MINIMUM QUALIFICATION AND EXPERIENCE FOR POSITION OF:-

ASSISTANT PROFESSOR (Grade I) :-

Ph.D. with First class or equivalent grade at the preceding degree in an appropriate branch/discipline with a good academic record throughout. A minimum of three years teaching/ research / professional experience, excluding the experience gained before and while pursuing Ph.D. Candidate should have demonstrated research capabilities in terms of publications in reputed journals and conferences.

Candidates with Ph.D but with less than 3 years experience can be considered for Assistant Professor (Grade II).

[1] Foreign Nationals will be on 5 years renewable contract basis, and have to obtain work visa from Government of India.

The areas below mentioned against each Academic Units are only indicative and not exhaustive. The Institute is open to receiving applications from outstanding candidates with specialization in these and other related areas.

ACADEMIC UNITS: -

1. **APPLIED MECHANICS:** Solid mechanics, Fluid mechanics, Design engineering and interdisciplinary areas of mechanics including but not restricted to Biomechanics, Nanomechanics, Multifunctional materials and structures, Structural health monitoring, Soft robotics, Machine learning in mechanics, Two-phase flows, Environmental fluid flows, Granular flows, Solid-fluid interactions, Naval Architecture, etc.

2. **BIOCHEMICAL ENGG. & BIOTECHNOLOGY:** DBEB is an interdisciplinary department open to both scientists (biologists, chemists, physicists) and engineers (chemical, biochemical). Weare particularly interested in candidates engaged in the rational development of processes for production of biochemicals using microbial, mammalian and plant cell cultures. We are equally interested in candidates involved in the development of enabling tools or technologies for the above processes such as metabolic engineering, synthetic biology, computational biology and systems biology.

3. **CHEMICAL ENGG:** All areas of Chemical Engineering, the candidate should have undergraduate education in chemical or allied engineering disciplines.

4. **CHEMISTRY:** Biochemistry, Chemistry of Materials, Medicinal Chemistry.

5. **CIVIL ENGG.**: **Environmental**: Water and Waste Water Engg. Air Pollution Control Engg. Solid and Hazardous Waste Engg. **Geotechnical**: Geotechnical Engg., geo-environmental Engg., Rock Mechanics and Rock Engg., **Structures**: Structural Engg. Construction Materials, Construction Management, **Transportation**: Transport and Traffic planning, Transportation and Traffic Engg., Pavement Engg., **Water Resources**: Water Resources Engg, and related areas.

6. **COMPUTER SCIENCE & ENGG.**: High Performance Computing and Visualization, Machine Learning and Artificial Intelligence, Wired and Wireless Networks, Mobile Computing Cyber –physical Systems & Internet of Things(IOT), Algorithms &

Complexity, Logic & Verification, Information Management, Information Retrieval, Data Analytics and Data Sciences, Computer Vision, Graphics & Robotics, Programming Languages, Semantics, Analysis & Language Implementation, Distributed & Multicore Computing, Operating Systems and Cloud Computing, Cryptography and Cryptosystems, Systems and Information Security, Human Computer Interaction, Embedded Systems, Computer Architecture, VLSI and Design Automation.

7. **DESIGN :** Industrial Design, Product Design, Engineering Design, Creativity and innovation, Design Theory & Methodology, Applied Ergonomics and Human Factors in Design, Universal and Inclusive Design, Design for UX/UI, HCI; GraphicDesign, Communication Design, Computer Aided Design and Manufacturing, Design Automation and Design Optimization, Design Computing and Design Informatics, Materials & Design, Design for Product Life-Cycle, Art & Design, Product Aesthetics, Digital Media & Design, Social and Cultural aspects of Design,Design Policy, Design Strategy, Design Management.

8. **ELECTRICAL ENGG.**: In all areas of Electrical Engineering including Electronics& Circuits, Control & Automation, Communication, Computer Engineering, Power Systems, Power Electronics, Machines & Drives.

9. **ENERGY SCIENCE & ENGINEERING:** Renewable Energy Technologies, Energy Storage, Electrical Power Systems, Power Electronics, Electrical Machines and Drives, Control and Instrumentation for Energy Applications, Electronic Devices, Thermodynamics, Fluid Mechanics, Heat Transfer, and Combustion pertaining to Energy Systems.

