



## Food Engineering

### Year I, Semester I

Nr	Modules	Credits ECTS
1	Physical chemistry of food	6
2	Industrial process design and food product development	6
3	Food physics	6
4	Research methodology and statistical data analysis	6
5	Food processing engineering	6
	<b>Total</b>	<b>30</b>

### Year I, Semester II

Nr	Modules	Credits ECTS
1	Food safety and quality management	6
2	Chemistry of natural products and functional food components	6
3	Food toxicology	6
4	Food spoilage management and advanced food packaging systems	6
5	Elective course (one course form module 1,2,3 or 4)	6
	<b>Total</b>	<b>30</b>

### Year II, Semester I

#### 1. Profile: Food Technology

Nr	Modules	Credits ECTS
1	Food sensory science	6
2	Food additives and shelf-life extension	6
3	Technology of novel food production: new sources, reformulation and concept design	6
4	Non-thermal food processing technologies	6

5	Elective course (to be selected from electice module 1 or 4)	6
	<b>Total</b>	<b>30</b>

### Year II, Semester I

#### 2. Profile: Alcoholic and non-alcoholic technology”

Nr	Modules	Credits ECTS
1	Advanced enology; wine stabilization and treatments	6
2	Beverage technology I; juices, carbonated and functional beverages	6
3	Beverage technology II; distillates, liqueurs, fermented beverages and alcohol-free wine	6
4	Wine chemistry and microbiology	6
5	Elective course (to be selected from elective module 2 or 4)	6
	<b>Total</b>	<b>30</b>

### Year II, Semester I

#### 3. Profile : “Food biotechnology”

Nr	Modules	Credits ECTS
1	Enzyme & cell immobilization processes	6
2	Food microbial biotechnology	6
3	Genetic engineering in biotechnology	6
4	Biotechnological methods in food waste processing	6
5	Elective course (to be selected from electice module 3 or 4)	6
	<b>Total</b>	<b>30</b>

### Year II, Semester II

	Seminar master thesis	2
	Master thesis	28
	<b>Totali</b>	<b>30</b>
	<b>Totali (1+2+3+4)</b>	<b>120</b>

#### Elective module 1: Food Technology (6 credits for each module)

No	Elective Module	Credits ECTS
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1	Nanotechnology in food science	6
2	Dairy science, special cheese production and packaging	6
3	Technology of animal-derived foods	6
4	Technology of plant-derived foods	6
5	AI in food and nutrition	6
6	Food Storage and preservation practices	6

### **Elective module 2: Alcoholic and non-alcoholic technology**

No	Elective Module	Credits ECTS
1	Aroma chemistry of beverages	6
2	Malting science and raw materials for distilling industry	6
3	Distillery, brewery by-products and waste valorization	6
4	Viticulture- landscape-environmental-protection-tourism	6

### **Elective module 3: Food biotechnology**

No	Elective Module	Credits ECTS
1	Molecular bioinformatics	6
2	Food biochemical process engineering	6
3.	Alternative proteins in Sustainable Food systems and Agrifood Chains	6

### **Elective module 4: Management and law**

No	Elective Module for management and law	Credits ECTS
1	Economics systems and food legislation	6
2	Advanced strategies in career management	6
3	National and international wine law and regulatory frameworks	6