

## Food Chemistry and Biotechnologies

**Year: I**
**Semester: I**

Nr. crt.	Discipline		hrs/week				Indiv. study	ECT S	Evaluation
	Name	Cod	C	S	L	P			
<b>Compulsory Disciplines (O)</b>									
1	Mathematics I	UPB.11.F.01.O.001	3	2	0	0		6	E
2	Analytical chemistry	UPB.11.D.01.O.002	3	0	4	0		7	E
3	Inorganic chemistry	UPB.11.D.01.O.003	3	2	2	0		7	E
4	Computing and graphical design	UPB.11.F.01.O.004	2	0	2	0		5	E
5	Micro & macroeconomy	UPB.11.C.01.O.005	2	1	0	0		3	V
<b>TOTAL Compulsory Disciplines (O)</b>			<b>13</b>	<b>5</b>	<b>8</b>			<b>28</b>	<b>4E+V</b>
<b>Optional Disciplines (A)</b>									
6	Foreign language I	UPB.11.C.01.A.006	0	2	0	0		2	V
<b>TOTAL optional disciplines (A)</b>			<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>		<b>2</b>	
<b>TOTAL compulsory disciplines (O) and optional (A)</b>			<b>13</b>	<b>7</b>	<b>8</b>		<b>13</b>	<b>30</b>	<b>4E+2V</b>
<b>TOTAL hrs/week</b>			<b>28</b>						
<b>Facultative disciplines (L)</b>									
7	Chemistry Fundamentals	UPB.11.F.01.L.007	0	2				2	V
8	Physical Education	UPB.11.C.01.L.008	0	1	0	0		1	V
9	Physics Fundamentals	UPB.11.F.01.L.009	0	2				1	V
10	Mathematics fundamentals	UPB.11.F.01.L.010	0	2				1	V
<b>TOTAL facultative disciplines (L)</b>			<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>		<b>5</b>	<b>4V</b>

**Year : I**
**Semester: II**

Nr. crt.	Discipline		hrs/week				Indiv. study	ECT S	Evaluation
	Name	Cod	C	S	L	P			
<b>Compulsory Disciplines (O)</b>									
11	Mathematics II	UPB.11.F.02.O.011	3	1	0	0		5	E
12	Instrumental analysis	UPB.11.D.02.O.012	3	0	4	0		7	E
13	Inorganic chemistry	UPB.11.D.02.O.013	3	0	2	0		5	E
14	Physics I	UPB.11.F.02.O.014	2	1	0	0		4	E
15	Transitional metals	UPB.11.F.02.O.015	2	1	0	0		4	E
16	Elements of mechanics and mechanical engineering	UPB.11.D.02.O.016	2	1	0	0		3	V
<b>TOTAL Compulsory Disciplines (O)</b>			<b>15</b>	<b>4</b>	<b>6</b>	<b>0</b>		<b>26</b>	<b>5E+V</b>
<b>Optional disciplines (A)</b>									
17	Computing and graphical design	UPB.11.F.02.A.017	0	0	3	0		2	V
<b>TOTAL optional disciplines (A)</b>			<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>		<b>4</b>	<b>V</b>
<b>TOTAL compulsory disciplines (O) and optional (A)</b>			<b>15</b>	<b>4</b>	<b>9</b>			<b>30</b>	
<b>TOTAL hrs/ week</b>			<b>28</b>						
<b>Facultative disciplines (L)</b>									
18	European Integration Concepts	UPB.11.C.02.L.018	1	1				2	V
19	Pedagogy I	UPB.11.C.02.L.019	2	2				5	E
20	Physical Education	UPB.11.C.02.L.020	0	1	0	0		1	V
<b>TOTAL facultative disciplines (L)</b>			<b>3</b>	<b>4</b>				<b>8</b>	<b>1E+2V</b>

