1

课程代码：
课程名称：大学英语 A
学分：3
课程描述： 该课程主要任务是培养学生的英语综合运用能力，使学生在今后的工作和社会交往中能用英语有效的进行口头和书面的信息交流。
课时安排：54 学时
先修课程：
考核方式：成绩由平时考核成绩和期末考核成绩构成。 **课程成绩：** 总成绩评定： 期末考试占总成绩的 45%，平时成绩占总成绩的 25%，网络成绩占总成绩的 15%，口语成绩占总成绩的 15%。 平时成绩评定： （1）作业完成情况：学生平时作业提交次数及完成质量； （2）课堂表现：学生主动课堂练习、讨论，创造性的提出问题的能力。 （3）考勤 网络成绩评定：（1）在线学习时间和完成网络课程练习情况； （2）在线作业和测试，班级论坛活动等情况。 口语成绩评定：每学期老师可以根据班级具体情况采用不同的考试方式，如演讲，讨论，辩论等形式。 期末考试：期末闭卷考试，考核课程教学内容。
教材：覃朝宪，张家政，《大学英语自主阅读》.北京：高等教育出版社.2007. 文旭，《新思维大学英语读写教程》.北京：外文出版社.2012。 郑树棠，《新视野大学英语视听说教程》第三版。北京：外语教学与研究出版社。2015.
教师：

Unit code：
Unit name：College English A
Credits：3
Introduction： The main task of this course is to cultivate students' comprehensive ability to use English, so as to enable students to communicate effectively both verbally and in writing in English in the future work and social interaction.
Teaching Pattern：54hrs
Prerequisite:
Course Assessment： Final Score=Usual Score*25%+Final Exam Score*45%+Internet Score 15%+Oral Score 15%. Usual Score is Determined by attendance rate, homework and class check；

Final Exam: Closed-book examination
Textbook： ChaoXian Qin, jia-zheng zhang, The independent college English reading. Beijing: Higher Education press. 2007. Xu Wen, The new thinking of college English reading and writing tutorials. Beijing: Foreign Language publishing house. 2012. Shutang Zheng, New horizon college English audio-visual course of introduction to the third edition. Beijing: Foreign language teaching and research press. 2015.
Course Director：

2

课程代码：
课程名称：大学英语 B
学分：3
课程描述： 该课程主要任务是培养学生的英语综合运用能力，使学生在今后的工作和社会交往中能用英语有效的进行口头和书面的信息交流。
课时安排：54 学时
先修课程：
考核方式：成绩由平时考核成绩和期末考核成绩构成。 **课程成绩：** 总成绩评定： 期末考试占总成绩的 45%，平时成绩占总成绩的 25%，网络成绩占总成绩的 15%，口语成绩占总成绩的 15%。 平时成绩评定： （1）作业完成情况：学生平时作业提交次数及完成质量； （2）课堂表现：学生主动课堂练习、讨论，创造性的提出问题的能力。 （3）考勤 网络成绩评定：（1）在线学习时间和完成网络课程练习情况； （2）在线作业和测试，班级论坛活动等情况。 口语成绩评定：每学期老师可以根据班级具体情况采用不同的考试方式，如演讲，讨论，辩论等形式。 期末考试：期末闭卷考试，考核课程教学内容。
教材：覃朝宪，张家政，《大学英语自主阅读》.北京：高等教育出版社.2007. 文旭，《新思维大学英语读写教程》.北京：外文出版社.2012。 郑树棠，《新视野大学英语视听说教程》第三版。北京：外语教学与研究出版社。2015.
教师：

Unit code：
Unit name：College English B
Credits：3
Introduction： The main task of this course is to cultivate students' comprehensive ability to use English, so as to

enable students to communicate effectively both verbally and in writing in English in the future work and social interaction.
Teaching Pattern： 54hrs
Prerequisite:
Course Assessment： Final Score=Usual Score*25%+Final Exam Score*45%+Internet Score 15%+Oral Score 15%. Usual Score is Determined by attendance rate, homework and class check； Final Exam: Closed-book examination
Textbook： Chaoian Qin, jia-zheng zhang, The independent college English reading. Beijing: Higher Education press. 2007. Xu Wen, The new thinking of college English reading and writing tutorials. Beijing: Foreign Language publishing house. 2012. Shutang Zheng, New horizon college English audio-visual course of introduction to the third edition. Beijing: Foreign language teaching and research press. 2015.
Course Director：

3

课程代码：
课程名称： 大学英语 C
学分： 3
课程描述： 该课程主要任务是培养学生的英语综合运用能力，使学生在今后的工作和社会交往中能用英语有效的进行口头和书面的信息交流。
课时安排： 54 学时
先修课程：
考核方式：成绩由平时考核成绩和期末考核成绩构成。 **课程成绩：** 总成绩评定： 期末考试占总成绩的 50%，平时成绩占总成绩的 20%，网络成绩占总成绩的 15%，口语成绩占总成绩的 15%。 平时成绩评定： （1）作业完成情况：学生平时作业提交次数及完成质量； （2）课堂表现：学生主动课堂练习、讨论，创造性的提出问题的能力。 （3）考勤 网络成绩评定： （1）在线学习时间和完成网络课程练习情况； （2）在线作业和测试，班级论坛活动等情况。 口语成绩评定：每学期老师可以根据班级具体情况采用不同的考试方式，如演讲，讨论，辩论等形式。 期末考试：期末闭卷考试，考核课程教学内容。
教材：

覃朝宪，张家政，《大学英语自主阅读》.北京：高等教育出版社.2007. 文旭，《新思维大学英语读写教程》.北京：外文出版社.2012。 郑树棠，《新视野大学英语视听说教程》第三版。北京：外语教学与研究出版社。2015.
教师：

Unit code：
Unit name： College English C
Credits： 3
Introduction： The main task of this course is to cultivate students' comprehensive ability to use English, so as to enable students to communicate effectively both verbally and in writing in English in the future work and social interaction.
Teaching Pattern： 54hrs
Prerequisite:
Course Assessment： Final Score=Usual Score*20%+Final Exam Score*50%+Internet Score 15%+Oral Score 15%. Usual Score is Determined by attendance rate, homework and class check； Final Exam: Closed-book examination
Textbook： Chaoxian Qin, jia-zheng zhang, The independent college English reading. Beijing: Higher Education press. 2007. Xuwen, The new thinking of college English reading and writing tutorials. Beijing: Foreign Language publishing house. 2012. Shutang Zheng, New horizon college English audio-visual course of introduction to the third edition. Beijing: Foreign language teaching and research press. 2015.
Course Director：

4

课程代码：
课程名称： 大学英语 D
学分： 3
课程描述： 该课程主要任务是培养学生的英语综合运用能力，使学生在今后的工作和社会交往中能用英语有效的进行口头和书面的信息交流。
课时安排： 54 学时
先修课程：
考核方式：成绩由平时考核成绩和期末考核成绩构成。 **课程成绩：** 总成绩评定： 期末考试占总成绩的 50%，平时成绩占总成绩的 20%，网络成绩占总成绩的 15%，口语成绩占总成绩的 15%。 平时成绩评定：

（1）作业完成情况：学生平时作业提交次数及完成质量；

（2）课堂表现：学生主动课堂练习、讨论，创造性的提出问题的能力。

（3）考勤

网络成绩评定：

（1）在线学习时间和完成网络课程练习情况；

（2）在线作业和测试，班级论坛活动等情况。

口语成绩评定：每学期老师可以根据班级具体情况采用不同的考试方式，如演讲，讨论，辩论等形式。

期末考试：期末闭卷考试，考核课程教学内容。

教材：覃朝宪，张家政，《大学英语自主阅读》.北京：高等教育出版社.2007.

文旭，《新思维大学英语读写教程》.北京：外文出版社.2012。

郑树棠，《新视野大学英语视听说教程》第三版。北京：外语教学与研究出版社。2015.

教师：

Unit code：

Unit name：College English D

Credits：3

Introduction：

The main task of this course is to cultivate students' comprehensive ability to use English, so as to enable students to communicate effectively both verbally and in writing in English in the future work and social interaction.

Teaching Pattern：54hrs

Prerequisite:

Course Assessment：

Final Score=Usual Score*20%+Final Exam Score*50%+Internet Score 15%+Oral Score 15%.

Usual Score is Determined by attendance rate, homework and class check；

Final Exam: Closed-book examination

Textbook：

Chaoxian Qin, jia-zheng zhang, The independent college English reading. Beijing: Higher Education press. 2007.

Xuwen, The new thinking of college English reading and writing tutorials. Beijing: Foreign Language publishing house. 2012.

Shutang Zheng, New horizon college English audio-visual course of introduction to the third edition. Beijing: Foreign language teaching and research press. 2015.

Course Director：

课程代码：21110010

课程名称：大学计算机基础 I

学分：4

课程描述：

为全校非艺术类学生开设的一门计算机公共必修课程，主要讲授计算机基础知识、计算机基本技能及计算思维方式，其目的和任务是全面培养学生的信息素养，提高学生的计算机应用水平；培养学生养成良好的计算思维能力，培养学生进一步学习新知识、新软件的能力，让计算机融入学生的学习、工作和生活中，以解决某些实际问题。

课时安排：45（理论）+40（实验）学时

先修课程：无

考核方式：期末机考+平时成绩+实验成绩

课程成绩：

总成绩评定： 期末考试占总成绩的 50%，平时成绩占总成绩的 35%，实验成绩占总成绩的 15%。

平时成绩评定：作业完成情况，课堂表现，课堂出勤，课程学习交流情况等。

期末考试：机考。

教材：计算思维类：《大学计算机-计算思维的视角（第 3 版）》郝兴伟编著，高等教育出版社.2017 年 4 月.

计算机基础类:《大学计算机基础（第 6 版）》龚沛曾、杨志强主著，高等教育出版社.2013 年 7 月。

实践教程《大学计算机基础实践教程》邹显春，高等教育出版社

教师：

Unit code：21110010

Unit name：Fundamentals of Computers I

Credits：4

Introduction：

As a computer public required course for non-art students of the entire school, it mainly covers computer basic knowledge, basic computer skills and calculation thinking ways; its purpose and mission are to fully develop the students' information literacy, improve students' computer application level, develop good thinking ability, and cultivate students' ability to further study the new knowledge, new software, which let the computer into the student's study, work and life to solve some practical problems.

Teaching Pattern：45 hrs (theory) + 40 hrs (experiment)

Prerequisite: Introduction to food technology, Principles of food engineering, Food machinery, Mechanical drawing, etc

Course Assessment：

Final Score=Usual Score*35%+Final Exam Score*50%+experiment15%

Usual Score is Determined by Job completion, classroom performance, attendance rate, communication

Final Exam: closed examination

Textbook： Hongjun Li. Food factory design, China Agricultural press, 2010
Course Director：

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课程代码：90110031
课程名称：大学生职业发展与就业指导
学分：1
课程描述： 现阶段作为我校通识必修课，主要涉及大学生职业生涯规划以及就业、创业指导等方面的内容，通过教学促使大学生理性地规划自身未来的发展，并努力在学习过程中自觉地提高就业能力和生涯管理能力。
课时安排：36 学时
先修课程：无
考核方式： **课程成绩：**
教材：《大学生职业发展与就业指导》，黄蓉生主编，人民出版社，2015 年第 1 版
教师：

Unit code：90110031
Unit name：College students career development and employment guidance
Credits：1
Introduction： As our compulsory courses, it mainly involves college students' career planning and employment, entrepreneurship instruction and so on, which assist college students rationally to plan the development of their own future and strive to consciously increase employment in the process of learning and career management ability.
Teaching Pattern：36hrs
Prerequisite: Introduction to food technology, Principles of food engineering, Food machinery, Mechanical drawing, etc
Course Assessment： Final Score=Usual Score*40%+Final Exam Score*60% Usual Score is Determined by attendance rate,practice and class check； Final Exam: computer-based testing.
Textbook："Career development and employment guidance of college students", Rongsheng Huang, People's Publishing House press, 2015
Course Director：

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课程代码：90110032

课程名称：大学生职业发展与就业指导
学分：1
课程描述： 现阶段作为我校通识必修课，主要涉及大学生职业生涯规划以及就业、创业指导等方面的内容，通过教学促使大学生理性地规划自身未来的发展，并努力在学习过程中自觉地提高就业能力和生涯管理能力。
课时安排：36 学时
先修课程：无
考核方式： **课程成绩：**
教材：《大学生职业发展与就业指导》，黄蓉生主编，人民出版社，2015 年第 1 版
教师：

Unit code：90110032
Unit name： College students career development and employment guidance
Credits：1
Introduction： As our compulsory courses, it mainly involves college students' career planning and employment, entrepreneurship instruction and so on, which assist college students rationally to plan the development of their own future and strive to consciously increase employment in the process of learning and career management ability.
Teaching Pattern：36hrs
Prerequisite: Introduction to food technology, Principles of food engineering, Food machinery, Mechanical drawing, etc
Course Assessment： Final Score=Usual Score*40%+Final Exam Score*60% Usual Score is Determined by attendance rate,practice and class check； Final Exam: computer-based testing.
Textbook："Career development and employment guidance of college students", Rongsheng Huang, People's Publishing House press, 2015
Course Director：

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课程代码：
课程名称：高等数学Ⅱ
学分：6.5
课程描述： 该课程主要任务是使学生熟悉和掌握高等数学研究问题的基本方法，学习科学的思想方法，掌握必要的基础理论和基本运算能力，培养学生的抽象思维能力、逻辑推理能力、经济管理

领域的数量分析能力。
课时安排：117
先修课程：初等数学
考核方式：闭卷考试+平时成绩 **课程成绩：**卷面成绩 70%+平时成绩 30%
教材：《高等数学》，刘长文，主编，高等农业教育出版社
教师：

Unit Code:
Unit name：Higher Mathematics II
Credits：6.5
Introduction： The main task is to make students familiar with and master basic methods of higher mathematics research problems, learn to think in a scientific way, master the necessary basic theory and basic operation ability, and develop the students' ability of abstract thinking, logic reasoning, quantitative analysis ability in the field of economic management.
Teaching Pattern：117
Prerequisite: Elementary Mathematics
Course Assessment：Closed book examination + usual results Coil score 70% + usual 30%
Textbook："Higher Mathematics", Liu Changwen, editor, Higher Agricultural Education Press
Course Director：

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课程代码：14210050
课程名称：线性代数 II
学分：3
课程描述： 课程基本任务是学习行列式，矩阵及其运算，向量的线性相关性，矩阵的初等变换与线性方程组，相似矩阵及二次型等有关的知识。通过学习使学生具备有关线性代数的基本理论及方法，并能用它解决一些实际问题。
课时安排：54
先修课程：高等数学
考核方式：闭卷考试+平时成绩 **课程成绩：**卷面成绩 70%+平时成绩 30%
教材：《线性数学》，同济大学应用系编/著，高等教育出版社
教师：

Unit Code:14210050
Unit name：Linear algebra Ⅱ
Credits：3
Introduction： The basic task of the course is to learn about determinants, matrices and operations, linear correlations of vectors, elementary transformations of matrices and linear equations, similar matrices and quadratic forms. The students can solve some practical problems by learning the basic theory and method of linear algebra.
Teaching Pattern：54
Prerequisite: Higher Mathematics
Course Assessment：Closed book examination + usual results Coil score 70% + usual 30%
Textbook："Linear Mathematics", Tongji University Department of Applied Applications, Higher Education Press
Course Director：

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课程代码：14210070
课程名称：概率论与数理统计
学分：3
课程描述： 课程由概率论和数理统计两部分组成。概率论侧重于探讨概率论的基本概念，建立一系列的定理与公式，寻求解决问题的理论与方法，包括随机事件与概率、随机变量及分布、随机变量的数字特征、大数定律与中心极限定理等内容。数理统计以概率论为理论基础，研究随机现象的呈现的结果进行统计推断，主要包括数理统计的概念、参数估计、假设检验、回归分析等内容。
课时安排：54
先修课程：高等数学、线性代数
考核方式：闭卷考试+平时成绩 **课程成绩**：卷面成绩 70%+平时成绩 30%
教材：《概率论与数理统计》，吴赣昌主编，中国人民大学出版社，2011 年第四版
教师：

Unit Code:14210070
Unit name：Probability Theory and Mathematical Statistics
Credits：3

Introduction： The course consists of probability theory and mathematical statistics. Probability theory focuses on discussing basic concepts of probability theory, establishing a series of theorems and formulas, searching for the theory and method to solve the problem, including random events and probability, random variables and distribution, digital features of random variables, law of large numbers and central limit theorem, etc. Mathematical statistics take the theory of probability theory as the basis to study presenting results of the random phenomenon to carry on the statistical inference, which mainly include the concept of mathematical statistics, parameter estimation, hypothesis testing, regression analysis, etc.
Teaching Pattern：54
Prerequisite: Higher Mathematics 、Linear algebra
Course Assessment：Closed book examination + usual results Coil score 70% + usual 30%
Textbook："Probability theory and mathematical statistics", Wu Ganchang editor, Renmin University of China Press, the fourth edition of 2011
Course Director：

