Indian Institute of Technology Jodhpur

Faculty Recruitment

Rolling Advertisement

IITJ/2023/Faculty Position/39; dated 1 March 2023

Indian Institute of Jodhpur (IIT Jodhpur) invites online applications from persons with exceptional academic record and valuable industrial experience at the levels of *Professor, Associate Professor* and *Assistant Professor* to conduct teaching and research in the following Departments.

Department	*Key areas of requirement (indicative and not exhaustive)*
Bioscience and Bioengineering	**Basic Biology:** Biological flow, Cellular & Molecular Neuroscience, Cancer Biology, Evolutionary Biology, Epigenetics, Ecology, Structural Biology with expertise in Cryo-Electron Microscopy and Nuclear Magnetic Resonance, Immuno-Oncology. **Interdisciplinary Biology**: Bioinformatics, Computational Biology, Mathematical Biology, Systems Biology, Biomechanics, Biological flow, Microfluidics, Bioinspired designs, Bioprinting, Biomaterials Engineering, Bio-transport Phenomenon, Bioelectricity, Mechanobiology, Computational drug design, Bio-photonics. **High throughput Biology:** Multi-omics (Genomics, Proteomics, Metabolomics, Phenomics etc.), Functional Metagenomics Bioprospecting, High-throughput screening, Single cell technologies, Lab-on-a-Chip/Organ on a chip, Precision medicine. **Applied Biology:** Ecosystem health monitoring and interventions, One-Health, Ecosystem modelling, Environmental Bioengineering, Food & Agriculture Biotechnology, Genome editing, Genome engineering, Metabolic engineering, Synthetic Biology, Bioprocess/Biochemical Engineering.
Chemical Engineering	Sustainable Chemical Engineering, Molecular Engineering, Process Engineering, Biochemical Engineering, Transport Phenomena, Chemical Reaction Engineering, Catalysis, Mass Transfer, Process Control, Heat Transfer, Chemical Engineering Thermodynamics, Separation Processes, Process Intensification, AI/ML in Process Engineering.
Chemistry	Chemical Biology & Medicinal Chemistry, Environmental chemistry, Gas phase spectroscopy, Transition Metal Chemistry, Electrochemistry, Physical Organic Chemistry, Supramolecular Chemistry, Bio-inorganic Chemistry, Bio-organic Chemistry, Computational Materials Chemistry, Polymer Chemistry
Civil and Infrastructure Engineering	Solid waste management, Wastewater Engineering, Transportation Planning, Smart Infrastructure Engineering, Earthquake Engineering
Computer Science and Engineering	Computer Architecture, High Performance Computing, Parallel Programming, GPU Programming, Distributed & Multicore Computing, VLSI and Design Automation, Operating Systems, Computer Networks, Sensors and IOT, Edge and Fog Computing, Cloud Technologies, Communication Networks, Next generation wireless communication systems, Networked Systems, Compilers, Programming Languages, Program Analysis and Verification, Database management systems, Data Analytics, Big Data, Data Engineering and Visualization, Software Systems and Engineering, Theoretical Computer Science, Algorithms, Verification, Logic, Automata, Quantum Computing, Artificial Intelligence and Machine Learning, Computational Learning

