

**Discrete and Computational Geometry – G 231**  
**SPRING 2006**<sup>1</sup>

**Instructor:** Professor Egon Schulte

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**Time:** Mondays and Wednesdays at 7:30 - 9:00 pm.

**Place:** 509 Lake Hall

The course discusses basic concepts in discrete and combinatorial geometry, as well as some concepts in computational geometry. The primary focus is on discrete and combinatorial geometry (this will cover more than three quarters of the course).

Topics include: convex sets and their basic properties; separation theorems for convex bodies; lattices and quadratic forms; Minkowski's Theorem and the Geometry of Numbers; packing, covering, and tiling of spaces; packing and covering densities; Minkowski-Hlawka Theorem; sphere packings and codes; Rogers' Bound for sphere packings; triangulation algorithms; convex hull algorithms; and other topics at instructor's discretion.

Prerequisites: Algebra 1

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<sup>1</sup>We will try to move the class into the day hours if agreeable to all students interested in the course.