

# Southwest University

## Graduate Course Syllabus

### Course Unit: School of Food Science

|  |   |                  |                         |                  |             |                              |    |                  |   |                  |
|--|---|------------------|-------------------------|------------------|-------------|------------------------------|----|------------------|---|------------------|
| Course No.   | 1108320062                                    | Course Name      | Functional Food         |                  |             |                              |    |                  |   |                  |
| Course category (√)  | Compulsory courses ()<br>Elective courses (√) | Credit hour      | 2                       | Total class hour | 30          | Lectures hours               | 25 | Discussion hours | 5 | Experiment hours |
| Lecturer   | Xiaowen Ding                                  | Job title degree | Professor Doctor degree |                  | Specialties | Food safety and healthy food |    |                  |   |                  |
| Range of application by majors: food science, agricultural products processing and storage engineering   |   |                  |                         |                  |             |                              |    |                  |   |                  |
| Prerequisite courses: food chemistry, food processing technology, food toxicology  |   |                  |                         |                  |             |                              |    |                  |   |                  |
| Teaching objectives and requirements:  |   |                  |                         |                  |             |                              |    |                  |   |                  |
| Objectives: Through the study of this course, the students can master some common human disease pathogenesis and possible control means, familiar with the common functional components and functional food management measures.   |   |                  |                         |                  |             |                              |    |                  |   |                  |
| Requirements:  |   |                  |                         |                  |             |                              |    |                  |   |                  |
| <ul style="list-style-type: none"> <li>① familiar with the basis of immunology, hyperlipidemia, causes of diabetes, free radical theory, the cause of obesity;</li> <li>② grasping the function or abnormal adjustment of the functional components of the mechanism and evaluation methods;</li> <li>③ understanding the causes of hypertension, fatigue and so on;</li> <li>④ familiar with China's functional food management laws and regulations and understand the development of functional food in China.</li> </ul> |   |                  |                         |                  |             |                              |    |                  |   |                  |

Teaching and testing methods (it's need to be conducive to cultivating the innovative thinking and ability of graduate students)

1. Lecture: immunological basis and enhance the function of the immune food; hyperlipidemia and auxiliary hypolipidemic functional food; diabetes and auxiliary hypoglycemic functional food; free radical theory and antioxidant functional food; obesity and weight loss functional food etc.

2. Discussion: China's functional food development trends and research progress.

3. Testing Methods: writing papers.

### **Course contents and course hours allocation**

1. Introduction (3)
2. Function food for immunological basis and enhance immunity (3)
3. Function food for hyperlipidemia and hypolipidemic (3)
4. Functional food diabetic and hypoglycemic (3)
5. Functional food for free radicals and antioxidant (3)
6. Functional food for obesity and weight loss (3)
7. Function of high blood pressure and auxiliary blood pressure (3)
8. Insomnia and improve sleep food increase (2)
9. Functional food for fatigue and ease of physical fatigue (1)
10. Functional food for bone mineral density (1)
11. Other functional foods (2)
12. Discussion (3)

(Please add more pages if this page is insufficient)

**The Catalog for main reference book (periodicals):**

| S.N. | Author                          | Books and Periodicals' name                      | Press                      |
|------|---------------------------------|--|----------------------------|
| 1.   | Jianxian Xu                     | Functional Food (1, 2, 3 rolls)                  | China Light Industry Press |
| 2    | Zonglian Jin                    | Principle and Application of Health Food Design  | China Light Industry Press |
| 3    | Guangya Wang                    | Method of Detecting the Efficacy of Healthy Food | China Light Industry Press |
| 4    | [美]GlennR. Gibson, ChrisM. Will | Functional Food                                  | China Light Industry Press |

Review Comments of School (Institute, Center):

Signature

(Date)

Review Comments of Student Committee:

Signature

(Date)

Review Comments of Graduate School

Signature

(Date)