

《食品感官评定》课程教学大纲

| 课程基本信息 (Course Information) | | | | | |
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| 课程代码 (Course Code) | FS322 | *学时 (Credit Hours) | 32 | *学分 (Credits) | 2.0 |
| *课程名称 (Course Name) | (中文)《食品感官评定》 | | | | |
| | (英文) (Sensory Evaluation of Food) | | | | |
| 课程性质 (Course Type) | 专业选修课 | | | | |
| 授课对象 (Target Audience) | 食品科学与工程专业 | | | | |
| 授课语言 (Language of Instruction) | 双语教学 Bilingual | | | | |
| *开课院系 (School) | 农业与生物学院 | | | | |
| 先修课程 (Prerequisite) | 《食品化学》，《生物化学》，《数理统计》等 | | | | |
| 授课教师 (Instructor) | 赵大云 | 课程网址 (Course Webpage) | | | |
| *课程简介 (Description) | <p>课程性质: 食品感官评定是在食品理化分析的基础上, 集心理学、生理学、统计学的知识发展起来的一门学科。该学科不仅实用性强, 灵敏度高, 结果可靠, 而且解决了一般理化分析所不能解决的复杂的生理感受问题。该课程是食品科学与工程专业和食品质量与安全专业的一门重要的专业基础课。</p> <p>教学目标: 阐述食品风味的化学基础, 感官鉴评的生理学基础, 食品的识别技巧, 鉴评员的选聘与培训, 鉴评的环境条件, 方法的选定与结果分析, 以及大量的应用实例, 从简明的实用的角度出发, 全面地介绍各种食品感官鉴评方法。用 32 学时的时间高度概括地介绍食品感官鉴评的基本概念、研究范畴、核心要素、感官鉴评方法等, 通过介绍食品感官鉴评与其它食品学科的最基本知识和相关的前沿应用, 激发学生对食品科学的浓厚兴趣, 提高学生的专业理论水平, 尤其是通过一段时间的专业理论知识的学习后, 综合应用这些理论知识的实际应用能力。</p> | | | | |
| *课程简介 (Description) | <p>The field of sensory science has grown rapidly in recent years. Now it holds an eminent position as a venue for research on sensory test methods (among many other topics). Knowledge of the intricate cellular processes in chemoreception, as well as their genetic basis has undergone nothing less than a revolution, culminating in the award of the Nobel Prize to Buck and Axel in 2004 for their discovery of the olfactory receptor gene super family. Advances in statistical methodology have accelerated as well. Sensometrics meetings are now vigorous and well-attended annual events. And yet, some things stay the same. Sensory testing will always involve human participants. But humans are tough measuring instruments to work with. They come with varying degrees of acumen, training, experiences, differing</p> | | | | |

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| | <p>genetic equipment, sensory capabilities, and of course, different preferences. Human foibles and their associated error variance will continue to place a limitation on sensory tests and actionable results.</p> <p>Although methods continue to evolve, appreciation of the core principles of the field is the key to effective application of sensory test methods. This book has been expanded to reflect the advances in methodologies, theory, and analysis that have transpired in the last 15 years. The chapters are now divided into numbered subsections. This may be of assistance to educators who may wish to assign only certain critical sections to beginning students. In some of the opening sections instructors will find suggestions about which sections are key for fundamental understanding of that topic or method. In many chapters we have gone out on a limb and specified a “recommended procedure.” In cases where there are multiple options for procedure or analysis, we usually chose a simple solution over one that is more complex.</p> <p>This course attempts to be comprehensive, yet understandable to all students at the university level. All the major sensory test methods are illustrated and discussed, including discrimination, descriptive, and affective tests. Some chapters are devoted to special topics, such as thresholds, time-intensity methods, similarity testing, color, texture, sensory quality control, qualitative research methods, consumer test methods and questionnaires, shelf life testing, an introduction to multivariate statistical techniques, and strategic sensory research. The statistical appendix provides basic instruction in the common statistical analyses for sensory evaluation with worked examples.</p> |
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课程教学大纲 (Course Syllabus)