	Theory, Computer Graphics, Computer Vision, Augmented Reality and Virtual Reality, Natural Language Processing, Data Mining, Information Retrieval, Speech Understanding, Robotics, Human Machine Interaction, Computational Social Science, Social and Complex Networks, Security and Privacy, Cybersecurity, Cryptography, Systems Security, Network security, Software Security, Trusted computing, Sustainable computing.
Electrical Engineering	VLSI, RFIC, Quantum Computing & High-Level Synthesis, Embedded & Control Systems, Communication Systems, Power Systems, Power Electronics, Robotics, Cyber-physical Systems & its security, Microelectronics including Photonics, Plasmonic, Spintronics, MEMS & NEMS; RF, Microwave & mm wave devices and technologies.
Metallurgical and Materials Engineering	Phase field modelling, Materials design using Artificial Intelligence and Machine Learning, Crystal Plasticity Modeling, Computational Thermodynamics of Materials (CALPHAD Assessment), DICTRA simulation. Extractive metallurgy, Process modelling of Metallurgical Processes. High Temperature Materials, Additive Manufacturing, Composites. Energy Materials (Solar, Hydrogen generation and storage), Polymer Synthesis and Processing, Processing of Ceramics.
Mathematics	Algorithms, Combinatorics, Graph Theory, Optimization, Applied Probability, Queuing Theory, Stochastic Modelling, Applied Statistics, Machine learning, Scientific Computations, Data analytics, Time series analysis, Game Theory, Algebraic Geometry, Differential Geometry, Topology, Harmonic Analysis, Operator Theory, Algebra, Number Theory.
Mechanical Engineering	**Design:** Computational Solid Mechanics, Lightweight Structures, Biomechanics and Bio-Design, Multibody Systems, Human Machine Interaction, Soft and Rehabilitation Robotics, Mobility Systems, Automation and Control, Design for X, AI in Design Automation, Optimization **Thermo-Fluids:** Non-Newtonian/granular flow, Computational Multiphase/High-speed Flows, Bio fluidics, Experimental turbulence/combustion, Turbomachinery, HVAC, Fuel Cell, Hydrogen Energy, Water Technologies, Wind Energy, Waste to Wealth **Manufacturing:** Metal Casting; Metal forming; Additive Manufacturing; Smart Manufacturing; Advanced Materials Processing (processes/equipment development); Modeling and Simulation of Manufacturing Processes; Manufacturing at Micro- and Nano-scales (Processes and Metrology); Bio-manufacturing; Non-Destructive Testing Techniques.
Physics	Advanced areas of physics including photonics, energy, nanomaterials, cold plasma, soft matter physics, stealth technologies, experimental high energy physics and quantum physics
School of Artificial Intelligence and Data Science	1. Brain Science and Applications (Brain networks and information processing in the brain; models of perception, intelligence and cognition; brain-inspired AI and other artificial systems; brain-inspired computer architecture)

	2. Mathematical and Computational Economics (Game Theory, Microeconomics, Computational/Algorithmic Techniques in Economics, Experimental Economics, Econometrics) 3. Intelligent Infrastructure (Intelligent Transport Systems, Smart Cities, Climate Change, Sustainability and Resilience, Cyber-physical systems, Cyber-Security, Digital Twins) 4. AI based Precision and Integrative Healthcare 5. Philosophy and Ethics of AI 6. Human Centered AI 7. Language Technology 8. Guarantees for Machine Learning
School of Management and Entrepreneurship	Accounting & Corporate Finance, Banking and Investment, Risk & Financial Engineering, Business Law, Business Research Methods and Statistics, Innovation & Entrepreneurship, Incubation management, Innovations, and Intellectual Property Rights, Patents, Geographical Indications, Trade Marks, Copyright, and Trade Secrets, Systems & Design Thinking, Human Capital, Organizational Behaviour, Technology and Digitalization in HRM, Marketing Management, Retail Marketing, Rural marketing, Digital Marketing, Marketing Analytics, Production and Operations Management and Analytics, Blockchain in Business applications, Cloud Computing in Business, Deep Learning in Business, Business Simulation Strategic Consulting and Negotiation, Economics.
School of Liberal Arts	Philosophy, Economics, Sociology, International Relations, Performing Arts, Aesthetics, History (History of Science), **Design:** Interaction design, AR/VR/MR/XR/Immersive experience design, Game design, Animation and VFX, Visual representation (2D & 3D – sketching, modelling, rendering), Product Design, Communication Design, Film Making, Cinematography, Sound Design
Center for Emerging Technologies for Sustainable Development	Ecosystem Science, Sustainable Development, Geospatial Sciences, Sustainability Auditing or accounting/ESG (Financing/Risk Mitigation), Public Health, Human Ecology, Sustainable Urban Planning, Learning Science and Instructional Design (Education Technology), Natural Resource Management (including Net Zero goals), Sustainability of Water, Waste Management, Carbon Capture (storage and use), Clean Energy, Sustainable Materials
Center For Technology Foresight and Policy	Foresight Theory, Practice and Methodologies, Strategic Foresight /Technological Foresight, Future Studies, Public Policy – Research, Proposal and Advocacy, Strategic Management and Business Models, Technology Management, Technology Road mapping, Decision-Making, Exposure and interest in one or more of evolving technologies and its future trajectories (such as Quantum Technologies, Metaverse, Future of Mobility and Transportation, AR/VR and Future of Devices, AI driven foresight and decision making, Sustainable Technologies, Digital Healthcare)
Center for Education and Technology for Education	Education Technology and/or subjects pertaining to Technical Education and Pedagogy or equivalent. 1. Engineering Education 2. Pedagogy for Engineering education 3. Instructional System design, Strategies

IIT Jodhpur reserves the right to focus on specific areas for recruitment as indicated above. The fields mentioned are meant to be indicative of the departments' current requirements, which may change without notice. However, persons which exceptional academic and research record in any area relevant to the department/school/center will also be considered.

