

EMBEDDED SYSTEMS SOLUTIONS

COMPREHENSIVE HPC ACADEMIC SOLUTIONS FOR UNIVERSITIES AND RESEARCH INSTITUTIONS



Embedded Systems Solutions (ESS), in partnership with Intel Software India, provides **COMPREHENSIVE HPC ACADEMIC SOLUTIONS** for universities, research facilities and training institutions. The comprehensive solution provides **HPC Courseware, HPC Hardware, HPC Software** and **Development Tools** supported by **Faculty Development Programs (FDP)** required for deploying academic solutions.

ESS and Intel Software India, continuously collaborate with academia to develop HPC curricula and HPC courses to ensure that today's graduates have the necessary skills to contribute to the innovation and global trends powered by HPC.

ESS INTEL HPC ACADEMIC SOLUTIONS PROVIDE THE FOLLOWING:

HIGH PERFORMANCE COMPUTING CURRICULA AND COURSEWARE

The HPC Academic Solutions provide the curricula topics best suited for HPC Courses for Under Graduate and Post Graduate Programs along with supporting lab exercises. Importantly, the complete courseware will be provided as part of the proposed comprehensive HPC academic solutions. The solutions also detail the recommended text books and additional online learning resources available to students and faculty to support classroom learning.

HIGH PERFORMANCE COMPUTING LABS: HARDWARE INFRASTRUCTURE AND REQUIRED SOFTWARE TOOLS

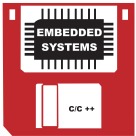
The HPC Academic Solutions provide the required HPC hardware platforms, software, and tools to build HPC Laboratories at universities. Importantly, this proposed infrastructure can also be used for researchers/scientists for their highly computational intensive pure science and engineering research.

FACULTY DEVELOPMENT PROGRAM

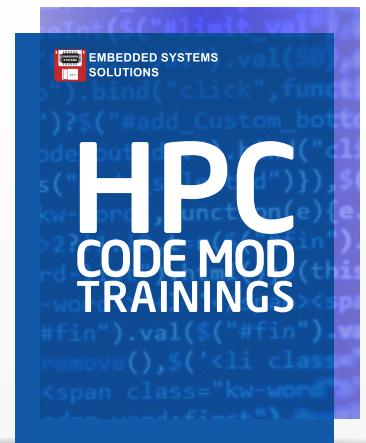
The HPC Academic Solutions provide Faculty Development Programs (FDP) to train faculty on key HPC topics including hands on lab exercises and activities. This training program can also be extended to researchers pursuing research areas which are computation intensive and require HPC platforms solutions.

This Faculty Development Programs (FDP) cover both hardware and software aspects of High Performance Parallel Computing. It is mainly focused on parallelizing concepts, multicore architectures and manycore architectures for HPC, parallel programming methodologies and important Intel software tools for HPC.

Additionally, guest lectures will be provided for faculty during the first six months of deploying the HPC academic solution to help ease the learning curve for the faculty and students.



EMBEDDED SYSTEMS SOLUTIONS



INTEL SOFTWARE TOOLS TRAINING

PARALLEL PROGRAMMING (BASICS)

This training program is developed for programmers with 'C' programming knowledge who want to learn basics of Parallel Programming on Intel Multi-Core & Many-Core Processor based Systems. The training emphasizes on parallel programming techniques and provides a high-level overview of Intel Parallel Studio XE.

IMPORTANCE OF HPC IN EDUCATION AND RESEARCH

This training program is developed for influencers and department heads of Educational and Research Organizations. It provides a high-level overview of HPC, the importance of HPC in education and research, role of HPC in nation building and importance of today's graduates having the necessary skills to contribute to the innovation trends powered by HPC.

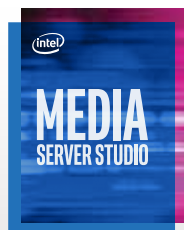
HPC CODE MODERNIZATION TRAINING

This training is for advanced HPC programmers, to take advantage of the performance gains and capabilities of the latest Intel® architecture with the Intel® Software Tools. It is intended to train software engineers parallelize legacy serial applications or create new parallel applications for Multi-Core, Many-Core, and Multi-Node computing.

Parallelism, vectorization and multithreading are simplified with the Intel® Parallel Studio XE - a comprehensive development tool suite from design and development to debugging and tuning. This training combines sessions on Intel Compilers & Components of Parallel Studio XE and Hands-on Lab Sessions using Intel Tools.

ADDITIONAL TRAININGS

- Xeon-Phi (KnightsCorner) System Administration
- Storage Architecture and Fundamentals of Parallel File System
- Intel Lustre Parallel File System
- Intel Omni-Path Architecture



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