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| <p>*学习目标(Learning Outcomes)</p> | <p>(1) 要求掌握以结构和反应为主的化学基本原理，以及与生命、材料、能源等学科和领域的关系及其应用 (A5.1.1, A5.1.3, A5.2.1);</p> <p>(2) 清晰思考和用语言文字准确表达的能力, 发现、分析和解决问题的能力 (B1, B2);</p> <p>(3) 批判性思考和创造性工作的能力 (B3);</p> <p>(4) 与不同类型的人合作共事的能力 (B4);</p> <p>(5) 至少一种外语的应用能力 (B6);</p> <p>(6) 终生学习的能力以及组织管理能力和获取整理信息的能力 (B8, B9);</p> <p>(7) 刻苦务实、视野开阔、精勤进取的素质培养 (C2,C3)。</p> <p>(1) After learning the course, students can deal with the issue of how to performance organoleptic experiments to evaluate the food sensory quality (A5.1.1, A5.1.3, A5.2.1).</p> <p>(2) Also, students will understand the physiological and biochemical responses, with which will be used during food sensory evaluation (B1, B2).</p> <p>(3) the ability to summarize and express correctly in terminology; (2) the ability to organize, performance, data tabulate and interpretation during food sensory evaluation (B3).</p> <p>(4) the ability to think critically and creatively (B4).</p> <p>(5) the ability to communicate with sensory evaluation panelists and colleagues</p> |
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| | <p>during work (B6).</p> <p>(6) using English in food sensory evaluation, lifelong learning, strong organization and management skills, and demonstrated ability to organize & Lead team and be a team player as well (B8, B9).</p> <p>(7) Quality training: painstaking, pragmatic, open minded, diligent and enterprising (C2, C3).</p> | | | | | |
| <p>*教学内容 进度安排及要求 (Class Schedule & Requirements)</p> | 教学内容 | 学时 | 教学方式 | 作业及要求 | 基本要求 | 考查方式 |
| | Chapter 1 Introduction and overview | 2 | 以课堂教学为主, 结合自学; 授课方式为双语教学, 即英文教材和PPT, 中文讲授。 课堂教学主要讲解基本原理, 并将前期所学的基础课程基础上把食品感官分析知识点融入基本原理的讲解, 使同学们更好地理解食品感官分析原理、提高对食品感官分析学科的兴趣、初步了解食品感官分析的理论体系、思维方式和研究方法。课堂教学中还引入提问和讨论, 使同学们能更好地融入课堂教学。 课堂提问和讨论能培养同学们自由思考、收集和提炼信息的能力以及用语言文字准确表达的能 | | 食品感官鉴别的基本概念、发展历史、学科地位、研究范畴、核心要素、分类方法概述。 要求: 掌握食品感官评定基本概念。 | |
| | Chapter 2 Physiological and Psychological Foundations of Sensory Function | 6 | | | 味觉和嗅觉的生理基础, 味觉和嗅觉之间的相互作用和影响及其在食品感官评定中所起的作用。 | |
| | Chapter 3 Principles of Good Practice | 4 | | | 掌握食品感官评定之前所应具备的条件, 包括鉴别员的挑选, 设施和场地的环境, 样品的制备以及鉴别员应该遵循的规范操作、数据的收集与整理等。 | |
| Chapter 4 | 6 | | | 理解并掌握区别性试验 | | |

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| | Discrimination Testing | | 力。 | | 的基本概念、试验方法、试验数据处理与结果解析。 | |
| | Chapter 5 Measurement of Sensory Thresholds | 4 | | | 理解并掌握阈值的概念以及两种重要的阈值检测方法。 | |
| | Chapter 6 Scaling and Descriptive Analysis | 6 | | | 理解并掌握食品感官评定中分级以及描述性试验的概念和试验设计、数据的处理和解析。 | |
| | Chapter 7 Preference and Acceptance Testing | 2 | | | 掌握偏好和接受性试验的基本概念并学会利用偏好和接受性试验手段在食品感官质量分析中的应用。 | |
| | Chapter 8 New Technologies applied in Food Sensory Evaluation | 2 | | | 掌握一些新出现的技术手段在食品感官评定中的应用。 | |
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| *考核方式 (Grading) | <p>最终成绩由平时成绩、课堂表现、考试成绩组合而成。各部分所占比例如下： 平时出勤： 10%。主要考核平时出勤情况。 课堂提问、上课参与程度： 20%。主要考核对知识点的掌握程度、口头及文字表达能力。 考试： 70%（如教学周为9周，一次考试）。主要考核对食品感官评价的基本原理和食品感官分析工作者的思维方式的掌握程度。 10% attendance, 20% homework and 70% final examination.</p> | | | | | |

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| <p>*教材或参考资料 (Textbooks & Other Materials)</p> | <p>教材: Harry T. Lawless, H. Heymann. Sensory Evaluation of Food-Principles and Practices, Second Edition. Springer-Verlag,2010, ISBN: 978-1-4419-6487-8, e-ISBN 978-1-4419-6488-5, 使用 4 届, 外文教材, 非国家级规划教材。</p> <p>参考书目:</p> <p>1. 张晓鸣 主编.食品感官评定.中国轻工业出版社, 2007 年 6 月第一版。 Food sensory evaluation, Edited by Zhang Xiaoming ,China light industry press, June 2007.</p> <p>2. 感官评定实践 (第三版) (影印版) . Herbert Stone, Joel L. Sidel 著, Sensory Evaluation Practices (Third Edition).中国轻工业出版社, 2007。 Sensory Evaluation Practices (Third Edition) (copy), Edited by Herbert Stone, Joel L. Sidel, China light industry press, 2007.</p> <p>3. 韩北忠 童华荣主编. 《食品感官评价》.中国林业出版社, 2014 年 7 月第一版第 1 版 Food sensory evaluation, Edited by Han Beizhong, Tong Huarong, China forestry publishing house, July 2014.</p> |
| <p>其它 (More)</p> | |
| <p>备注 (Notes)</p> | |

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。