

## Review for the Final Examination

The final examination will cover Chapters 2, 3 and 4 in the lecture notes as well as Ex 4 to Ex 11 except the optional ones.

You should memorize the statements and proofs of the following theorems:

The contraction mapping principle,

The theorem on the perturbation of identity,

Inverse function theorem (statement only),

Implicit function theorem,

Picard-Lindelof theorem,

Ascoli theorem (statement only),

Arzela theorem (statement only),

Cauchy-Peano theorem, and

Baire category theorem.