

朝陽科技大學 095學年度第1學期教學大綱
Green Architecture 綠建築

當期課號	7274	Course Number	7274
授課教師	吳和甫	Instructor	WU,HO FU
中文課名	綠建築	Course Name	Green Architecture
開課單位	建築及都市設計研究所碩士班二A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	<p>提昇建築在社會中的領導地位，並順應世界永續建築的發展，本課將研討美國綠建築指標之真髓！在室內環境、洪水處置與節能設計上，充分運用設計策略來達到環境科技與生態保育的互動與整合。</p>	Objectives	<p>Recent successful public acceptance of the LEED (Leadership in Energy and Environmental Design) rating system has generated vast interests on specific issues such as indoor air quality, storm water management etc... represent the cutting edge of environmental technology and ecological concern in architecture. These concerns expand our vision to the impact that construction industry has on health of the planet, and focus our attention on the health problem associated with the contemporary built environment. Future architects will need to acquire expertise to address effectively these issues on all aspects of design. This class will offer a detailed introduction to issues of human health and environmental sustainability in architectural design. The course will consist of a combination of lectures, seminar discussions of assigned investigations and readings and short analysis of architectural design outcomes and performances. The course will be oriented toward achieving a basic level of competence of technical and ecological literacy relevant to design applications, and will also encourage students to explore and investigate subjects of their interests to built up their knowledge and to produce a guideline for sustainable design.</p>
	<p>Selected reading from public resources will be given through internet and library. All readings should be completed prior to the class lecture and discussion. Following web sites contain portion of reading materials for the course:</p> <p>http://www.pbs.org/tradesecrets/ http://www.buildinggreen.com/index.cfm http://www.usgbc.org/ http://www.energydesignresources.com/ http://www.eere.energy.gov/</p> <p>1. Mechanical and Electrical Equipment for Buildings. 9th Ed. by Stein, & Reynolds, Wiley, 2000. 2. A Golden Thread, by Ken Butti and</p>	Teaching	

教材	<p>John Perlin, Van Norstrand, 1980.</p> <p>3. Design with Climate, by Victor Olgay, published by Princeton University Press.</p> <p>4. Heating, Cooling, Lighting: Design Methods for Architects, by N. Lechner, published, Wiley, 2003.</p> <p>5. Cooling and Heating Load Calculation Manual, 2nd. Ed, F. McQuiston, & J. Spitler, ASHRAE, 1999.</p> <p>6. Passive Solar Heating Analysis - A Design Manual, published by ASHRAE, 1984.</p> <p>7. Daylighting Performance and Design, by Gregg D. Ander, Wiley, 2003.</p> <p>8. Concepts and Practice of Architectural Daylighting, Fuller Moore, Van Norstrand Reinhold Co. 1998.</p>	Learning Materials	
成績評量方式	<p>1. 課堂參與 10%</p> <p>2. 作業 30%</p> <p>3. 期中考 20%</p> <p>4. 期末報告 40%</p>	Grading	<p>The grade of the course will be based on the combined grade of the items listed below:</p> <p>1. Participation 10%</p> <p>2. Assignments (Lab 1,2,3) 30%</p> <p>3. Exam (Mid term) 20%</p> <p>4. Final Research Report 40%</p>
教師網頁	-		
教學內容	<ul style="list-style-type: none"> • USGBC-LEED CRITERIA在建築設計上的運用。 • 台灣綠建築九大指標的評估及其影響。 • 研討世界著名生態建築的優劣點。 • 分析台灣在綠建築設計上的策略及應用。 	Syllabus	<p>The course will enable the student to:</p> <ol style="list-style-type: none"> 1. Become familiar with sustainable design principals and various performance evaluations. 2. Understand building thermal processes and performance consideration. 3. Become familiar with renewable energy systems such as photovoltaic system design and performance prediction. 4. Develop the ability to use natural lighting creatively as an architectural design element and form giver. 5. Become familiar with calculation procedures for predicting daylight levels within spaces. 6. Integrate natural ventilation systems into green building design.

尊重智慧財產權，請勿非法影印。