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课程代码：15210030
课程名称：大学物理 III
学分：4
课程描述 物理学是探讨物质结构和运动基本规律的科学，它研究的对象是物质最基本、最普遍的运动形式，它研究的规律具有极大的普遍性。物质学是除了数学以外的一切自然科学的基础，也是当代工程技术的重要理论支柱。物理学的理论、研究方法、实验技术在化学、生物、农业、信息科学等已得到了广泛的应用。该课程主要讲述物理学的基本概念、基本定理（定律）及其一些重要应用。其主要内容包括：力学、热学、电磁学、振动与波、光学等。除此之外，介绍物理学在现代科学技术中的应用也是本课程的重要内容之一。通过本课程学习，使学生正确认识物理学基本理论的建立和发展过程，培养学生科学的思维方法和研究方法，提高学生科学研究能力和创新能力，为学生学习专业知识和近代科技技术打下必要的物理基础。
课时安排：讲授 54 学时，实验 27 学时。讲授每周 3 学时，实验每周 3 学时
先修课程：高等数学
考核方式：闭卷考试；最终成绩由期末考试成绩、平时成绩和实验成绩组成，比例分别为 60%、15%和 25%。平时成绩由课堂出勤率、作业的完成情况确定。
教材：杨亚玲 主编. 大学物理学[M]. 北京：中国农业出版社, 2014.
教师：匡安龙

Unit code：15210030
Unit name：College Physics III
Credits：4
Introduction：

Physics is a discipline of natural science which studies the basic structure, movement form and interaction of matters. It includes mechanical movement, thermal motion of molecules, electromagnetic motion, atomic and nuclear internal movement, which widely exists in each advanced and complicated form of motion. Physics is regarded as the foundation of all natural sciences besides Mathematics, as well as the theoretical pillar of modern engineering technology. The College Physics Ⅲ is a compulsory theory curriculum with the content of general concepts, theorem (law) and important application of matters' motion. This course introduces the mechanics, thermotics, vibration and wave, electromagnetics, optics, and basic knowledge of mechanics of special relativity. In addition, the utilization of physics in modern science and technology is also introduced as one important part of this course. This course aims to let student comprehend and utilize theories correctly, cultivate students ability with scientific thinking and researching method, prepare students with sufficient physics knowledge and experiment skills for learning subsequent curriculum.
Teaching Pattern：3 hrs lectures weekly (18wks), 3 hrs practical weekly (9 wks)
Prerequisite: Advanced Mathematics
Course Assessment：Final Score=Usual Score*15%+Experimental Exam Score *25%+Final Exam Score*60%； Usual Score is Determined by attendance rate and the completion of homework； Final Exam: closed book exam
Textbook：Yaling Yang et al. College Physics. Beijing: China Agriculture Press, 2014, 1
Course Director：**Yaling Yang**

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课程代码：16210010
课程名称：普通化学
学分：4
课程描述： 课程由理论和实验两部分组成：普通化学理论部分讲授现代化学的基本理论和基础知识；普通化学实验是理论教学的深化和补充，具有较强的实践性，主要涉及基本操作与技能练习、物质的性质与化学反应规律、物质特性常数的测定、独立设计与综合性实验。
课时安排：72
先修课程：高等数学、普通物理学
考核方式：闭卷考试+实验成绩+平时成绩 **课程成绩**：卷面成绩 65%+实验成绩 30%+平时成绩 5%
教材：《普通化学》，廖家耀主编，科学技术出版社，2012 年第 1 版 《普通化学实验》，廖家耀主编，科学技术出版社，2012 年第 1 版
教师：

Unit Code:16210010
Unit name：General chemistry

Credits：4
Introduction： The course consists of theory and experiment: General chemical theory presents the basic theory and basic knowledge of modern chemistry; General chemistry experiment is the deepening and supplement to theoretical teaching with strong practicality, which mainly involves the basic operation and skills practice, material properties and chemical reaction, material characteristic constant determination, independent design and comprehensive experiments.
Teaching Pattern：72
Prerequisite: Higher Mathematics 、General physics
Course Assessment：Closed book examination + experimental results + usual results Score 65% + 30% of experimental results + 5%
Textbook："General Chemistry", edited by Liao Jiayao, Science and Technology Press, 2012 first edition "General Chemistry Experiment", edited by Liao Jiayao, Science and Technology Press, 2012 first edition
Course Director：

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课程代码：16210021
课程名称：分析化学
学分：4
课程描述：分析化学是研究物质结构存在形式、化学组成和相对含量的科学，是研究化学现象和生命现象的必要的工具。仔培养学生准确的量的概念、科研技能和科学素养方面具有重要地位，其任务是培养学生分析化学基础知识、操作技能和科学素质。
课时安排：73
先修课程：普通化学、高等数学、普通物理学
考核方式：闭卷考试+平时成绩 **课程成绩**：卷面成绩 60%+平时成绩 40%
教材：《分析化学》，陈时洪主编，中国农业出版社，2013 年第 1 版 《新分析化学教程》，张明晓主编，科学出版社，2008 年第 1 版
教师：

Unit Code:16210021
Unit name：Analytical chemistry
Credits：4
Introduction： Analytical chemistry is the science to study existence form, chemical composition and relative content of the physical structure, which is the necessary tool for studying chemical phenomena and life phenomena. It is important to cultivate students' concept of accurate quantity, scientific research skills and scientific literacy. Its task is to cultivate students' analytical chemistry basic knowledge, operational skills and scientific quality.

Teaching Pattern：73
Prerequisite:General chemistry、Higher Mathematics 、General physics
Course Assessment：Closed book examination + usual results Score 60% + 40%
Textbook： "Analytical Chemistry", edited by Chen Shixhong, China Agricultural Publishing House, 1st edition, 2013 "New Analytical Chemistry Course", edited by Zhang Mingxiao, Science Press, 2008 1st edition
Course Director：

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课程代码：16210030
课程名称：有机化学 I
学分：4
课程描述 《有机化学》是化学的基础学科，是研究有机化合物的组成、结构、性质及其变化规律和合成方法的科学。它与化学的其它分支是互相联系、互相渗透、互相促进的。无论从事化学中的哪一个领域的工作，都必须具备有机化学基础知识。 本课程主要介绍各类有机化合物的命名、结构特征、物理性质、化学性质、用途、来源和制备方法；各类官能团的特性、取代反应、加成反应、消除反应、重排反应、氧化还原反应等各种类型有机反应的反应原理、条件及其影响因素、应用范围；有机结构理论；重要的反应机理，尤其是各类化合物的结构与反应性关系；有机分子的立体化学基本概念，简单的有机合成；有机化合物的分离鉴定，有机化合物的结构测定等。 通过本课程的学习，使学生系统全面掌握有机化学的基本知识和基础理论，培养学生分析问题和解决问题的能力，为学好后续课程打下坚实的基础。
课时安排：课堂讲授 54 学时，实验 27 学时。讲授每周 3 学时，实验每周 3 学时
先修课程：16210010
考核方式：闭卷考试，成绩评定过程中，考试成绩占 60%，实验成绩占 20%，平时成绩占 20%，综合后的成绩为本门课的最终成绩。平时成绩由课堂出勤、平时作业、课堂表现等确定。
教材：.李贵深，李宗澧.有机化学[M]，北京，中国农业出版社，2013 T. W. Graham Solomons,Craig Fryhle.Organic Chemistry(Tenth Edition).Wiley,2009
教师：李宗澧

Unit code：16210030
Unit name：Organic Chemistry I
Credits：4
Introduction： The Organic Chemistry is one foundational discipline of Chemistry, which studies on the composition, structure and characteristics of organic compounds, as well as their regulation and principles of change and synthesis methods. It has a mutual connection, penetration and promotion relationship with other disciplines of Chemistry. One must have knowledge of Organic Chemistry

no matter he/she works in what field in Chemistry. The Organic Chemistry is a compulsory theory curriculum. The content includes nomenclature, structure, physical and chemical properties, utilization, originate and preparation methods of various kinds of organic compounds; characteristics of various functional groups; the reaction principles, conditions, impact factors and scope of utilization of various types of organic reaction, such as substitution, addition reaction, rearrangement, elimination and oxidation reduction; theory of organic structure; the mechanism of important reactions especially about the relationship between structure and reactivity of various compounds; basic concepts of organic stereo chemical molecules; simple organic synthesis; Isolation, identification and structure determination of organic compounds. This curriculum enables students to systematically and comprehensively master knowledge and theory of Organic Chemistry, cultivates students' ability to analyze and solve problems, and lays a solid foundation for learning subsequent major courses.
Teaching Pattern：3 hrs lectures weekly (18wks), 3 hrs practical weekly (9 wks)
Prerequisite：16210010
Course Assessment：Final Score=Usual Score*20%+Final Exam Score*60%+ lab work (20%)；Usual Score is Determined by attendance rate, homework, and the completion of experiments；Final Exam: closed book exam
Textbook：Guishen Li, Zongli Li. The Organic Chemistry [M]. Beijing, China Agriculture Press, 2013. **T. W. Graham Solomons,Craig Fryhle.Organic Chemistry(Tenth Edition).Wiley,2009**
Course Director： Zongli Li

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课程代码：26210010 / 26210020
课程名称：基础生物化学
学分：4.5
课程描述 生物化学是用化学的理论和方法研究生物体的化学组成以及在生命活动中所发生的化学变化及其调控规律，从而阐明生命现象本质的一门学科。 生物化学是生命科学各专业的一门重要的基础课。课程的主要内容有：生物大分子的结构和功能（蛋白质、核酸、酶）；物质代谢及其调节（糖代谢、脂类代谢、生物氧化、氨基酸代谢、核苷酸代谢，物质代谢的联系与调节）；基因信息的传递（DNA 复制、RNA 转录、蛋白质翻译、基因表达调控，基因重组与基因工程）；细胞信息传递；常用分子生物学技术的原理及其应用等。教学内容注重生物化学基础和基本生物技术的原理。 通过生物化学的学习，使学生系统地掌握生物化学的基础知识、基本理论和实验技术，引导学生从分子水平认识生命现象，了解近期生物化学的新进展，为学生进一步学习后续的生物相关课程奠定基础。
课时安排：课堂讲授 54 学时，实验 40 学时。课堂讲授每周 3 学时；实验每周 3 学时
先修课程：16210010，16210030
考核方式：闭卷考试，成绩评定过程中，考试成绩占 50%，实验成绩占 30%，平时成绩占 20%，综合后的成绩为本门课的最终成绩。平时成绩由课堂出勤、平时作业、课堂表现等确定。
教材：霍顿等主编，《基础生物化学》，北京：科学出版社，2012 年；2.周先碗，胡晓倩主编，《基础生物化学实验》，北京：高等教育出版社，2011 年

教师：刘烈钊，吕俊

Unit code：26210010 / 26210020
Unit name：Basic Biochemistry
Credits：4.5
Introduction The Biochemistry is an important foundational discipline of Life Science. It employs theories and means of Chemistry to study organisms' chemical composition, chemical changes of compositions occurring in life activity, and principles of regulation, so as to demonstrate the nature of life phenomena. The Basic Biochemistry is a compulsory curriculum and very important for every major in Life Science. The content includes structure and function of biological macromolecules, such as protein, nucleic acid and enzyme; substance metabolism and its regulation, for example, carbohydrate and lipid metabolism, biological oxidation, amino acid metabolism, nucleotide metabolism, the interrelationships and regulation of metabolic; transmission of genetic information, such as DNA replication, RNA transcription, protein translation, regulation of gene expression, gene recombination and genetic engineering; cell information transmission; principle and application of common-used molecular techniques. The teaching focuses on the basis knowledge and principles of biochemistry and biotechnology. This curriculum aims to enable students to systematically master the knowledge, theories and experiment skills of modern biochemistry, guide students to recognize life phenomena at the molecular level, understand recent progress in biochemistry, and lay a solid foundation for follow-up courses.
Teaching Pattern：3 hrs lectures weekly (18wks), 3 hrs practical weekly (13 wks)
Prerequisite：16210010，16210030
Course Assessment：Final Score=Usual Score*20%+Final Exam Score*50%+ lab work (30%)；Usual Score is Determined by attendance rate, homework, and the completion of experiments；Final Exam: closed book exam
Textbook： Horton H.R., et al. Principle of Biochemistry. Beijing: Science Press, 2012. Xianwan Zhou, Xiaoqian Hu. Principle of Biochemistry Experiment. Beijing: Higher Education Press, 2011
Course Director： Liezhao Liu, Jun Li

1

课程代码：24312680
程名称：食品化学
学分：2
课程描述 本课程主要研究食品的化学组成、性质和食品在储藏加工和包装过程中发生的化学和物理变化，食品色香味和食品的安全性以及人体营养的基本原理，加工贮藏过程中食品营养价值的变化等，是食品质量与安全专业的必修专业课。 学习本课程的目的是使学生掌握食品风味成分、营养成分和其它功能成分及有害成分等的变化规律，为保证和提高食品的质量、开发新的食品资源，调整食物结构提供必要的理论

基础。
课时安排：36
先修课程：普通化学、有机化学、分析化学、生物化学
考核方式：闭卷考试 + 平时成绩 **课程成绩：**卷面成绩占考核成绩的 70%，平时成绩占 30%
教材：《食品化学》，赵国华主编，科学出版社，2014年第1版
教师：王洪伟

Unit code：24312680
Unit name：Food Chemistry
Credits：2
Introduction The main content of the Food Chemistry includes the composition、properties、physical and chemical changes in processing、storage、packaging process, sensory、food safety、the basic principle of human nutrition,food nutrition changes in processing and storage. By learning the course, the students are expected to master the variation regulation of food flavor ingredients, nutritional ingredients and functional ingredients and other harmful components, ensure and improve the quality of food, develop new food resource, provide the necessary theoretical basis for the adjustment of food structure.
Teaching Pattern：36
Prerequisite: General Chemistry, Organic Chemistry, Analytical Chemistry, Biochemistry
Course Assessment：Closed book examination + usual results Coil performance accounted for 70% of the results, usually accounted for 30%
Textbook："Food Chemistry", edited by Zhao Guohua, Science Press, 1st edition, 2014
Course Director：Wang Hongwei

2

课程代码：24312950
课程名称：食品微生物学
学分：2.5
课程描述 食品微生物学是食品科学学院食品质量与安全专业的必修课程之一，课程内容包括微生物学的基础知识和微生物学在食品中的应用知识两部分。微生物学基础知识部分包括对三大类重要的微生物（细菌、真菌和病毒）的形态大小、结构组成、繁殖方式和培养特征的认识；对微生物的营养、生长、代谢、遗传与变异和生态知识的学习。这部分内容紧紧围绕与食品相关的微生物种类和事例。微生物学在食品中的应用知识部分主要包括有益微生物在食品工业中的应用、有害微生物所引起的食品腐败和食物中毒及食品卫生微生物指标。课程的学习为后续课程微生物的检测奠定基础。
课时安排：45
先修课程：有机化学、食品化学、生物化学
考核方式：闭卷考试 + 平时成绩。 **课程成绩：**卷面成绩占考核成绩的 60-70%，平时成绩占 40-30%。

教材：《食品微生物学》，贺稚非、李平兰主编//著，西南师范大学出版社，2010年第1版
教师：杜小兵

Unit code：24312950
Unit name：Food Micorobiology
Credits：**2.5**
Introduction Food Microbiology is one of the three main courses of food science and engineering. It is based on biochemistry, organic chemistry, biology, physics and nutrition, etc., specializing in food-related microbial morphological characteristics, physiological and biochemical characteristics, growth and reproduction regulations, environmental factors on microbial growth, microbial classification, microbial ecology, microbial genetic variation and breeding. By learning the course, we will cultivate students to develop substances that are beneficial to human life by using microbial production, control the harmful microorganisms that cause food corruption and cause food poisoning, prolong food shelf life and eliminate food poisoning.
Teaching Pattern：**45**
Prerequisite: Organic chemistry, food chemistry, biochemistry
Course Assessment：Closed book examination + usual results. Coil performance accounted for 60-70% of the results, usually 40-30% of the results.
Textbook： Food Microbiology
Course Director：**Du Xiaobing**

3

课程代码：24312819
课程名称：食品工艺学
学分：**2**
课程描述 《食品工艺学》作为食品科学与工程的综合性专业基础课程，主要在研究食品腐败变质的原因和基于食品保藏的各种加工方法的基本原理的基础上，讲授食品加工的基本工艺与设备。它作为食品质量与安全专业必修课程，对食品加工过程的质量安全控制具有重要作用。
课时安排：**36**
先修课程：食品化学，食品微生物学，食品营养学，食品机械
考核方式：闭卷考试 + 平时成绩。 **课程成绩**：卷面成绩 70%+平时成绩 30%
教材：《食品工艺学导论》，马长伟,曾名勇主编/著，中国农业大学出版社，2008年第2版
教师：杜小兵

Unit code：24312819
Unit name：Food Processing Technology
Credits：**2**
Introduction
Teaching Pattern：**36**
Prerequisite: Food chemistry, Food microbiology, Food nutrition, Food machinery

