

Blue Waters Virtual Course Announcement
Introduction to High Performance Computing
Autumn 2016

The Blue Waters project at the University of Illinois is pleased to announce the offering of a graduate course *Introduction to High Performance Computing* that will be offered as a collaborative, online course for multiple participating institutions. We are seeking other university partners that are interested in offering the course for credit to their students. The course includes online video lectures, quizzes, and homework assignments with access to free accounts on the Blue Waters system.

Participating institutions will need to provide a local instructor that will be responsible for advising the local students and officially assigning grades. Students will complete the online course exams and exercises as part of their grade.

The instructor for the course is Dr. David E. Keyes, Director of the Extreme Computing Research and Founding Dean of the Mathematical and Computer Sciences and Engineering Division at the King Abdullah University of Science and Technology (KAUST). The course description is attached.

Prerequisites for the graduate students include:

- Experience working in a Unix environment
- Experience developing and running scientific codes written in C or C++
- Familiarity with basic numerical algorithms and basic computer architecture

The expectations for students, faculty, and the instruction team are noted below. Interested faculty should contact Steve Gordon, organizer of the Blue Waters course program at sgordon@osc.edu or by phone at 614-292-4132.

Expectations for Participants

The expectations of the “collaborating faculty” are that they will:

- Establish a “collaborating course” (possibly a special topics course) on the autumn course catalog
- Promote this course to students on their own campus
- View the recorded lectures together with their local enrolled students
- Provide office hours to advise the students on the course content
- Proctor the course exam
- Provide regular feedback on behalf of the students to Dr. Hwu on the course throughout the semester

The expectations of Dr. Keyes and the O2PEP team are that they will:

- Provide an initial live web-cast to introduce the instructor, TAs, support staff, and introduce remote participants and faculty to one another
- Provide two recorded lectures per week
- Provide exercises and activities for the students
- Provide a web space for all course related materials
- Provide regular quizzes to allow the students to assess their own progress
- Provide a mid-term exam and a final exam
- Grade all the quizzes and exams
- Provide TAs to assist all students with questions about the course content, exercises, quizzes, and other materials covered during the semester
- Conduct an evaluation of the course with the participants and collaborating faculty

Expectations of the students:

- Students must register in a “collaborating course” on their own campus
- Students will need their own laptop or desktop system
- Students are expected to view the recorded lectures as a group with their local “collaborating faculty” to learn/discuss the content as a group
- Students are expected to contact the TAs at the University of Illinois for in-depth questions about the content, exercises, or other materials
- Students will be asked to submit quizzes for self-assessment purposes
- Students will be asked to submit a mid-term and a final exam for determining a grade, with a scale applied according to their own campus grading methods