

《食品营养学》课程教学大纲（2020 级）

课程基本信息 (Course Information)					
课程代码 (Course Code)	FOST4401	*学时 (Credit Hours)	48	*学分 (Credits)	3
*课程名称 (Course Name)	(中文) 食品营养学				
	(英文) Food Nutrition				
课程类型 (Course Type)	Compulsory Course				
授课对象 (Target Audience)	Senior Students of Food Science and Technology Department				
授课语言 (Language of Instruction)	English (or Bilingual depends on requirement)				
*开课院系 (School)	School of Agriculture and Biology				
先修课程 (Prerequisite)	Food Chemistry, Food Processing, ect..	后续课程 (post)			
*课程负责人 (Instructor)	盛漪 副教授	课程网址 (Course Webpage)			
*课程简介 (中文) (Description)	<p>(中文 300-500 字, 含课程性质、主要教学内容、课程教学目标等)</p> <p>《食品营养学》是食品科学与工程专业的专业必修课程。是面向本专业三、四年级学生开设的专业核心课, 先修课程包括《食品化学》、《食品安全学》以及《食品工艺学》等专业课程。《食品营养学》自成体系, 也可以独立开设或者面向全校作为通识类课程。</p> <p>食品营养学是研究食物营养素及其他生物活性物质对人体健康的生理作用和有益影响的科学。通过学习食品中的能量平衡和基本六大营养素, 诸如水分、蛋白质、脂肪、碳水化合物、维生素及矿物质, 了解这些营养素的基本化学组成、分类、理化特性、营养学作用, 并进一步学习这些营养元素在人体内的消化、吸收、转运和代谢机制。明了能量失衡、营养元素缺乏或过剩, 对人体健康带来的潜在不利影响。理解并掌握与食物营养相关的疾病, 以及不同人群(包括儿童与青少年、孕妇与乳母、老年和特殊疾患者人群)对食物营养的需求。</p>				

	<p>在这门课程里，学生还将学习膳食指导原则，例如控制能量平衡、设计科学膳食模式、中国居民膳食指南与宝塔模型等知识和概念。学生不但要了解科学饮食的基本概念和原理，还将增进设计膳食与控制膳食的实践技巧。真正解决“吃什么”、“吃多少”和“怎么吃”的问题。真正让学生掌握营养学的基本理论知识和实践技能，成为现代营养学人才。</p>
<p>*课程简介 (英文) (Description)</p>	<p>(英文 300-500 字)</p> <p>《Food Nutrition》 is a compulsory course for the senior students of Food Science and Technology Department. It is also a core major course in the whole curriculum program. The prerequisite courses could be 'Food chemistry', 'Food Processing' and 'Food Safety', but not required absolutely.</p> <p>Nutrition is the science that interprets the interaction of nutrients and other substances in food in relation to maintenance, growth, reproduction, health and disease of an organism. It includes food intake, absorption, assimilation, biosynthesis, catabolism and excretion.</p> <p>The diet of an organism is what it eats, which is largely determined by the availability, processing and palatability of foods. A healthy diet includes preparation of food and storage methods that preserve nutrients from oxidation, heat or leaching, and that reduce risk of food-borne illnesses.</p> <p>Registered Dietitians, "RDs" or "RDNs" (Registered Dietitian or Registered Dietitian Nutritionist) are health professionals qualified to provide safe, evidence-based dietary advice which includes a review of what is eaten, a thorough review of nutritional health, and a personalized nutritional treatment plan. They also provide preventive and therapeutic programs at work places, schools and similar institutions.</p> <p>A poor diet may have an injurious impact on health, causing deficiency diseases such as scurvy and kwashiorkor; health-threatening conditions like obesity and metabolic syndrome; and such common chronic systemic diseases as cardiovascular disease, diabetes, and osteoporosis.</p> <p>Students would learn basic knowledges including definitions, concepts, terminologies, and guidelines about nutrition and nutrients. Learn how to give professional dietary opinions and instructions. Implement dietary design and nutrients balance.</p>

课程目标与内容 (Course objectives and contents)

