UNIVERSITY OF CALIFORNIA
UCMERCED

Syllabus for EECS288-01: Adv Topic High Perf Computing

Fall 2018
Instructor: Dong Li

Designation:	Advanced Topics in High Performance Computing
Catalog Description:	The course reviews advanced topics in high performance computing. The course will consist of formal lectures, presentation and discussion of papers, and research projects. Students will gain research experiences on modern large-scale parallel systems.
Text Books and Other Required Materials:	Depending on the topic, there may be a required textbook and/or a collection of papers from the literature.
Course Objectives/ Student Learning Outcomes:	This course introduces advanced topics in high performance computing (HPC). The course examines critical research problems to build efficient HPC and reviews most recent research progress. The course covers many techniques commonly employed in HPC. The course aims to provide students a deep knowledge on HPC. By the end of this course, students will be able to: (1) have hands-on experience with the emerging programming models (PLO2, PLO3 and PLO5); (2) gain deep knowledge of the recent development of parallel architecture (PLO1, PLO3 and PLO4); (3) explain the major research challenges in the current parallel computing research (PLO1 and PLO6); (4) be conversant with performance analyze and modeling of parallel programs (PLO1, PLO2, and PLO3);
Program Learning Outcomes:	
Prerequisites by Topic:	
Course Policies:	
Academic Dishonesty Statement:	a. Each student in this course is expected to abide by the University of California, Merced's Academic Honesty Policy. Any work submitted by a student in this course for academic credit will be the student's own work. b. You are encouraged to study together and to discuss information and concepts covered in lecture and the sections with other students. You can give "consulting" help to or receive "consulting" help from such students. However, this permissible cooperation should never involve one student having possession of a copy of all or part of work done by someone else, in the form of an e mail, an e mail attachment file, a diskette, or a hard copy. Should copying occur, both the student who copied work from another student and the student who gave material to be copied will both automatically receive a zero for the assignment. Penalty for violation of this Policy can also be extended to include failure of the course and University disciplinary action. c. During examinations, you must do your own work. Talking or discussion is not

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	permitted during the examinations, nor may you compare papers, copy from others, or collaborate in any way. Any collaborative behavior during the examinations will result in failure of the exam, and may lead to failure of the course and University disciplinary action.
Disability Statement:	Accommodations for Students with Disabilities: The University of California Merced is committed to ensuring equal academic opportunities and inclusion for students with disabilities based on the principles of independent living, accessible universal design and diversity. I am available to discuss appropriate academic accommodations that may be required for student with disabilities. Requests for academic accommodations are to be made during the first three weeks of the semester, except for unusual circumstances. Students are encouraged to register with Disability Services Center to verify their eligibility for appropriate accommodations.
Topics:	Each edition of the course will focus on a different topic. Topics planned for this edition (but subject to change) include: (1) Non-volatile memory systems (2) Distributed machine learning (3) Fault tolerance in high performance computing (4) Big data processing frameworks
Class/laboratory Schedule:	Each week: 2 lectures of 1h 15min and 1 lab of 2h 50'
Midterm/Final Exam Schedule:	
Course Calendar:	
Professional Component:	
Assessment/Grading Policy:	
Coordinator:	Dong Li
Contact Information:	Email: dli35@ucmerced.edu Office: SE2 211
Office Hours:	