

BSc in Civil Engineering – Curriculum Chart

Term 1

Courses	Credits	Code	Prerequisites / Corequisites	Type
General Mathematics 1	۳	۳۸۱۳.۰۲		B
General Physics 1	۳	۳۸۱۵.۰۴	General Mathematics 1	B
Technical Drawing	۳	۱۴۱۴.۲۸		R
Islamic Thought 1	۱	۳۸۱۸.۰۱		G
English Language	۳	۳۸۱۹.۰۷		G
Persian Language	۳	۳۸۱۶.۰۸		G
Total Credits	۱۶			

Term 2

Courses	Credits	Code	Prerequisites / Corequisites	Type
General Mathematics 2	۳	۳۸۱۳.۰۴	General Mathematics 1	B
Physics 1 Lab	۱	۳۸۱۵.۱۱	General Physics 1	B
Differential Equations	۳	۳۸۱۳.۰۹	General Mathematics 2	B
Computer Programming	۳	۳۸۱۶.۳۹	<i>Term 2 and above</i>	B
Statics	۳	۱۴۱۴.۲۹	General Mathematics 1	R
Engineering Geology	۲	۱۴۱۴.۳۲	<i>Term 2 and above</i>	R
Urban Architecture	۲	۱۴۱۴.۳۰	Technical Drawing	R
Islamic Thought 2	۲	۳۸۱۸.۰۲	-	G
Physical Education 1	۱	۲۲۱.۰.۰۱	-	G
Total Credits	۲۰			

Term 3

Courses	Credits	Code	Prerequisites / Corequisites	Type
Engineering Statistics and Probability	۲	۳۸۲.۰.۳۷	General Mathematics 1	B
Numerical Analysis	۲	۳۸۱۳.۱۳	Differential Equations - Computer Engineering	B
Strength of Materials 1	۳	۱۴۱۴.۳۶	Statics	R
Dynamics	۳	۱۴۱۴.۳۵	Statics	R
Building Materials	۱/۵	۱۴۱۴.۳۷	Structural Geology	R
Building Materials Lab	۰/۵	۱۴۱۴.۳۸	Structural Geology	R
Environmental Engineering	۲	۱۴۱۴۱۱۶	<i>Term 2 and above</i>	R
Surveying 1	۲	۱۴۱۴.۳۱	General Mathematics 1	R
Islamic Ethics	۲	۳۸۱۶.۰.۶	-	G
Physical Education 2	۱	۲۲۱.۰.۰۲	Physical Education 1	G
Total Credits	۱۹			

Term 4

Courses	Credits	Code	Prerequisites / Corequisites	Type
Structural Analysis 1	۳	۱۴۱۴.۴۲	Strength of Materials 1	R
Fluid Mechanics	۳	۱۴۱۴.۵۳	Dynamics	R
Concrete Technology	۲	۱۴۱۴۲.۹	Building Materials and Lab	R
Soil Mechanics	۳	۱۴۱۴.۵۰	Engineering Geology - Strength of Materials 1	R
Strength of Materials 2	۳	۱۴۱۴.۸۹	Strength of Materials 1	E
Strength of Materials Lab	۱	۱۴۱۴.۶۷	Strength of Materials 1	E
<i>an Elective course</i>	۲	-	Strength of Materials 1	E
Islamic Revolution and its Roots	۲	۳۸۱۸.۰۵	Dynamics	G
Total Credits	۱۹			

Table 4 - Elective Courses of Term 4

Courses	Credits	Code	Prerequisites / Corequisites	Type
Systems Engineering	2	۱۴۱۴.۶۶	General Mathematics 2 - Engineering Statistics and Probability	E
Engineering Economics	2	۲۸.۴.۶۰	<i>Term 4 and above</i>	E
Total Credits	2			

Term 5

Courses	Credits	Code	Prerequisites / Corequisites	Type
Structural Analysis 2	۳	۱۴۱۴.۸۳	Numerical Analysis - Structural Analysis 1	R
Reinforced Concrete Structures 1	۳	۱۴۱۴.۴۴	Concrete Technology - Structural Analysis 1	R
Steel Structures 1	۳	۱۴۱۴.۸۶	Structural Analysis 1	R
Concrete Technology Lab	۱	۱۴۱۴.۴۰	Concrete Technology	R
Soil Mechanics Lab	۱	۱۴۱۴.۵۱	Soil Mechanics 1	R
Road Construction	۲	۱۴۱۴.۶۱	Surveying 1 - Soil Mechanics	R
Hydraulics	۲	۱۴۱۴.۵۴	Fluid Mechanics	R
<i>an Elective Course</i>	۲	-	<i>an Elective course from table 5</i>	E
History of Islam	۲	۳۸۱۸.۰۴		G
Total Credits	۱۹			

Table 5 - Elective Courses of Term 5

Courses	Credits	Code	Prerequisites / Corequisites	Type
Engineering Hydrology	2	۱۳۱۳.۵۶	Engineering Statistics and Probability - Fluid Mechanics	E
Deep Excavation and Retaining Structures	2	۱۴۱۴۳۴۱	Soil Mechanics	E
Total Credits	2			

