41021 Theory of Matrices (3)

**Knowledge**
The students should be able to know the similarity transformation theories on the matrices, and in particular the Jordan canonical forms.

**Comprehension**
Should be able to understand the simplest form that a matrix can be similar to, and be able to determine the Jordan canonical form of a given matrix.

**Application**
Some applications on solving linear first order ordinary differential equations.

**Analysis**
Be able to prove or understand the proofs of some classical theories of matrices.

**Synthesis**
Should have a better and more comprehensive understanding of what studied in Linear Algebra.

**Evaluation**
Should be able to use theories to find important information of a given matrix.

**Class Activities**
To solve problems and prove Theorems in class.

**Out of class Activities** To
do homework.