10. **HUMANITIES & SOCIAL SCIENCES**: **Economics:** Specialization in Microeconomics/Macroeconomics/International Trade/ Economic History is desired. However, exceptionally good candidates in any otherspecializations in Economics are also encouraged to apply. **Linguistics:** Semantics, Neuro-linguistics, Phonology, Comparative Syntax, Theoretical/Formal Syntax, Psycholinguistics, Language Acquisition, Computational linguistics. **Literature:** Poetry, North Eastern literatures and cultures, Subaltern and Dalit studies, Comparative Literature, Literatures of Protest, Folklore Studies, Digital Humanities, Culture Studies/Literary Culture Studies, Art & Aesthetics, Film Studies. **Philosophy:** All sub-disciplines of philosophy, with a special focus on the following areas: ethics, metaphysics, history of philosophy, political philosophy, philosophy of law, logic, epistemology, philosophy of mind, environmental philosophy, feminist philosophy, philosophy of culture, philosophy of religion, philosophy of technology, and philosophy of science. Applications are especially welcome from philosophers with access to philosophical texts in non-English languages, and who belong to diverse traditions of philosophy in different parts of the world. **Psychology:** Social Psychology, Positive Psychology, Cognitive Psychology, Neuropsychology, Computational Psychology. **Sociology:** Sociology of Family, Kinship and Gender; Sociology of Industry and Organizations; Population Studies and Demography; Dalit and Tribal Studies; Economic Sociology/Anthropology; Visual Sociology/Anthropology.

11. **MANAGEMENT STUDIES**: Operations & Supply Chain Management, Marketing Management, Strategic Management, Technology Management, Telecom Systems

Management, Human Resource Management, Corporate law, Finance, Economics, Information Systems, Business Analytics, Entrepreneurship.

12. **MATERIAL SCIENCE AND ENGINEERING:** Material synthesis, processing and characterization, Materials modeling, polymeric materials, Alloys, composites and structural materials, Functional materials, Nanostructured materials, Materials for sustainable technology and process Metallurgy and Corrosion Science and Engineering.

13. **MATHEMATICS:** Probability, Statistics, Optimization, Scientific Computing, Theoretical Computer Science and Machine Learning and Data Science.

14. **MECHANICAL ENGG.**: "All areas of Design and Production and Industrial Engineering. Further, applicants having strong fundamentals pertaining to thermodynamics, fluid mechanics, heat and mass transfer, combustion and gasification and numerical and experimental techniques may apply. It is desirable that the research interests should relate to one or more of the following application areas:
    - Sustainable Energy, clean energy and Transportation motive power
    - Thermo-fluid analysis of Biological Systems
    - Micro and nano-scale heat transfer
    - Thermal engineering of processes

    Applicants in the areas of Production and Industrial Engineering specializations are specially encouraged to apply".

15. **PHYSICS:** Quantum Materials, Quantum Technology & Quantum Information Systems, Applied Optics, Optical Design & Fabrication, Atomic, Molecular Spectroscopy, Plasma Physics.

16. **TEXTILE & FIBRE ENGINEERING:** Textile Engineering, Textile Technology, Textile Chemistry, Fibre Science & Technology, and other Engineering and Science (such as Civil, Mechanical, Chemical, Electrical/Electronics, Materials, Polymers, Mathematics, Physics, Chemistry, Bio-Sciences and Management) with demonstrated research experience in areas relevant to textiles and fibres.

17. **APPLIED RESEARCH IN ELECTRONICS (CARE) : Microwaves and RF**: RFICand RFMEMS, Imaging and Surveillance, RF Digital Co-design, Active and Reconfigurable Antennas and Arrays, High Power Solid-State Systems, Non-linear Modeling and Measurements, Components & Systems up to THz; **Microelectronics**: MEMS and Microsystems, Micro sensors development for defense and space applications, mm-wave and THZ electronic devices, QuantumElectronic devices for Quantum Information Technology; **Signal Processing**:Acoustic Signal Processing, Underwater and Air Acoustics, Speech and Audio Processing, Signal Processing for Communications, Sensor Array SignalProcessing, Multi-sensor Data Fusion, Machine Learning for Signal Processing, Signal Processing for Internet-of-Things; **Multi-disciplinary**: Modern Radar Systems.

18. **ATMOSPHERIC SCIENCES (CAS):** All areas of Atmospheric and Oceanic Science.

19. **AUTOMOTIVE RESEARCH AND TRIBOLOGY (CART):** Power Electronics for EV applications, Battery management systems and other storage technologies for EVs,

EV charging infrastructure and smart charging solutions, Vehicular Telematics and Embedded system for EVs, Connected and Autonomous EVs, Vehicle dynamics and control.

20. **BIOMEDICAL ENGG (CBME).**: **Bio Instrumentation;** Electrical Engineering, Electronics, Medical Sensors, **Biomechanics;** Medical Implants, Mechanical Engineering, Design Engineering, Production Engineering, Material Science & Engineering, **Bio Imaging;** Electrical, Electronics, Optical.

