

课程教学大纲

课程基本信息 (Course Information)					
课程代码 (Course Code)	FS329	*学时 (Credit Hours)	32	*学分 (Credits)	2
*课程名称 (Course Name)	(中文) 食品安全风险评估				
	(英文) Risk Assessment on Food Safety				
课程性质 (Course Type)	专业选修课 Major Selective Course				
授课对象 (Target Audience)	食品科学与工程相关专业本科生 Food science and technology and related majors				
授课语言 (Language of Instruction)	中英双语 Bilingual Chinese and English				
*开课院系 (School)	农业与生物学院 School of Agriculture and Biology				
先修课程 (Prerequisite)	微生物学、化学、食品毒理学 Microbiology, Chemistry, food toxicology				
授课教师 (Instructor)	施春雷、王大鹏 Drs. Chunlei Shi and Dapeng Wang	课程网址 (Course Webpage)			
*课程简介 (Description)	<p>此课程是食品科学与工程及相关专业的专业选修课。 “食品安全风险评估”是以分析评估食品和食品添加剂中生物性、化学性和物理性危害对人体健康和食品贸易可能造成的不良影响为主要内容的学科。通过本课程的学习，使学生能理性地看待各种食品安全危害因子，掌握危害因子与食品之间的关系，学会采取相应的预防和补救措施来控制食品安全事故的发生，或者将事故的影响降到最低，以胜任今后在政府监管部门、食品企业的管理和研发工作。</p>				
*课程简介 (Description)	<p>This course is an selective course for food science and technology and related majors. Risk assessment on Food safety is the main content of the analysis and evaluation of the potential adverse effects of biological, chemical and physical hazards on human health and food trade in food and food additives. Through learning this course, students can rationally understand all sorts of food safety hazards, grasp the relationship between risk factors and food, learn to take appropriate preventive and remedial measures to control the occurrence of food safety incidents, or to minimize the effects of the accident, to perform in the future government agency and food industry.</p>				
课程教学大纲 (Course Syllabus)					

<p>*学习目标(Learning Outcomes)</p>	<p>1. 了解食品安全风险评估的基本原理和应用 (A3) To Understand the basic principle and application of food safety risk assessment (A3)</p> <p>2. 了解食品安全风险评估的基本概念和一般流程 (A5.1, A5.4) To understand the basic concept of food safety risk assessment and the general process (A5.1, A5.4)</p> <p>3. 通过课程实践, 培育认识和发现问题的能力 (B2, C2) 和团队协作解决问题的能力 (A5.3, B3, C1) Through the course practice, to foster the ability to understand and find problems (B2, C2) and the team cooperation ability to solve problems (A5.3, B3, C1)</p>					
<p>*教学内容 进度安排及要求 (Class Schedule & Requirements)</p>	<p>教学内容</p>	<p>学时</p>	<p>教学方式</p>	<p>作业及要求</p>	<p>基本要求</p>	<p>考查方式</p>
	<p>食品安全概述 Introduction to Food Safety</p>	<p>6 学时 6 credit hours</p>	<p>课堂教学 Classroom Teaching</p>	<p>随堂考查 Quiz</p>	<p>1. 食品安全危害因子 2. 食源性疾病的发展趋势 3. 食品安全的经济学 1. The food safety risk factors 2. The development trend of foodborne disease 3. The economics of food safety</p>	<p>随堂考查 Quiz</p>
	<p>食品安全风险分析框架 Principles of Risk Analysis on Food Safety</p>	<p>4 学时 4 credit hours</p>	<p>课堂教学 Classroom Teaching</p>	<p>随堂考查 Quiz</p>	<p>1. 食品安全风险分析框架概述 2. 风险预测 3. 风险评估的支持系统 1. Overview of food safety risk analysis framework 2. Risk prediction 3. The support system of risk assessment</p>	<p>随堂考查 Quiz</p>

