

Syllabus

MATH664/AMSC664 Spring 2009

Advanced Scientific Computing II (ASC II)

Instructors: Aleksey Zimin, Radu Balan

Office Hours: Tuesday, 2.00-3.00pm (Aleksey Zimin), 3.30-4.30pm (Radu Balan); or by appointment otherwise

Contact Information:

alekseyz@ipst.umd.edu , CSS Building 224, Room 4317, x52348

rvbalan@math.umd.edu , Math Building, Room 2308, x55492 / CSCAMM , Room 4131 , x51217

Prerequisites : ASC I

This course is a continuation of ASC I. This course focuses on issues of code development and validation relevant to large scientific computing projects on high performance computing systems.

Students' responsibilities in AMSC664:

- Students will provide weekly statements of their project status. The statements are due before the beginning of the scheduled weekly class period.
- Students will prepare and give a 15-20 minute oral presentation between March 1st and March 15th detailing the status of the project. At the time of this presentation the project must be in its final stages or complete.
- Students will prepare and give a comprehensive 30-minute final project presentation and submit the final project report at the end of the course.

Students are responsible for achieving the project goals that were listed in the proposal. Grading takes into account student's understanding of the project, its implementation, timing of the weekly reports, presentation quality and the final report quality.

The class will meet once a week in CSIC 4122.

Tentative lecture topics:

- Examples of Algorithms and Code Development
 - Several examples of algorithm development and implementation from instructors' areas of research.
- Computational Science Seminars
 - Local and visiting computational scientists representing a broad selection of scientific disciplines will explain the computational aspects of their work with emphasis on code development and validation. Each student is expected to listen to these seminars critically.

Students are encouraged to meet with the instructors by appointment to discuss their progress.