



**Requirement for Assistant Professor/Associate
Professor/Professor of Practice in Computer Science and
Engineering, School of Engineering and Technology (UIET),
CSJM University, Kanpur**

1. Competitive Programming

Requirement for Professor of Practice:

Roles and Responsibilities:

1. Curriculum Development and Teaching:

- Design and develop advanced courses and modules on competitive programming, algorithms, data structures, and problem-solving techniques.
- Deliver lectures and conduct practical sessions focusing on enhancing students' competitive programming skills.

2. Mentoring and Training:

- Provide mentorship to students interested in competitive programming.
- Guide students in preparing for national and international level competitive programming contests.
- Organize and conduct workshops, boot camps, and training sessions to build students' problem-solving skills.

3. Industry-Academia Collaboration:

- Collaborate with industry experts to bring real-world competitive programming challenges into the academic environment.
- Foster relationships with tech companies to facilitate internships, guest lectures, and collaborative projects.

4. Research and Innovation:

- Encourage and support students in conducting research related to algorithms, data structures, and other areas of computer science relevant to competitive programming.

5. Event Organization:

- Organize and oversee intra-university coding competitions to identify and nurture talent.
- Facilitate the participation of university teams in external competitive programming events.
- Coordinate with other faculty members to ensure the smooth execution of programming contests and related events.

6. Skill Development and Student Engagement:

- Engage with students outside the classroom through programming clubs, online platforms, and coding communities.
- Track and monitor student progress and provide continuous feedback to help them improve.

Qualifications and Experience:

1. Educational Background:

- A degree in Computer Science, Information Technology, or a related field is preferred.



- Candidates with a significant professional track record in competitive programming or related areas may be considered even if they do not have formal academic qualifications.
 - 2. **Professional Experience:**
 - At least 15 years of experience in the field of computer science, with a focus on algorithms, data structures, and competitive programming.
 - Experience in mentoring students or teams for competitive programming contests is highly desirable.
 - 3. **Skills and Expertise:**
 - Strong expertise in algorithms, data structures, and problem-solving.
 - Proficiency in programming languages commonly used in competitive programming, such as C++, Python, and Java.
 - Proven track record of participating in or coaching teams for competitive programming competitions.
 - 4. **Additional Qualities:**
 - Excellent communication and teaching skills.
 - Passion for mentoring and developing the next generation of computer science talent.
 - Ability to work collaboratively with students, faculty, and industry partners.
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2. Artificial Intelligence and Machine Learning

Requirements for Assistant Professor/Associate Professor/Professor of Practice:

- **Expertise:** Deep knowledge in AI and ML concepts, including neural networks, deep learning, natural language processing, and computer vision.
 - **Experience:** At least 5/10/15 years of experience in AI/ML, with a proven track record in developing AI solutions, preferably in industry or research settings.
 - **Roles and Responsibilities:**
 - Develop and teach courses on AI, machine learning algorithms, and data science.
 - Mentor students on AI/ML projects, guiding them in applying theoretical knowledge to real-world problems.
 - Lead research initiatives in AI and foster industry partnerships for collaborative projects.
 - Organize workshops and seminars to keep students and faculty updated on the latest AI/ML trends and advancements.
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3. Cybersecurity

Requirements for Assistant Professor/Associate Professor/Professor of Practice:

- **Expertise:** Strong background in cybersecurity, including knowledge of cryptography, network security, ethical hacking, and cybersecurity protocols.
- **Experience:** Minimum 5/10/15 years of experience in cybersecurity roles, such as security analyst, security architect, or cybersecurity consultant, with practical experience in managing cyber threats.
- **Roles and Responsibilities:**



- Teach courses on cybersecurity principles, ethical hacking, and incident response.
- Develop practical labs and simulations to train students in identifying and mitigating security threats.
- Lead initiatives to strengthen the university's cybersecurity infrastructure.
- Collaborate with industry partners to provide students with hands-on experience through internships and real-world cybersecurity projects.

4. Data Science and Big Data Analytics

Requirements for Assistant Professor/Associate Professor/Professor of Practice:

- **Expertise:** Extensive knowledge of data science, big data technologies, statistical analysis, and data visualization tools.
- **Experience:** At least 5/10/15 years of experience in data analytics roles, such as data scientist, data analyst, or big data engineer, with experience in handling large-scale data projects.
- **Roles and Responsibilities:**
 - Develop and teach courses on data science, big data technologies (e.g., Hadoop, Spark), and machine learning.
 - Mentor students in projects involving data analysis, predictive modeling, and data-driven decision-making.
 - Establish partnerships with industry for collaborative data science projects and case studies.
 - Organize data science competitions and hackathons to encourage student participation in data analytics.

5. Cloud Computing

Requirements for Assistant Professor/Associate Professor/Professor of Practice:

- **Expertise:** In-depth understanding of cloud computing platforms (e.g., AWS, Azure, Google Cloud), cloud architecture, and virtualization technologies.
- **Experience:** Minimum 5/10/15 years of experience in cloud computing, including roles such as cloud architect, cloud engineer, or cloud consultant, with hands-on experience in deploying and managing cloud solutions.
- **Roles and Responsibilities:**
 - Teach courses on cloud computing fundamentals, cloud architecture, and cloud services.
 - Guide students in practical projects related to cloud deployment, cloud security, and cloud-native application development.
 - Collaborate with cloud service providers to offer students hands-on training and certification opportunities.
 - Lead research projects focused on optimizing cloud infrastructure and exploring new cloud computing paradigms.



6. Blockchain Technology

Requirements for Assistant Professor/Associate Professor/Professor of Practice:

- **Expertise:** Solid knowledge of blockchain technology, smart contracts, decentralized applications (dApps), and cryptographic principles.
- **Experience:** At least 5/10/15 years of experience in blockchain development, with experience in implementing blockchain solutions in sectors like finance, supply chain, or healthcare.
- **Roles and Responsibilities:**
 - Develop and teach courses on blockchain technology, smart contracts, and distributed ledger technologies.
 - Mentor students in building blockchain-based applications and conducting research on blockchain scalability and security.
 - Facilitate partnerships with companies using blockchain to provide students with practical exposure and internship opportunities.
 - Organize blockchain workshops and hackathons to stimulate interest and innovation in blockchain technology.