	<p>危害识别 Hazard Identification</p>	<p>8 学时 8 credit hours</p>	<p>课堂教学 Classroom Teaching</p>	<p>随堂考查 Quiz</p>	<p>1. 危害识别中化学表征应遵循的基本原则 2. 毒理学研究 3. 食源性疾病监测 4. 食品中污染物监测 5. 流行病学研究</p> <p>1. The basic principles for hazard identification in chemical characterization 2. Toxicological studies 3. The foodborne disease surveillance 4. The food pollutant monitoring 5. Epidemiological studies</p>	<p>随堂考查 Quiz</p>
	<p>危害特征 Hazard Characterization</p>	<p>4 学时 4 credit hours</p>	<p>课堂教学 Classroom Teaching</p>	<p>随堂考查 Quiz</p>	<p>1. 剂量—反应关系分析的基本概念 2. 剂量—反应模拟的原则 3. 化学危害物的剂量—反应分析 4. 致病菌的剂量—反应分析</p> <p>1. The basic concept of dose response relationship</p>	<p>随堂考查 Quiz</p>

					analysis 2. The dose response simulation principle 3. The dose response analysis of chemical hazards 4. The dose response analysis of pathogenic bacteria	
	暴露评估 Exposure Assessment	4 学时 4 credit hours	课堂教学 Classroom Teaching	随堂考查 Quiz	1. 数据来源 2. 膳食暴露的评估方法 1. The data sources 2. Dietary exposure assessment methods	随堂考查 Quiz
	风险描述 Risk Characterization	4 学时 4 credit hours	课堂教学 Classroom Teaching	随堂考查 Quiz	1. 健康指导值 2. 混合物的评估 3. 风险评估报告的编写指导原则 1. Health guidance values 2. The evaluation of mixtures 3. The writing guidelines of risk assessment	随堂考查 Quiz
	风险评估的应用与决策 Application and	4 学时 4	小组讨论 Group Discussion	课堂汇报	1. 食品加工过程的风险控制 2. 食品安全目	课堂汇报 Class Presentation

	Decision-making of Risk Assessment	credit hours			标 3. 食品安全标准 1. The risk control during food processing process 2. Food safety objectives 3. The food safety standards	
*考核方式 (Grading)	<p>最终成绩由平时成绩、课堂汇报、课程大作业成绩组合而成。各部分占比如下： 平时成绩：20%。主要考核出勤情况、课堂各项活动的参与度。 课堂汇报：30%。主要考核对知识点的掌握程度，以及分析解决问题的能力 and 口头表达能力。 课程大作业：50%。主要考核对本门课程基础理论和方法的综合掌握情况以及团队合作能力。</p> <p>Final grade is determined by regular grade, class presentation, and final assignment: Regular grade: 20%. Assessed by attendance, participation of class activities. Class presentation: 30%. Assessed by knowledge familiarity degree, problem solving ability and oral communication ability. Final assignment: 50%. Assessed by comprehension of basic theory and method of this course and team cooperation ability.</p>					
*教材或参考资料 (Textbooks & Other Materials)	<p>1. 石阶平主编. 食品安全风险评估, 北京: 中国农业大学出版社, 2010. Shi Jieping. Risk Assessment on Food Safety. China Agricultural University Press, Beijing, 2010.</p> <p>2. 福赛思著, 石阶平等译. 食品中微生物风险评估, 北京: 中国农业大学出版社, 2007. Stephen J Forsythe. The Microbiological Risk Assessment of Food. China Agricultural University Press, Beijing, 2007.</p> <p>3. 拉桑德著, 刘一骝译. 风险评估: 理论、方法与应用, 北京: 清华大学出版社, 2013. Marvin Rausand. Risk Assessment: Theory, Methods and Applications. Tsinghua University Press, Beijing, 2013.</p> <p>4. 凯利, 史密斯著, 郝志鹏译. 贝叶斯概率风险评估, 北京: 国防工业出版社, 2014. Dana Kelly, Curtis Smith. Bayesian Inference for Probabilistic Risk Assessment. National Defense Industry Press, Beijing, 2014.</p>					
其它 (More)						

备注 (Notes)	
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备注说明：

1. 带*内容为必填项。
2. 课程简介字数为 300-500 字；课程大纲以表述清楚教学安排为宜，字数不限。