



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

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|--|---|---|----------------------|--|---|----------------------------------|---|------------|---|
| Course Title | | Soil Science | | | | | | | |
| Course Code | | TAB104 | | Course Level | | Short Cycle (Associate's Degree) | | | |
| ECTS Credit | 6 | Workload | 100 (<i>Hours</i>) | Theory | 2 | Practice | 2 | Laboratory | 0 |
| Objectives of the Course | | The aim of this course, is to teach to students defining soil formation and rocks, minerals, elements in soi,l understanding relationships among soil physical, chemical and biological properties. | | | | | | | |
| Course Content | | Soil elements and minerals, soil formation, soil morphology, physical, chemical and biological properties of soil, soil organic matter, soil erosion and conservation. | | | | | | | |
| Work Placement | | N/A | | | | | | | |
| Planned Learning Activities and Teaching Methods | | | | Explanation (Presentation), Experiment, Demonstration, Discussion, Case Study, Individual Study, Problem Solving | | | | | |
| Name of Lecturer(s) | | | | | | | | | |

Assessment Methods and Criteria

| Method | Quantity | Percentage (%) |
|---------------------|----------|----------------|
| Midterm Examination | 1 | 40 |
| Final Examination | 1 | 60 |

Recommended or Required Reading

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| 1 | AYDIN M. Ve KILIÇ Ş. 2010 Toprak Bilimi ISBN : 978-605-395-378-4 |
| 2 | AKALAN İ. 1988 Toprak Bilgisi. Ankara Üniversitesi Ziraat Fakültesi Yayın No: 1058 Ders Kitabı: 309 Ankara |

| Week | Weekly Detailed Course Contents | |
|------|---------------------------------|--|
| 1 | Theoretical | Introduction and soil definition |
| | Practice | field work |
| 2 | Theoretical | Soil elements and minerals |
| | Practice | introduction of different minerals in the soil |
| 3 | Theoretical | Igneous, sedimentary and metamorphic rocks |
| | Practice | Introduction of different rock types |
| 4 | Theoretical | Soil formation |
| | Practice | Examination of the soil profile |
| 5 | Theoretical | Soil morphology and profile |
| | Practice | Examination of soil profile horizons |
| 6 | Theoretical | Physical properties of soil |
| | Practice | soil sampling |
| 7 | Theoretical | Chemical properties of soil |
| | Practice | soil sampling |
| 8 | Intermediate Exam | Midterm Exam |
| 9 | Theoretical | Soil organisms |
| | Practice | soil analysis |
| 10 | Theoretical | Soil organic matter |
| | Practice | soil analysis |
| 11 | Theoretical | Soil erosion and conservation |
| | Practice | soil analysis |
| 12 | Theoretical | Soil classification |
| | Practice | soil analysis |
| 13 | Theoretical | Soil using |
| | Practice | soil analysis |
| 14 | Theoretical | Soil-environment relationships |
| | Practice | soil analysis |



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|----|-------------|---------------|
| 15 | Theoretical | General Again |
| | Practice | soil analysis |

Workload Calculation

| Activity | Quantity | Preparation | Duration | Total Workload |
|---------------------------------------|----------|-------------|----------|----------------|
| Lecture - Theory | 14 | 0 | 2 | 28 |
| Lecture - Practice | 14 | 0 | 2 | 28 |
| Assignment | 10 | 0 | 0 | 0 |
| Laboratory | 5 | 2 | 1 | 15 |
| Land Work | 1 | 10 | 1 | 11 |
| Midterm Examination | 1 | 7 | 1 | 8 |
| Final Examination | 1 | 9 | 1 | 10 |
| Total Workload (Hours) | | | | 100 |
| [Total Workload (Hours) / 25*] = ECTS | | | | 4 |

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

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|---|---|
| 1 | To be able to define soil formation and soil morphology |
| 2 | To be able to define soil physical properties and connected with soil fertility |
| 3 | To be able to define soil chemical properties and connected with soil fertility |
| 4 | To be able to define soil biological properties and connected with soil fertility |
| 5 | To be able to explain the causes of soil erosion and precaution type to be taken against water erosion, |

Programme Outcomes (Agricultural Machinery)

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|----|---|
| 1 | To be able to comprehend social, cultural and societal responsibility and keep up with national and international up contemporary issues and developments. |
| 2 | To be able to be bounded to the Atatürk nationalism, adopted to the national, ethic, spiritual and cultural value of the Turkish Nation, opened to the universal and modern development, adopted the richness, deep seated and productive properties of the Turkish language, having language sympathy and awareness, having reading pleasure and habit and having sufficient foreign language for their vocational necessities, In the directions of the Atatürk Principles and Revolutions, |
| 3 | To be able to recognize the basic computer hardware and operating systems , knowledge of internet usage being able to prepare documents, electronic tables and presentation by using office programs. |
| 4 | To be able to be aware of ethic responsibility and vocational profession and to have consciousness of a lifelong learning concept |
| 5 | To be able to know current vocational issues and to have skill to define and interpret them. |
| 6 | To be able to be aware of the universal and social dimensional effects in engineering solutions, and to be able to have knowledge about entrepreneurship and newfangledness. |
| 7 | To recognize the materials which used for preparation of agricultural machinery and have skill for the choosing the appropriate material. |
| 8 | To be able to acquire the skill of using the necessary tools and equipments which are used in the production and maintenance of agricultural machinery. |
| 9 | To be able to prepare the agricultural tools and machineries, to determine the breakdowns and to do periodic maintenance and repairs. |
| 10 | To be able to comprehend the picture of the agricultural tools and machinery and their fabrication , and have the skill to draw them via computer. |
| 11 | To be able to assemble and to combine machinery pieces by using demountable and nondetachable junction methods. |
| 12 | To be able to have the skill of resistance calculations of the agricultural tool and machinery on computer. |
| 13 | To be able to test and control the suitability of new machines and mechanic equipment to the definite standarts and technical properties. |
| 14 | To be able to have general knowledge of agricultural production. |
| 15 | To be able to have knowledge of basic sciences. |

