

Southwest University

Graduate Course Syllabus

Course Unit: Food College

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|--|--|------------------|----------------------------------|-------------------|-------------|---------------|----|------------------|----|------------------|--|
| Course No. | 1108320021 | Course | Special Topic of Food Processing | | | | | | | | |
| Course category (√) | Compulsory courses (√) Elective courses () | Credit hour | 2 | Total class hours | 40 | Lecture hours | 30 | Discussion Hours | 10 | Experiment hours | |
| Lecturer | Zeng Fankun | Job title Degree | Professor Master degree | | Specialties | | | Food Processing | | | |
| Range of application by majors: agricultural products processing and storage engineering, food science. | | | | | | | | | | | |
| Prerequisite courses: | | | | | | | | | | | |
| Teaching objectives and requirements: <p>These courses, teaching lectures, discussions, etc. will make students having a certain understanding on the development status & trends of food processing at domestic and oversea, and be familiar with the research fields of food processing, and master the new technical principles, development process, characteristics and applications during the food processing, and then have a further understanding and be familiar with the principles and new technologies of the food processing, as well as the food processing research methods.</p> | | | | | | | | | | | |
| Teaching methods and examination methods (it should be conducive to cultivate graduates' innovative thinking and innovation ability): <p>The lecture will be the main the part in the teaching methods, carry out the classroom discussion on 2 to 3 aspects according to the source of students and students' majors, while some new technologies or methods in food processing will be applied as the exploratory experiments.</p> <p>The examination method combines the written test and the discussion.</p> | | | | | | | | | | | |

Course content and course hours allocation

The total course hours are 40 hours, 30 hours for lectures, 10 hours for discussion, no time for experiment.

The first special topic: the domestic and foreign food processing status and development trends (6 hours)

The second special topic: the modern food concept and research fields (4 hours)

The third special topic: the construction stage brief and preparation requirements of feasibility study report for food project (4 hours)

The fourth special topic: the new technology of food sterilization - ultra-high-pressure sterilization, microwave sterilization, water activity control and other principles & applications (6 hours)

The fifth special topic: the new food separation and concentration technology - supercritical extraction, membrane separation technology principle and application (6 hours)

The sixth special topic: the aseptic filling and new packaging materials and technology principles & applications (4 hours)

The seventh special topic: other high-technologies - low temperature freeze crushing, microcapsule technology principles and applications (6 hours)

The eighth special topic: citrus or mustard's processing and comprehensive utilization of the research status (4 hours)

(The discussion hours are included in the above course hours)

(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 | Gao Fucheng etc. | High – Tech of Modern Food Engineering | China Light Industry Press |
| 2 | Chen Wenpeng etc. | The physical principles of food preservation | Zhengyan Press |
| 3 | Gao Kongrong etc. | Food Separation Technology | South China University of Technology Press |
| 4 | Liu Zhongdong | Application of Microwave Technology in Food Industry | China Light Industry Press |
| 5 | Ma Haile | Supercritical Fluid Extraction of Biological Resources | 安徽科学技术出版社 Anhui Science and Technology Press |

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|----|------------------|---------------------------------------|---|
| 6 | Zeng Xiaoqing | Principle and Application of HACCP | South China University of Technology Press |
| 7 | | Food and Fermentation Industries | |
| 8 | | Food science | |
| 9 | | Food Science and Technology | |
| 10 | | J. of Food Science | |
| 11 | | J. of Food Engineering | |
| | ... | ... | ... |

Review Comments of School (Institute, Center):

Signature

(Date)

Review Comments of Student Committee:

Signature

(Date)

Review Comments of Graduate School

Signature

(Date)