TIME TABLE: 28306/28307 MWF 10:00 – 10:50 in Douglas Hall 304 from 01/12/2009 to 05/01/2009. 3 undergraduate hours (28306) or 4 graduate hours (28307).

PREREQUISITE: grade of C or better in MCS 401 or consent of the instructor.

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

MCS 481 SITE: See `http://www.math.uic.edu/~jan/mcs481.html` for pdf versions of this sheet, project descriptions, links to resources, etc...

TEXTBOOK: "Computational Geometry. Algorithms and Applications" by M. de Berg, M. van Kreveld, M. Overmars, and O. Schwartzkopf. Third Edition, Springer-Verlag 2008. The Second Edition (2000) is also fine. We will cover the first eleven chapters thoroughly and skim through the last five chapters.

HOMEWORK: with every lecture three exercises are suggested. It is recommended that you try to solve these suggested exercises. Solutions to selected problems will be collected. Homework counts for 100 of the total 700 points.

CGAL is an open source software library for computational geometry algorithms, free to download from `www.cgal.org`. To install it, you will need a `c++` compiler (it works with gcc) and the boost `c++` libraries, available at `www.boost.org`. Visualization is optional. We will use `CGAL` for computer projects.

PROJECTS: Three projects will be assigned during the semester, worth a total of 200 points. Graduate students may opt out of the exams and work on a computer project of their own research interest. Although some familiarity with `c++` is assumed, the projects will involve mainly exploratory computations with `CGAL`, rather than intensive computer programming.

ACADEMIC HONESTY: No student shall claim or submit the work of another as ones own. You may discuss homework and projects with others, but must finish it and write the solution yourself without looking at others' work. Allowing someone to copy from you is also punishable.

EXAMS: During the semester, there will be two exams worth 100 points each. There will be no makeup exams given. The final exam counts for 200 points. If an exam is missed, then greater weight will be placed on the final exam, especially on the material covered on the missing exam. Graduate students may replace the final exam with a research computer project combined with a written technical report.

GRADING SCALE: 90 – 100% = A, 80 – 89% = B, 70 – 79% = C, 60 – 69% = D, 0 – 59% = E.
Your course grade is based on a total of 700 points: 100 from the homework, 200 from the projects, 200 from the exams during the semester, and 200 from the final exam.

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).

CLASS ATTENDANCE: Students are expected to attend all class meetings. Any changes in this syllabus or in the scheduling of exams and other assignments will be announced during class meetings. While the lectures cover the same materials in the text book, usually other examples will be presented and discussed. We will also address the topics you need to implement the projects.

SOME IMPORTANT DATES:

Monday 19 January : Martin Luther King, Jr., Day. No classes.
Friday 23 January : last day to add or drop the class.
Friday 20 February : last day to withdraw from the class.
Monday 23 – Friday 27 March : Spring vacation. No classes.
Friday 8 May, 10:30AM-12:30PM : Final examination.