

Southwest University

Graduate Course Syllabus

Course Unit: School of Food Science

Course No.	1109020351	Course	Comprehensive utilization of tea								
Course category (√)	Compulsory courses (√) Elective courses ()	Credit hour	2	Total class hours	40	Lecture hours	30	Discussion Hours	4	Experiment hours	6
Lecturer	Tong Huarong	Job title Degree	Professor Master		Specialties		Tea science, food				
Range of application by majors: Tea science for postgraduate											
Preparatory courses: principles of tea chemistry and tea making engineering											
<p>Teaching objectives and requirements:</p> <p>The purpose of this course is to learn and understand the experimental tea deep processing and comprehensive utilization of general technology principle, master Tea functional components separation and preparation technology, and tea beverage tea food processing technology, understand the latest research on tea comprehensive utilization, production situation and development trend, and grasp the skills of experimental method.</p>											

Teaching methods and test methods (it should be conducive to cultivate graduates' innovative thinking and innovation ability):

1. Teaching methods: give priority to curriculum teaching, supplemented by student discussion and related experiments to consolidate and deepen the content of the course teaching

2. Examination method: written paper; write course report, and usual exam results are decided based on full extent of the report material collection, incisive degree of the analysis and the novelty of the academic point of view.

Course content and course hours allocation

I. Class teaching (30 class hours)

Conclusion (2 hours)

Chapter General technology of comprehensive utilization of tea (10 class hours)

Section 1 Preparation technology of tea juice

Section 2 Drying technology

Section 3 Separation and purification technology

Chapter 2 Separation and preparation technology of active components in tea (10 class hours)

Section 1 Characteristics and design of extraction and purification technology of active components in tea

Section 2 Extraction and purification of polyphenols from tea

Section 3 Extraction and purification of purine bases in tea

Section 4 Separation and purification technology of tea polysaccharide

Section 5 Comprehensive extraction technology of tea polyphenols, caffeine and tea polysaccharide

Section 6 Separation and purification technology of tea pigment

Section 7 Extraction and purification technology of tea saponin

Section 8 Extraction and purification technology of Theanine

Chapter 3 Processing of tea drinks (3 class hours)

Section 1 Overview

Section 2 Main raw and auxiliary materials of tea soft drinks

Section 3 Main raw and auxiliary materials of tea soft drinks

Section 4 Production technology of tea carbonic acid beverage

Section 5 Canned tea

Section 6 Tea health drink

Chapter 4 Processing of tea products (3 class hours)

Section 1 Tea flavor frozen products

Section 2 Tea candy

Section 3 Tea flavored pastry

Chapter 5 Deep processing and comprehensive utilization of tea products (2 class hours)

Section 1 Product standards

Section 2 Sanitary inspection

Section 3 Additive test

II. Experimental part (6 class hours)

Experiment 1 Theanine synthesis

Experiment 2 Extraction of tea polyphenols, tea polysaccharides and caffeine

Experiment 3 Processing of tea beverage

Catalog for main reference book (periodicals):

S.N.	Author	Books and Periodicals'	Press
------	--------	------------------------	-------

		name	
1	Chinese Tea Society	Tea Science	Tea Research Institute of Chinese Academy of Agricultural Sciences
2	Yan Hongde et al	Deep Processing Technology of Tea	China Light Industry Press
3	Chen Zongdao et al	Tea Chemical Engineering	Southwestern Normal University Press
4	Jiang Zuoming et al	Comprehensive Utilization of Tea	Southwestern Normal University Press
5	Gao Fucheng et al	High and New Technology of Modern Food Engineering	China Light Industry Press
6	Gao Kongrong et al	Food Separation Technology	South China University of Technology Press
7	Sibi et al	Plant Polyphenols	Science Press
8	The Society of food Science and Technology	Journal of Food Science	Institute of Food Technologists
9		Journal of Agricultural and Food Chemistry	American Chemical Society

Review Comments of School (Institute, Center):

Signature (Date)

Review Comments of Student Committee:

Signature (Date)

Review Comments of Graduate School

Signature

(Date)