Eligibility requirements

(a) Professor

(1) Ph.D. with first division in the preceding degree or equivalent in the appropriate discipline, with good academic record throughout.
(2) At least a minimum of 10 years teaching, research and/or industrial experience, of which at least 4 years should be at the level of Associate Professor in IITs, IISc, IIMs, NITIE Mumbai and IISERs or at an equivalent level.

(b) Associate Professor

(1) Ph.D. with first division in the preceding degree or equivalent in the appropriate discipline, with good academic record throughout.
(2) At least a minimum of 6 years teaching, research and/or industrial experience, of which at least 3 years should be at the level of Assistant Professor in a reputed Institute or University or equivalent.

(c) Assistant Professor Grade I

(1) Ph.D. with first division in the preceding degree or equivalent in the appropriate discipline, with good academic record throughout.
(2) At least a minimum of 3 years teaching, research and/or industrial experience, from the date of defending the Ph.D. Thesis (experience while pursuing Ph.D. Program is not be included).

(d) Assistant Professor Grade II

(1) Ph.D. with first division in the preceding degree or equivalent in the appropriate discipline, with good academic record throughout.
(2) Applicants having no or less than 3 years Post-Ph.D. experience will be considered for a contractual appointment of duration less than or equal to 3 years which can be converted into regular position upon review of performance during or after contract period.

The prescribed essential qualifications and experience indicated are bare minimum, and mere possessions of the same will not entitle the applicants to be called for interview. The Institute reserves the right to restrict the number of applicants to be called for interview to a reasonable limit, on the basis of qualification and experience higher than that of the minimum prescribed in the advertisement. Therefore applicants should furnish details of all the qualifications and experience possessed in the relevant field, over and above (if any) the minimum qualification prescribed along with documentary evidences.

1.1.2 Scale of Pay

Following table provides an estimate of the total approximate emoluments of faculty members at IIT Jodhpur in accordance with Government of India prescribed guidelines. The Selection Committee may accord higher emoluments in case of candidates with exceptional track record.

Designation	*Scale of Pay*	*Approximate Monthly Gross Emoluments with HRA and other Allowances as on 31 January 2023*
Professor	To be placed in Pay level 14A; Minimum Basic Pay of Rs. 1,59,100	Rs. 2,53,164
Associate Professor	To be placed in Pay level 13A2; Minimum Basic Pay of Rs. 1,39,600	Rs. 2,22,744
Assistant Professor Grade I	To be placed in Pay level 12; Minimum Basic Pay of Rs. 1,01,500	Rs. 1,63,308
Assistant Professor Grade II	To be placed in Pay level 10; Minimum Basic Pay of Rs. 70,900 (candidates having no post-Ph.D. experience)	Rs. 1,15,572

For example, candidates selected for the position of Assistant Professor Grade II with no post-PhD experience shall be:

(1) Placed in Pay level 10; with a Minimum Basic Pay of Rs. 70,900
(2) Elevated after 1 year to Pay level 11; with a Minimum Basic Pay of Rs. 73,100
(3) Elevated after 3 years to Assistant Professor Grade I; with a Minimum Basic Pay of Rs. 1,01,500
(4) Moved to Pay level 13A1 on completion of 3 years of service as Assistant Professor Grade I; with a Minimum Basic Pay of Rs. 1,31,400

1.1.3 Additional Financial Support to New Faculty Members

The following conveniences are provided to the Faculty Members joining the Institute:

(1) Reimbursement of Relocation Expenditure

- Reimbursement of relocation expenses will be given on submission of original bills, to those Faculty Members who are joining for full-time positions at the Institute from abroad / from any place in India.
- The reimbursement will be given for one-way economy class airfare by any Airline for faculty members themselves and their family members (as defined in SR 2(8)). As per the Government of India norms, the tickets must be booked either through one of the authorized travel agents M/s. Balmer Lawrie & Company Limited (BLCL) OR M/s. Ashok Travels & Tours (ATT) OR Indian Railways Catering and Tourism Corporation Ltd. (IRCTC).
- This facility is available only to candidates joining the post of Professor/Associate Professor/Assistant Professor Grade I after executing a bond to serve IIT Jodhpur for 3 Years. Candidates joining the post of Assistant Professor Grade II (On Contract) can become eligible only, if they are offered the post of Assistant Professor Grade I after due review of performance. In such cases, a bond shall be executed to serve IIT Jodhpur for 3 Years after joining the post of Assistant Professor Grade I.
- The Reimbursement of relocation expenses will be made as under:-

S.No.	Particulars	Financial Limit for Reimbursement of Travelling Allowance and Transportation Charges
1	Faculty Member(s) joining the Institute from within India (From Government/Autonomous / Similar Institutes)	The reimbursement will be governed by the provisions as laid down in the SR-116 and TTA Rules.
2	Faculty Member(s) joining the Institute from within India other than 1 above	The Reimbursement will be up to Rs. 1,50,000/- or actuals (whichever is less).
3	Faculty Member(s) joining the Institute from abroad	The Reimbursement will be up to Rs. 2,50,000/- or actuals (whichever is less).

