

Short Certificate Course in High Performance Computing

Course Objective

The course provides practical knowledge of High-Performance Computing (HPC), focusing on its applications, system administration, and parallel programming. Participants will learn to manage HPC systems and develop optimized code for complex computational tasks, equipping them to implement advanced solutions across various domains.

Who Should Attend?

The course targets professionals, researchers, and students in computational fields, focusing on parallel computing, advanced algorithms, and optimizing performance for data-intensive tasks and simulations. Applicants must have basic computer knowledge and programming fundamentals. Applicants with one year of experience in the field will be given priority.

Course Outcomes

On completing the course, participants will be able to:

- Demonstrate understanding of the principles, architecture, and components of HPC systems.
- Apply HPC techniques to solve real-world problems in domains such as science, engineering, and data analytics.
- Manage, configure, and maintain HPC clusters and infrastructure efficiently.
- Use parallel programming tools to optimize code performance.
- Analyse and enhance the performance of computational workloads on HPC systems.
- Design and deploy customized HPC solutions for specific computational challenges.

Course Design

- Introduction to High-Performance Computing (HPC)
- HPC cluster and Ecosystem
- Architecture and Organisation
- Linux Operating System and Shell Scripting
- HPC Access and Module management
- Parallel Programming: Open MP, Message Passing Interface
- Schedulers and Job Submission
- Machine Learning applications and libraries
- HPC Applications and Case Studies

Assessment

Participants are evaluated using Diversified Continuous Assessment throughout the duration of the course to make a fair assessment of the skills acquired by them to have a very uniform and fair assessment.

Certificate

The participants will receive the Certificate of Completion on completion of the course.

When to Apply

Application closing dates are usually at the end of January for the first intake and the end of June for the second intake of the year. For more details, students are advised to visit the website of INCEIT.

Note: The aforementioned programme is not eligible for admission in any degree programme.

Duration: Six Weeks

Delivery Mode: The programme will be delivered full-time (day and/or evening, face-to-face and/or Online) in accordance with NUST rules.



Scan the QR code to apply.
Online application is FREE!

Enquiries

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