

# 102-2 Preliminary Syllabus, Da-Yeh Univ

Information			
Title	計算熱流學	Serial No. / ID	2605 / MAI4072
Dept.	機械與自動化工程學系	School System / Class	大學日間部3年1班
Lecturer	吳佩學	Full or Part-time	專任
Required / Credit	Optinal / 3	Graduate Class	No
Time / Place	(四)234 / H727	Language	Chinese

Introduction
<p>This course is designed to train students to learn basics of computational heat transfer and fluid flow. In addition to basic concepts of numerical methods of solving thermal and fluid problems, students will learn how to use commercial software to solve some typical thermal and fluid problems. This will help students improve their problem-solving skills and increase their abilities of design and analysis and help enhance their employability and competitiveness for the future. The objectives of this course are:</p> <ol style="list-style-type: none"><li>1. to teach students basic knowledge of computation,</li><li>2. to introduce commercial software for the design and analysis of thermal and fluid problems encountered in industries,</li><li>3. to train students to use commercial software to solve typical heat transfer and fluid problems.</li></ol>

Outline
<ol style="list-style-type: none"><li>1. Introduction to Computational Heat Transfer and Fluid Flow</li><li>2. Conservation Principles</li><li>3. Distretization Methods</li><li>4. Geometry and Mesh Setup</li><li>5. Boundary Conditions and Solver Setup</li><li>6. Solution and Convergence</li><li>7. Postprocessing</li></ol>

Prerequisite
Thermodynamics (I), Fluid Mechanics, Calculus