

Southwest University

Graduate Course Syllabus

Course Unit: School of Food Science

Course No.	1108320057		Course name		Food toxicology							
Course category (√)	Compulsory courses (√) Elective courses ()	Credit hour	2	Total class hour	40	Lecture s hours	30	Discu ssion hours	5	Exp erim ent hour s	5	
Lecturer	Xiaowen Ding	Job title Degree	Professor Doctor degree		Specialties		Food safety and health food					
Range of application by majors: Food science, processing and storage of agricultural products												
Prerequisite courses: Food safety and quality control, food immunology, food microbiology												
Teaching objectives and requirements:												
Teaching objectives: Through the study of this course, students will master the basic concepts of food toxicology, basic research methods, toxicity mechanism, know well the principles and methods of toxicity evaluation, and understand the progress of toxicology research.												
Requirements:												
① Understand the development of food toxicology, the biological transduction and transformation of foreign compounds;												
② Master the mechanism of toxin production by exotic compounds;												
③ Principles and methods for toxicological evaluation of food safety;												
④ Through the experiment, students will be familiar with the experimental methods of feeding, force-feeding, drawing blood and dissecting the experimental animals;												
⑤ Write more than 1 course papers, and summarize the experimental experience.												
Teaching and testing methods (it's need to be conducive to cultivating the innovative thinking and ability of graduate students)												
1. Teaching: The basic concepts of toxicology, the transport and transformation of xenobiotics in organisms, the mechanism of toxicity of xenobiotics, the principles and methods of toxicological evaluation, etc.												
2. Discussion: Discuss mainly the importance, application and research progress of toxicology in food science research.												
3. Testing methods: Written examination combined with paper writing.												

Course contents and course hours allocation

1. Basic concepts of Toxicology (3)
 2. Biological transport of xenobiotics in food (2)
 3. Biotransformation of xenobiotics in food (3)
 4. Toxic mechanism and influencing factors of xenobiotics in food (4)
 5. Animal experiment basis of food toxicology (2)
 6. General toxic effects and evaluation of foreign compounds in food (2)
 7. Genotoxicity of foreign compounds in food and its evaluation (4)
 8. Carcinogenicity of xenobiotics in food and its evaluation (2)
 9. Toxicity and evaluation of reproductive and developmental toxicity of xenobiotics in food (3)
 10. Immune toxicity and evaluation of xenobiotics in food (3)
 11. In vitro test and application of new biological technology in toxicology (2)
- Experiments (5)
- Discussion (5)

(Please add more pages if this page is insufficient)

The Catalog for main reference book (periodicals):

No.	Author	Books and Periodicals' name	Press
1.	Zuwei Gu	Introduction to Modern Toxicology	Chemical Industry

			Press
2.	Ning Liu	Food Toxicology	China Light Industry Press
3.	Long Li Jiakun Chen	Commonly used experimental methods in modern toxicology: Principles and methods	Chemical Industry Press
4	Chinese Preventive Medicine Association	Journal of Toxicology	
5	Institute of toxicology and pharmacy, Military Medical Science Academy of the PLA Chinese Pharmacological Society Chinese Society of Toxicology	Chinese Journal of Pharmacology and Toxicology	

Review Comments of School (Institute, Center):

Signature (Date)

Review Comments of Student Committee:

Signature (Date)

Review Comments of Graduate School

Signature (Date)