

# 成績稽核

基本資訊

教科書(尊重智慧財產權，請用正版教科書，勿非法影印他人著作)

書名	作者	譯者	出版社	出版年
開課系所	機械與自動化工程學系		無參考教科書	研究所專工班1年1班
任課教師	林陽泰	專兼任別	客座	

參考教材及專業期刊導讀(尊重智慧財產權，請用正版教科書，勿非法影印他人著作)

書名	作者	譯者	出版社	出版年
無參考教材及專業期刊導讀				

## 課程簡介

上課進度		分配時數(%)				
週次	教學內容	講授	示範	習作	實驗	其他

1	Stress-Strain Relationship for an Isotropic Elastic Material, Basic Equation of Elasticity for Isotropic Bodies	80	10	10	0	0
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## 課程大綱

2	Vectors and Tensors del Operator, Transformation of Coordinates	80	10	10	0	0
3	1. Tensor Analysis 2. Stress and Strain Analysis Tensor operations, Quotient Law, Equations of motion	80	10	10	0	0
4	3. Linear Elasticity Principal Stresses, stress Deviations	80	10	10	0	0
5	4. Solution of Problems in Elasticity by potential and Complex Variables Displacement, Velocity, Acceleration Deformation Gradient,	80	10	10	0	0
6	5. Elastic and Plastic Behavior of Materials Strain Tensors, Compatibility of Strain Components	80	10	10	0	0
7	6. Variational Calculus, Energy Method Equilibrium of An Elastic Body under zero Body Force, Navier	80	10	10	0	0
8	7. Viscoelasticity s Equation, Applications Of the Theory Of Linear Elasticity	80	10	10	0	0
9	8. Thermoelasticity Scalar and Vector Potentials, Equations of Motion in terms of	80	10	10	0	0
10	9. Plasticity Displacement Potentials	80	10	10	0	0

7	Strain Potential, Harmonic Functions, Galerkin Vector Biharmonic Function, Galerkin Vector and Neuber-Papkovich	80	10	10	0	0
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8	3. 基本能力或先修課程 Function in Dynamics 工程力學、工程數學、材料力學	80	10	10	0	0
9	Biharmonic Function, Galerkin Vector and Neuber-Papkovich Function in Dynamics	80	10	10	0	0

10	課程與系所基本素養及核心能力之關連 Plane state Stress or Strain, Airy stress Function for Two-Dimensional Problem, Airy, Stress Function in Polar	80	10	10	0	0
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11	教學計畫表 Coordinates, Axially Symmetric Problem Solution by means of Complex Variable, Cauchy-Riemann Conditions, Kolosov-Muskhelishvili method	80	10	10	0	0
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系所核心能力	權重(%)	檢核能力指標(績效指標)	教學策略	評量方法及配分	核心能力學習成績	期末學習成績	
12	【A】	1. Plates Bounded by two Concentric Circles and 2. Elliptic Hole in a Plate under Simple Tension ( Method of Conformal Transformation )	80	10	10	【B】	【C=B*A】

13	無此教學計畫表資訊 Steady-State Response to Moving Load, Galilean transformation, Alternate Method of Solution	80	10	10	0	0
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14	Viscoelastic Models, Solution by using Laplace Transformation and Inversion, Kelvin `chain and general Maxwell model	80	10	10	0	0
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15	Hereditary Integrals, Correspondence Principle, Viscoelastic beams,	80	10	10	0	0
16	Vibrations-dynamic behavior for a Viscoelastic Bar under Oscillating stress, Complex Compliances, Dissipation, Relations between Compliances, Two-dimensional problems	80	10	10	0	0
17	Minimization of Functional, Ealers ' Equation, Plasticity Criteria	80	10	10	0	0
18	Final Examination	0	0	0	0	100