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| **Course name** | **Code** | **Semester** | **T+U** | **Credit** | **ACTS** |
| RecentDevelopments in SoilScience | 5115267 | Güz | 3+0 | 3 | 6 |
| **Prerequirements** |  |
| **Course Language** | English |
| **Course type** | Selective |
| **Course coordinater** |  |
| **Instructor** |  |
| **Course purpose** | Recentresearches in soilscience, findingsandnewmethods form thepurpose of thiscourse |
| **Course content** | Teachingrecentdevelopmentsandimprovements in soilscience. |
| **Learning outcomes of thecourse** | **At theend of thiscoursestudents;**1. Learnalternativesoilanalysesmethods2. Learn how tocomparetheresults of newandtradionalanalysesmethods3. Learnalternativemethodsandusethem in differentareas4. How topeformSpektroradyometricanalyses5. Learncharacterization of soilsalinityusing EM-38 method6. Learnmultivariatestatisticalmethods |
| **Weeks** | **Subjects** |
| 1 | Traditional soil analyses methods  |
| 2 | Alternativesoilanalysesmethods |
| 3 | Theuse of spectroradiometricmethods in soilscience |
| 4 | Advantages anddisadvantagesofspectroradiometricmethods |
| 5 | Studies in soilscienceperformedusingvisibleandnearinfraredreflectancespectroscopy |
| 6 | Multivariatestatisticalmethodsused in spectroradiometrictechniques |
| 7 | Multivariatestatisticalmethodsused in spectroradiometrictechniques |
| 8 | New aproaches in characterization of soilsalinity |
| 9 | EM-38 equaipmentandsoilsalinitycharacterization |
| 10 | EM-38 andcomparison of traditionalsoillaboratoryanalyses |
| 11 | EM-38 andcomparisonswithspectroradiometricmethods |
| 12 |  EM-38 andspectroradiometers in mappingsoilparameters |
| 13 | Calculation of theaccuracy of soilmapsproduced |
| 14 | Calculation of theaccuracy of soilmapsproduced |
| **General competency** |
| Learn how tocharacterizesoilpropertiesusingspectroradiometerAbletomapsoilsalinityusing EM-38 methodAbletointerprettheresults of EM38 andSpectroradiometermethods |
|  |
| **References** |
| 1. Williams, P.,Norris, K.H. 1987. Near-InfraredTechnologyıntheagricultureandfoodIndustries.AmericanAssociations of CerealChemists.
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| **Evaluation system** |
| MidtermExam: 40%, Final: 60%; Project orhomeworkevaluations can be madebyannouncing at thebeginning of thesemester. |

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|  | **PROGRAM ÖĞRENME ÇIKTILARI İLE** **DERS ÖĞRENİM KAZANIMLARI İLİŞKİSİ TABLOSU** |
|  | **PÇ1** | **PÇ2** | **PÇ3** | **PÇ4** | **PÇ5** | **PÇ6** | **PÇ7** | **PÇ8** | **PÇ9** | **PÇ10** |
| **ÖK1** | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 |
| **ÖK2** | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 |
| **ÖK3** | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 |
| **ÖK4** | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 |
| **ÖK5** | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 |
| **ÖK6** | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 |
| **ÖK: Öğrenme Kazanımları PÇ: Program Çıktıları** |
| **Katkı Düzeyi** | **1 Çok Düşük** | **2 Düşük** | **3 Orta** | **4 Yüksek** | **5 Çok Yüksek** |

**Program Çıktıları ve İlgili Dersin İlişkisi**

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| **Ders** | **PÇ1** | **PÇ2** | **PÇ3** | **PÇ4** | **PÇ5** | **PÇ6** | **PÇ7**  | **PÇ8** | **PÇ9** | **PÇ10** |
| RecentDevelopments in SoilScience | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 |