*课程目标 (Course Object)	结合本校办学定位、学生情况、专业人才培养要求，具体描述学习本课程后应该达到的知识、能力、素质、价值水平。 1.掌握食品营养学的基本知识体系与实践技能，并能综合运用本专业所学的知识和技能来分析和解决食品营养技术问题，增进为社会服务的理念。(A5,B1,B2,B3) 2.具有查阅有关资料和论文的能力，清晰地思考问题并运用文字准确表达，可以进行专业交流与讨论，具有一定的分析和解决问题的能力。(B1,C3,C5) 3.可以综合运用课程所学习的知识，能够解决实际问题。志存高远、意志坚强，更好地为人民服务。(C4, D1,D2,D4)								
毕业要求指标 点与课程目标 的对应关系	课程目标				毕业要求指标点				
	课程目标 1				3.4 能分析和评价食品工程实践对社会、健康、安全、环境、法律、文化等因素的影响				
	课程目标 2				5.3 能够针对具体的食品工程问题，开发或选用满足特定需求的现代工具，模拟和预测食品科学与工程中的相关问题，并能够分析其局限性				
	课程目标 3				10.3 具有一定的国际视野，具备跨文化交流的语言和书面表达能力，能就食品科学专业问题，在跨文化背景下进行基本沟通和交流				
*教学内容进度 安排及对应课 程目标 (Class Schedule & Requirements & Course Objectives)12	章节	教学内容 (要点)	教学目标	学时	教学形 式	作业及 考核要求	课程思政 融入点	对应课程 目标	
	1	How important food nutrition is?	Lead students learning the importance of food nutrition	2	Lecture	Review	Establish the determination of serving people	123	
	2	Human bodies and nutrition needs.	Get to know physiology BMI,BMR,PAL	2	Lecture	Review	Learn how to serve people	123	
	3	Concept and terminology	Get to know basic theory of food nutrition	2	Lecture	Quiz	Work hard	123	
	4	Dietary guidelines	Get to know dietary guidelines	2	Lecture	Discussion	Literature research	123	
	5	Food group plan	Understand food group plan	2	Lecture	Discussion	Literature research	123	

6	Case study and calculation (1)	Learn to evaluate dietary patterns	2	Practice	Calculation and Practice	Homework	123
7	Case study and calculation (2)	Learn to evaluate dietary patterns	2	Practice	Calculation and Practice	Homework	123
8	Carb. terms and classification	Learn basic terminology	2	Lecture	Discussion	Literature research	123
9	Carb. nutritional function	Get to know the functions	2	Lecture	Review	Self-motivated learning	123
10	Intake, digestion, and assimilation	Understand carb.in the bodies	2	Lecture	Review	Good virtue cultured	123
11	Carbohydrates and diabetes	Think of nutrition and NCD	2	Lecture	Review	Self-motivated learning	123
12	Lipid terms and classification	Learn basic terminology	2	Lecture	Discussion	Literature research	123
13	Lipid nutritional function	Get to know the functions	2	Lecture	Review	Self-motivated learning	123
14	Intake, digestion, and assimilation	Understand Lipid in the bodies	2	Lecture	Review	Good virtue cultured	123
15	Lipids and CVD	Think of nutrition and NCD	2	Lecture	Review	Self-motivated learning	123
16	Protein terms and classification	Learn basic terminology	2	Lecture	Discussion	Literature research	123
17	Protein nutritional function	Get to know the functions	2	Lecture	Review	Self-motivated learning	123
18	Intake,	Understand	2	Lecture	Review	Good virtue	123

		digestion, and assimilation	Protein in the bodies				cultured	
	19	Water	The function of water	2	Lecture	Review	Good virtue cultured	123
	20	Major minerals	Different kind of minerals	2	Lecture	Review	Self-motivated learning	123
	21	Minor minerals	Different kind of minerals	2	Lecture	Review	Self-motivated learning	123
	22	Water-soluble vitamins	VB, VC	2	Lecture	Review	Self-motivated learning	123
	23	Fat-soluble vitamins	VA, VD, VE, VK	2	Lecture	Review	Self-motivated learning	123
	24	Lesson review	Overall review	2	Q & A	Review	Self-motivated learning	123
注 1: 建议按照教学周周学时编排。								
注 2: 相应章节的课程思政融入点根据实际情况填写。								
课程目标达成度评价	课程目标			平时成绩(10分)	课程项目 (20分)	期末考试 (70分)	课程目标权重	课程目标达成度
	考核方式							
	课程目标 1			3.5	7	24.5	35%	根据成绩再评价
	课程目标 2			3.5	7	24.5	35%	同上
课程目标 3			3	6	21	30%	同上	
*考核方式 (Grading)	示例: (1) 平时成绩 10分 (2) 课程项目 20分 (3) 期末考试 70分							
*教材或参考资料 (Textbooks & Other Materials)	教材: Nutrition - Concepts and Controversies. Frances Sizer, Ellie Whitney. Wadsworth, Cengage :Learning. 2012. 13 th Edition. ISBN-13:978-1-133-62818-7. 参考资料: The Academy of Nutrition and Dietetics Complete Food and Nutrition Guide, Roberta Larson Duyff. 5 th Ed. Houghton Mifflin.							
其它 (More)								
备注 (Notes)								

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。