

Course Title: Mediterranean diet: From Landscape to Tradition and Health

Course calendar: 5 - 30 June (SiPN should arrive in Lisbon few days before as indicated by the SiPN office)

ECTS: 6 (usually transfer back as a 3 US credit course)

Contact Hours: 42

Note: SiPN students can combine this course with another SiPN June offering as long as the other course runs in the afternoon.

	MODULES	Docentes	Teóricas	Práticas
Week 1	1. Institutional Reception			
	2. The Mediterranean Diet as a Life Style in Portugal	Vítor Barros	2 h	
	3. Portuguese Landscapes	António Fabião	1 h	
	4. Sensory Analysis of Food: Consumers acceptance vs. Quality evaluation and scoring	Suzana Ferreira-Dias	1.5 h	1.5 h
	Theoretical background: general concepts of sensory analysis, physiology of sensations, the role of analytical and consumers' panels, testing rooms and sensory evaluation rules. Laboratory work: evaluation of the basic tastes; determination of detection and identification thresholds of some basic tastes.			
	5. Dairy Products	Pedro Louro	3 h	3 h
	The milk and dairy sector in Portugal; the Mediterranean influence – traditional dairy products from milk of small ruminants; Dairy products in the context of the Mediterranean Diet, nutritional and health implications; Traditional cheeses and Protected Designations of Origin; Dairy products technology – general processing and traditional technological specificities in butter, cheese and whey cheese production; cheese quality and PDO cheese evaluation system.		Laboratory work: cheese quality assessment and PDO cheese evaluation system; sensory analysis of different Portuguese traditional dairy products (cheese, whey cheese and butter); butter making from sheep milk.	
Welcome party				

	MODULES	Docentes	Teóricas	Práticas
Week 2	6. Wine and winery	Sofia Catarino	3 h	3 h
	Characterization of the Portuguese wine sector; Wine regions and Protected Designations of Origin; Portuguese grape varieties and wine types; Wine authenticity; Nutraceutical effects; White and red winemaking (brief description of the conventional processes); Aging in wood; Chemical and sensory control during processing.		Laboratory work: Quality parameters assessment: total acidity, pH, alcoholic strength, chromatic characteristics. Sensory analysis of different types of Portuguese wines.	
	Field trip: Peninsula de Setubal e Arrabida Oliveira Simões, Santiago, queijarias José Maria da Fonseca	Cheese factory & winery	1 day	

	MODULES	Docentes	Teóricas	Práticas
Week 3	7. Fruits & Vegetables	Margarida Moldão	3 h	3 h
	Characterization of the Portuguese fruits & vegetable sector; Fruit & vegetables in human nutrition and health implications; Postharvest fruit & vegetable quality parameters; Presentation of fruits & vegetable products to consumers: Fresh and processed products (minimally processed, non-alcoholic beverages, dehydrated, jellified, crystallized and fermented fruits & vegetables).	Laboratory work: Quality parameters assessment. Sensory analysis of different types of Portuguese fruits & vegetables and their products.		
	8. Forest products, Cork and cork products	Helena Pereira	1.5 h	1.5 h
	The specifics of the cork oak agro forests, a multifunctional savanna-type forest, and of the sustainable exploitation of the trees for the production of cork. The formation of cork as the outer bark of the tree, its cellular structure, chemistry and the resulting unique set of properties. Processing into cork products, from wine stoppers to surfacing and insulation agglomerates as well as design objects. Function of wine stoppers for wine in-bottle aging and quality assessment.			
	Field trip: Coruche	Cork oak forest and industry	1 day	
	9. Nuts and Wild Forest Products			
	Mushrooms, herbs and spices; Wild plants traditionally used in Portugal to flavor food dishes and for its medicinal properties and as a potential source of health; Underexploited natural source of compounds with biological activity.	Margarida Moldão	1 h	
Field trip: Oeste Region (Torres Vedras)	Fruits and vegetable industry	1 day		

	MODULES	Docentes	Teóricas	Práticas
Week 4	10. Olive and Olive Oil	Suzana Ferreira-Dias	3 h	3 h
	Characterization of the olive oil sector (World, Mediterranean countries and in Portugal); olive oil definition; olive oil as a functional food with recognized health claims; Portuguese olive oils with Protected Denomination of Origin; flowsheet of olive oil extraction and brief description of the process (continuous olive mills); olive oil commercial types, quality parameters of olive oil (chemical and sensory analysis).	Laboratory work: Quality parameters assessment - acidity, peroxide index, UV absorbance, and sensory analysis.		
	11. Agro-residues Valorization	Rita Fragoso	2 h	
	Agro-Forestry production chain – towards sustainability (framework, impacts and change drivers). Moving from a linear towards a circular economy. Efficient use of resources, water-energy nexus. Converting agro-residues into secondary raw materials (biorefinery concept, nutrients recycling, water recovery). Waste to bio-energy solutions.			
	Field trip: Alentejo	Olive oil and winery, cultural heritage	1 day	
FINAL EVALUATION EXAM				

Grade Assessment :

- 25 % class participation (continuous evaluation)
- 75 % Exam

Bibliography

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- Centamore, A. (2015). *Tasting Wine & Cheese: An Insider's Guide to Mastering the Principles of Pairing*. Quarry Books. (BISA: Q021 – 445)
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- Reetika Rekhy and Robyn McConchie (2014) Promoting consumption of fruit and vegetables for better health. Have campaigns delivered on the goals?, *Appetite* 79: 113–123.
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Provisional Schedule (subject to slight changes):

Week 1	5/06 9:30 Institutional Reception 10:00 The Mediterranean Diet as a Life Style in Portugal	6/06 9:30 Portuguese Landscapes 14:00 Sensory Analysis of Food: Consumers acceptance vs. Quality evaluation and scoring	7/06 9:30 Sensory Analysis of Food: Consumers acceptance vs. Quality evaluation and scoring	8/06 9:30 Dairy Products	9/06 9:30 Dairy Products
Week 2	12/06 9:30 Wine and winery	13/06 Lisbon Holiday	14/06 9:30 Wine and winery	15/06 National Holiday	16/06 9:00 Field trip Cheese factory & winery
Week 3	19 9:30 Fruits & Vegetables	20 9:30 Forest products, Cork and cork products	21 9:00 Field trip Cork oak forest and industry	22 9:30 Nuts and Wild Forest Products	23 9:00 Field trip Fruits and vegetable industry
Week 4	26 Olive and Olive Oil	27 Olive and Olive Oil	28 Agro-residues Valorization	29 Field trip Olive oil and winery, cultural heritage	