

100-2 Preliminary Syllabus, Da-Yeh Univ

Information			
Title	高等流體力學(二)	Serial No. / ID	1851 / MUR5048
Dept.	機械與自動化工程學系碩士班	School System / Class	研究所碩士班1年1班
Lecturer	謝其源	Full or Part-time	專任
Required / Credit	Optinal / 3	Graduate Class	No
Time / Place	(一)7 / H467 (三)34 / H467	Language	Chinese

Introduction
<p>This is the second advanced Fluid Mechanics course. It mainly contains two parts: turbulent flow and compressible flow.</p> <p>Course objectives: Train students to</p> <ol style="list-style-type: none"> 1. understand types and modes of compressible flow, 2. understand steady and unsteady supersonic flow and shock waves, 3. gain ability in analyzing compressible flow problem, 4. gain basic concepts of turbulent flow and its modeling.

Outline
<p>Part I</p> <p>Chap. 1 Compressible Flow - Some History and Introductory Thoughts</p> <p>Chap. 2 Integral Forms of the Conservation Equations for Inviscid Flows</p> <p>Chap. 3 One-Dimensional Flow</p> <p>Chap. 4 Oblique Shock and Expansion Waves</p> <p>Chap. 5 Quasi-One-Dimensional Flow</p> <p>Chap. 6 Differential Conservation Equation for Inviscid Flow</p> <p>Chap. 7 Unsteady Wave Motion</p> <p>Part II</p> <p>Chap. 1 Definition and Nature of Turbulence - Kolmogorov scaling</p> <p>Chap. 2 Turbulent Transport of Momentum & Heat - Reynolds Equation</p>

Prerequisite
English, Physics, Fluid Mechanics