## Year:II

## Semester: I

Nr. crt.	Discipline		Hrs/week				Indiv. study	ECTS	Evaluation
	Name	Cod	C	S	L	P			
Compulsory Disciplines (O)									
1	Physics II	UPB.11.F.03.O.001	2	1	0	0		4	E
2	Organic chemistry	UPB.11.F.03.O.002	2	2	0	0		5	E
3	Physical chemistry	UPB.11.D.03.O.003	3	0	4	0		7	E
4	Ecology and sustainable development	UPB.11.D.03.O.004	3	0	3	0		6	E
5	Fundamentals of electrical engineering and electronics	UPB.11.D.03.O.005	2	0	0	0		2	V
6	Management	UPB.11.D.03.O.006	1	1	0	0		2	V
7	Communication techniques	UPB.11.F.03.O.007	1	1	0	0		2	V
TOTAL Compulsory Disciplines (O)			14	5	7	0		28	4E+3V
Optional disciplines (A)									
8	Optional discipline I	UPB.11.F.03.A.008	2	0	0	0		2	V
TOTAL optional disciplines (A)									
TOTAL compulsory disciplines (O) and optional (A)			16	5	7	0		30	4E+4V
TOTAL hrs/week						28			
Facultative disciplines (L)									
9	Pedagogy II	UPB.11.C.03.L.009	2	2	0	0		5	E
10	Physical Education III	UPB.11.C.03.L.010		1	0	0		1	V
TOTAL facultative disciplines (L)			2	3	0	0		6	1E+1V

## Year:II

## Semester: II

Nr. crt.	Discipline		Hrs/week				Indiv. study	ECTS	Evaluation
	Name	Cod	C	S	L	P			
Compulsory Disciplines (O)									
11	Organic chemistry	UPB.11.D.04.O.011	2	2	3			7	E+V
12	Physical chemistry	UPB.11.D.04.O.012	2	0	2	0		5	E
13	Chemical engineering	UPB.11.D.04.O.013	3	0	2	0		6	E
14	Materials science I- inorganic materials	UPB.11.D.04.O.014	3	0	2	0		5	E
15	Materials science II - organic materials and composites	UPB.11.D.04.O.015	3	0	2	0		5	E
TOTAL Compulsory Disciplines (O)			13	2	11	0		28	5E+V
Optional disciplines (A)									
16	Optional discipline II	UPB.11.F.04.O.016	2	0	0	0		2	V
TOTAL optional disciplines (A)			2					2	
TOTAL compulsory disciplines (O) and optional (A)			15	2	0	0		30	5E+2V
TOTAL hrs/week						27			
Facultative disciplines (L)									
17	Methods of Teaching Specialized Matters	UPB.11.C.04.L.017	2	2				5	E
18	Physical Education III	UPB.11.C.04.L.018	0	1	0	0		1	V
TOTAL facultative disciplines (L)			2	2				6	1E+1V

## Year:III

## Semester: I

Nr. crt.	Disciplines		Hrs/week				Indiv. study	ECTS	Evaluation
	Name	Cod	C	S	L	P			
<b>Compulsory Disciplines (O)</b>									
1	Organic chemistry	UPB.11.D.05.O.401	2	0	3			5	E
2	Physical chemistry	UPB.11.D.05.O.402	2	0	2	0		4	E
3	Unit operations in process industries	UPB.11.D.05.O.403	3	0	2	0		5	E
4	Electrochemistry	UPB.11.D.05.O.404	2		3	0		5	E
5	Instrumental analysis in organic chemistry	UPB.11.S.05.O.405	2	0	3	0		5	E
6	Biochemistry I	UPB.11.F.05.O.406	2	0	0	0		3	V
<b>TOTAL Compulsory Disciplines (O)</b>			<b>13</b>		<b>13</b>	<b>0</b>		<b>27</b>	<b>5E+V</b>
7	Industrial management	UPB.11.D.05.A.307	1	0	1	0		3	V
<b>TOTAL compulsory disciplines (O) and optional (A)</b>			<b>14</b>	<b>0</b>	<b>14</b>	<b>1</b>		<b>30</b>	<b>5E+2V</b>
<b>TOTAL hrs/ week.....</b>			<b>27</b>						
<b>Facultative disciplines (L)</b>									
8	Computer aided training I	UPB.11.D.05.L.408	0	0	2	0		2	V
9	Teaching practice in preuniversity education I	UPB.11.C.05.L.409	0	0	0	3			
10	Computer aided training II	UPB.11.C.05.L.410	1	2	0	0		4	V
<b>TOTAL facultative disciplines (L)</b>			<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>		<b>6</b>	<b>2V</b>

