

**Discrete Geometry II – G335**

**FALL 2009**

**Instructor: Professor Egon Schulte**

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**Time: Tuesdays 3:00–4:30 pm and Thursdays 1:30–3:00 pm.**

**Place: 509 Lake Hall**

The course discusses fundamental concepts in discrete and combinatorial geometry

Topics include basic convex geometry; convex bodies and polytopes; lattices and quadratic forms; Minkowski's theorem and the geometry of numbers; Blichfeldt's theorem; packing, covering, and tiling of spaces; packing and covering densities; Minkowski-Hlawka theorem; sphere packings and codes; Rogers' Bound for sphere packings; Voronoi diagrams; crystallographic groups and Bieberbach theorems; tilings and aperiodicity; polytopes and groups; and other topics at instructor's discretion.