

## SEMINAR: HIGH PERFORMANCE COMPUTING APPLICATIONS

(1 Credit)

Department of Mechanical and Civil Engineering

Department of Computer Science

Minnesota State University, Mankato

Spring Semester 2008

**Fridays 12-2, TR E 315**

**Instructors:** Dr. Patrick A. Tebbe Ext. 6834  
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**Course materials:** As provided in class, electronically, or through the Wissink Copy Center.

**Course Description:** This class will introduce students to the new MSU high performance computing cluster. Lectures and speakers will provide information on the HPC hardware, software, and applications in such fields as mechanical, electrical, computer, and civil engineering, computer science, physics, chemistry and biology.

**Prerequisites:** Admission to the College of Science, Engineering, and Technology or instructor's approval.

**Course websites:** <http://www.mnsu.edu/hpc> and <http://bates.cs.mnsu.edu/hpc>

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### Grading Policy

	Undergraduate	Graduate
Class attendance	60%	40%
Reflection and research papers	30%	25%
Assigned Projects	10%	10%
Literature review and HPC exploration		25%

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Students will be given an account on the cluster system for numerical experiments. Undergraduates will be given lab work to explore particular applications. Graduate students will be asked to review related literature and explore an HPC solution to a problem related to their area.

The course is being designed for students from a wide range of disciplines. Experience with a programming language is required and examples will be drawn from multiple languages.

Class will meet every other Friday: January 18, February 1, 15, 29, March 21, April 4, 18, May 2

#### Academic Honesty Statement

Students assume the responsibility to fulfill their academic obligations in a fair and honest manner. Students found responsible for inappropriate activities, such as plagiarism, cheating or collusion, will face the appropriate academic and disciplinary sanctions.

#### ADA Compliance Statement

MSU provides students with disabilities reasonable accommodation to participate in educational programs, activities or services. Students with disabilities requiring accommodation to participate in class activities or meet course requirements should first register with the Office of Disability Services (389-2825).