

**STRUCTURE OF ACADEMIC PROGRAM  
FOOD TECHNOLOGY  
FIRST CYCLE - 240 ECTS (FOUR YEAR STUDIES)**

**COURSE PROGRAMS, FIRST YEAR - FIRST SEMESTER**

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1.	2FI100112	Mathematics 1	8	3+2+2	240
2.	2ZF107512	General and inorganic chemistry	8	3+2+2	240
3.	UGD101312	Informatics	6	2+2+1	180
4.		Elective faculty subjects from the list no. 1-1	4	2+1+1	120
5.		Elective faculty subjects from the list no. 1-2	4	2+1+1	120
6.	UGD102717	Sport and recreation	*	0+0+2	
<b>Total ECTS</b>			<b>30</b>	<b>12+8+9</b>	<b>900</b>

**List no. 1-1 of elective faculty subjects (one elective subject)**

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1.	3MF190712	Laboratory safety	4	2+1+1	120
2.	2TH109315	Basics of biochemistry	4	2+1+1	120

**List no. 1-2 of elective faculty subjects (one elective subject)**

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1.	2TH109415	Biological basis of raw materials	4	2+1+1	120
2.	UGD102412	Physics	4	2+1+1	120

## COURSE PROGRAMS, FIRST YEAR, SECOND SEMESTER

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1	2ZF107712	Organic chemistry	8	3+2+2	240
2	2TH100112	Basics of technological engineering	6	2+2+1	180
3	2FI100412	Mathematics 2	6	2+2+1	180
4		Elective faculty subjects from the list no. 2-1	4	2+1+1	120
5		Elective university subjects from the list no. 9	4	0+0+4	120
6	2TT100517	<b>Practical teaching *</b>	2	0+0+2	60
<b>Total ECTS</b>			<b>30</b>	<b>9+7+11</b>	<b>900</b>

**\* Practical teaching - compulsory realization for transfer to the next academic year, only for first (1) cycle of studies. Performed for 30 days.**

**List no. 2-1 of elective faculty subjects (one elective subject)**

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1.	2TH100412	Thermodynamics	4	2+1+1	120
2.	2ZF107612	Analytical chemistry	4	2+1+1	120
3.	2TH109615	Genetically modified products	4	2+1+1	120

## COURSE PROGRAMS, SECOND YEAR, THIRD SEMESTER

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1	2TH109715	Introduction to food technology	8	3+2+2	240
2	2TH109815	Basics of microbiology	8	3+2+2	240
3	2ZF107812	Physical Chemistry	6	2+2+1	180
4		Elective faculty subjects from the list no. 3-1	4	2+1+1	120
5		Elective faculty subjects from the list no. 3-2	4	2+1+1	120
<b>Total ECTS</b>			<b>30</b>	<b>12+8+7</b>	<b>900</b>

### List no. 3-1 of elective faculty subjects (one elective subject)

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1	2TH102012	Development of the product	4	2+1+1	120
2	2TH103212	Analysis of labor	4	2+1+1	120

### List no. 3-2 of elective faculty subjects (one elective subject)

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1	2TH110015	Raw materials for the production of animal products	4	2+1+1	120
2	2TH100813	Business communications	4	2+1+1	120

## COURSE PROGRAMS, SECOND YEAR, FOURTH SEMESTER

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1	2TH110215	Food biochemistry	6	2+2+1	180
2	2TH110115	Technological operations in the food industry	8	3+2+2	240
3	2TH110315	Food microbiology	6	2+2+1	180
4		Elective faculty subjects from the list no. 4	4	2+1+1	120
5		Elective university subjects from the list no. 9	4	0+0+4	120
6	2TT101617	<b>Practical teaching *</b>	<b>2</b>	0+0+2	60
<b>Total ECTS</b>			<b>30</b>	<b>9+7+11</b>	<b>900</b>

**\* Practical teaching - compulsory realization for transfer to the next academic year, only for first (1) cycle of studies. Performed for 30 days.**

**List no. 4 of elective faculty subjects (one elective subject)**

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1	2TH110415	Food and diet	4	2+1+1	120
2	2TH110515	Manufacture of soft drinks	4	2+1+1	120

### COURSE PROGRAMS, THIRD YEAR, FIFTH SEMESTER

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1	2TH106912	Planning experiments	6	2+2+1	180
2	2TH110615	Processing of cereals	8	3+2+2	240
3	2TH110715	Processing of oilseed crops	8	3+2+2	240
4		Elective faculty subjects from the list no. 5-1	4	2+1+1	120
5		Elective faculty subjects from the list no. 5-2	4	2+1+1	120
<b>Total ECTS</b>			<b>30</b>	<b>12+8+7</b>	<b>900</b>

#### List no. 5 -1 of elective faculty subjects (one elective subject)

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1	2TH110815	Manufacture of alcoholic products	4	2+1+1	120
2	2TH110915	Food packaging	4	2+1+1	120

#### List no. 5-2 of elective faculty subjects (one elective subject)

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1	2TH111115	Technology of bakery products	4	2+1+1	120
2	2TH111215	Aromatic, spicy and healing plants	4	2+1+1	120