Course Assessment：Closed book examination + usual results. Coil score 70% + usual 30%
Textbook：Introduction to Food Technology, Ma Changwei, Zeng Mingyong, ed., China Agricultural University Press, 2008 2nd Edition
Course Director：Du Xiaobing

4

课程代码：24312929
课程名称：食品营养学
学分：2.0
课程描述 理论和知识方面：要求学生掌握食品营养素的种类、营养功能及其在加工贮藏过程中的变化；掌握营养学的基础知识及不同人群的食品营养要求；了解强化食品、工程食品和保健食品及膳食与健康的关系；了解社区营养及重要性。 能力和技能方面：要求学生掌握食品中主要营养成分及不同人群的需求特点，并能做出相应的膳食评价。
课时安排： 36 个学时理论学习
先修课程：基础生物化学、食品化学、食品生物化学等
考核方式：考试，闭卷笔试。 **课程成绩**：平时成绩 25%、期末考试成绩 75%
教材：周才琼，周玉林主编.食品营养学，北京：中国质检出版社，2012
教师：周才琼

Unit code：24312929
Unit name：Food Nutrition
Credits：2
Introduction Theory and knowledge: students are required to master the kinds of food nutrients, nutritional functions and changes in the process of processing and storage; master the basic knowledge of nutrition and food nutrition requirements of different groups; understand the relationship between strengthening food, engineering food and health food, diet and health; Learn about community nutrition and importance. Ability and skills: students are required to master main nutritional components of food and characteristics of needs of different populations, and could make corresponding dietary evaluations.
Teaching Pattern：（36 classes）Theoretical Study
Prerequisite: Basis of Biochemistry, Food Chemistry, Food Biochemistry and so on
Course Assessment： Final Score=Usual Score*25%+Final Exam Score*75%； Final Exam: closed book exam
Textbook：Food Nutrition

Course Director：Caiqiong Zhou

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课程代码：24312812
课程名称：食品安全学
学分： 2
课程描述 食品安全学是食品质量与安全专业本科生的专业必修课。使学生掌握各类食品污染物的来源、毒性、毒作用机理和防控措施等食品安全学的基础知识和基本理论，能应用所学的知识综合分析食品从农田到餐桌整个过程可能存在的安全问题并提出有效的防控措施，具有综合运用所学知识解决食品质量与安全领域实际问题的能力。
课时安排： 36
先修课程：生物化学，食品化学，食品微生物学
考核方式：闭卷考试 **课程成绩**：平时成绩（25%）+ 期末成绩（75%）
教材：《食品安全学》，丁晓雯，柳春红主编，中国农业大学出版社，2011年第1版
教师：丁晓雯

Unit code：24312812
Unit name：Food safety
Credits：2
Introduction Food safety is a compulsory course for undergraduates majoring in food quality and safety. It enables students to master basic knowledge and basic theory of food security such as sources of all kinds of food pollutants, the toxicity, toxic mechanism and prevention and control measures and so on to apply their knowledge on synthetic analysis of possible security problems in whole process of food from farm to table and puts forward effective prevention and control measures with the integrated use of knowledge to solve practical problems in the field of food quality and security.
Teaching Pattern：36
Prerequisite: Biochemistry, food chemistry, food microbiology
Course Assessment：Final Score=Usual Score*25%+Final Exam Score*75%； Usual Score is Determined by attendance rate, homework；Final Exam: closed book exam.
Textbook: Food safety, Xiaowen Ding, Chunghong Liu, China agricultural university press, 2011(the first edition)
Course Director：Xiaowen Ding

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程代码：24312814
课程名称：食品毒理学
学分：2.0

课程描述 食品毒理学是食品质量与安全专业的必修课。本课程是从毒理学的角度，研究食品中所含的内、外源化学物质对食用者的毒作用现象、机理，检验和评价食品的安全性，从而确保人类的健康。食品毒理学兼有基础学科和应用学科的双重特性，具有理论性、应用性及科研方法学的学科特点。
课时安排：36 学时
先修课程：化学、微生物学、人体生理学
考核方式：闭卷考试 + 平时成绩。 **课程成绩：**平时考核成绩(30%) + 期末笔试 (70%)。
教材：刘宁，沈明浩主编.《食品毒理学》. 北京：中国轻工业出版社.2005
教师：索化夷

Unit code：24312814
Unit name：Food Toxicology
Credits：2.0
Introduction This is a compulsory course for food quality and safety. This course is from the toxicological point of view, the food contained in the internal and external chemical substances on the user's toxic effects, mechanisms, testing and evaluation of food safety, so as to ensure human health. Food toxicology both the basic disciplines and applied disciplines of the dual characteristics, with theoretical, applied and scientific research methodological characteristics.
Teaching Pattern：36 hrs lectures totally
Prerequisite: Basic Chemistry, Microbiology, Human Physiology
Course Assessment： Final Score=Usual Score*30%+Final Exam Score*70% Final Exam: closed book exam
Textbook：Liu Ning, Shen Minghao. Food Toxicology [M], Beijing: China Light Industry .2005
Course Director：Huayi Suo

7

课程代码：24312824
课程名称：食品理化分析（含仪器分析）
学分：2
课程描述： 性质：本课程是食品质量与安全专业本科生的专业选修课。 地位：它是依据物理、化学、生物化学的基本理论，应用食品现代分析仪器对食品的原料、辅料、半成品及成品的质量进行检验。 任务：课程的主要任务是介绍食品中营养成分、食品添加剂和有毒有害物质的分析检验原理与技术，其作用是为食品行业把好生产质量关，为改进生产工艺、加工技术和包装技术、开发新的食品资源提供依据
课时安排：36 理论学时
先修课程：食品安全，分析化学

考核方式：考试。闭卷笔试 + 平时成绩。

课程成绩：

总成绩评定：课程总评成绩由期末笔试成绩占 65%，平时成绩占 35%构成

平时成绩评定：

（1）课堂表现（30 分）；

（2）作业完成情况（30 分）；

（3）课堂考勤（40 分）。

期末考试：课堂所讲的基本概念及原理，考察分析原理基本的应用。

教材：

《食品分析》 侯玉泽、丁晓雯主编，郑州大学出版社，2011 年

《食品仪器分析技术》 戴军主编，化学工业出版社，2006 年

教师：钟金锋

Unit code：24312824

Unit name：Food Analysis

Credits：2

Introduction：

Nature: this course is an elective course for undergraduates majoring in food quality and safety.

Status: it is the basic theory on physics, chemistry and biochemistry, and applies food modern analytical instrument to test the quality of raw materials, auxiliary materials, semi-finished products and finished products.

Task: the main task of the course is to introduce the food nutrition, food additives and poisonous and analysis testing principle and technology of harmful substances, which aims at improving production quality of food industry to provide the basis for production technology, processing technology and packaging technology.

Teaching Pattern：36hrs

Prerequisite: Food Safety , Analytical Chemistry

Course Assessment：

Final Score=Usual Score*35%+Final Exam Score*65%

Usual Score is Determined by attendance rate, homework and class check；

Final Exam: closed book exam

Textbook： Yu-ze Hou,Xiaowen ding. food analysis, zhengzhou university press, 2011

Dai jun. food instrumental analysis technology, chemical industry press, 2006

Course Director：**JinFeng Zhong**

8

课程代码：24312813

课程名称：食品标准与法规

学分：1.5

课程描述

本课程的主要内容是食品法律法规的基础知识;我国的食品法律法规体系、制定和实施;食品的监管部门和行政执法;食品标准的基础知识;我国的食品标准;国际法律法规和标准等方面的知识和技能。通过本课程的教学使学生掌握食品法律法规和标准的基础知识,我国的食品法律法规和标准;我国的监管部门和监管范围,在"从农田到餐桌"的整条链上如何实现食品质量和安全的监管,让学生对整个食品质量与安全的监管有基本的认识,了解"风险评估"、"从源头监管"等现代的食品安全理念,为他们将来从事食品安全相关的工作奠定基础。
课时安排: 27 学时
先修课程:食品化学、食品分析、食品质量管理学、食品卫生与检验
考核方式:闭卷考试+平时成绩。 **课程成绩:**平时考核成绩(30%) + 期末笔试 (70%)。
教材:《食品标准与法规》,周才琼,陈宗道 主编,中国农业大学出版社,2009 年第 1 版.
教师:杨吉霞

Unit code:24312813
Unit name: Food Standards and Regulations
Credits:1.5
Introduction The main content of this course is the basic knowledge of food laws and regulations, formulation and implementation of China's food laws and regulations system, food supervision department and administrative law enforcement, basic knowledge of food standards, food standards in China; knowledge and skills in international laws and regulations and standards. The teaching of this course enables students to master the basic knowledge of food laws and regulations and standards, and China's food laws and regulations and standards, China's regulatory and regulatory scope. The whole chain of food quality and safety supervision for the "from farm to table" let the student have basic knowledge of food quality and safety supervision, understand modern food safety concept such as "risk assessment" and "supervision from the source", and lay the foundation for their future work in the food safety.
Teaching Pattern: 27 hrs lectures totally
Prerequisite: Food Chemistry, Food Analysis, Food Quality Management, Food Hygiene and Testing
Course Assessment: Final Score=Usual Score*30%+Final Exam Score*70%; Usual Score is Determined by attendance rate, homework, and the performance of classroom; Final Exam: closed book exam.
Textbook: Food Safety Supervision and Management
Course Director: Jixia Yang

课程代码:24312827

课程名称：食品质量管理

学分： 2

课程描述

该课程是为食品生产和经营管理直接服务的一门应用科学。课程以现代食品质量管理科学的观点，系统阐述食品质量管理的基本概念、理论和方法，重点介绍食品质量管理基础，食品质量控制与数理统计方法，全面质量管理及质量成本管理，食品质量体系认证（产品质量认证），HACCP、GMP 和 SSOP，食品质量检验与抽样方案等内容。同时，还介绍现代食品质量管理的新方法和发展动态，通过教学，使学生了解现代社会质量含义和质量竞争的方式与特点，掌握食品质量管理的基本概念、理论和方法，为与食品企业相关的产品设计、生产、商贸流通和管理等工作服务。

课时安排： 36

先修课程：管理学原理、食品安全学、食品工程原理、数理统计学

考核方式：闭卷考试

课程成绩：平时成绩（30%）+ 期末成绩（70%）

教材：《食品质量与安全管理》，陈宗道、刘金福、陈绍军主编，中国农业出版社，2011年第1版

教师：明建

Unit code：24312827

Unit name：Food Quality Management

Credits：2

Introduction

This course is an applied science for the direct service of food production and management. This course from modern food quality management scientific point, systematically states food quality management basic concept, theory and method, especially food quality management foundation, food quality control and methods of mathematical statistics, comprehensive quality management and quality cost management, food quality system certification, product quality certification), HACCP, GMP, and SSOP food quality inspection and sampling plan, etc. At the same time, it also introduces the new method and development of modern food quality management, makes students understand the quality of the modern social meaning and the ways and features of quality competition, master the basic concept, the theory and method of food quality management, to make them provide the service for product design, production, circulation and management related to the food industry.

Teaching Pattern：36

Prerequisite: Principles of management, Food safety, Food Engineering Principles, Mathematical Statistics

Course Assessment： Final Score=Usual Score*30%+Final Exam Score*70%；
Usual Score is Determined by attendance rate, homework；Final Exam: closed book exam.

Textbook: Food quality and safety management, Zongdao Chen ,Jinfu Liu, Shaojun Chen , China agricultural press, 2011(the first edition)

Course Director：Jian Ming

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课程代码：24312826
课程名称：食品微生物检验学
学分： 1.5
课程描述 本课程为食品科学学院食品质量与安全专业的专业必修课程。课程内容包括食品微生物检验一般流程、食品微生物检验常规技术与原理和食品安全国家标准微生物指标及检测方法。
课时安排： 31
先修课程：生物化学、食品微生物学
考核方式：综述论文 **课程成绩：**平时成绩（40%）+ 期末成绩（60%）
教材： 无
教师：杜小兵

Unit code：24312826
Unit name：Food Microbiological Examination
Credits：1.5
Introduction This course is a compulsory course in Food Quality and Safety Department of Food Science Institute. The course include food microorganism inspection general process, food microorganism inspection conventional technology & principle and food safety national standard microbial index & detection method.
Teaching Pattern：31
Prerequisite: Biochemistry, Food Microbiology
Course Assessment： Final Score=Usual Score*40%+Final Thesis Score*60%； Usual Score is Determined by attendance rate, homework and final thesis.
Textbook: NO
Course Director：Xiaobing Du

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课程代码：24312811
课程名称：食品安全监督管理
学分：1.5

课程描述

本课程主要介绍我国的食品安全监督管理体制，从农田到餐桌各环节的安全监管，包括农产品种植和养殖、生产加工、流通、餐饮服务、进出口贸易各个环节的安全监督管理，问题食品的召回管理，食品安全风险评估，发生食品安全事件时的应急反应体系，食品危害的溯源管理体系，发达国家的食品安全监管制度等，让学生比较系统地理解我国的食品安全监督管理体制，及其在“从农田到餐桌”整个产业链条中的各个环节所发挥的监督管理作用，牢固树立安全管理意识，在将来的食品从业过程中主动遵从安全监管体制，为完善和促进体制建设做出积极的贡献。

课时安排：27 学时

先修课程：食品化学、食品分析、食品质量管理学、食品卫生与检验

考核方式：闭卷考试+平时成绩。

课程成绩：平时考核成绩(30%) + 期末笔试 (70%)。

教材：《食品安全监督管理》，国家食品药品监督管理局、黑龙江省食品药品监督管理局 主编，中国医药科技出版社，2008 年第 1 版.

教师：杨吉霞

Unit code：24312811

Unit name：the Food Safety Supervision and Management

Credits：1.5

Introduction:

This course mainly introduces our country's food safety supervision and management system, the safety supervision on each link from farm to table, including agricultural planting and breeding, production, processing, circulation and catering services, safe supervision and management for each link for import and export trade, recall management of recall of unqualified food, food safety risk assessment, food safety incident emergency response system, traceability management system of food hazards, food safety supervision system of developed countries. It lets students systematically understand our country's food safety supervision and management system, and the supervision role in the whole industry chain of "from farm to table", firmly establish a safety management consciousness, and actively abide by safety regulatory system in the future career in food industry to make positive contribution to improve and promote the system construction.

Teaching Pattern：27hrs lectures totally

Prerequisite: Food chemistry, Food analysis, Food quality management, Food hygiene and testing

Course Assessment： Final Score=Usual Score*30%+Final Exam Score*70%；

Usual Score is Determined by attendance rate, homework, and the performance of classroom ； Final Exam: closed book exam.