21. **RURAL DEVELOPMENT AND TECHNOLOGY (CRDT) :** Rural Resources, Energy systems & Infrastructure; Resilience & Climate Change; Disruptive Technologies; Engineering Design, Artisanal/Agricultural Tools & Crafts; Indian Knowledge system, Skill Development & Entrepreneurship; Water resource management, Sanitation & Soil Health; Microbial & Biomass Technologies; Food science & Nutrition, Food processing & Technology (All above areas in rural context) **Preference will be given in these areas:** Artisanal/Agricultural Tools & Crafts; Resilience & Climate Change; Water resource management & Food science & Nutrition.

22. **SENSORS, INSTRUMENTATION AND CYBER-PHYSICAL SYSTEM ENGINEERING (SeNSE):** Candidates must have an ability to build world-class research facilities, and a proven/ demonstrated history of hands-on product and prototype development at the individual/ team level in- Optical Engineering (optical fabrication, laser systems and optical instrumentation), Precision mechanics, electronics systems and instrumentation, sensors, smart systems, cyber-physicalsystems. (more details at http://bit.ly/SENSE-faculty-advertisement).

23. **TRIP-Centre (Transportation Research and Injury Prevention Centre):** Invites applications from well qualified Ph.D. degree holders with a strong academic background for the posts of Assistant Professor/Associate Professor and Professor specializing in transport planning and traffic safety, Automotive safety, Impact biomechanics, sustainable transport safety; vehicular pollution, transport economics, transport geography (statistics/epidemiology with a focus on population and demographics. Applicants can seek joint appointments in suitable departments and center's at IITD. TRIP Centre is a new academic unit established in May, '21. The Centre promotes and facilitates collaborative research and technology development in transportation research and injury prevention field.

24. **OPTICS AND PHOTONICS CENTRE:** Optical Engineering, Optical Instrumentation and Metrology, Optical Imaging, Fiber Optics, Integrated Optics, Optical Communication, Optical Sensors, Laser Science and Technology, Ultrafast Optics, Silicon Photonics, Nanophotonics, Plasmonics, Biophotonics, Green Photonics, Statistical and Quantum Optics, Quantum Photonics, Terahertz Photonics, Optical Metamaterials, Nonlinear Optics, Optical and Magneto-optical Storage Devices, Photonic Devices, and other relevant areas.

25. **BHARTI SCHOOL OF TELECOMMUNICATION TECHNOLOGY ANDMANAGEMENT (BSTTM)**: All areas of Telecom Technology and Management.

26. **AMAR NATH & SHASHI KHOSLA SCHOOL OF INFORMATION TECHNOLOGY (ANSKSIT):** Computational Neuroscience, Medical Applications of Information Technologies, Computational & Systems Biology, Embedded Systems& Sensor, Computer Security, Internet of Things (IOT).

27. **KUSUMA SCHOOL OF BIOLOGICAL SCIENCES (KSBS):** Basic/ Fundamental research in Biological Sciences in the areas of Structural Biology, Infectiousdiseases & non-communicable disorders and cognitive & computational neurosciences.

28. **SCHOOL OF PUBLIC POLICY (SOPP)**: The applicants must have a demonstrated track record of research in the area of public policy with broad focus on Science, Technology & Innovation (STI) and Development, and expertise in one or more of the specific areas of (1) Energy & Environment (2) Health innovations & systems (3) Sustainable Habitats (4) Agriculture, Food & Water (5) Industry & Economy (6) Internet, Digital Information & Society (7) Innovation Systems & Processes, and (8) Technical Higher Education. For further details, please see http://ssp.iitd.ac.in/

29. **SCHOOL OF ARTIFICIAL INTELLIGENCE (ScAI)** : In all areas of artificial intelligence, Subareas of interest include (but are not limited to) deep learning, reinforcement learning, probabilistic models, data mining, information retrieval, multi-agent systems, knowledge representation and reasoning, mathematical foundations of AI, ethics of AI, applied AI such as NLP, computer vision, robotics, AI on the edge, etc., and applications of AI to domain areas such as healthcare, agriculture, education, industry 4.0, etc. ScAI strongly encourages applicants with demonstrated track-record of working at the intersection of an application area and the AI fields. More details are found at http://www.scai.iitd.ac.in

The following benefits are applicable for the post of Assistant Professor:-

- A start-up seed grant of up to ₹ 20,00,000/- is available to develop research capability in the area of expertise of the faculty member to set research goals for oneself. The Institute also provides an additional grant of ₹ 30,00,000/- as matchingequipment grant to build new capability / high-value research facility in emerging areas via special project funding from external agencies. These grants are to be availed within 3 years of joining. The strategic goal of this fund is to aim for biggerprojects.
- A cumulative Professional Development Allowance **(PDA)** of ₹ 3,00,000/- for every block period of 3 years is available to every member of the faculty to meet the expenses for participating in conferences, membership fee of various professional bodies, procurement of books and periodicals and contingent expenses.
- Reimbursement of telephone/mobile bills up to a ceiling of ₹ 2,250/- plus taxes and ₹ 1,200/- plus taxes as applicable per month for faculty members in pay levels12/13/13(A) and 11, respectively.

