

BSc in Soil Science and Engineering – Curriculum Chart

Term 1

| Courses | Credits | Code | Prerequisites | Type |
|----------------------------------|-----------|---------|---------------|----------|
| Mathematics (General-Basic) | ۳ | ۳۸۱۳.۱۲ | | Required |
| General Physics 1 | ۲ | ۳۸۱۵.۰۷ | | Required |
| General Physics 1 Lab | ۱ | ۳۸۱۵.۱۴ | | Required |
| General Chemistry | ۲ | ۳۸۱۷.۷۲ | | Required |
| General Chemistry Lab | ۱ | ۳۸۱۷.۸۰ | | Required |
| Plant Anatomy and Physiology | ۲ | ۱۸۱۶.۸۵ | | Required |
| Plant Anatomy and Physiology Lab | ۱ | ۱۸۱۶.۸۶ | | Required |
| English Language | ۳ | ۳۸۱۹.۰۷ | | Required |
| Islamic Thought 1 | ۲ | ۳۸۱۸.۰۱ | | Required |
| Student Life Skills | ۲ | ۳۸۲۵.۹۳ | | Elective |
| Total Credits | 19 | | | |

Term 2

| Courses | Credits | Code | Prerequisites | Type |
|--------------------------|-----------|---------|-------------------|----------|
| Ecology | ۳ | ۱۸۱۶۱۳۱ | - | Required |
| Biology | ۲ | ۱۸۱۶.۲۱ | - | Required |
| Organic Chemistry | ۲ | ۱۸۱۶.۹۱ | General Chemistry | Required |
| Organic Chemistry Lab | ۱ | ۱۸۱۶.۹۲ | - | Required |
| Geology | ۱ | ۱۸۱۶۱۲۷ | - | Required |
| Geology Lab | ۱ | ۱۸۱۶۱۲۸ | - | Required |
| General Agriculture | ۲ | ۱۸۱۶۱۲۹ | - | Required |
| General Agriculture Lab | ۱ | ۱۸۱۶۱۳۰ | - | Required |
| General Soil Science | ۲ | ۱۸۱۶.۹۵ | General Chemistry | Required |
| General Soil Science Lab | ۱ | ۱۸۱۶.۹۶ | - | Required |
| Islamic Thought 2 | ۲ | ۳۸۱۸.۰۲ | Islamic Thought 1 | Required |
| Physical Education 1 | ۱ | ۲۲۱.۰۰۱ | - | Required |
| Total Credits | 19 | | | |

Term 3

| Courses | Credits | Code | Prerequisites | Type |
|---------------------------------------|-----------|----------|-----------------------------|----------|
| Analytical Chemistry | ۲ | ۱۸۱۴.۴۲ | General Chemistry | Required |
| Analytical Chemistry Lab | ۱ | ۱۸۱۴.۴۳ | - | Required |
| Meteorology and Climatology | ۲ | ۱۸۱۶۱.۰۹ | General Physics 1 | Required |
| Meteorology and Climatology Lab | ۱ | ۱۸۱۶۱۱.۰ | - | Required |
| Statistics and Probability | ۳ | ۱۸۱۶.۱۴ | Mathematics (General-Basic) | Required |
| Soil Physics | ۲ | ۱۸۱۴.۴۴ | General Soil Science | Required |
| Soil Physics Lab | ۱ | ۱۸۱۴.۴۵ | - | Required |
| Agricultural Machinery | ۲ | ۱۸۱۶۱.۰۱ | - | Required |
| Agricultural Machinery Lab | ۱ | ۱۸۱۶۱.۰۲ | - | Required |
| Thematic Commentary of the Holy Quran | ۲ | ۳۸۱۸.۰۳ | - | Required |
| Total Credits | 17 | | | |

Term 4

| Courses | Credits | Code | Prerequisites | Type |
|--|-----------|----------|--|----------|
| Cartography | ۱ | ۱۸۲۸.۹۸ | - | Required |
| Cartography Lab | ۱ | ۱۸۲۸.۹۹ | - | Required |
| General Horticulture | ۲ | ۱۸۱۶۱.۵ | - | Required |
| General Horticulture in Practice | ۱ | ۱۸۱۶۱.۶ | - | Required |
| Principles and Methods of Irrigation | ۲ | ۱۸۱۶.۹۹ | General Soil Science | Required |
| Principles and Methods of Irrigation in Practice | ۱ | ۱۸۱۶۱.۰۰ | - | Required |
| Wind Erosion | ۱ | ۱۸۱۶۲.۰۰ | General Soil Science | Required |
| Wind Erosion Lab | ۱ | ۱۸۱۶۲.۰۱ | - | Required |
| Soil Chemistry | ۲ | ۱۸۱۶.۴۶ | General Soil Science | Required |
| Soil Chemistry Lab | ۱ | ۱۸۱۶.۴۷ | - | Required |
| Analytical History of the Early Islam | ۲ | ۳۸۱۸.۰۴ | - | Required |
| Internship 1 | ۳ | ۱۸۱۶.۰۷ | General Soil Science/ General Agriculture | Required |
| Total Credits | 18 | | | |