Term 6

Courses	Credits	Code	Prerequisites	Type
Hydraulics Lab	۱	۱۴۱۴.۵۵	Fluid Mechanics	R
Reinforced Concrete Structures 2	۳	۱۴۱۴.۸۵	Reinforced Concrete Structures 1	R
Steel Structures 2	۲	۱۴۱۴.۴۸	Steel Structures 1	R
Foundation Engineering	۲	۱۴۱۴.۵۲	Reinforced Concrete Structures 1 - Soil Mechanics 1	R
Pavement Construction	۲	۱۴۱۴.۶۳	Building Materials and Lab - Road Construction	R
Thematic Commentary of the Quran	۲	۳۸۱۸.۰۳	-	G
4 Elective Courses	۲	-	-	E
Total Credits	۲۰			

Table 6 - Elective Courses of Term 6

Courses	Credits	Code	Prerequisites	Type
Construction Machinery in Road Construction	2	۱۴۱۴.۴۱	<i>Term 5 and above</i>	E
Traffic Engineering Principles	2	۱۴۱۴.۷۳	Engineering Statistics and Probability - Road Construction	E
Transportation Engineering	2	۱۴۱۴.۶۴	Engineering Statistics and Probability - Road Construction	E
Mechanical and Electrical Installations	2	۱۴۱۴.۶۸	Fluid Mechanics - Technical Drawing	E
English for Students of Civil Engineering	2	۱۴۱۴.۶۹	<i>Term 5 and above</i>	E
Total Credits	2			

Summer Course

Courses	Credits	Code	Prerequisites	Type
Internship	1	2804031	<i>Minimum of 100 credits required</i>	
Total Credits	1			

Term 7

Courses	Credits	Code	Prerequisites	Type
Earthquake and Wind Engineering Principles	۳	۱۴۱۴.۸۴	Structural Analysis 2	R
Quantity Surveying and Estimating	۱	۱۴۱۴.۶۵	Architectural Design and Urban Planning	R
3 two-credit Elective Courses	۲	-	-	E
1 three-credit Elective Course	۳	-	-	E
Knowledge of Family and Population	۲	۳۸۱۸.۰۷	-	G
Total Credits	۱۵			

Table 7 – Two-credit Elective Courses of Term 7

Courses	Credits	Code	Prerequisites	Type
Earthquake Resistant Masonry Structures	2	۱۴۱۴.۷۶	Structural Analysis 2	E
Bridge Engineering Principles	2	۱۴۱۴.۷۷	Reinforced Concrete Structures 2 - Steel Structures 2	E
Welding Technology and Inspection and Workshop	2	۱۴۱۴۱۶۹	Steel Structures 1	E
Local Research	2	۱۴۱۴۲۴۳	Foundation Engineering	E
Total Credits	6			

Table 7 – Three-credit Elective Courses of Term 7

Courses	Credits	Code	Prerequisites	Type
Water Structures	۳	۱۴۱۴.۵۹	Soil Mechanics - Hydraulics and Lab	E
Water Engineering	۲	۱۴۱۴.۵۷	Engineering Hydrology	E
Water Engineering Project	۱	۱۴۱۴.۵۸	Engineering Hydrology - Water Engineering	E
Underground Water	۳	۱۴۱۴.۷۲	Engineering Hydrology	
Engineering Hydrology	۲	۱۴۱۴.۵۶	Fluid Mechanics - Engineering Statistics and Probability	E
Total Credits	3			

Term 8

Courses	Credits	Code	Prerequisites	Type
Construction Methods	۲	۱۴۱۴.۹۱	Architectural Design and Urban Planning - Reinforced Concrete Structures 2 - Steel Structures 2	R
Reinforced Concrete Structures Project	۱	۱۴۱۴.۴۶	Reinforced Concrete Structures 2 - Structural Analysis 2	R
Steel Structures Project	۱	۱۴۱۴.۴۹	Steel Structures 2 - Structural Analysis 2	R
Road Construction Project	۱	۱۴۱۴.۶۲	Soil Mechanics - Surveying 1	R
Application of Computer in Civil Engineering	۲	۱۴۱۴.۷۰	Numerical Analysis - Structural Analysis 2	E
<i>3 two-credit Elective course from table 8</i>	۲	۱۴۱۴.۹۱	-	E
Total Credits	۱۳			

Table 8 – two-credit Elective Courses of Term 8

Courses	Credits	Code	Prerequisites	Type
National Regulations of Construction	2	۱۴۱۴۳۴۲	Term 7 and above	E
Maintenance, Repair and Restoration of Structures	2	۱۴۱۴۲۵۰	Reinforced Concrete Structures 2 - Steel Structures 2	E
Construction Management Principles	2	۱۴۱۴۲۴۸	Project Quantity Surveying and Estimating	E
Armed Soil and Methods of its Implementation	2	۱۴۱۴۰۲۵	Soil Mechanics (Foundation Engineering - Technical Chart)	
Tunnel Engineering Principles	2	۱۴۱۴۲۱۲	Foundation Engineering	E
Total Credits	6			

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