Textbook：Food Safety Supervision and Management

Course Director：Jixia Yang

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课程代码：
课程名称：食品质量与安全专业导论
学分：2
课程描述 本课程以专题形式介绍当前食品工业的现状、趋势、存在的问题和对策，食品质量与安全专业的国内外比较研究，西南大学食品质量与安全专业教学课程体系，食品安全基础知识介绍，答疑等内容，是食品质量与安全的专业发展选修课。本课程是食品质量与安全专业的本科学生一个专业学习的引导，目的是培养学生对食品质量与安全专业的热爱，树立献身中国食品工业的精神、激发学习的兴趣，为大学四年的学习和生活作好思想准备。
课时安排：36 学时
先修课程：无
考核方式：考查 **课程成绩：**课程报告 60%+ 平时成绩 40%。
教材：无
教师：阚建全

Unit code：
Unit name：Food Safety Discipline
Credits：2
Introduction This course introduces the current present situation, trend and existing problems and countermeasures for food industry in a special form, food quality and safety professional comparative research both at home and abroad, teaching course system of food quality and safety, food safety knowledge for Southwest University, answering questions, etc., which is elective course for the major of food quality and safety. This course is a guide of professional learning for undergraduate students majoring in food quality and safety, which aims at cultivating the love of students for food quality and safety professional, the spirit to be dedicated to Chinese food industry, and stimulating study interest to prepare for the university four years of study and life.
Teaching Pattern：36 hrs lectures totally
Prerequisite:NO
Course Assessment：test；Final Score=Final Exam Score*60%+Usual Score*40%； Usual Score is Determined by Classroom performance and Class attendance.
Textbook：NO
Course Director：Jianquan Kan

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课程代码：24322760
课程名称：科技文献阅读
学分：1
课程描述 本课程以专题形式介绍科技文献的调研、科技文献资料的阅读方法、科技文献阅读报告

的撰写、讨论等内容，是食品质量与安全的专业发展选修课。学习本课程目的是培养学生如何查找科技文献资料，如何阅读科技文献资料，如何撰写阅读报告的能力，并树立创新的欲望和意识、为后面从事创新性学习作好理论和思想准备。
课时安排：18 学时
先修课程：
考核方式：考查 **课程成绩：**文献阅读报告 60%+ 平时成绩 40%。
教材：
教师：阚建全

Unit code：24322760
Unit name：study of academic thesis
Credits：1
Introduction This course introduces the research of scientific and technological literature, the reading method of scientific and technical literature, the writing and discussion of scientific literature reading report in special form, which is the elective course for major of food quality and safety. The purpose of this course is to train students how to find the literature of science and technology, how to read the literature of science and technology, the ability of how to write a book report, and sets up the desire and innovation consciousness, to make preparation for theory and ideas for later creative learning.
Teaching Pattern：18 hrs lectures totally
Prerequisite:
Course Assessment：test；Final Score=Literature reading report Score*60%+Usual Score*40%；Usual Score is Determined by Classroom performance and Class attendance.
Textbook：
Course Director：Jianquan Kan

课程代码：24322876
课程名称：科技论文写作
学分：1
课程描述 本课程以专题形式介绍科研项目和选题、文献资料调研和综述、试验设计和方法论、论文撰写与评价、科研基本素质等内容，是食品质量与安全的专业发展选修课。学习本课程目的是培养学生树立献身科学事业的精神、创新的欲望和意识、实事求是和严谨的科学态度，为从事论文研究作好理论和思想准备。
课时安排：18 学时
先修课程：本专业的专业基础课和部分专业课
考核方式：考查

课程成绩：课程论文 80%+ 平时成绩 20%。
教材：
教师：阚建全

Unit code：24322876
Unit name：Composition of an academic thesis
Credits：1
Introduction This course introduces scientific research project and selected topic, literature research and reviews, test design and methodology, thesis writing and evaluation, scientific research basic qualities in a special form, which is the elective course for major of food quality and safety. The purpose of this course is to cultivate students to set up dedicated science spirit, innovation desire and consciousness, seeking truth from facts and rigorous scientific attitude, to make preparation for theory and ideas for later research papers.
Teaching Pattern：18 hrs lectures totally
Prerequisite: The professional courses and some professional courses
Course Assessment：test；Final Score=Course papers Score*80%+Usual Score*20%；Usual Score is Determined by Classroom performance and Class attendance.
Textbook：
Course Director：Jianquan Kan

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课程代码：24322690
课程名称：食品科学与安全进展
学分：1 .0
课程描述 本课程以专题形式介绍非消化性碳水化合物与健康、生理活性多糖和糖蛋白研究方法、天然植物多酚及功能研究进展、发酵食品微生物资源多样性与益生菌开发、传统加工方式与食品安全、食物对人体精神和记忆的影响以及现代食品快检技术中的免疫分析检测技术等，是食品质量与安全的专业发展选修课。 **Course description**
课时安排： 18 个学时课堂学习
先修课程：食品化学、食品微生物学
考核方式：考查。 **课程成绩**：平时成绩 20%、期末考试成绩 80%
教材：
教师：周才琼

Unit code：24322690
Unit name：The Progress of Food Science and Security
Credits：1.0

Introduction

This course introduces peptic carbohydrates and health, research method of Physiological active polysaccharides and glycoproteins, natural plant polyphenols and functional research progress, probiotic fermented food diversity and microorganism resources development, traditional processing way and food safety, the effect of food on human spirit and memory and immunoassay detection technology in the modern fast food inspection technology, etc. in a special form, which is the elective course for major of food quality and safety.

Teaching Pattern：Theoretical Study（18 classes）

Prerequisite: Food Chemistry, Food Microbiology

Course Assessment：

Final Score=Usual Score*20%+Final Exam Score*80%；

Final Exam: report

Textbook：

Course Director： Caiqiong Zhou

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课程代码：24322949

课程名称：人体生理学基础

学分：2

课程描述

人体生理学是生理科学的一个分支，是在学习基础生物化学等课程的基础上，理论和应用地研究构成人体各个系统的器官和细胞的正常活动过程，特别是各个器官、细胞功能表现的内部机制，不同细胞、器官、系统之间的相互联系和相互作用，并阐明人体作为一个整体，其各部分的功能活动是如何相互协调、相互制约，从而能从复杂多变的环境中维持正常的生命活动过程的。可有效深刻理解食品营养学和食品毒理学等课程.

课时安排：36 学时

先修课程：生物化学、食品化学

考核方式：测试考查考试 + 平时成绩

课程成绩：测试考查考试占考核成绩的 70％，平时成绩占 30％

平时成绩评定：课堂考勤（70 分）、作业（30 分）。

教材：生理学(第6版). 姚泰主编, 北京:人民卫生出版社, 2004

教师：马良

Unit code：24322949

Unit name： The basis of human physiology

Credits：2

Introduction

Human physiology is a branch of physical science, which is normal activity process for theory and application research of the organs and cells of human body system, especially the internal mechanisms of various organs and cell functions, interconnection and interaction between different cells, organs and systems based on learning biochemistry course. It also states how

functional activities of the human body as a whole coordinate and restrain each other, so as to maintain normal life activities in a complex and changeable environment, which let students effectively understand food nutrition and food toxicology and other courses.
Teaching Pattern：36 hrs lectures totally
Prerequisite: Biochemistry, Food Chemistry
Course Assessment：Test test exams + usual results Test examinations accounted for 70% of the examination results, usually 30% Usual results: classroom attendance (70 points), homework (30 points).
Textbook：Physiology (6th Edition). Yao Tai editor, Beijing: People's Health Publishing House, 2004
Course Director：Liang Ma

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课程代码：24322710
课程名称：食品试验设计和统计分析
学分：2
课程描述 本课程是为食品质量与安全专业开设的一门专业选修课。本课程是在已修读概率论课程的基础上，进一步学习在食品科技领域常用的实验数据资料的统计分析、试验设计方法基础知识，让学生掌握数据资料的整理；描述统计；假设检验；方差分析等统计分析方法，掌握对比、正交试验设计方法，培养学生针对实际问题，选择适当的方法分析和评价数据资料、检验数据资料，以及进行简单试验设计的知识和技能。
课时安排： 理论课 18 学时+实践课 27 学时
先修课程：概率论
考核方式：闭卷考试+平时成绩。 **课程成绩**：平时考核成绩(50%) + 期末笔试 (50%)。
教材：
教师：杨吉霞

Unit code：24322710
Unit name：Food Test Design and Statistical Analysis
Credits：2
Introduction **T**his course is the elective course for major of food quality and safety. It lets student further study statistical analysis of experimental data, basic knowledge of test design method based on probability theory courses to make students master statistical analysis methods such as data collection, descriptive statistics, hypothesis testing, analysis of variance as well as design method of contrast and orthogonal test. It cultivates students to choose proper methods to analyze and evaluate data, test data, as well as choose knowledge and skills to conduct simple test design.
Teaching Pattern：Theory class, 18 hrs + practice course, 27 hrs
Prerequisite: Probability Theory
Course Assessment：Final Score=Usual Score*50%+Final Exam Score*50%.

Textbook：
Course Director：Jixia Yang

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课程代码： 24322902
课程名称：食品风味化学
学分： 2
课程描述 食品风味化学研究食品风味的形成、风味物质的化学成分、风味的变化规律以及风味物质的人工制造和风味食品的工业化生产。食品风味化学主要以现代化学为技术平台，解释食品风味现象，归纳食品风味变化规律，介绍食品风味调配技术。重点介绍了食品风味化学的研究领域、食品风味物质的分析与鉴定方法、化学特性与风味强度、食品风味物质的形成、典型食品风味、调节食品风味的产品等。 通过本课程的学习，使学生对食品风味化学有一个较全面的了解，从而对食品品质的审评与检验打下基础。同时对开拓学生视野，提高科学素养也是大有益处的。
课时安排： 36
先修课程：大学化学、生物化学、食品化学
考核方式： 考查 **课程成绩：**平时考核成绩(30%) + 期末论文 (70%)
教材：张晓鸣.食品风味化学.北京：化学工业出版社，2011.8
教师：叶发银

Unit code：24322902
Unit name：Food Flavor Chemistry
Credits：2
Introduction Food flavor chemistry is mainly about modern chemical technology platform,which explains the phenomenon of food flavor and food flavor formation. It also analyzes the chemical composition of flavor compounds, summarized changes of food flavor to guide artificial flavors and flavor of food industrial production. This course focuses on teaching food flavor concepts and classification, flavor perception and molecular physiology theory. The formation mechanism of natural food flavors, produce changes in food processing, typical food flavor, separate flavor compounds, analysis and processing methods, as well as food processing of flavor chemical application and so on are this course's main points. Through the study of this course, students will have a more comprehensive understanding of food flavor chemistry, thus laying a foundation for the review and inspection of food quality. At the same time it also helpful to open up horizons and improve the scientific literacy.
Teaching Pattern：36
Prerequisite: University chemistry, biochemistry, food chemistry
Course Assessment： Final Score=Usual Score*30%+Final Thesis Score*70%； Usual Score is Determined by attendance rate, homework and final thesis.
Textbook： Xiaoming Zhang. Food flavor chemistry. Beijing: chemical industry press, 2011.8

Course Director：Fayin Ye

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课程代码：24322915
课程名称：食品酶学
学分：2
课程描述 《食品酶学》课程是为食品质量与安全专业开设的一门专业选修课。本课程是在已修读生物化学、食品化学课程的基础上，进一步学习酶学基本理论和酶在食品加工及保藏中的应用知识。理论部分主要介绍酶分类和性质、分离纯化、催化动力学，应用部分主要介绍酶在食品工业中的应用、酶在食品分析中的应用、酶的安全和毒理相关的问题。通过本课程的学习，学生可以系统地学习酶在食品加工、保藏和分析检测中的基本理论和实际应用，熟悉酶安全性监管相关的制度。
课时安排：理论课 27 学时+实验课 13 课时
先修课程：生物化学、食品化学、食品微生物
考核方式：课程论文+平时成绩。。 **课程成绩：**平时成绩（40%）+课程论文(60%)。
教材：食品酶学，何国庆 丁立孝 主编，化学工业出版社，2006 年第 1 版
教师：杨吉霞

Unit code：24322915
Unit name：Food Enzymology
Credits：2
Introduction Food Enzymology is the elective course for major of food quality and safety, which lets students to further study the application of enzyme in food processing and preservation based on the biochemistry and food chemistry. Theoretical part mainly introduces enzyme classification and properties, isolation, purification, catalysis, and the application part mainly introduces the application of enzyme in food industry, the application of enzyme in food analysis, issues related to safety and toxicology of enzymes. Through the study of this course, students can systematically learn the basic theories and practical applications of enzymes in food processing, preservation and analysis and testing, and be familiar with the system of enzyme safety regulation.
Teaching Pattern：Theory class ,27 hrs + experiment class, 13 hrs
Prerequisite: Biochemistry, Food Chemistry, Food Microbiology
Course Assessment： Final Score=Usual Score*40%+ course paper Score*60%； Usual Score is Determined by attendance rate, homework, and the performance of classroom； Final Exam: course paper.
Textbook：Food Enzymology
Course Director：Jixia Yang

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课程代码：24322922
课程名称：食品物理化学
学分： 2
课程描述 本课程的授课对象为我校食品质量与安全专业的本科生，为专业选修课，对后续专业课程的学习和掌握具有重要作用。食品物理化学是食品化学的一门分支学科。食品物理化学以各类食品成分为研究对象，侧重从物理及化学角度系统探食品体系中食品成分之间发生的相互作用及其对食品品质的影响。本课程的主要任务是使学生全面系统地掌握食品物理化学的原理和方法，涵盖的内容包括食品分散系中的组分相互作用、表界面化学、食品热力学、食品动力学、食品晶体学、食品流变学、食品凝胶等。
课时安排： 36
先修课程：无机及分析化学、物理化学、生物化学、食品化学、食品工艺学
考核方式：考查 **课程成绩：**平时考核成绩(30%) + 期末论文 (70%)
教材：《食品物理化学》，张佳程，师进生主编，中国轻工业出版社，2007年8月第1版
教师： 叶发银

Unit code：24322922
Unit name：Food Physical Chemistry
Credits：2
Introduction This course is the elective course for major of food quality and safety, which plays an important role in the study and mastery of following specialized courses. Food physics and chemistry is a branch of food chemistry. Physical chemistry takes all kinds of food ingredients as the research object, focusing on the systemically exploring the interaction between food ingredients in food system from the standpoint of physics and chemistry and its effect on food quality. The main task of this course is to enable students to systematically grasp the principles and methods of food physics and chemistry. It covers component interaction, interface chemistry, food thermodynamics, food dynamics, food crystallography, food rheology, food gel, etc. in food dispersal systems.
Teaching Pattern：36
Prerequisite: Inorganic and analytical chemistry, physical chemistry, biochemistry, food chemistry, food technology
Course Assessment：Final Score=Usual Score*30%+Final Thesis Score*70%； Usual Score is Determined by attendance rate, homework and final thesis.
Textbook：Food physics and chemistry, Jiacheng Zhang, chief editor, China light industry press, August, 2007(the first edition).
Course Director：Fayin Ye

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课程代码：24322912

课程名称：食品胶体化学
学分： 1.5
课程描述 本课程授课对象为我校食品质量与安全专业的本科生，为专业选修课。食品胶体化学是从物理化学角度，从微观和本质上系统探食品胶体分散体系性质和宏观现象的一门分支学科。本课程的主要任务是使学生全面系统地掌握胶体科学的原理和方法，通过对表面张力和表面热力学理论、润湿和铺展、吸附、表面膜等重要界面现象、胶体稳定理论、乳状液和泡沫稳定机理、凝胶的形成机制等深入学习，使学生能够自觉运用上述知识和理论，解释并解决食品加工与保藏方面的实际问题。
课时安排： 27
先修课程：无机及分析化学、物理化学、生物化学、食品化学、食品工艺学
考核方式： 考查 **课程成绩：**平时考核成绩(30%) + 期末论文 (70%)
教材：《表面活性剂、胶体与界面化学基础》，崔正刚主编，化学工业出版社，2013 年第 1 版。
教师：叶发银

Unit code：24322912
Unit name：Food Colloid Chemistry
Credits：1.5
Introduction This course is the elective course for major of food quality and safety. Food colloid chemistry is a branch of discipline that explore the properties and macroscopic phenomena of food colloids from microscopic and the essential system with the angle of the physical and chemical Angle. The main task of this course is to make students master the colloid science and comprehensive system of principle and method of thermodynamics theory, and enable students to consciously use knowledge and theory, explain and solve actual problems on food processing and preservation through in-depth study of surface tension, surface thermodynamic theory, interfacial phenomena including wetting and spreading, adsorption, surface film, colloid stability theory, emulsion and foam stability mechanism and gel forming mechanism.
Teaching Pattern：27
Prerequisite: Inorganic and analytical chemistry, physical chemistry, biochemistry, food chemistry, food technology
Course Assessment：Final Score=Usual Score*30%+Final Thesis Score*70%； Usual Score is Determined by attendance rate, homework and final thesis.
Textbook： Surfactant, colloid and interface chemistry foundation, Zhenggang Cui, chemical industry press, 2013.
Course Director：Fayin Ye

课程代码：24322926
课程名称：食品物性学
学分： 1.5

课程描述 本课程授课对象为我校食品质量与安全专业的本科生，为专业选修课。食品物性学从微观和宏观两方面讲述食品及食品原料在加工贮藏过程中的物理性质变化，使学生了解食品的物理性质、测定原理和方法、物理性质的应用与控制，为研究开发新产品、提高产品货架期，从工程学角度为学生奠定基础。
课时安排： 27
先修课程：无机及分析化学、物理化学、生物化学、食品化学、食品工艺学
考核方式：考查 **课程成绩：**平时考核成绩(30%) + 期末论文 (70%)
教材：《食品物性学》，李云飞，殷涌光，徐树来，金万镐编著，中国轻工业出版社，2009年第2版
教师：叶发银

Unit code：24322926
Unit name：Physical Properties of Foods
Credits：1.5
Introduction This course is a elective course for undergraduates majoring in food science and engineering and food quality and safety offered at the 5th semester for 40 class hour. It is a multi-disciplinary comprehensive course as well as a practical course with great practicability with basement of the physical properties of foods and their research methods and principles. Through this course, It not only makes students to understand and grasp some basic concepts, principles, measuring methods and quality evaluation methods of food properties, but also develop students' ability to use food physics knowledge to carry out food research, development and technological innovation.
Teaching Pattern：27
Prerequisite: Inorganic and analytical chemistry, physical chemistry, biochemistry, food chemistry, food technology
Course Assessment： Final Score=Usual Score*30%+Final Thesis Score*70%； Usual Score is Determined by attendance rate, homework and final thesis.
Textbook: Yunfei Li, Yongguang Yin, Shulai Xu,Wangao Jin, China light industry press, 2009,（the second edition）
Course Director：Fayin Ye

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课程代码： 24322930
课程名称：食品原料学
学分： 2
课程描述 食品原料学是食品学的基础和重要组成部分。食品原料学不仅可为食品加工学科提供各种原料的物理、化学、生化特性等基础知识，它还从营养学、医学角度，对人们在

