BSc in Mechanical Engineering of Biosystem (Postharvest Technology) – Curriculum Chart

Term 1

Courses	Credits	Code	Prerequisites / (Corequisite)	Type
Mathematics 1	٣		-	B
Physics 1	٢		-	B
Physics 1 Lab	١		(Physics 1)	B
General Chemistry	٣		-	B
Industrial Drawing 1	١		-	R
Industrial Drawing 1 (Practice)	١		(Industrial Drawing 1)	R
English Language	٣		-	G
Student Life Skills	٢		*to be presented in term 1*	G
Islamic Thought 1	٢		-	G
Total Credits	١٨			

Term 2

Courses	Credits	Code	Prerequisites / (Corequisite)	Type
Mathematics 2	٣		Mathematics 1	B
Physics 2	٢		Mathematics 1 / Physics 1	B
Physics 2 Lab	١		(Physics 2)	B
Engineering Statistics	٣		Mathematics 1	R
Statics	٣		Physics 1 / Mathematics 1	R
Materials Science	٣		General Chemistry	R
General Agriculture	٢		-	R
General Agriculture (Practice)	١		-	R
Total Credits	١٨			

Term 3

Courses	Credits	Code	Prerequisites / (Corequisite)	Type
Mathematics 3 (Differential Equations)	٣		Mathematics 1	B
Computer Programming	٢		Mathematics 1	B
Computer Programming (Practice)	١		(Computer Programming)	B
General Agricultural Machinery	٢		-	R
General Agricultural Machinery Workshop	١		(General Agricultural Machinery)	R
Strength of Materials (1)	٣		Statics	R
Foundations of Electrical Engineering (1)	٢		Physics 2	R
Foundations of Electrical Engineering (1) Lab	١		(Foundations of Electrical Engineering 1)	R
Industrial Drawing (2)	١		Industrial Drawing 1	R
Industrial Drawing 2 (Practice)	١		(Industrial Drawing 2)	R
Islamic Thought 2	٢		-	G
Total Credits	١٩			

Term 4

Courses	Credits	Code	Prerequisites / (Corequisite)	Type
Fluid Mechanics 1	٣		Mathematics 3 / Statics	R
Instrumentation and Control	٢		Mathematics 3 / Foundations of Electrical Engineering 1	R
Instrumentation and Control Lab	١		(Instrumentation and Control)	R
Dynamics	٣		Mathematics 3	R
Unit Operation 1	٣		Foundations of Electrical Engineering 1	R
Strength of Materials 2	٢		Strength of Materials 1	R
Welding and Sheet Metal	١		*Term 2 and above*	R
Persian Language	٣		-	G
Internship (1)	٢		*second summer and later*	R
Total Credits	٢٠			

Summer Course

Courses	Credits	Code	Prerequisites	Type
Internship 2	2		*to be offered in the second summer*	R
Total Credits	2			

Term 5

Courses	Credits	Code	Prerequisites / (Corequisites)	Type
Design of Machine Elements (1)	٣		Strength of Materials 1 / Materials Science	R
Thermodynamics	٣		Fluid Mechanics 1	R
Numerical Analysis	٢		Computer Programming	B
Energy and Material Balance	٣		-	R
Strength of Materials Lab	١		(Strength of Materials 2)	R
Machine Tools and Manufacture	١		*second year and later*	R
Islamic Ethics	٢		-	G
Physical Education 1	١		-	G
Total Credits	١٦			

Term 6

Courses	Credits	Code	Prerequisites / (Corequisite)	Type
Unit Operation 2	٣		-	R
Internal Combustion Engines	٣		-	R
Internal Combustion Engines (Practice)	١		(Internal Combustion Engine)	R
Heat Transfer	٣		-	R
Engineering Mathematics	٣		Mathematics 3 (Differential Equations)	R
Thematic Commentary of the Quran	٢		-	G
Physical Education (2)	١		Physical Education (1)	G
Total Credits	١٦			

Summer Course

Courses	Credits	Code	Prerequisites	Type
Internship 3	2		*to be offered in the third summer*	R
Total Credits	2			

Term 7

Courses	Credits	Code	Prerequisites	Type
Mass Transfer	۲		General Chemistry	R
Cold Storage and Refrigeration Systems Design	۳		Heat Transfer	R
Unit Operation 3	۳		Foundations of Electrical Engineering (1)	R
Specialized English	۲		English Language	R
Knowledge of Family and Education	۲		-	G
Analytical History of Islam	۲		-	G
Total Credits	۱۴			

Term 8

Courses	Credits	Code	Prerequisites / (Corequisites)	Type
Characteristics of Biomaterial Engineering	۳		Thermodynamics	R
Characteristics of Biomaterial Engineering Lab	۱		-	R
Repair and Maintenance Engineering	۲		-	R
Repair and Maintenance Engineering (Practice)	۱		(Repair and Maintenance Engineering)	R
Project Control and Management	۲		-	R
General Horticulture	۲		-	R
General Horticulture (Practice)	۱		(General Horticulture)	R
Islamic Revolution and its Roots	۲		-	G
Postharvest Technology and Storage	۳		-	R
Total Credits	۱۷			

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