UNIVERSITY OF MYSORE

Estd. 1916

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No.AC.2(S)/384/14-15

Dated: 10-06-2015

NOTIFICATION

Sub: Introduction of High Performance Computing related elective course for M.Sc, M.Tech and MCA programmes.

Ref: 1. Proceedings of Faculty of Science & Technology Meeting held on 02-02-2015.
2. Proceedings of the Meeting of Academic Council held on 27-03-2015.

The Board of Studies in **Computer Science (PG)** at its meeting held on 21-11-2014 has resolved to introduce of High Performance Computing related elective course for M.Sc, M.Tech and MCA programmes form the academic year 2015-16

The Faculty of Science and Technology and the Academic Council at their meetings held on 02-02-2015 and 27-03-2015 respectively approved the above proposals and the same is notified.

The copy of High Performance Computing related elective course for M.Sc, M.Tech and MCA programmes is annexed.

DRAFT APPROVED BY THE REGISTRAR

REGISTRAR.

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS/DOS in Computer Science, MGM.
3. The Dean, Faculty of Science & Technology, DOS in Earth Science, MGM.
4. The Director, College Development Council, UOM, Mysore.
5. The Coordinator, Online & Outreach programme, Parakalamatta, MGM.
6. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
7. The Supdt, A.B., Academic Section / PMEB, UOM., Mysore.
8. The P.A. to the Vice-Chancellor/Registrar/Registrar(Evaluation), UOM., Mysore.
9. The Case Worker, AC.7, Academic Section, University of Mysore, Mysore.
10. The Section Guard File(Supdt.AC.2), A.B., A.C., UOM.
11. The Schedule File.

Parallel Algorithms for High Performance Computing   **Credit: 2:1:1**

Unit 1: High Performance Computing - Computing complexity v/s Speedup, High speed computing, Parallel computing, Solving problems in parallel - Temporal parallelism, Data parallelism, Understanding inter-task dependency, Granularity of parallelism

Unit 2: Different types of parallel computing and programming issues- Pipeline computing, array processors, shared memory, multiprocessors, message passing multi-computers.

Unit 3: Some parallel computing models for, searching and sorting applications.

Unit 4: Some parallel computing problems with two-dimensional array structures/ matrices, involving matrix like addition, multiplication, applications.

Reference:

1. Parallel Computer Architecture And Programming – V.Rajaraman And C. Shivaramurthy
2. Introduction To Parallel Processing – M. Sasikumar, Dinesh Shikhare, P. Ravi Prakash.
3. Elements of Parallel Computing – V. Rajaraman
4. Designing Efficient Algorithms For Parallel Computers - Michael Jay Quinn
5. Sequential And Parallel Algorithms - Kenneth A. Berman, Jerome L. Paul
6. Parallel Algorithms - Pranay Chaudhuri
7. Parallel Sorting Algorithms - Selim G. Akl
8. Analysis And Design Of Parallel Algorithms - S. Lakshmivarahan, Sudarshan Kumar Dhall