

TIMETABLE: 33634 MWF 10:00–10:50 in 216 Taft Hall from 08/22/2011 to 12/02/2011.

PREREQUISITES: The graduate catalog lists “Grade of B or better in MCS 360 or the equivalent or consent of instructor.” Examples of courses which could serve as “the equivalent” are MCS 320 (introduction to symbolic computation) and MCS 471 (numerical analysis).

MS in MISI: MCS 507 is one of the core courses for the masters of science (MS) in Mathematics and Information Sciences for Industry (MISI) at UIC. In a broader context, MCS 507 fits in an interdisciplinary computational science and engineering (CSE) curriculum.

INSTRUCTOR: Jan Verschelde, Office: 1210 SEO, Phone: 312 996 4609.

E-mail: jan@math.uic.edu. URL: <http://www.math.uic.edu/~jan>.

OFFICE HOURS: On Mon 12noon, Wed 1PM, Fri 2PM, I am sure to be in my office; but feel free to stop by if you have any questions. We can also make an appointment.

TEXTBOOK: An introduction to computational science with Python is provided in the book of Hans Petter Langtangen: *A Primer on Scientific Programming with Python*. Second Edition, Springer-Verlag, 2011.

MCS 507 SITE: See <http://www.math.uic.edu/~jan/mcs507/index.html> for a copy of the syllabus, posting of slides, reference materials, and changes in the scheduling.

HOMEWORK: At every lecture, several exercises are listed. Some exercises provide inspiration for an interesting project. At every lecture, interesting homework problems will be recommended. The collection of homework will be announced at least one week before the deadline.

PROJECTS: Three projects will be assigned during the semester. To experiment with the concepts and algorithms, there is free software, we will use mainly Python and Sage. Topics of the first two projects will be prescribed. The topic of the third project will depend on your own research interests and could be developed into a final project (instead of a final exam).

EXAMS: During the semester, there is one midterm on the first half of the course. As a take-home exam, the midterm functions as an important homework collection. Instead of a classical review week and a final exam, the last week of classes could be spent on project presentations, so the final grade is determined mainly by computer projects.

CLASS ATTENDANCE: Students are expected to attend all class meetings. While the lectures cover the same materials as in the text book, usually other examples will be presented and discussed.

STUDENTS WITH DISABILITIES who require accommodations for access and participation in this course must be registered with the Office of Disability Services (ODS). Please contact ODS at 312/413-2183 (voice) or 312/413-0123 (TTY).

SOME IMPORTANT DATES:

Friday 2 September : last day to add or drop the class.

Monday 5 September : Labor Day holiday. No classes.

Thursday 24, Friday 25 November : Thanksgiving holiday. No classes.

Friday 9 December, 10:30-12:30PM : Final examination, room to be announced.