

## 136.323 REVIEW December 2, 2004

Chapters from Kasriel:

Chapter 3, Sections: 45-47, 49-50, 52-53.

Chapter 4, Sections: 54-56, 58-63, 67.

Chapter 5, Sections: 69, 70, 72.

### List of definitions to remember:

distance function, metric space, open ball, open set, closed set, limit point, closure of a set, metric subspace, convergent sequence, Cauchy sequence, complete metric space, continuous function, homeomorphism, uniformly continuous function, isometry, distance between a point and a set, distance between two sets,

separated sets and separation of a set, connected set, path connected set, dense set, separable set, cover, subcover, base, bounded set, diameter of a set, totally bounded set, inner product, norm, Banach space, Hilbert space, pointwise and uniform convergence of a sequence of functions,

compact set, sequentially compact set, Bolzano – Weierstrass property, Lindelof space.