一、 Syllabus:

I. Cartesian Tensors

1. Orthonormal Base Vectors
2. Transformation rule of Vectors
3. Dyads, Dyadics, and Tensors
4. Transformation rule of Tensors
5. Quotient Tests
6. Isotropic Tensors

II. Ordinary Differential Equations

1. Initial-Value Problem
2. Existence and Uniqueness Theory
3. System of 1st order ODE's (const. coefficients)
4. Second-Order ODE
5. Adjoint Operators
6. Green`s Functions and Modified Green`s Function
7. Sturm-Liouville Theory

III. Partial Differential Equation

1. Introduction
2. Classifications
3. Green`s Function & Integral Representation
4. Other Methods of Solution
5. Maximum-Minimum Principle

二、 Prerequisite:

Calculus; Engineering Math (I & II), or Advanced Calculus

三、 成績評量方式：

No.	項目	百分比	說明
1.	第一次期中考	20%	
2.	第二次期中考	30%	
3.	期末考	30%	
4.	作業	20%	