膳食中正确选用食品原料，合理利用食品的营养，保持健康的饮食生活提供原料方面的知识。食品原料学还包括了比食品加工学更广泛的内容，即为食品产业、食品流通和饮食业等提供食品原料生产、流通、消费的宏观信息，包括质量标准、流通体系等。它还从人们的膳食营养需要和食品的加工要求方面，对原料的生产、贮存、流通提出要求。并对农、林、牧、渔业的种植、养殖、育种、管理有十分重要的意义。
课时安排： 36
先修课程： 无
考核方式：开（闭）卷考试/课程论文 **课程成绩**：平时成绩（20%）+期中成绩（30%）+ 期末成绩（50%）
教材： 《食品原料学》，蒋爱民，赵丽芹主编，东南大学出版社，2007年第1版
教师：董全

Unit code：24322930
Unit name：Food Material
Credits：2
Introduction Food Material is the basis and important component of food science, offered at the 4th semester for 54 h. Food materials not only provide the basic knowledge of materials physical, chemical, biochemical characteristics for food processing course, but also provide material knowledge for selecting correct food, using food nutrition reasonable, and keeping healthy eating life. Food materials includes a wider range than food processing, that can provide food raw materials production, circulation, consumption of macro information, including quality standards, circulation system for food industry, food distribution and catering industry. So that enable students master food materials on the more comprehensive professional knowledge, basic skills, improve the follow-up course learning efficiency is very helpful, professional skills, business ability has been significantly improved to participate in the work can quickly adapt to the needs of social development, in order to achieve our food Laying a solid foundation for the sustainable development of production.
Teaching Pattern：36
Prerequisite: NO
Course Assessment：Final Score=Usual Score*20%+ Midterm Examination Score*30%Final Exam Score*50%； Usual Score is Determined by attendance rate, homework.
Textbook: Food raw materials science, Aiming Jiang, Liqin Zhao, southeast university press, 2007(the first edition)
Course Director：Quan Dong

课程代码：24322965
课程名称：食品添加剂
学分： 2
课程描述

食品添加剂是食品化学的一门分支学科。食品添加剂课程是研究为改善食品品质和色、香、味以及为防腐和加工工艺的需要而加入食品中的化学合成或天然添加剂。该课程是食品科学与工程及其相关专业的专业课程。它与食品工艺学、食品营养学等学科处于同一层次。其基础课程是有机化学，专业基础课程是食品化学。后置课程为食品工艺学、食品发酵工艺学等工艺类课程。可以说，食品添加剂是这些基础学科在食品加工中的应用。因此，它主要是一门应用性、实践性、规范性的学科。通过本课程的学习，让学生了解常用食品添加剂的性质、作用及其应用、以发展食品工业，开拓食品市场，培养实用的新型人才。因此它对食品专业发展具有极其重要的意义。
课时安排： 36
先修课程：无机化学、有机化学、分析化学、物理化学、生物化学、食品化学、食品毒理学、食品营养学。
考核方式：闭卷考试 **课程成绩：**平时成绩（30%）+ 期末成绩（70%）
教材：郝利平等编. 食品添加剂. 北京：中国农业出版社，2013年8月
教师：明建

Unit code：24322965
Unit name：Food Additives
Credits：2
Introduction This course is an important professional course for food science and engineering. The task of the course is to help students understand the definition, nature, traits, toxicity, usage, application and dosage of food additives, as well as the principles of food additives.It not only about the use of precautions and other relevant knowledge, but also introduced domestic and foreign food additives, development of dynamics, food additive management approaches, food nutrition enhancer management practices and other relevant laws and regulations. For the students in the future study and practice to lay a generous foundation.
Teaching Pattern：36
Prerequisite: Inorganic chemistry, organic chemistry, analytical chemistry, physical chemistry, biochemistry, food chemistry, food toxicology, food nutrition
Course Assessment： Final Score=Usual Score*30%+Final Exam Score*70%； Usual Score is Determined by attendance rate, homework；Final Exam: closed book exam.
Textbook: Liping Hao. Food additives. Beijing: China agricultural press, August 2013
Course Director：Jian Ming

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课程代码：24322963
课程名称：食品生物技术概论
学分：2
课程描述： 食品生物技术概论主要研究的内容是发酵工程、酶工程、基因工程和细胞工程内容。

课时安排：36 学时
先修课程：基础化学、有机化学、生物化学、遗传学、食品微生物学和营养学、物理学和数学等
考核方式：本课程是选修课程，期末开卷考试 **课程成绩：** 总成绩评定：成绩由期末开卷考试成绩和平时作业、测验和参考出勤构成。 平时成绩评定：期末开卷考试占总成绩的 80%，平时成绩占总成绩的 20%。 （1）作业完成情况：作业有成绩等级，优、良、中、差，占总成绩的 10%； （2）阶段性测验：学生阶段性的测验有分数，开卷测验，占总成绩的 10%； （3）课堂考勤：每次课堂点名，出勤率有严格要求，参考出勤率。 期末考试：期末开卷考试，考核课程教学内容。
教材：《食品生物技术导论》，罗云波、生吉萍主编，中国农业大学出版社，
教师：贺稚非

Unit code：24322963
Unit name： Introduction of Food Biotechnology
Credits：2
Introduction： The main research of food biotechnology mainly covers fermentation engineering, enzyme engineering, genetic engineering and cell engineering.
Teaching Pattern：36hrs
Prerequisite: Food Safety
Course Assessment： Final Score=Usual Score*20%+Final Exam Score*80% Usual Score is Determined by attendance rate, Staged tests and class check； Final Exam: Open-book examination
Textbook： Yunbo Luo, Jiping Sheng . Introduction to food biotechnology, China agricultural university press,
Course Director：Zhi-Fei He

课程代码：24322933
课程名称：食品贮藏原理与技术
学分：2
课程描述： 课程主要通过讲解果蔬采后生理代谢的变化、存在的问题以及贮运技术，让学生掌握果蔬类食品贮藏的基本原理和贮藏技术。课程以果蔬类食品为基础进行详细论述，果蔬类是人类主要的食品原料之一，由于基础科学和基础学科的发展，果蔬采后贮运已经成为一门蓬勃发展的新学科；贮运技术的深入研究及设备、材料、药剂的不断更新，也使果蔬产品的贮运品质和贮藏期得到了明显的提高和延长。

课时安排：36 学时

先修课程：基础生物化学，植物生理学/植物学、食品微生物学

考核方式：开卷考试 + 平时成绩

课程成绩：

总成绩评定：卷面成绩占考核成绩的 60%，平时成绩占 40%

平时成绩评定：平时成绩占总成绩的 40%，由课堂表现、作业完成情况和课堂考勤 3 部分组成。

（1）课堂表现（10 分）：学生主动参与课堂练习、讨论，创造性地提出问题的能力；

（2）作业完成情况（15 分）：学生平时作业提交次数及完成质量；

（3）课堂考勤（15 分）。

期末考试：期末考试的范围涵盖第 2-6 章的内容，采用开卷考试的形式，试卷题型包括：名词解释、填空、辨析、简答和问答等，主要考察学生对基本概念的掌握和运用课程内容解决生产实际问题的能力。

教材：《园艺产品贮藏加工学（贮藏篇）》，罗云波, 生吉萍主编，中国农业大学出版社，2010年第2版

教师：邓丽莉

Unit code：24322933

Unit name：Storage principle and technology of food

Credits：2

Introduction：

Principles and Technology of Food Storage is a compulsory course in food science and engineering and it is also a professional course offered by horticulture, agronomy and other majors in Higher Agricultural colleges. The main content of the course includes postharvest storage principle of agricultural products, interrelated technology and facilities, transportation and marketing issues, chemical composition of agricultural products, agricultural products storage physiology of storage, the commercialization of agricultural products, agricultural products processing, transportation, purchase and sale of agricultural products fruit, vegetables, grain and oil storage and other agricultural and sideline products storage etc.. The purpose of this course is to enable students to master the basic principles and storage techniques of food storage, and to have the ability to solve practical problems through an in-depth understanding of the basic characteristics of food.

Teaching Pattern：36hrs

Prerequisite: Basic Biochemistry, Plant Physiology/botany, Food Microbiology

Course Assessment：

Final Score=Usual Score*40%+Final Exam Score*60%

Usual Score is Determined by attendance rate, homework and class check；

Final Exam: Open-book examination

Textbook： Luo yunbo, Jiping. Garden product storage and processing (storage), China agricultural university press, 2010

Course Director：Lili Deng

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课程代码：24322928
课程名称：食品原料生产安全控制
学分：2
课程描述： 了解农业生态系统与食品原料安全、食品原料生成中的污染，食品原料生产的化学和生物基础，植物性原料食品安全控制，畜产食品原料安全控制，水产食品原料安全控制，其他食品原辅材料安全控制等。
课时安排：36 学时理论课
先修课程：食品安全
考核方式：考察方式。（课程论文 + 平时成绩。） 课程成绩： 总成绩评定：课程总评成绩由课程成绩成绩占 60%，平时成绩占 40%构成 平时成绩评定： （1）课堂表现（30 分）； （2）作业完成情况（30 分）； （3）课堂考勤（40 分）。 期末考试：课堂所讲的基本概念及原理，考察分析原理基本的应用。
教材： 艾启俊 陈辉 主编。 食品原料安全控制，第二版. 北京，中国轻工业出版社, 2006 年 9 月。
教师：钟金锋

Unit code：24322928
Unit name：Safety controls of crop production
Credits：2
Introduction： Students can get knowledge of agricultural ecosystem and food ingredients, pollution rising from food raw materials, chemical and biological basis produced from food raw materials, plant raw materials safety control, and animal food raw materials safety control, aquatic food raw materials safety control, other food raw and auxiliary materials safety control and so on.
Teaching Pattern：36hrs
Prerequisite: Food Safety
Course Assessment： Final Score=Usual Score*40%+Final Exam Score*60% Usual Score is Determined by attendance rate,homework and class check； Final Exam: Paper.

Textbook： Ai qijun. Food raw material safety control, second edition. Beijing, China light industry press, September 2006.
Course Director：JinFeng Zhong

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课程代码：24322873
课程名称：基因工程与食品安全
学分：2
课程描述 本课程主要介绍基因工程的理论和与食品安全相关的应用。理论部分包括基因工程的分子生物学基础、工具酶、载体、主要技术，目的基因的分离、克隆、表达和产物检测，转基因微生物、植物、动物的构建过程，应用部分主要介绍食品领域的转基因生物，基因工程在食品原料改良、发酵、农副产品加工中的应用，基因工程在食品安全性检测中的应用。
课时安排：理论课时 27+实验课时 13
先修课程：生物化学、食品化学、食品微生物
考核方式：课程论文+平时成绩。 **课程成绩：**平时成绩占 40%，课程论文占 60%。
教材：[1] 食品分子生物学基础，雍克岚 主编，中国轻工业出版社，2008 年第 1 版. [2] 分子生物学实验指导，魏群 主编，高等教育出版社，2007 年第 2 版.
教师：杨吉霞

Unit code：24322873
Unit name：Genetic Engineering and Food Safety
Credits：2
Introduction: This course mainly introduces the theory of genetic engineering and its application of food safety. Theory includes molecular biology of genetic engineering, tool enzyme, carrier, main technology, target gene separation, cloning and expression, and product testing, the process of the construction of transgenic microorganism, plants, and animals. The application part mainly introduces the transgenic microorganism in the field of food, the application of genetic engineering in food raw materials improvement, fermentation, agricultural and sideline products processing, the application of genetic engineering application in the food safety testing.
Teaching Pattern：Theory class, 27 hrs+ practice class, 13 hrs
Prerequisite: Biochemistry, Food chemistry, Food microbiology
Course Assessment：Final Score=Usual Score*40%+ curriculum papers Score*60% Usual Score is Determined by attendance rate, homework, and the completion of experiments； Final Exam: curriculum papers.
] Food Molecular Biology Foundation. [2] Molecular Biology Experiment Guide.
Course Director：Jixia Yang

课程代码：24322858
课程名称：动植物检验检疫学（含实验）
学分：理论 2.0，实验 0.5
课程描述 《动植物检验检疫学》是以探讨动植物及其产品随人的活动而传播动物传染病、寄生虫病和植物危险性病、虫、杂草的现象及其规律，研究其传播机制，并探寻控制、遏制的策略，发展动物传染病、寄生虫病和植物危险性病、虫、杂草的检验检疫技术，设计限制、防止与消除为害的方法等的一门实用性学科。
课时安排：40 学时 (含 13 学时实验)
先修课程：食品微生物学、免疫学基础
考核方式：课程论文 + 平时成绩 + 实验成绩 **课程成绩：**课程论文占考核成绩的 65%，平时成绩占 10%，实验成绩占 25%。平时成绩包括课堂表现、测试（20 分）+课堂考勤（10 分）。
教材：李志红，杨汉春，沈佐锐.《动植物检疫概论》北京；中国农业大学出版社，2004.10 年第 2 版
教师：索化夷

Unit code：24322858
Unit name：Animal and Plant Quarantine
Credits：Theoretical lesson 2.0，Experiment Course 0.5
Introduction Animal and plant quarantine is to prevent the transmission of animal infectious diseases, parasitic diseases and plant disease, insects and weeds in the fields of human interaction (including commodity transport, germplasm exchange and personnel travel). Fishery production and human health, and promote the development of foreign trade, by the statutory specialized agencies, according to the relevant laws and regulations, the application of modern science and technology, in the domestic and international circulation of animals and plants, animal and plant products and other quarantine, Before the circulation and circulation to take a series of legal management, administration and technical management of the integrated management system. "Animal and Plant Inspection and Quarantine" is to explore the animals and plants and their products with the activities of human transmission of infectious diseases, parasitic diseases and plant disease, insects, weeds and their laws, to study its transmission mechanism, and explore Control, containment strategies, the development of animal infectious diseases, parasitic diseases and plant disease, insects, weeds of the inspection and quarantine technology, design restrictions, to prevent and eliminate the harmful methods such as a practical subject.
Teaching Pattern：40 hrs lectures totally (included 13 hrs experiments)
Prerequisite: Food Microbiology, Immunology Foundation
Course Assessment：Final Score=Usual Score*10%+Experiments Score*25%+Course Papers*65%
Textbook：Li Zhihong, Yang Hanchun, Shen Zuorui. Introduction to Animal and Plant Quarantine [M](the second edition), Beijing: China Agricultural University Press, 2004.

Course Director：Huayi Suo

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课程代码：24322864
课程名称：功能性食品学
学分：2 .0
课程描述 本课程主要内容包括：保健（功能）食品相关概念、功能作用成分、保健（功能）食品原料及保健（功能）食品的功能作用，并简单介绍保健（功能）食品评价的基本原理和方法以及保健（功能）食品的法律法规体系。
课时安排： 36 个学时课堂学习
先修课程：有机化学、基础生物化学、食品化学等。
考核方式：考查，课程报告 **课程成绩：**平时成绩 30%、期末考试成绩 70%
教材：《功能性食品学》，周才琼，唐春红主编，北京：化学工业出版社，2015 年
教师：周才琼

Unit code：24322864
Unit name：Functional Food Science
Credits：2
Introduction This course mainly includes: concept related to health (functional) food, functional component, health (functional) food raw materials and ingredients (functional) food functions, and brief introduction of evaluating basic principle and method of the health care (function) food and health (functional) food laws and regulations system.
Teaching Pattern：Theoretical study（36 classes）
Prerequisite:
Course Assessment： Final Score=Usual Score*30%+Final Exam Score*70%； Final Exam: report
Textbook：Functional Food Science
Course Director：Caiqiong Zhou

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课程代码：24322904
课程名称：食品感官分析
学分：2.0
课程描述 本课程主要使学生了解食品感官分析、控制和分析的生理和感觉基础；对食品特定问题选择和应用适当的感官分析方法；理解食品感官分析中的试验设计和统计方法的应用；感官

分析数据与仪器和化学测定的相关性；同时掌握三点测定、描述分析、阈值测定等基本食品感官分析方法，能组织并实施食品感官分析项目。
课时安排：45
先修课程：食品化学、试验设计与统计分析
考核方式：课程论文成绩+实验考核成绩+平时成绩 **课程成绩：**课程论文成绩占考核成绩的 50％，实验成绩占 30％，平时成绩 20%
教材：《食品感官分析》，韩北忠，童华荣主编，中国林业出版社，2009 年第 1 版
教师：王洪伟

Unit code：24322904
Unit name：Food sensory analysis
Credits：2
Introduction This course is a elective course for undergraduates majoring in food science and engineering and food quality and safety offered at the 5th semester for 40 class hour. Food sensory analysis is based on the analysis of food physical and chemical, combined with psychology, physiology and statistics and other knowledge to develop. Sensory analysis of food is used to evoke a scientific measurement method to analysis and interpret the reaction characteristics feel from food with its material sight, smell, taste, touch and hearing. Sensory analysis of food use the objective tool to detect organoleptic properties of food, based on psychology, physiology, physics, chemistry and statistics. With well design, can achieve the accuracy and reproducibility. The food sensory analysis is widely used in food processing, storage, food quality control and other aspects of food quality and safety. Through this course, students can grasp basic methods of sensory analysis of food, organize product sensory analysis project. It will also make students lay on product sensory analysis for statistical analysis combined with the expertise to interpret and analyze the corresponding correct conclusions, which can guide production and make new suggestions or improvements to scientific research.
Teaching Pattern：45
Prerequisite: Food chemistry, experimental design and statistical analysis
Course Assessment： Course Achievement + Experimental Results + Achievements Course papers accounted for 50% of the examination results, experimental results accounted for 30%, usually 20%
Textbook："Food sensory analysis", Han Beizhong, Tong Huarong editor, China Forestry Publishing House, 2009 first edition
Course Director：Wang Hongwei

课程代码：24322907

课程名称：食品工厂设计

学分：2

课程描述：

食品工厂设计涉及食品工艺、工程技术和经济等诸多学科，主要研究食品工厂的工艺设计、公用工程技术、项目技术经济评价方法的综合性科学，本课程主要是使学生了解食品工厂基本建设的程序，掌握可行性研究的基本方法和食品工程设计的原理与技术，培养学生在工程项目遴选、评估、决策、设计、监督和管理等方面的政治素养和专业技术能力。

课时安排：40 学时

先修课程：食品工艺学导论、食品工程原理、食品机械、机械制图等

考核方式：闭卷考试 + 平时成绩。

课程成绩：

总成绩评定：卷面成绩占考核成绩的 60%，平时成绩占 40%。

平时成绩评定：平时成绩包括课堂作业和实习，分别占总成绩的 15%、25%。（1）作业完成情况（15 分）：根据学生平时作业提交次数及完成质量；（2）实践（25 分）：根据学生参观食品工厂的实习情况，结合学生收集资料、工艺设计能力和解决实际问题能力和合作研究能力评判。

期末考试：食品工厂设计课程期末考试主要是考察基本概念的掌握、基本理论的理解、重要工艺设计的运用，同时考察其他如技术经济分析指标理解、环境保护相关问题等。

教材：《食品工厂设计》，李洪军主编，中国农业出版社出版社，2010 年第 2 版

教师：尚永彪

Unit code：24322907

Unit name：Food Plant Design

Credits：2

Introduction：

Food plant design involve food technology, engineering and economics and many other disciplines, main study food factories process design, public engineering, comprehensive scientific methods of project technical and economic evaluation, is compulsory basic course of food science and engineering, offered at the 5th semester for 40 h. The purpose of this course is to enable students to understand basic food plant construction program, to master the principles and technical feasibility study of the basic methods and food engineering, the design of students in the project selection, assessment, decision-making aspects, develop the ability of supervision, management, professional and technical competence.