### COURSE PROGRAMS, THIRD YEAR, SIXTH SEMESTER

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1	2TH111315	Standards, control and quality in the food industry	8	3+2+2	240
2	2TH111415	Milk and milk preparations	6	2+2+1	180
3	2TH111515	Process technique in the food industry	6	2+2+1	180
4		Elective faculty subjects from the list no.6	4	2+1+1	120
5		Elective university subjects from the list no.9	4	0+0+4	120
6	2TT103117	<b>Practical teaching *</b>	<b>2</b>	0+0+2	60
<b>Total ECTS</b>			<b>30</b>	<b>9+7+11</b>	<b>900</b>

**\* Practical teaching - compulsory realization for transfer to the next academic year, only for first (1) cycle of studies. Performed for 30 days.**

**List no. 6 of elective faculty subjects (one elective subject)**

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1	2TH111615	Biopolymer technology	4	2+1+1	120
2	2TH111715	Processing of fruits and vegetables	4	2+1+1	120
3	2TH111815	Microbiological hazards in food	4	2+1+1	120

## COURSE PROGRAMS, FOURTH YEAR, SEVENTH SEMESTER

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1	2ZF121712	Technology of wine production	8	3+2+2	240
2	2TH112115	Food preservation	8	3+2+2	240
3	2TH112215	Hygiene and sanitation in the food industry	6	2+2+1	180
4		Elective faculty subjects from the list no. 7-1	4	2+1+1	120
5		Elective faculty subjects from the list no. 7-2	4	2+1+1	120
<b>Total ECTS</b>			<b>30</b>	<b>12+8+7</b>	<b>900</b>

### List no. 7-1 of elective faculty subjects (one elective subject)

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1	2TH112315	Toxins in food	4	2+1+1	120
2	2TH112415	Secondary animal products	4	2+1+1	120

### List no. 7-2 of elective faculty subjects (one elective subject)

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1	2TH112515	Practical work in the manufacturing industry	4	2+1+1	120
2	2TH111915	Technology of finished dishes	4	2+1+1	120

## COURSE PROGRAMS, FOURTH YEAR, EIGHTH SEMESTER

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1	2TH103612	Design of technological processes	4	2+1+1	120
2	2TT108117	Principles of material selection	4	2+1+1	120
3	2ZF120712	Meat and meat preparations	4	2+1+1	120
4	2TT104417	Graduate thesis	6	2+2+1	180
5		Elective faculty subjects from the list no. 8	4	2+1+1	120
6		Elective university subjects from the list no. 9	4	0+0+4	120
7	2TT104517	Practical teaching - interdisciplinary project *	4	0+0+4	120
<b>Вкупно</b>			<b>30</b>	<b>10+6+13</b>	<b>900</b>

\* Practical teaching - interdisciplinary project foreseen in 8 semesters, will be evaluated with 4 ECTS, and it will be provided by a mentor who is a teacher in the professional subjects of the faculty. It will be performed 2 days a week for 4 hours, or one day a week for 8 hours.

### List no. 8 of elective faculty subjects (one elective subject)

Order no.	Code on subject	Subjects	ECTS	Class of classes	Total hours
1	2TH112715	Quality management in food production	4	2+1+1	120
2	2TH112815	Management in the food industry	4	2+1+1	120



**List no. 9** of electives from the free list of University courses for the first cycle of study (4 - four subjects are selected)

Code	List of University electives subjects II, IV, VI and VIII semesters			
	SUBJECTS	Credits	Hours	Total
UGD100117	Macedonian literature and culture	4	0+0+4	120
UGD100217	Macedonian language and spelling	4	0+0+4	120
UGD100317	Ethics	4	0+0+4	120
UGD100417	History of Macedonia	4	0+0+4	120
UGD100517	Authors right	4	0+0+4	120
UGD100617	Tolerance and conflict resolution	4	0+0+4	120
UGD100717	Business systems	4	0+0+4	120
UGD100817	Tourism industry	4	0+0+4	120
UGD100917	Entrepreneurship and innovation	4	0+0+4	120
UGD101017	Management of self-development and behavior	4	0+0+4	120
UGD101117	Business economics	4	0+0+4	120
UGD101217	Choral singing	4	0+0+4	120
UGD101317	Music and art	4	0+0+4	120
UGD101417	Introduction to film history	4	0+0+4	120
UGD101517	Dramaturgy	4	0+0+4	120
UGD101617	Basics of drawing	4	0+0+4	120
UGD101717	History of classical painting	4	0+0+4	120
UGD101817	Health promotion	4	0+0+4	120
UGD101917	Oral health and hygiene	4	0+0+4	120
UGD102017	Precious and semiprecious minerals	4	0+0+4	120
UGD102117	Earth science	4	0+0+4	120
UGD102217	Wildlife Science	4	0+0+4	120
UGD102317	Environmental Protection	4	0+0+4	120
UGD102417	Intelligent electronic components and devices	4	0+0+4	120
UGD102517	Experiment planning	4	0+0+4	120
UGD102617	History of clothing	4	0+0+4	120
UGD102717	Management and quality control	4	0+0+4	120
UGD102817	Informatics	4	0+0+4	120
UGD102917	Basics of programming	4	0+0+4	120