		The Faculty Member must join the Institute within a period of three months after returning from abroad.

(2) Reimbursement of telephone bills as per the Institute norms.
(3) A Cumulative Professional Development Allowance (CPDA) of Rs. 3 lakhs for every block period of 3 years on reimbursable basis to meet expenses related to participation in national and international conferences, payment of membership fee towards professional bodies, purchase of books and contingency expenses as per Institute norms.
(4) Research initiation grant of up to Rs. 25 Lakhs (as per the availability of funds) within the initial period of 3 years from the date of joining.
(5) Mobility Research Grant: up to Rs. 10 lakhs to support travel, subsistence allowance and contingency expenses to the Assistant Professor and his/her one Ph.D. student to visit the laboratories of foreign collaborator during two consecutive years as per the rules of the Institute.
(6) Transit accommodation for initial period of joining the Institute. Within this period, the Institute will try to offer suitable accommodation on the residential campus, if available. When such accommodation is not available, the employee is required seek private accommodation in the city.
(7) Medical re-imbursement as per Institute norms.
(8) Reimbursement of education allowance for children up to 12th Class for the first two children up to a maximum of Rs. 27,000 per child.
(9) Contribution towards New Pension Scheme (NPS) as per the norms of Government of India.
(10) Interest-free soft advance up to a maximum limit of 3 months salary (namely Basic Pay + Dearness Allowance) or 1.5 lakhs whichever is less can be availed maximum two times within the 3 years of date of joining the Institute for the purpose of education, obligatory expenses, legal costs, purchase of consumers' durables and pilgrimages. The advance amount can be repaid in a maximum of 12 monthly equal installments.

1.1.4 Other Financial Incentives

Faculty Members receiving any one of the following two awards: (i) INAE Young Engineer Awards, and (ii) INSA Young Scientist Award, will be provided an additional financial incentive of Rs. 10,000 per month. The incentive will be given for a period of 3 years from the date of announcement of the award.

Faculty Members who are the fellow of any two of the following academy: (i) Indian National Science Academy (INSA), New Delhi (ii) Indian National Academy of Engineering (INAE), New Delhi (iii) Indian Academy of Science (IASc), Bangalore (iv) National Academy of Science, India (NASI), Allahabad, will be provided honorarium of Rs. 15,000 per month.

1.1.5 Information regarding the application process

This is a standing advertisement. There is no specific requirement on when a candidate can submit an application. Applications will be accepted throughout the year. Interested candidates may apply with all the details requested in ONLINE application placed on the website of IIT Jodhpur (www.iitj.ac.in).

(1) Applications will be screened for the interview once every three months or based on the requirement of the department.
(2) Although recruitment will be prioritized on the basis of need in certain areas within a particular discipline, applications may also be considered from exceptional candidates with background in other areas of the specified discipline.
(3) Institute adopts reservations policy as per Government of India norms.
(4) In case of exceptional candidates, the Institute reserves the right to relax age, qualifications and/or experience. Applicants are requested to upload the certificates in required format along with the application form.
(5) The Institute reserves the right to fill or not to fill any or all of the advertised posts.
(6) Candidates employed in Government and Semi-Government Organizations, Public Sector Enterprises, Autonomous Organizations, University and Educational Institutes must provide 'No

Objection Certificate' from their present employer at the time of interview, in case he/she is shortlisted for interview.

(7) Candidates shortlisted for the Interview will be provided economy class Air-Fare for travel in India (as per Govt. Norms) from the starting airport to Jodhpur Airport and return by the shortest route.

(8) Application with insufficient information or without relevant supporting documents will not be considered for further processing.

(9) The Institute may verify the antecedents or documents submitted by a person at the time of appointment or during the tenure of the service. In case, it is detected that the documents submitted by the candidates are fake or the candidate has a clandestine antecedents or background and has suppressed the said information, then his or her services shall be terminated.

(10) For any query please contact to office_recruitment@iitj.ac.in, Ph. 0291-2801111

Professor In-charge (Faculty)