

**National Chia-yi University Syllabus**  
**Department of Forest Products Science & Furniture Engineering,**  
**Fall Semester, Academic Year 2010**

<b>Course: Cultural Properties Conservation and life.</b>	<b>Credit:2</b>	<b>Hours:2</b>
<b>Class: Grade 2</b>	<b>■ Required, □ Elective</b>	
<b>Instructor: Tsang-Chyi Shiah</b>	<b>E-mail: tshiah@mail.ncyu.edu.tw</b>	
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**I. Course Description:**

Precious paper-based articles are the most common collections in Taiwanese museums. The organic ingredients in papers are easily degraded during long-time storage. When severely degraded paper relics become brittle and broken, some improvement and strengthening methods to recover the properties of these aged papers must be considered.

This course introduce the characteristics of paper-based cultural properties, the correlation between paper making and durability of paper artifacts, to figure out the cause of paper aging and ways to prevention.

**II. Teaching Objectives:**

The aim of this course is to carry students into the interesting world of paper-based cultural properties and learning the science of paper conservation.

**III. Class Schedule**

<b>Week</b>	<b>Date</b>	<b>Topic/Activity</b>	<b>Reading/Assignment</b>
1		Introduction for the course and teaching media show	
2		The characteristics of paper-based cultural properties and conservation science	
3		The characteristics of paper-based cultural properties and conservation science	
4		Paper making process and durability of paper artifacts	
5		Paper making process and durability of paper artifacts	
6		The cause of paper aging and prevention	

	methods
7	The cause of paper aging and prevention methods
8	Controlling the environmental factors of storage condition
9	Middle exam.
10	The micro-biodegradation of paper artifacts and treatment methods
11	The micro-biodegradation of paper artifacts and treatment methods
12	The micro-biodegradation of paper artifacts and treatment methods
13	The de-acidification treatment and conservation techniques
14	The de-acidification treatment and conservation techniques
15	The mounting paste and mending
16	The mounting paste and mending
17	The conservation treatments of paper-based cultural properties ( washing, bleaching and buffering for the aged paper materials; fix and strengthening treatment for artifacts made of paper )
18	Final exam

#### **IV. Evaluation :**

Attendance or exercise 40 %, Presentation 60%.

#### **V. References :**

- 1. Barnett, H.L. and B.B. Hunter (1987) Illustrated Genera of Imperfect Fungi. Fourth Edition , Macmillan publishing company, New York.**
- 2. B. Konstanze (1992) Conservation concerns, Smithsonian Institution Press, Washington and London.**
- 3. Nyuksha, Ju. P. (1994) The biodeterioration of paper and books. “ Recent Advances in Biodeterioration and Biodegradation”. Garg, K.L., N. Garg and K.G. Mukerji Eds. Vol. I : India.**
- 4. J. S. Mills and R. White (1994) The organic chemistry of museum objects, Scientific Department, The National Gallery, London.**