Teaching Pattern：40hrs

Prerequisite: Introduction to food technology, Principles of food engineering, Food machinery, Mechanical drawing, etc

Course Assessment：

Final Score=Usual Score*40%+Final Exam Score*60%

Usual Score is Determined by attendance rate, Practice and class check；

Final Exam: closed examination

Textbook： HongJun Li. Food factory design, China agricultural press, 2010

Course Director：YongBiao Shang

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课程代码：24322940
课程名称：畜产品加工学
学分：2
课程描述： 《畜产品加工学》是涉及畜牧科学、微生物学、食品化学和食品工程原理诸多学科，主要研究畜牧产品加工原理与工艺技术的综合性应用科学。本课程主要讲授肉制品、乳制品以及蛋制品的基础知识以及加工工艺及加工中常见问题。
课时安排：40 学时
先修课程：食品微生物、食品化学、食品工艺学
考核方式： 考查 **课程成绩：**平时成绩（30％）+实验考核成绩（20％）+期末考核成绩（50％）。
教材:《畜产品加工学》，周光宏主编，张兰威，李洪军，马美湖等副主编，中国农业出版社出版社，2013年2月修订第2版。
教师：李洪军

Unit code：24322940
Unit name： Animal Products Processing
Credits：2
Introduction： Animal Product Processing Science involves science of animal husbandry, microbiology, food chemistry and food engineering. This paper mainly studies the comprehensive applied science of the processing principle and technology of livestock products. This course mainly focuses on the basic knowledge of meat products, dairy products and egg products, as well as the common problems in processing technology and processing.
Teaching Pattern：36hrs
Prerequisite: Food microbiology, food chemistry, food technology
Course Assessment： Final Score=Usual Score*30%+Experiment Scores*20%+Final Exam Score*50% Usual Score is Determined by attendance rate,practice and class check； Final Exam: Paper.
Textbook： Animal product processing science, edited by Guanghong Zhou, Lanwei Zhang, Hongjun Li, Meihu MA, China agricultural press, February 2013
Course Director：HongJun Li

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课程代码：24322877
课程名称：粮油加工工艺学
学分：2.0
课程描述 本课程的教学目的是：使学生了解并掌握有关粮食主食及方便食品加工技术、淀粉生产与变性淀粉制备原理与技术、膨化食品加工技术、植物油提取精炼和加工、植物蛋白加工的加工工艺和操作要点，经过实践教学，使学生能够独立完成相关加工品的制作。
课时安排：40 学时(理论 27 实验实习 13)
先修课程：食品化学、食品机械、食品原料学、食品工艺学
考核方式：课程作业+平时成绩+实验成绩，平时成绩：课堂考勤（50 分）+课堂表现和课堂测试（50 分） **课程成绩：**课程作业占考核成绩的 30%，平时成绩占考核成绩的 30%，实验成绩占考核成绩的 40%
教材：《粮油食品加工工艺学》，陆启玉主编/著，中国轻工业出版社，2014 年第 1 版第 9 次印刷
教师：钟耕

Unit code：24322877
Unit name：Cereal grain and vegetable oil processing
Credits：2.0
Introduction "Cereal grain and vegetable oil processing" is one of the important courses in the processing of food engineering, but also an important course for the quality and safety of food and agriculture. It is a applied science, it is based on botany, chemistry, physics, microbiology, crop cultivation and other disciplines based on a variety of mechanical and chemical unit operation as a means (such as raw material crushing, sorting, drying Dehydration, evaporation and concentration, material transport, extraction, etc.), the processing of grain and oil raw materials and processing, is a highly applied subject.
Teaching Pattern：40 hrs lectures（included 27 hrs lectures and 13 hrs Experimental Practice）
Prerequisite: Food Chemistry, Food Machinery, Food Raw Materials, Food Processing Technology
Course Assessment： Final Score=Course Homework*30% +Usual Score*30%+Experiment Score*50% Usual Score = Attendance Rate*50% + Classroom Performance and Classroom Tests*50%
Textbook：Qiyu Lu. Cereal grain and vegetable oil processing [M](the first edition and the ninth print), China Light Industry Press, 2014
Course Director：Zhong Geng

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课程代码：24322869
课程名称：果蔬加工工艺学
学分：1.5

课程描述 果蔬加工工艺学是阐述果蔬加工保藏原理及原料预处理、果蔬罐藏、果蔬制汁、果蔬干制、果蔬糖制、蔬菜腌制、果蔬速冻、果酒与果醋酿造以及果蔬综合利用及其他加工技术的加工工艺和关键控制点。本课程是在学习食品工艺学基础上，引导从事果蔬加工、生产、管理等工作的技术人员和企业经营者掌握和了解果蔬加工的基础知识、基本理论和技能。
课时安排：27 学时
先修课程：食品化学、食品营养学、食品微生物学、食品工程原理、食品工艺学
考核方式：期末考试或课程论文+ 平时成绩 **课程成绩：**期末考试成绩占 50%-60%，平时成绩分课外作业成绩和考勤情况占 40%-50%。
教材：《果蔬加工工艺学》，董全主编，西南师范大学出版社，2011 年 8 月第 1 版
教师：曾凡坤

Unit code：24322869
Unit name：Processing Technology of Fruits and Vegetables
Credits：1.5
Introduction This course is a professional elective course for food science and engineering, food quality and safety. It is a course that summarizes the basic knowledge and basic technology of fruit and vegetable processing. Fruit and vegetable processing is an important part of the food industry, a wide range, more types of processing products, large output. Fruit and vegetable processing technology is to explain the principles of processing and preservation of fruits and vegetables and raw materials preparation, fruit and vegetable cans, fruit and vegetable juice, fruit and vegetable dry system, fruit and vegetable sugar, pickled vegetables, fruit and vegetable quick-frozen, fruit wine and fruit vinegar brewing and comprehensive utilization of fruits and vegetables and other processing Technology processing technology and key control points. This course is based on the study of food technology, guide the fruit and vegetable processing, production, management and other technical staff and business operators to master and understand the basic knowledge of fruit and vegetable processing, basic theory and skills.
Teaching Pattern：27 hrs lectures
Prerequisite: Food Chemistry, Food Nutrition, Food Microbiology, Food Engineering Principles, Food Processing Technology
Course Assessment： Final Score=Usual Score*(40%-50%) + Final Tests Score or Course Papers*(50%-60%)
Textbook：Dong Quan. Processing Technology of Fruits and Vegetables [M](the first edition). Southwest Normal University Press, 2011(08)
Course Director：Zeng Fankun

课程代码：24322859
课程名称：发酵食品学
学分：2.0
课程描述

本课程主要针对食品质量与安全有生物生化、普通微生物学背景的本科学生。使学生了解和掌握各类发酵食品，包括饮料酒类如啤酒、葡萄酒、黄酒、白酒等，调味品类如酱油、食醋、豆豉、豆瓣酱、豆腐乳、味精等的基本原理和基本技术，熟悉生产过程中的主要设备，并能运用所学理论设计发酵食品生产工艺；了解该学科的发展前沿、热点和问题，使学生牢固掌握酿造方面的基本理论和基础知识，熟悉蒸馏酒、酿造调味品生产的工艺流程，为学生今后的学习及工作实践打下宽厚的基础。
课时安排：36 学时
先修课程：生物化学、微生物学、生物工程原理
考核方式：平时成绩+考试成绩 **课程成绩：**平时成绩占 25-45％，卷面成绩占考核成绩的 55-75％
教材：《发酵食品学》，徐莹 张惟广主编/著，郑州大学出版社，2011 年第 1 版
教师：张惟广

Unit code：24322859
Unit name：Zymotechnology
Credits：2.0
Introduction This course is mainly for the quality and safety of food have biological biochemistry, general microbiology background of undergraduate students. So that students understand and master all kinds of fermented food, including beverages such as beer, wine, rice wine, liquor, condiments such as soy sauce, vinegar, tempeh, bean paste, fermented bean curd, monosodium glutamate and other basic principles and basic techniques, familiar Production process of the main equipment, and can use the theory of the design of fermented food production process; understand the development of the discipline cutting-edge, hot and problems, so that students master the basic theory of brewing and basic knowledge, familiar with distilled wine, brewing condiments Production process, for students in the future study and practice to lay a generous foundation.
Teaching Pattern：36 hrs lectures
Prerequisite: Biochemistry, Microbiology, Bioengineering Principle
Course Assessment：Final Score=Usual Score*(25%-45%) + Final Tests Score*(55%-75%)
Textbook：Xu Ying, Zhang Weiguang. Fermented food science [M](the first edition). Zhengzhou University Press, 2011
Course Director：Zhang Weiguang

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课程代码：24322890
课程名称：软饮料工艺学
学分：2.0
课程描述 软饮料工艺学是根据技术上先进,经济上合理的原则,研究软饮料生产中的原材料、半成品和成品的加工过程的一门应用科学。主要研究软饮料的基础知识、加工工艺以及其生产中常见问题。
课时安排：40 学时(理论 27 实验实习 13)

先修课程：食品生物化学、食品微生物学、食品原料学、食品机械
考核方式：课程论文 + 平时成绩，平时成绩：课堂考勤（50 分）+课堂表现和课堂测试（50 分） **课程成绩：**期末考核占 50%，实验成绩占 30%，平时成绩占 20%
教材：《软饮料工艺学》，蒋和体 主编，西南师范大学出版社，2008 年
教师：蒋和体

Unit code：24322890
Unit name：Processing Technology of Soft Drinks
Credits：2.0
Introduction Soft Beverage Technology is an applied science that studies the processing of raw materials, semi-finished products and finished products in soft drinks production based on technologically advanced and economically rational principles. It is designated elective course of food quality and safety specialty.
Teaching Pattern：40 hrs lectures（included 27 hrs lectures and 13 hrs Experimental Practice）
Prerequisite: Food biochemistry, Food Microbiology, Food Raw Materials, Food Machinery
Course Assessment： Final Score=Usual Score*20%+Final Exam Score*50%+Experiment Score*30% Usual Score = Attendance Rate*50% + Classroom Performance and Classroom Tests*50%; Final Exam: Course papers
Textbook：Jiang Heti. Processing Technology of Soft Drinks [M], Southwest Normal University Press, 2008
Course Director：Jiang Heti

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课程代码：24322840
课程名称：焙烤食品工艺学
学分：1.5
课程描述 焙烤食品工艺学是一门理论与实践性、操作性很强的应用为主的课程，是研究焙烤食生产中原辅料性质、各类产品生产工艺与技术、质量问题分析与解决控制的课程。本课程的教学目的是：使学生了解并掌握有关焙烤食品原辅料的性能和特点，特别是食品添加剂在焙烤食品制作中的作用和安全要求，焙烤食品加工技术，重点是中式传统主食食品、面包、蛋糕、糕点等食品的加工技术和操作要点。
课时安排：31 学时 （含实验 13 学时）
先修课程：
考核方式：1. 本实验课程采用实验中的实际操作技能和写出的实验报告进行综合评定学生的实验成绩。 2. 实验成绩占本门课程总成绩的 50%，每个实验以 100 分制进行打分，登记在实验成绩单上。

教材：《粮油加工及焙烤食品实验指导》
教师：钟耕

Unit code：24322840
Unit name：Baked food technology
Credits：1.5
Introduction: Baked food technology is a theory of course with strong practicality, operational application, which is the study of centaline property in baked food production, various production craft and technology, quality problem analysis and solving control. The purpose of this course: make students understand and master the performance and characteristics of baked food raw materials, especially the roles and safety requirements of food additives in the baked food production, baked food processing technology; the focus is processing technology and operation points of Chinese traditional staple food, bread, cakes, pastries and other food.
Teaching Pattern：31 hrs lectures totally (included 13 hrs experiments)
Prerequisite:
Course Assessment：1. The experimental course using the actual operation of the experiment skills and write the experimental report to conduct a comprehensive assessment of the student's experimental results. 2. The experimental results accounted for 50% of the total score of the course, each experiment to 100 points system for scoring, registered in the experimental report card.
Textbook："Cereals and Oils Processing and Baking Food Experimental Guidance"
Course Director：Geng Zhong

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课程代码：24322867
课程名称：果酒酿造与鉴赏
学分：2
课程描述 通过对各种果酒如葡萄酒、苹果酒、梨酒等的发酵工艺及研究进展的讲解介绍，要求学生通过本课程的学习在掌握果酒发酵的原理及生产工艺的同时了解果酒生产方面的最新进展，熟悉国内外果酒的发展动态，具备果酒的生产和鉴赏的基本知识，并能在此基础上具有初步研制、开发新型果酒的科学研究和实际工作能力；具备文献检索、资料查询能力，能阅读本专业外语书刊。
课时安排：40 学时 （含实验 13 学时）
先修课程：果酒酿造与鉴赏
考核方式：实作考核 **课程成绩**：采用平时考核和期末实作考核，综合评定学生成绩。平时实验占 70%，期末占 30%。
教材：发酵食品综合实验技术自编教材

教师：杜木英

Unit code：24322867
Unit name：Baking food technology experiment
Credits：2
Introduction: It asks students to master principle and production technology of the wine fermentation, understand the latest progress of fruit wine production, be familiar with the dynamic development of fruit wine at home and abroad, and get basic knowledge of production and appreciation of fruit wine through the introduction of fermentation technology and research progress of wine production and appreciation. Then, students get the ability on preliminary research and scientific research and practical work of developing new fruit wine, literature retrieval, information inquiry, and professional foreign language book reading.
Teaching Pattern：40 hrs lectures totally (included 13 hrs experiments)
Prerequisite:
Course Assessment：Practical assessment；Final Score=Usual experiment*70%+Final Exam Score*30%.
Textbook：Fermented food comprehensive experimental technology since the teaching materials
Course Director：Muying Du

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课程代码：24322891
课程名称：膳食调查与食谱设计
学分：1 .5
课程描述 《膳食调查与食谱设计》是在食品营养学课程的后续应用。学生在学习了解食品营养学关于营养素及功能作用、营养素食物来源及不同人群的营养需要前提下，继续学习膳食调查与食谱设计相关内容后运用所学知识开展膳食调查并能进行膳食营养评价，能够为不同人群的要求设计相应的食谱。本课程是食品营养学具体应用重要的延伸，有利于培养学生分析问题、解决问题的能力。
课时安排： 18 学时理论+13 学时实验
先修课程：食品化学、食品微生物学
考核方式：考查。报告 **课程成绩**：平时成绩 25%、期末考试成绩 75%
教材：
教师：周才琼

Unit code：24322891
Unit name：Dietary Survey and Recipe Design
Credits：1.5

Introduction

Dietary Research and Diet Design is a follow-up application to the food nutrition curriculum.

