Liberal Arts: Cultural Studies, Economics, English, Sociology, Anthropology, Philosophy, Psychology, Development Studies, Linguistics, English Language Teaching, Fine Arts & Performing Arts (Fine Arts particulars are given in section 4.0) Outstanding applicants from other areas may also be considered.

Note: Description of posts and required qualifications for applicants in English Language Teaching, in the Department of Liberal Arts, IIT Hyderabad

IIT Hyderabad invites applications for faculty positions in English Language Teaching (ELT). The position will entail the following responsibilities:

- Offering classes and training sessions to under and postgraduate students of technology and science in basic Communication Skills/ Technical and Business Communication/ Professional English writing
- Preparing students for professional and academic, oral and written presentations
- Preparing students for job interviews and group discussions

Qualification:
Mandatory: MA [in English Language Teaching (ELT)] and PhD in ELT with consistently good academic record
Desirable: Experience with teaching Communication Skills.

For Assistant Professor Grade I and II, the candidate should preferably be below the age of 35 years.

5.10 Mathematics: Probability/Statistics, Partial Differential Equations (theoretical), Algebra and Complex Analysis. Outstanding applicants from other areas may also be considered.

5.11 Mechanical and Aerospace Engineering:
Applications are solicited from applications with a strong background in Mechanical and/or Aerospace

Engineering, especially in the following areas of expertise:

1. All areas of Manufacturing
2. All areas of Aerospace Mechanics
3. Multiscale Experimental Mechanics
4. Experimental/Theoretical Fluid Mechanics
5. Vehicle Dynamics
6. Fluid-Structure Interaction
7. Combustion/Propulsion/IC Engines
8. Computational Aerodynamics/Compressible flows
9. NDE/Structural Health Monitoring
10. Dynamics and Controls
11. High Fidelity Computational Mechanics

Candidates with exceptional credentials in other fields will also be considered

5.12 Materials Science & Metallurgical Engineering:

1. Functional Materials:
    - Fabrication of optoelectronic materials and devices
    - PVD/ CVD based inorganic photovoltaic devices – structure-property relations
    - Band gap engineering and phonon studies of semiconductor devices
    - Metamaterials, magnetic nanostructures and devices
    - Relaxor ferroelectric thin film and devices
    - Solid state hydrogen storage materials

2. Computational Materials Science:
    - First principles method development and applications to materials phenomena
    - Atomistic modeling of defects and deformation in materials
    - Modeling of deformation in materials - continuum plasticity, discrete dislocation plasticity, damage mechanics
3. Extractive and process metallurgy

4. Physical Metallurgy:
    - Defect structure/interface analysis using advanced microscopy techniques
    - Experimental thermodynamics and CALPHAD
    - Surface engineering and advanced coatings

5. Structural polymers – Mechanical behavior and structure-property relations

6. Materials in extreme environments

Candidates with exceptional academic background irrespective of the areas of specialization will be considered

5.13 Physics:

Applications for the faculty positions are invited in the following priority experimental research areas. However, candidates with exceptional academic background irrespective of the areas of specialization will also be considered.

Priority physics experimental research areas:

1. Condensed matter experiment
2. Nuclear Physics Experiment (low energy) - nuclear structure, exotic and super heavy nuclei, with detector, hardware experience
3. Adaptive optics and instrumentation design
4. Nanophotonics: High-resolution Microscopy with metamaterials

** Candidates with B.Tech degree in Electrical engineering (or related discipline) as undergraduate degree will also be considered for these disciplines.*

5.14 Department of Entrepreneurship and Management: Candidates who have done outstanding and significant research work in the areas of:

Supply Chain Management
Operations Research
Green Management
Industrial Relations
Organizational Behavior
Human Resource Management
Rural Management
Entrepreneurship and Innovation
General Management
Marketing and Sales
Finance and Accounting
Business Analytics
Critical Management
Organizational Structure and Strategy
Corporate Social Responsibility
Business Ethics
Information systems
Social Innovation and Entrepreneurship
Public sector management
Public policy management

For further information, please visit the website of IIT Hyderabad: www.iith.ac.in