

BSc in Food Industry Machinery Engineering – Curriculum Chart

Term 1

Courses	Credits	Code	Prerequisites / (Corequisites)	Type
Mathematics 1	۳		-	B
Physics 1	۲		-	B
Physics 1 Lab	۱		(Physics 1)	B
General Chemistry	۳		-	B
Industrial Drawing 1	۱		-	R
Industrial Drawing 1 Practice	۱		(Industrial Drawing 1)	R
English Language	۳		-	G
Student Life Skills	۲		-	G
Islamic Thought 1	۲		-	G
Total Credits	۱۸			

Term 2

Courses	Credits	Code	Prerequisites / (Corequisites)	Type
Mathematics 2	۳		Mathematics 1	B
Physics 2	۲		Mathematics 1 / Physics 1	B
Physics 2 Lab	۱		(Physics 2)	B
Engineering Statistics	۳		Mathematics 1	R
Statics	۳		Mathematics 1 / Physics 1	R
Materials Science	۳		General Chemistry	R
Organic Chemistry	۲		General Chemistry	G
Total Credits	۱۷			

Term 3

Courses	Credits	Code	Prerequisites/ (Corequisites)	Type
Mathematics 3 (Differential Equations)	۳		Mathematics 2	B
Computer Programming	۳		-	B
Computer Programming Practice	۱		(Computer Programming)	B
Thermodynamics	۳		Mathematics 1	R
Strength of Materials (1)	۳		Statics	R
Biochemistry and Food Chemistry	۳		Organic Chemistry	R
Industrial Chemistry 2	۱		Industrial Drawing 1	R
Industrial Chemistry 2 Practice	۱		(Industrial Drawing 2)	R
Islamic Thought 2	۲		Islamic Thought 1	G
Total Credits	۱۹			

Term 4

Courses	Credits	Code	Prerequisites/(Corequisites)	Type
Fluid Mechanics 1	۳		Mathematics 1	R
Instrumentation and Control	۲		Fundamentals of Electrical Engineering 1 / Mathematics 3	R
Instrumentation and Control Practice	۱		(Instrumentation and Control)	R
Dynamics	۳		Mathematics 1	R
General Microbiology and Food	۳		-	R
General Microbiology and Food Practice	۱		(General Microbiology)	R
Unit Operation 1	۳		Strength of Materials 1	R
Welding and Sheet Metal Workshop	۱		<i>Term 2 and above</i>	R
Persian Language	۳		-	G
Total Credits	۲۰			

Term 5

Courses	Credits	Code	Prerequisites/ (Corequisites)	Type
Machine Component Design 1	۳		Dynamics / Strength of Materials 1	R
Numerical Calculations	۲		Computer Programming	B
Food Industry 1	۲		Biochemistry and Food Chemistry / General Microbiology and Food	R
Energy and Materials Balance	۳		Thermodynamics	R
Fundamentals of Electrical Engineering 1	۲		Physics 2	R
Fundamentals of Electrical Engineering 1 Lab	۱		(Fundamentals of Electrical Engineering 1)	R
Machine Tool and Tool Making Workshop	۱		Term 2 and above	R
Islamic Ethics	۲		-	G
Physical Education 1	۱		-	G
Total Credits	۱۷			

Term 6

Courses	Credits	Code	Prerequisites / (Corequisites)	Type
Heat Transfer	۳		Thermodynamics	R
Food Quality Control	۳		Engineering Statistics	R
Engineering Mathematics	۳		Mathematics 3	R
Unit Operation 2	۳		Fluid Mechanics 1	R
Food Industry 2	۲		Food Industry 1	R
Thematic Commentary of the Quran	۲		-	G
Physical Education 2	۱		Physical Education 1	G
Total Credits	۱۷			

Summer Course

Courses	Credits	Code	Prerequisites / (Corequisites)	Type
Internship	6		110 credits – to be offered in the third summer	R
Total Credits	6			

Term 7

Courses	Credits	Code	Prerequisites / (Corequisites)	Type
Food Industry 3	۲		Food Industry 2	R
Refrigeration and Cold Storage Systems	۳		Heat Transfer	R
Mass Transfer	۲		Heat Transfer	R
Unit Operation 3	۳		Heat Transfer	R
Knowledge of Family and Population	۲		-	G
Analytical History of the Early Islam	۲		-	G
Total Credits	۱۴			

Term 8

Courses	Credits	Code	Prerequisites / (Corequisites)	Type
Storage and Post-harvest Engineering	۳		Food Industry 3	R
Principles of Food Industry Factories Design	۲		Food Industry 3	R
Engineering Lab in Food Industry	۱		Food Industry 1, 2, 3	R
Engineering Properties of Biological Materials	۳		Fluid Mechanics 1, Strength of Materials, Heat Transfer, Mass Transfer	R
Engineering Properties of Biological Materials Lab	۱		(Engineering Properties of Biological Materials)	R
Engineering Design Methods	۲		Component Design 1	R
Islamic Revolution and its Roots	۲		-	G
Total Credits	۱۴			

Course Types: G=General B=Basic R=Required