Students continue to study the dietary investigation and recipe design and adopt the knowledge to carry out the dietary investigation and to evaluate dietary nutrition to design the corresponding recipes for the requirements of different people after understanding about the nutrients and fundction. This course is an important extension of the specific application of food nutrition, which is conducive to cultivating students' ability to analyze and solve problems.

Teaching Pattern：Theoretical Study（18）Experiment Study（13）

Prerequisite: Food chemistry, Food Microbiology

Course Assessment：

Final Score=Usual Score*25%+Final Exam Score*75%；

Final Exam: report

Textbook：

Course Director：Caiqiong Zhou

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课程代码：24322899

课程名称：食品包装学

学分：1.5

课程描述

本课程主要讲授食品包装材料和食品包装原理与方法；食品包装专用技术及各类食品包装等食品包装工程学知识；食品包装设计学知识；食品品牌包装与营销知识。

通过学习，学生能分析了解市场对食品包装的需求，能发现食品的包装存在的问题，能判断分析其中原因并对基本问题能予以解决，并能设计出创新的食品包装。

课时安排：27 学时

先修课程：

考核方式：考查。

课程成绩：平时成绩+课程论文；平时成绩占 40%+课程论文占 60%。

教材：《食品包装学》，章建浩主编，中国农业出版社，2011 年第 3 版

教师：张　敏

Unit code：24322899

Unit name：Food Packaging

Credits：1.5

Introduction:

This course mainly ccovers food packaging materials and food packaging principles and methods, food packaging technology and food packaging engineering knowledge, knowledge of food packaging design, food brand packaging and marketing knowledge.

Through learning, students can analyze and understand the market demand for food packaging, can find problems of food packaging, can determine and analyze the reasons to solve basic problems, and design the innovation food packaging.

Teaching Pattern：27 hrs lectures totally
Prerequisite:
Course Assessment：test；Final Score=Usual Score*40%+Course papers Score*60%.
Textbook："Food Packaging", Zhang Jianhao editor, China Agricultural Publishing House, 2011 third edition
Course Director：Min Zhang

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课程代码：24322938
课程名称：现代食品分离技术
学分：2
课程描述 《现代食品分离技术》课程是伴随着高技术产业的出现和分离技术的发展，特别是生物工程、生物技术、材料科学及仪器设备开发等的发展而逐渐发展起来的更先进、更优化的分离分析技术，本课程主要讲授和离子交换技术、固相萃取技术、亲和层析技术、超声波萃取技术、微波萃取技术等现代分离技术的基本概念、基本原理和应用现状和发展趋势。
课时安排：36 课时
先修课程：分析化学、食品分析与检验、食品分析
考核方式：课程论文（60%） + 平时成绩（40%） 平时成绩：课堂表现（50 分）+作业完成情况（30 分）+课堂考勤（20 分）
教材：《现代食品分离技术》， 张德海主编，中国农业大学出版社.2007年
教师：张宇昊

Unit code：24322938
Unit name： Modern Isolation Technology for food
Credits：2
Introduction This course is accompanied by the development of high-tech industry and the emergence of separation technology, especially the development of biological engineering, biotechnology, materials science and equipment development.It gradually developed a more advanced, more optimal separation analysis techniques and it’s different from the traditional separation technology, which means it’s a course based on analytical chemistry, food analysis and other professional development courses.It will effectively improve students' professional qualities. The course systematically introduces the basic theory and application of various separation techniques in food science and engineering. It particularly emphasis on the application of new separation technology in the food industry. This course can make students understand today's most advanced separation and analysis techniques, master the theory and applications of various separation techniques, and enrich their professional knowledge through reading relevant literature. With the use of modern analytical techniques can solve practical problems and promote their own creative thinking and play.
Teaching Pattern：36 hours

Prerequisite: Analytical Chemistry, Food Analysis and Testing, Food Analysis
Course Assessment：Course Papers (60%) + Normal Achievements (40%) Normal performance: classroom performance (50 points) + job completion (30 points) + classroom attendance (20 points)
Textbook："Modern Food Separation Technology", edited by Zhang Dehai, China Agricultural University Press
Course Director：Yuhao Zhang

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课程代码：24322910
课程名称：食品机械与设备
学分：2
课程描述 食品机械与设备是食品质量与安全专业的选修专业课之一，主要讲授各类食品加工机械与设备的原理，结构和性能，参数的确定与选择，有重点地介绍典型食品厂生产线的配套，使学生掌握食品加工机械与设备的使用、维护保养和选型的基本技能。
课时安排：40 课时（包含 13 课时实验课）
先修课程：机械制图、食品工程原理
考核方式：闭卷考试（60%） + 平时成绩（40%） 平时成绩：课堂表现（20 分）+实践教学（20 分）
教材：《食品机械与设备》，马海乐主编//著，中国农业出版社，2011年第2版
教师：

Unit code：24322910
Unit name：Food Machinery and Equipment
Credits：2
Introduction: Food Machinery and Equipment is one of elective courses for major of food quality and safety, mainly cover principle, structure and performance, parameters determination and selection of processing machinery and equipment of various food, with emphasis to introduce the typical food factory production lines supporting, which enable students to master the use of food processing machinery and equipment, maintenance and selection of basic skills.
Teaching Pattern：40 hours (including 13 hours of experimental lessons)
Prerequisite: Mechanical drawing, food engineering principles
Course Assessment：Closed book examination (60%) + usual results (40%) Normal performance: classroom performance (20 points) + practice teaching (20 points)
Textbook："Food machinery and equipment", Ma Haile editor / /, China Agricultural Publishing House, 2011 second edition
Course Director

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课程代码：24322872
课程名称：机械制图
学分：2
课程描述 机械制图是一门实践性较强的技术基础课，其主要目的是培养学生正确运用正投影法来分析、表述工程问题、绘制和阅读工程图样的能力和空间想象能力。
课时安排：40 课时（包含 13 个实验课时）
先修课程：无
考核方式：闭卷考试（60%）+平时成绩（40%） 平时成绩： 课堂考勤（10 分）+实验课绘图完成情况（30 分）
教材：《现代工程制图》，梁会珍主编，机械工业出版社，2013年第1版
教师：吴习宇

Unit code：24322872
Unit name：Mechanical Drafting
Credits：2
Introduction: Mechanical drawing is a practical stronger technology basic course. Its main purpose is to train students' correct use of orthogonal projection method to analyze and describe engineering problems, drawing and reading of engineering drawings and spatial ability.
Teaching Pattern：40 hours (including 13 hours of experimental lessons)
Prerequisite：NO
Course Assessment：Closed book examination (60%) + usual results (40) Normal grade: Class attendance (10 points) + Experimental class drawing completion (30 minutes)
Textbook："Modern Engineering Drawing", edited by Liang Huizhen, Mechanical Industry Press, 2013 First Edition
Course Director：Xiyu Wu

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课程代码：24322956
课程名称：机械设计基础
学分：2
课程描述 机械设计基础是一门介绍常用机械和通用零件的基础知识及基本设计方法的技术基础课。教学内容着重基本知识、基本理论和基本方法，以及有关的设计技能的基本训练。
课时安排：40 课时（包含 13 个实验课时）
先修课程：机械制图
考核方式：课堂测试 总成绩评定：期末考试 60%，实验成绩 30%，平时成绩 10%。

平时成绩：作业完成情况（5 分）+课堂表现和考勤（5 分）
教材：《机械设计基础杨》杨可桢，程光蕴著，高等教育出版社，2013 第六版
教师：

Unit code：24322956
Unit name：The basics of machinery design
Credits：2
Introduction: The basis of mechanical design is a basic knowledge of common machinery, common parts and basic design methods. The teaching content focuses on basic knowledge, basic theories and basic methods, as well as basic training of relevant design skills.
Teaching Pattern：40 hours (including 13 hours of experimental lessons)
Prerequisite：Mechanical Drawing
Course Assessment：Classroom test Total score assessment: 60% of the final exam, 30% of the experimental results, usually 10% of the results. Normal performance: completion of the job (5 points) + classroom performance and attendance (5 points)
Textbook："Mechanical design basis Yang" Yang Kezhen, Cheng Guangyun, Higher Education Press, 2013 sixth edition
Course Director：

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课程代码：24322911
课程名称：食品加工与流通安全控制
学分：2
课程描述： 主要介绍七类食品（粮食制品、果蔬制品、肉制品、乳制品、蛋制品、水产品和饮料）的的原料卫生标准、加工场所要求、加工和物流中的安全生产要点及控制措施。通过本课程学习，培养学生熟练掌握食品安全与质量控制的基本原理和方法，使学生掌握各类食品加工和物流的安全控制基本知识，熟悉食品加工的安全生产。
课时安排：36 理论学时
先修课程：食品安全
考核方式：考察。期末采用课程论文+平时作业。 **课程成绩**： 总成绩评定：课程总评成绩由期末笔试成绩占 60%，平时成绩占 40%构成 平时成绩评定： （1）课堂表现（30 分）； （2）作业完成情况（30 分）； （3）课堂考勤（40 分）。 期末考察：课堂所讲的基本概念及原理，考察分析原理基本的应用。

教材：

[1] 董全、刘承初 主编. 食品加工和物流安全控制. 北京，中国质检出版社和中国标准出版社出版 2013 年。

[2] 夏延斌、钱和主编.食品加工中的安全控制（第二版），北京，中国轻工业出版社出版 2008

[3] 许牡丹，毛跟年.食品安全性与分析检测.北京：化学工业出版社，2003

[4] 朱珠.食品安全与卫生检测.北京:高等教育出版社,2004

[5] 杨永华.食品安全管理体系 HACCP 推行实务.深圳:海天出版社，2002

[6] 黄毅.食品质量安全市场准入指南，北京；中国轻工业出版社，2005

[7] 夏延斌、钱和主编. 食品加工中的安全控制. 北京: 中国轻工业出版社, 2007

教师：钟金锋

Unit code：24322911

Unit name：Safety Control in Food Processing and Circulation

Credits：2

Introduction：

It mainly introduces health standards of the raw materials, processing site requirements, key points of safety in production and control measures in processing and logistics for seven kinds of food (food products, fruit and vegetable products, meat products, dairy products, egg products, aquatic products and drinks). Through learning this course, students can master the basic principle and methods of food safety and quality control, basic knowledge safety control of processing and logistics for various food, and be familiar with the safety of the food processing production.

Teaching Pattern：36hrs

Prerequisite: Food Safety

Course Assessment：

Final Score=Usual Score*40%+Final Exam Score*60%

Usual Score is Determined by attendance rate, homework and class check；

Final Exam:Paper

Textbook：

[1] Dong Quan, Liu Chengchu. Food processing and logistics security control. Beijing, China quality inspection press and China standard press published 2013.

[2] Yan-bin Xia,Qian He. The safety control in food processing (second edition), Beijing, China light industry press, 2008

[3] Shiy-liang Shyu, Mao Gennian. Food security and the analysis of testing. Beijing: chemical industry press, 2003

[4] Juju. Food safety and hygiene inspection. Beijing: higher education press, 2004

[5] Yang Yonghua. HACCP food safety management system for practice. Shenzhen: Haitian press, 2002

[6]Huang-yi. Food quality and safety market access guide, Beijing; China light industry press, 2005

[7] Yan-binXia,Qian-he. The safety control in food processing. Beijing: China light industry press, 2007

Course Director：JinFeng Zhong

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课程代码：24322903
课程名称：食品风险分析
学分：1.5
课程描述 课程围绕食品风险评估的基本原理，系统讲述食品安全分析框架，危害识别、危害特性、暴露评估、风险描述等风险分析的基本原理，并结合实际评估案例，对风险评估的方法进行解析。
课时安排：27 课时
先修课程：食品毒理学，食品微生物学，食品添加剂，食品安全学，食品安全保藏学，食品标准与法规，食品质量管理。
考核方式： 闭卷考试（60%）+平时成绩（40%） 平时成绩：课堂考勤 10%+作业或调查 30%
教材：《食品安全风险评估》，石阶平主编，陈君石主审，中国农业大学出版社，2010年7月第1版
教师：明建

Unit code：24322903
Unit name：Food Risk Analysis
Credits：1.5
Introduction: The course introduces basic principle of risk analysis including food safety analysis framework, hazard identification, hazard characteristics, exposure assessment and risk description around the basic principle of food risk assessment system, and analyzes risk assessment approach combining with the actual assessment case.
Teaching Pattern：27 hours
Prerequisite：Food toxicology, food microbiology, food additives, food safety, food safety preservation, food standards and regulations, food quality management.
Course Assessment：Closed book examination (60%) + usual results (40%) Normal grades: Class attendance 10% + homework or survey 30%
Textbook："Food Safety Risk Assessment", edited by Shi Jieping, Chen Junshi, China Agricultural University Press, July 2010 First Edition
Course Director： Jiang Min

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课程代码：24322924
课程名称：食品物流学
学分：2
课程描述

掌握有关食品物流基本流程及食品物流一般技能，对现代食品物流技术有一个较为全面的了解，使学生的知识体系适应现代食品制造业发展的需要，为食品生产和流通提出新的建议或改进措施。
课时安排：36
先修课程：企业管理，食品加工
考核方式：期末考试+平时成绩。 **课程成绩：**平时成绩占 40%，期末开卷考试成绩占 60%。
教材：《食品物流学》，陈锦权主编/著，轻工业出版社，2015 年第 1 版。
教师：

Unit code：24322924
Unit name：Food Logistics
Credits：2
Introduction: It makes student master food logistics basic flow and logistics general skill, has a more comprehensive understanding on the modern food logistics technology, and makes the students' knowledge system adapt to needs of the development of modern food manufacturing to put forward new proposals for food production and circulation or improvement measures.
Teaching Pattern：36
Prerequisite: Enterprise management, food processing
Course Assessment： Final Score=Usual Score*40%+ Final Exam Score*60% Usual Score is Determined by attendance rate, homework；Final Exam: Open book examination
Textbook：Food Logistics
Course Director：

课程代码：24322931
课程名称：食品质量与安全专业英语
学分：1.5
课程描述 让学生掌握专业英文文献的检索方法、阅读方法和技巧，使学生能够快速准确地理解专业文献，培养学生初步的英文学术论文写作能力，特别注重论文题目、摘要的写作，同时也引导学生参与国际性的学术交流，例如听全英文的专业课程、听英文的学术报告、做 poster 和口头学术报告。
课时安排： 27 学时
先修课程：食品化学、食品微生物、食品营养学、食品加工工艺学
考核方式：课程论文+平时成绩。 **课程成绩：**平时成绩（50%）+课程论文(50%)。
教材：《食品科学与工程英语》，张兰威 李佳新 主编，哈尔滨工程大学出版社，2007 年第 2 版.
教师：杨吉霞

Unit code：24322931
Unit name：Professional English for Food Safety and Quality Major
Credits：1.5
Introduction: Through the study, students master the professional English literature retrieval methods, reading methods and skills, so that they could rapidly and accurately understand the professional literature, get English academic paper writing ability, with a special focus on paper topics, writing, and participate in international academic exchanges, such as English professional course, English academic report, and giving poster and oral academic report.
Teaching Pattern： 27 hrs lectures totally
Prerequisite: Food chemistry, food microbiology, food nutrition, food processing technology
Course Assessment：Final Score=Usual Score*50%+ course paper Score*50%； Usual Score is Determined by attendance rate, homework, and the performance of classroom； Final Exam: course paper.
Textbook：Professional English for Food Safety and Quality Major
Course Director：Jixia Yang

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课程代码：24322916
课程名称：食品美学
学分：1.5
课程描述 食品美学的课程任务是使学生了解我国食品及食品文化的渊源，食品与士大夫文人的关系，食品美学的形成及其相关所需的社会、自然条件。
课时安排： 27
先修课程：无
考核方式：课程论文+平时成绩。 **课程成绩：**平时成绩占 30%，课程论文占 70%。
教材：无
教师：

Unit code：24322916
Unit name：Food Aesthetics
Credits：1.5
Introduction: Food aesthetic mission is to make students understand the origin and development of China's food and food culture, the relationship between food and the Confucian scholar, social and natural conditions needed for formation of food aesthetics.
Teaching Pattern： 27

Prerequisite: NO
Course Assessment：Final Score=Usual Score*30%+ Final Exam Score *70% Usual Score is Determined by homework and the completion of experiments；Final Exam: write 800-1000 words of course paper
Textbook：NO
Course Director：

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课程代码：24322921
课程名称：食品文化概论
学分：1
课程描述 本课程是食品质量与安全专业和食品科学与工程专业的专业发展课程选修课。课程的任务是让学生了解食品文化的本质和特征、食品文化史、食品文化的产生、食品文化的功能影响和传播、食品文化的艺术、食品文化与经济、食品文化与民俗学、东西方食品文化差异、食品文化的种类、食品文化与认知科学、食品文化的作品和体验等有关知识，同时介绍生活中的一些养生习惯，对学生今后的学习及生活实践有一定的指导作用。
课时安排：18 学时
先修课程：食品原料学，果蔬加工工艺学，肉类加工工艺学，培烤食品加工工艺学，软饮料工艺学，果酒酿造及鉴赏，食品美学，食品添加剂，食品标准与法规，食品质量管理。
考核方式：闭卷考试+平时成绩。 **课程成绩**：平时考核成绩(40%) + 期末笔试 (60%)。
教材：庞杰主编. 食品文化概论. 北京：中国农业大学出版社，2009 年 12 月
教师： 明建

