

**TIMETABLE:** 35487 MWF 2:00–2:50 in 313 Taft Hall from 01/13/2014 to 05/02/2014.

**PREREQUISITES:** Timetable lists “Grade of C or better in MCS 460 or the equivalent, and MATH 480 or consent of the instructor,” but this is outdated. The MCS 460 has in the mean time become MCS 320 (introduction to symbolic computation) and instead of Math 480, MCS 471 (numerical analysis) works even better as the second prerequisite. Also knowledge of abstract algebra (MATH 330) is useful.

**INSTRUCTOR:** Jan Verschelde, Office: 1210 SEO, Phone: 312 996 4609.  
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**OFFICE HOURS:** On Mon 11Am, Wed 10AM, Fri 12noon, 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.

**TOPICS:** The course covers symbolic-numeric algorithms in algebraic geometry. The former textbook for the course was “Numerical Polynomial Algebra” by Hans J. Stetter, SIAM 2004. The list of topics is modeled after lecture notes used in Spring 2007, 2009, and 2011. Also this year lecture notes will be made available.

**MCS 563 SITE:** See <http://www.math.uic.edu/~jan/mcs563/index.html> for a copy of the syllabus, posting of lecture notes, 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 software: CoCoA, Maple, Macaulay 2, PHCpack, Sage, Singular, etc. 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. The midterm and the final exam are excellent preparations for the Symbolic Computation branch of the *Symbolic and Numerical Computing (SNC) Prelim*. Students not interested in this Prelim may opt out of the exams, and focus on research projects instead.

**CLASS ATTENDANCE:** Students are expected to attend all class meetings. While the lectures cover the same materials as in the notes, 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:**

Monday 20 January : Martin Luther King, Jr., Day. No classes.

Friday 24 January : last day to add or drop the class.

Friday 21 March : last day for undergraduates to withdraw from the class.

Monday 24 – Friday 28 March : Spring vacation. No classes.

Wednesday 7 May, 1:00PM-3:00PM, final examination, room to be announced.