



School of Bioinnovation and Bio-based Product Intelligence (SCIN)  
Program in Bioinnovation (International Program, Multidisciplinary Program)  
Course: SCIN 391 Wood and Phytomaterials

Degree  Bachelor  Master  Doctoral  
Faculty of Science

<b>Course Code and Course Title</b>	English: SCIN 391 Wood and Phytomaterials Thai: วิชา ๓๙๑ ไม้และวัสดุจากพืช
<b>Number of Credits</b>	2 (2-0-4)
<b>Curriculum and Course Type</b>	Program of Study Bachelor's Degree Program in Science and Technology (International Program, Multidisciplinary Program)
<b>Course Coordinator</b>	Tatpong Tulyananda, Ph.D Address: School of Bioinnovation & Bio-based Product Intelligence, SC1-308 Faculty of Science, Mahidol University, Salaya Tel: 0-2201-5000 email: tatpong.tul@mahidol.edu
<b>Semester/Year of Study</b>	Second semester/ 3 <sup>rd</sup> Year
<b>Prerequisite</b>	None
<b>Co-requisite</b>	None
<b>Day/Time/Study Site Location</b>	By appointment Faculty of Science, Mahidol University, Salaya Campus
<b>Date of Latest Revision</b>	10 Dec 2022

### Course Learning Outcomes (CLOs)

After successful completion of this course, students are able to

- CLO1 Understand primary and secondary sources of phytomaterials
- CLO2 Know types of phytomaterials and cultural application
- CLO3 Understand wood texture development
- CLO4 Can use image analysis software in wood quality analysis

### Course Description

Primary and secondary sources of phytomaterials. History and applications of woods and various phytomaterials. Types of phytomaterials. Wood texture development. Composition, synthesis structure, and origins. Simple wood quality analysis with tools and image analysis software



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**Credit Hours / Trimester**

Theory (Hours)	Addition Class (Hours)	Laboratory/Field trip/ Internship (Hours)	Self-study (Hours)
30 Hours/Semester (1 Hours x 15 Weeks)	-	-	30 Hours/Semester (2 Hours x 15 Weeks)

**Number of Hours per Week for Individual Advice**

By appointment online or at SC1-354B Faculty of Science, Mahidol University, Salaya Campus

**Evaluation of the CLOs**

Course Learning Outcomes	Measurement Method			Weight (%)
	Class Attendance, Participation and Behavior in Class	Written Exam	Home work/Project	
CLO1 Understand primary and secondary sources of phytomaterials	10%	10%	-	-
CLO2 Know types of phytomaterials and cultural application	-	20%	-	-
CLO3 Understand wood texture development	-	-	10%	-
CLO4 Can use image analysis software in wood quality analysis	-	-	50%	-
<b>Total</b>	<b>10%</b>	<b>30%</b>	<b>60%</b>	<b>100%</b>

**Measurement and evaluation**

After completion of the evaluation process each student is assigned a criterion-referenced grade (as shown in the table below). Evaluation and achievement will be justifying according to Faculty and University code, conducted by grading system of A, B+, B, C+, C, D and F. To pass this course, student must earn a grade of a least D.

Total Percentage of Evaluation	Below 50	50-54	55-59	60-64	65-69	70-74	75-79	80-100
Grade	F	D	D+	C	C+	B	B+	A

**Teaching Schedule**

English: SCIN 391 Wood and Phytomaterials 2 (2-0-4)



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Topic	Hour		Instructor
	Lecture	Lab	
Introduction	2	0	Tatpong Tulyananda
Fundamental of plant development	2	0	
Wood structure development	2	0	
History of wood and various phytomaterials	2	0	
Wood analysis with ImageJ	2	0	
Group discussion	10	0	
Individual assignment	6	0	
Final presentation	4	0	
Take-home exam			
30 Hr			