Unit code：24322921
Unit name：Food Culture Introduction
Credits：1
Introduction: This course is an elective course for major of food quality and safety and major of food science and engineering. The task of the course is to let students understand the essence and characteristics of food culture, food culture history, food culture production, food culture influence and spread, the art of food culture, food culture and the economy, culture and folklore, the difference of eastern and western food culture, food culture catrgory, food culture and cognitive science, works and the experience of food culture. Meanwhile, it introduces It also introduces some health habits in life, which gives some guidance for students' future study and life practice.
Teaching Pattern：18
Prerequisite: Raw materials of food, fruit and vegetable processing, meat processing, baking food processing technology, technology of soft drinks and food, wine appreciation, aesthetics, food additives, food standards and regulations, food quality management

Course Assessment：Final Score=Usual Score*40%+Final Exam Score*60%； Usual Score is Determined by attendance rate and homework；Final Exam: closed book exam
Textbook：Food Culture Introduction
Course Director：Jian Ming

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课程代码：24322852
课程名称：茶艺
学分：1.5
课程描述 学习茶艺应该掌握的基础知识、国内外茶艺发展历史、茶艺表演礼仪、茶艺美学、茶艺表演中环境布置、茶艺表演的创作与评鉴、国内外茶艺表演欣赏及解说词欣赏等，并对不同茶类茶艺表演流程及解说词设计进行了点评。
课时安排：理论 18 学时 ＋ 实践 13 学时
先修课程：茶叶生物化学、茶叶加工学、茶叶审评与鉴赏
考核方式：茶艺演示 ＋ 平时成绩 **课程成绩**：平时考核成绩(40%) +茶艺演示(60%)。
教材：无
教师：曾亮

Unit code：24322852
Unit name：Tea Art
Credits：**1.**5
Introduction: It lets students get all of basic knowledge, tea art history at home and abroad, tea ceremony etiquette, tea art aesthetics, environmental layout in case of tea art performance, creation and evaluation in case of tea art performance, appreciation and commentary for tea art performance at home and abroad, which students shall know. It also gives comments on different tea tea art performance process and commentary.
Teaching Pattern：Theory class, 18 + practice class,13
Prerequisite: Tea biochemistry, tea processing, tea review and appreciation
Course Assessment：Final Score=Usual Score*40%+ tea ceremony Score*60%； Usual Score is Determined by attendance rate and homework；Final Exam: tea ceremony
Textbook：NO
Course Director：Liang Zeng

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课程代码：24322866
课程名称：国际贸易实务
学分：2
课程描述

它涉及国际贸易基本理论与政策，国际贸易法律与惯例、国际金融结算、国际运输与保险、国际贸易谈判及合同签订等学科的基本原则与基本知识的运用。
课时安排：36 学时
先修课程：市场营销学
考核方式：课程论文+平时成绩。 **课程成绩：**平时成绩占 40%，课程论文占 60%。
教材：《国际贸易实务》，黎孝先、石玉川主编，对外经济贸易大学出版社，2008.10
教师：

Unit code：24322866
Unit name：International Trade Practice
Credits：2
Introduction: It involves the basic theory and policy of international trade, basic principles of international trade law and practice, international finance and settlement, international transport and insurance, international trade negotiations and contract signing.
Teaching Pattern：36
Prerequisite: Marketing
Course Assessment：Final Score=Usual Score*40%+ Final Exam Score *60% Usual Score is Determined by attendance rate, homework, Staged testing and the completion of experiments；Final Exam: curriculum papers
Textbook：International Trade Practice
Course Director：

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课程代码：24322897
课程名称：食品安全社会调查
学分：1
课程描述 深入社会进行实地调查研究，对我国食品的质量安全状况及存在问题进行分析评价的实践性课程。
课时安排：实验课时 27 学时
先修课程：食品化学、食品分析、食品质量管理学、食品卫生与检验、食品标准与法规
考核方式：调查方案设计+调查过程+调查结果分析和报告陈述。 **课程成绩：**调查方案设计(30%) + 调查过程(40%)+调查结果分析和报告陈述(30%)。
教材：
教师：杨吉霞

Unit code：24322897
Unit name：Food Safety Social Survey
Credits：1

Introduction: It carries out the field investigation and research to analyze and evaluate the quality and safety of our food as the practical course.
Teaching Pattern： practice class, 27 hrs lectures totally
Prerequisite: Food Chemistry, Food Analysis, Food Quality Management, Food Hygiene and Inspection, Food Standards and Regulations
Course Assessment： Final Score= Survey plan design (30%) + investigation process (40%) + findings analysis and report statement (30%)。
Textbook：
Course Director： Jixia Yang

（1）

课程代码：24312949
课程名称：食品化学实验
学分：1
课程描述 掌握食品基本物理化学指标的测定，比如，食品中水分、油脂的过氧化值的测定；了解常见食品中的化学反应的影响因素，如，氨基酸含量对美拉德反应的影响、热处理对维生素 Vc 的影响以及果胶凝胶化实验。
课时安排：27
先修课程：《有机化学》、《基础生物化学》、《食品化学》等
考核方式：预习报告及平时表现、实际操作分析技能和实验报告 **课程成绩：**平时表现 20%+实验操作考核 30% (包括平时实验中的动手能力及期末实验操作考核)，+实验报告 50%
教材：《食品化学实验原理与技术》
教师：张甫生

Unit code：24312949
Unit name：Food chemistry experiment
Credits：1
Introduction 《Food Chemistry Experiment》 is a professional basic experiment course after the course of 《Food Chemistry》. It is a compulsory course for students majoring in food science and engineering, food quality and safety. This course is mainly based on practical teaching. According to the task of the course, the experiment is divided into two levels: basic experiment and comprehensive design experiment. Basic experiment, the goal and task of experiment are given, and gives experiment procedure, let students according to the route, to verify the theoretical knowledge learned; comprehensive design experiment, purpose and task of experiment are given, but do not give the experimental route, let students design experimental procedures, and in accordance with the course and steps designed to operate. Through this experiment course, train students experiment operation ability, analyze the problem and solve the problem ability synthetically, develop the serious and realistic scientific attitude and rigorous work style.
Teaching Pattern：27

Prerequisite: "Organic chemistry", "basic biochemistry", "food chemistry" and so on
Course Assessment：Preview reports and performance, actual analysis skills and experimental reports Usually 20% performance + 30% of the experimental operation assessment (including the usual hands of the experimental ability and end of the experimental operation assessment), + experimental report 50%
Textbook："Principles and Techniques of Food Chemistry Experiment"
Course Director：Zhang Fusheng

（2）

课程代码：24312770
课程名称：食品微生物学实验
学分：1
课程描述 能熟练进行微生物的基本技能的操作，食品微生物学是一门技能性要求很强的课程，要求学生熟练掌握微生物学的基本操作技能，如显微镜的使用技术、染色制片技术、形态观察方法（细菌、酵母菌、霉菌的形态观察方法）、培养基制备技术、高压灭菌技术、干热灭菌技术、转种接种技术、划线分离技术以及食品中菌落总数的测定技术、微生物的大小测定等技术等。
课时安排：27
先修课程：有机化学 生物化学
考核方式：平时实验、实验报告成绩 **课程成绩**：平时实验 30%+实验报告成绩 70%。
教材：《食品微生物学实验原理与技术》
教师：侯宏晓

Unit code：24312770
Unit name：Food Microbiology Experiment
Credits：1
Introduction Food Microbiology Experiment is the independent experimental course after studying Food Microbiology, which is the proof of theoretical teaching and has a strong practicality. According to the requirements of the course, the course content is divided into three parts: basic experiment, comprehensive design experiment and innovation experiment. The first two levels of experiment, students follow the experiment instruction, familiar with experimental principles, experimental methods and operation techniques. On the third level, students will design the experiment plan and complete the experiment content independently. Through learning the operation of the experimental course, students are trained to master the basic operation skills of microbiology, independent design experiment scheme and accurate analysis of experimental results, comprehensive use of the knowledge to solve the problems in food production, grasp abilities to think, analyze, solve problems independently and evaluate others' academic views. At the same time, students form habits to be realistic, serious and serious scientific style and good experimental ability, to lay a good foundation for future work.

Teaching Pattern：27
Prerequisite: Organic chemistry，Biochemistry
Course Assessment： Usually experimental, experimental report results Usually 30% of the experiment + 70% of the experimental report.
Textbook："Microbiological Experiment Principle and Technology"
Course Director：Hou Hongxiao

（3）

课程代码：24312820
课程名称：食品工艺学实验
学分：1
课程描述 懂得如何根据食品的干制原理、腌制原理、罐藏原理、冷藏原理运用于食品加工过程中，对各类食品原料进行加工、保藏，包括干制食品、罐头食品、果酱、风味金针菇的制作保藏等。
课时安排：27
先修课程：食品工艺学
考核方式：平时实验、实验报告成绩 **课程成绩：**时成绩 40%+实验报告成绩 40%+实验考核成绩 20%。
教材：《食品工艺学实验》
教师：张玉

Unit code：24312820
Unit name：Food Technology Experiment
Credits：1
Introduction: It knows how to apply food dried principle, curing principle, jar hidden principle, refrigeration principle to the food processing process, to conduct processing, preservation for various food raw materials including production and preservation of dried food, canned food, jam, needle mushroom flavor, etc.
Teaching Pattern：27
Prerequisite: Food Technology
Course Assessment： Usually experimental, experimental report results 40% of the results + 40% of the experimental report + 20% of the experimental results.
Textbook："Food Technology Experiment"
Course Director：Zhang Yu

（4）

课程代码：24312815
课程名称：食品毒理学实验
学分：1.0

课程描述 掌握实验动物的一般操作方法，如：大、小鼠的性别判定，保定，灌胃等毒理学常用技术；掌握急性毒性实验设计，操作方法，结果判定。能较熟练地计算出 LD_{50}；掌握染色体、微核标本分析技术，能对精子畸变进行判定。
课时安排：实验 18 学时
先修课程：基础生物化学、食品卫生原理、人体生理学
课程成绩：成绩由实验报告结合实际情况综合评判
教材：《食品毒理学试验》自编
教师：索化夷

Unit code：24312815
Unit name：Food Toxicology Experiment
Credits：1.0
Introduction This course is a branch of toxicology, is an important basic theory course, but also a comprehensive practice class. The purpose of teaching is to enable food quality and safety students to master the basic theory, basic knowledge and basic experimental skills of food toxicology so that students can carry out basic toxicology safety evaluation after graduation. Teaching requires students to master the basic content of theoretical courses, but also to master the basic principles of experimental courses and technical operations. At the same time in the experimental teaching to train students to independently solve problems and solve problems.
Teaching Pattern：18 hrs lectures totally
Prerequisite: Basic biochemistry, food hygiene principles, human physiology
Course Assessment：Results from the experimental report combined with the actual situation of comprehensive evaluation
Textbook：Food Toxicology Experiment self
Course Director：Huayi Suo

（5）

课程代码：24312824
课程名称：食品理化分析(含仪器分析)实验
学分： 1.5
课程描述 课程的主要内容是介绍食品中营养成分、食品添加剂和有毒有害物质的分析检验原理与技术，实验涉及各种消化实验，食品中蛋白质、钙、铅、亚硝酸盐和维生素 B2 的测定，并且学会使用比色仪、液相色谱、气相色谱、质构仪、流变仪。
课时安排： 40
先修课程：无
考核方式：实验技能考核 **课程成绩：**平时成绩（30%）+实验技能考核（30%）+实验报告（40%）
教材： 无
教师：郑炯、张玉

Unit code：24312824
Unit name：Food And Chemical Analysis (including instrumental analysis) Experiment
Credits：1.5
Introduction The main content of the course is to introduce the analysis testing principle and technology of food nutrition, food additives and poisonous and harmful substances. The experiment involves various digestion experiments, the determination of protein, calcium, lead, nitrite and vitamin B2 in food, and learns to use color meter, liquid chromatography, gas chromatography and mass structure and rheometer.
Teaching Pattern：40
Prerequisite:
Course Assessment：Final Score=Usual Score*30%+ Experimental skills assessment*30%+Lab report*40%
Textbook:
Course Director：Jiong Zheng, Yu Zhang

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课程代码：24322870
课程名称：果蔬加工工艺实验
学分：1.0
课程描述 通过实验，要求学生掌握制作鲜切果蔬、果蔬罐头、果蔬糖制品、蔬菜腌制品和焙烤果蔬制品的加工方法，学会使用果蔬加工的常用仪器、设备。
课时安排：27 学时
先修课程：果蔬加工工艺学
考核方式：平时成绩 + 实验技能考核 + 实验报告 **课程成绩**：平时实验占总成绩权重的 30%，实验技能考核占总成绩权重的 40%，实验报告占总成绩权重的 30%。
教材：《果蔬加工工艺学实验》
教师：张玉

Unit code：24322870
Unit name：Processing Technology of Fruits and Vegetables Experiment
Credits：1.0
Introduction Processing Technology of Fruits and Vegetables Experiment is an important part of the fruit and vegetable processing technology course. Through the experimental practice, verify and deepen the understanding of the basic principles of fruit and vegetable processing, familiar with

the basic knowledge of fruit and vegetable processing, master the quality of fruit and vegetable processing, fruit and vegetable processing basic skills and basic methods of operation. Through the experiment, students are required to master the production of fresh cut fruits and vegetables, canned fruit and vegetable, fruit and vegetable sugar products, vegetables, pickled products and baked fruit and vegetable products processing methods, learn to use fruit and vegetable processing equipment, equipment.
Teaching Pattern：27 hrs lectures
Prerequisite: Processing Technology of Fruits and Vegetables
Course Assessment：Final Score=Usual Score*30% + Experimental Skills Assessment *40% + Experimental Reports*30%
Textbook：Processing Technology of Fruits and Vegetables Experiment
Course Director：Zhang Yu

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课程代码：24322871
课程名称：果蔬贮藏加工综合性实验
学分：1
课程描述 主要介绍果蔬采后的加工及贮藏原理、技术和设施、商品化处理技术等各方面的问题，内容包括果蔬加工方式、加工产品品质的化学构成、果蔬贮藏生理、果蔬贮藏方式、果蔬商品化处理等。
课时安排：27 学时
先修课程：
考核方式：考查。 **课程成绩**：本课程的评分采用平时实验报告成绩、学期实验结束后实验考核成绩，综合评定。平时实验占 70%，实验考核占 30%。
教材：
教师：张 玉

Unit code：24322871
Unit name：Comprehensive Experiment on Storage and Processing of Fruits and Vegetables
Credits：1
Introduction: It mainly introduces the processing and storage principle, technology and facilities, processing technology and so on for postharvest fruits and vegetables, which include various fruit and vegetable processing mode, chemical composition of processing product, fruit and vegetable storage physiology, fruit and vegetable storage method, commercialization of fruit and vegetable processing, etc.
Teaching Pattern：27 hrs lectures totally
Prerequisite:

Course Assessment：test；Final Score=Usual Score*70%+Experimental assessment Score*60%.
Textbook：
Course Director：Yu Zhang

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课程代码：24322861
课程名称：发酵食品综合实验
学分：1
课程描述 实验涉及市售酸奶中乳酸菌的分离及酸奶制作、小型发酵罐应用和酵母菌发酵、传统水豆豉菌种的分离及豆豉制作、果酒的发酵及果酒鉴赏、腐乳的加工及质量控制、啤酒的酿造及品评、豆酱加工及质量控制、风味泡菜的加工、红曲米酒的酿制、白酒酿造、白酒的品评等。
课时安排：27 学时
先修课程：果酒酿造与鉴赏、啤酒工艺学、发酵食品工艺学、食品微生物学
考核方式：考查。 **课程成绩**：采用平时考核和期末实作考核，综合评定学生成绩。平时实验占比 60%，期末占 30%，参观实践占 10%。
教材：
教师：杜木英

Unit code：24322861
Unit name：Comprehensive experiment of fermented food
Credits：1
Introduction: Experiments involving the separation of lactic acid bacteria in yogurt sold and yogurt production, application of small fermentation tanks, and yeast fermentation, separation of traditional natto strains and production of lobster sauce, wine fermentation and wine appreciation, processing and quality control of fermented bean curd, beer brewing and tasting, bean paste processing and quality control, flavor pickles processing, red kojic rice wine brewing, liquor brewing, liquor appreciation etc.
Teaching Pattern：27 hrs lectures totally
Prerequisite:
Course Assessment：test；Final Score=Usual experiment Score*60%+Final Exam +Visit practice Score*10%.
Textbook：Wine brewing and appreciation, beer technology, fermented food technology, food microbiology
Course Director：Muying Du