Term 5

| Courses | Credits | Code | Prerequisites | Type |
|------------------------------------|-----------|---------|----------------------------------|----------|
| Soil Classification | ۱ | ۱۸۱۶.۸۱ | General Soil Science/ Geology | Required |
| Soil Classification in Practice | ۱ | ۱۸۱۶.۸۲ | - | Required |
| Saline-Sodic Soils | ۲ | ۱۸۱۶.۴۸ | General Soil Science | Required |
| Saline-Sodic Soils Lab | ۱ | ۱۸۱۶.۴۹ | - | Required |
| Soil Fertility and Fertilizers | ۲ | ۱۸۱۶.۵۰ | General Soil Science | Required |
| Soil Fertility and Fertilizers Lab | ۱ | ۱۸۱۶.۵۱ | - | Required |
| Origin of Soil | ۲ | ۱۸۱۶.۸۰ | General Soil Science/ Geology | Required |
| General Biochemistry | ۳ | ۱۸۱۶.۳۵ | Organic Chemistry | Elective |
| General Persian | ۳ | ۳۸۱۶.۰۸ | - | Required |
| Islamic Ethics | ۲ | ۳۸۱۸.۰۶ | - | Required |
| Total Credits | 18 | | | |

Term 6

| Courses | Credits | Code | Prerequisites | Type |
|--|-----------|---------|-------------------------------------|----------|
| Erosion and Soil Conservation | ۲ | ۱۸۱۴.۷۸ | General Soil Science | Required |
| Erosion and Soil Conservation in Practice | ۱ | ۱۸۱۴.۷۹ | - | Required |
| Agricultural Design of Experiments | ۳ | ۱۹۱۶.۳۰ | Statistics and Probability | Required |
| Soil Microbiology | ۲ | ۱۸۱۴.۸۳ | Biology | Required |
| Soil Microbiology Lab | ۱ | ۱۸۱۴.۸۴ | - | Required |
| Identification and Production of Soil Maps | ۲ | ۱۸۱۴.۵۶ | Cartography | Required |
| Identification and Production of Soil Maps | ۱ | ۱۸۱۴.۵۷ | - | Required |
| Plant Nutrition | ۲ | ۱۸۱۴.۵۸ | Soil Fertility and Fertilizers | Required |
| Plant Nutrition Lab | ۱ | ۱۸۱۴.۵۹ | - | Required |
| Internship 2 | ۳ | ۱۸۱۴۱۹۹ | <i>Most of the Required courses</i> | Required |
| Islamic Revolution and its Roots | ۲ | ۳۸۱۸.۰۵ | - | Required |
| Total Credits | 20 | | | |

Term 7

| Courses | Credits | Code | Prerequisites | Type |
|--|-----------|---------|--|----------|
| Environmental Pollution | ۲ | ۱۸۱۴.۱۸ | - | Elective |
| Physical Education 2 | ۱ | ۲۲۱.۰۰۲ | Physical Education 1 | Required |
| Water, Soil, and Plant Relationship | ۲ | ۱۸۱۶.۵۰ | General Soil Science/ Principles and Methods of Irrigation | Required |
| Water, Soil, and Plant Relationship Lab | ۱ | ۱۸۱۶.۵۱ | - | Required |
| Soil Biology | ۲ | ۱۸۱۴.۷۰ | Soil Microbiology | Required |
| Soil Biology Lab | ۱ | ۱۸۱۴.۷۱ | - | Required |
| Fundamentals of Drainage | ۲ | ۱۸۱۴.۷۶ | Principles and Methods of Irrigation | Required |
| Fundamentals of Drainage in Practice | ۱ | ۱۸۱۴.۷۷ | - | Required |
| English for Students of Soil Science and Engineering | ۳ | ۱۸۱۴۲.۳ | - | Required |
| Knowledge of Family and Population | ۲ | ۳۸۱۸.۰۷ | - | Required |
| Total Credits | 17 | | | |

Term 8

| Courses | Credits | Code | Prerequisites | Type |
|---|-----------|---------|---|----------|
| Soil and Land Evaluation | ۲ | ۱۸۱۴۰۶۴ | Identification and Production of Soil Maps | Required |
| Soil and Land Evaluation in Practice | ۱ | ۱۸۱۴۰۶۵ | - | Required |
| Computer Programming | ۲ | ۱۸۱۶۱۳۳ | - | Elective |
| Computer Programming in Practice | ۱ | ۱۸۱۶۱۳۴ | - | Elective |
| Compost | ۲ | ۱۸۱۴۱۶۳ | Soil Biology | Elective |
| Soil Management in Sustainable Agriculture | ۲ | ۱۸۱۴۰۸۹ | - | Required |
| Skill Training | ۴ | ۱۸۱۴۰۶۱ | - | Required |
| Total Credits | 14 | | | |