- Relocation allowance, as a reimbursement of expenses incurred by a faculty member on travel by him/her and his/her family and for transportation of household goods, limited to ₹ 2,50,000/- for faculty joining the Institute from abroad and
  ₹1,25,000/- for faculty joining the Institute from India.
- Candidates for the post of Assistant Professor are eligible for "Young Faculty Incentive Fellowship", initially for a period of 3 years from date of joining till the movement to Pay Level 13A1 whichever is earlier. The fellowship grants an honorarium of ₹ 25,000/- per month over and above the salary.
- Faculty are eligible for Chair Positions that entitle faculty members to a grant of ₹ 5,00,000 per annum for a period of 3 years, extendable up to 5 years.
- Institute bestows Faculty Research Awards to faculty members, across designations, in recognition of their significant research contributions.
- Other than above some more additional benefits and incentives are available in the institute. For further details, please see athttps://home.iitd.ac.in/uploads/Benefits_and_incentives_to_faculty.pdf

NOTES:

- The policy of Govt. of India on reservation of faculty positions as applicable to IITs, including that for persons with disability, will apply.
- The minimum requirement of qualifications and/or experience may be relaxed in respect of exceptionally outstanding candidates in certain areas.
- A mere fulfillment of required minimum qualifications and experience does not entitle a candidate to be called for an interview/discussion.
- The Institute reserves the right to fill or not to fill the posts advertised.
- No correspondence whatsoever will be entertained from the candidates regardingpostal delays, conduct and result of the interview, and reasons for not being calledfor interview or selection.
- Depending upon the qualification and experience, a higher starting salary maybe offered to deserving candidates.
- Separate online applications must be filled in, if a candidate is applying for a faculty position in more than one academic unit (Department/Centre/School). Candidates having overlapping interests in more than one academic unit can be considered for joint appointment, if selected.
- The candidates called for interview will be paid AC2-Tier by Train / Economy Class by Air or actual expenditure and AC Taxi by road (from Airport/Railway Station/ISBT and back) fare from their place of residence/work and back by the shortest route within India.
- Persons employed in Government/Semi-Government Organization or Educational Institutions must apply through proper channel OR shall provide "**No Objection Certificate"** while applying or at the time of interview.

IIT Delhi makes every attempt to help faculty members settle in their academic roleand to grow professionally.

ACCOMMODATION: Suitable residential accommodations, located on the campus, shall be provided as per Institute rules to the faculty members on joining the Institute (this is subject to availability). Faculty members can avail accommodation outside the campus on lease till regular accommodation is provided in the campus. Institute supports payment of monthly rental of up to ₹ 35,000/- for the same.

ABOUT THE CAMPUS: Extending into an area of 320 acres, the campus is imaginatively laid out with a picturesque landscape with clean and wide roads. The campus provides all essential amenities for community living including Staff Club, Sports Complex (both indoor & outdoor), Hospital, Shopping Centre, Banks, ATMs, Post Office,numerous food courts, Community Centre, etc.

HOW TO APPLY:

It is a requirement that candidates use the IIT Delhi website (https://home.iitd.ac.in/jobs-iitd/index.php**)** to fill-up and submit application online against the aforesaid faculty position on or before **31st March, 2022**. The website also contains useful information on various aspects of working and living at IIT Delhi and recruitment process.

As a precaution, after submitting the application through the website, please retain a copy of the application. Candidates employed with Government/Semi-Government Organizations or with Autonomous Bodies must print a copy of the electronic submissionand submit the printed version through proper channel at the address given below.

Candidates who have applied online may please log in to our site (https://ecampus.iitd.ac.in/IITDFR-0/login) and check the status whether their applications have been received or not.

Address for Correspondence:

Joint Registrar (E-I)
Indian Institute of Technology Delhi
Hauz Khas, New Delhi-110016, INDIA
Telephone: +91-11-26591716/26591709
E-mail: fac_recruit@admin.iitd.ac.in