Course Syllabus

Code - Course Title	**GMS525 - Neurogastronomy**
Course Type	I. SEMESTER
Laboratory + Practice	3+0
ECTS	**6.0**
Language of Instruction	Türkçe
Course Type	Elective Courses
Course Instructor(s)	DOÇ. DR. SEMA EKİNCEK

Mode of Delivery	Face to face
Place of Delivery	On Campus
Used Educational Platforms	Face-to-face
Prerequisites	no prerequisities
Courses Recomended	Indıvıdual and Taste
Recommended Resources	Gordon M. Shepherd (2012). Neurogastronomy: How the Brain Creates Flavor and Why It Matters.Charles Spence & Piqueras-Fiszman, B. (2014). The Perfect Meal: The Multisensory Science of Fo
Work Placement	no
Aims of the Course	The aim of this course is to ensure that students comprehend the concepts of neurogastronomy and gastrophysics, the physiological foundations of taste and smell perception, and the effects of cross-modal interactions on the dining experience. It is intended that students become familiar with neurophysiological measurement techniques, such as EEG, GSR, and facial expression analysis, and evaluate the use of these techniques in gastronomy research. Within the scope of the course, students are expected to examine scientific research in the field of neurogastronomy and develop experimental research designs for this field.

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Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Introduction to Neurogastronomy: Definition of neurogastronomy, fundamental concepts, relationship between neurogastronomy and gastrophysics	
Week - 2		Fundamentals of sensory perception: Physiology of taste, effects of smell, and multisensory interactions	
Week - 3		Brain measurements in neurogastronomy: EEG, brain waves, frontal asymmetry;	
Week - 4		Neurophysiological measurement techniques: GSR, facial expression analysis (FEA), and other methods	
Week - 5		Visual stimuli: Effects of color, shape, and presentation on taste perception	
Week - 6		Auditory and tactile stimuli: Effects of sound, texture, and mouthfeel on eating experience	
Week - 7		Taste–smell interactions	
Week - 8		Crossmodal interactions: Effects of inter-sensory interactions on eating experience	

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Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 9		Literature review: Analysis and discussion of scientific papers on multisensory and crossmodal interactions;	
Week - 10		Introduction to experimental design: Hypothesis, variables, and experimental setup	
Week - 11		Laboratory practice: Demonstration of measurement devices and sample experimental procedure	
Week - 12		Neurogastronomy experimental design: Review of studies	
Week - 13		Student project development: Experimental design preparation	
Week - 14		Student project development: Experimental design preparation	

Learning Outcomes

#	Learning Outcome
1	Explains the fundamental concepts of neurogastronomy.
2	Evaluates the effects of taste, smell, and other senses on food perception.
3	Describes the relationship between neurocognitive processes and sensory perception.
4	Compares and interprets measurement techniques used in neurogastronomy studies (EEG, GSR, FEA, etc.).
5	Analyzes the role of sensory and crossmodal interactions in consumer perception.
6	Explains the basic elements of experimental design (hypothesis, variables, methods).
7	Develops an experimental design in the field of neurogastronomy.

Sustainable Development Goals

✓ Health and Quality of Life ✓ Quality Education ✓ Industry, Innovation and Infrastructure

Course Theme

✓ Health Sciences and Medical Technologies ✓ Agriculture, Food and Livestock ✓ Data Science ✓ Artificial Intelligence ✓ Innovation Skills

AKTS Workload

Activity	Duration (Hour)	Count	Workload
Teorik Derse Katılım	3.00	12	36
Sınıf Dışı Çalışma (Ön Hazırlık & Pekiştirme Amaçlı)	2.00	8	16
Ödevler	3.00	9	27
Proje - Rapor - Sunum Hazırlama	3.00	6	18
Ara Sınav Hazırlığı (sınav süresi dahil)	10.00	1	10
Final Sınavı Hazırlığı (sınav süresi dahil)	30.00	1	30

AKTS Workload

Activity	Duration (Hour)	Count	Workload
Uygulama (Laboratuvar, Müzik/Enstrüman Uygulaması, Atölye/Saha Çalışması vb.)	3.00	6	18
Staj Uygulaması	0.00	0	0
		Calculated ECTS	**6.0**

Assessment Method and Passing Requirements

✓ Homework ✓ Presentation