## Year:III

## Semester: II

Nr. crt.	Discipline		Hrs/week				Indiv. study	ECTS	Evaluation
	Name	Cod	C	S	L	P			
<b>Compulsory Disciplines (O)</b>									
11	Unit operations in process industries	UPB.11.T.06.O.411	2	1	2	2		4	E
12	Organic chemistry	UPB.11.S.06.O.412	2	0	3	0		4	E
13	Biochemistry II	UPB.11.S.06.O.413	2	0	2	0		4	E
14	Microbiology	UPB.11.S.06.O.414	2	0	2			4	E
15	Food pollution	UPB.11.D.06.O.415	2	0	2			4	E
16	Practical training	UPB.11.D.06.O.416	0	0	0	0		6	V
<b>TOTAL Compulsory Disciplines (O)</b>			<b>10</b>	<b>0</b>	<b>11</b>	<b>2</b>		<b>25</b>	<b>5E+V</b>
<b>Optional disciplines (A)</b>									
17	Food basics	UPB.11.S.06.O.417	2	0	0	0		2	V
18	Corrosion and anticorrosion protection	UPB.11.F.06.O.418	1	0	1	0		2	V
<b>TOTAL optional disciplines (A)</b>			<b>3</b>	<b>0</b>	<b>1</b>			<b>4</b>	<b>2V</b>
<b>TOTAL compulsory disciplines (O) and optional (A)</b>			<b>14</b>		<b>12</b>	<b>1</b>	<b>12</b>	<b>30</b>	<b>5E+3V</b>
<b>TOTAL hrs/week</b>			<b>30</b>						
<b>Facultative disciplines (L)</b>									
19	Computer aided training	UPB.11.D.06.L.319	0	0	2	0		2	V
20	Classroom management	UPB.11.C.06.L.320	1	1	0	0		3	V
21	Teaching practice in preuniversity education II	UPB.11.C.06.L.321	0	0	3			3	V
<b>TOTAL facultative disciplines (L)</b>			<b>1</b>	<b>1</b>	<b>5</b>	<b>0</b>		<b>8</b>	<b>3V</b>

## Year:IV

## Semester: I

Nr. crt.	Discipline		hrs/week				Indiv. study	ECTS	Evaluation
	Name	Cod	C	S	L	P			
<b>Compulsory Disciplines (O)</b>									
1	Chemical reactors	UPB.11.F.07.O.401	3	0	2	1		6	E
2	Applied enzymology	UPB.11.S.07.O.402	2	0	2	0		6	E
3	Polymer packaging for food products	UPB.11.S.07.O.403	2	0	2	0		3	V
4	Toxicology	UPB.11.S.07.O.404	2	0	2	0		4	E
5	Synthetic compounds for food industry	UPB.11.S.07.O.405	2	0	3	1		6	E
TOTAL Compulsory Disciplines (O)			11	0	11	2		25	4E+V
<b>Optional disciplines (A)</b>									
6	Special food basics	UPB.11.S.07.A.406	2	0	0			3	V
7	Bibliographic research	UPB.11.S.07.A.408	1	1	0			2	V
TOTAL optional disciplines (A)			3	1	0			5	2V
TOTAL compulsory disciplines (O) and optional (A)			14	1	11	2		30	5E+3V
TOTAL hrs/ week			28						
<b>Facultative disciplines (L)</b>									
8	Optimizations in the chemical industry	UPB.11.DF.06.L.408	1	1	0	0		2	V
9	Computer aided training III	UPB.11.T.07.L.409	0	0	2	0		2	V
10	Marketing	UPB.11.E.06.L.410	1	1	0	0		2	V
TOTAL facultative disciplines (L)			2	2	2			6	3V

## Year:IV

## Semester: II

Nr. crt.	Discipline		Hrs/week				Indiv. study	ECTS	Evaluation
	Name	Cod	C	S	L	P			
<b>Compulsory Disciplines (O)</b>									
11	Semisynthesis products	UPB.11.S.08.O.411	2	0	3	0		5	V
12	Food biochemistry	UPB.11.S.08.O.412	2	0	2			4	V
13	Food quality control	UPB.11.S.08.O.413	2	0	2	0		4	V
14	Biochemical technologies	UPB.11.S.08.O.414	2	0	1	0		4	V
15	Food technologies	UPB.11.S.08.O.415	2	0	0	2		5	V
16	License/diploma project	UPB.11.S.08.O.416	0	0	4	0		4	V
TOTAL Compulsory Disciplines (O)			10	0	12	2		26	6V
<b>Optional disciplines (A)</b>									
17	Natural flavours	UPB.11.S.08.O.418	2	0	0	0		2	V
18	Hygiene and storage of food products	UPB.11.S.08.O.420	2	0	0	0		2	V
TOTAL optional disciplines (A)			4	0	0	0		4	2V
TOTAL compulsory disciplines (O) and optional (A)			10	2	12	2		30	8V
TOTAL hrs/ week			28						
<b>Facultative disciplines (L)</b>									
19	Computer aided training IV	UPB.11.T.08.L.319	0	0	2	0		2	V
TOTAL facultative disciplines (L)			0	0	2			2	1V