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| **Course name** | **Code** | **Term** | **T+A** | **Credit** | **ACTS** |
| Geostatistics  | 5115266 | Spring | 3+0 | 3 | 6 |
| **Preconditions** |  |
| **Course Language** | English |
| **Course type** | Selective |
| **Coordinator of thecourse** |  |
| **Instructor** |  |
| **Course assistances** |  |
| **Thepurpose of thecourse** | Thepurpose of thiscourse is toteach how to do geostatisticalanalyses in SoilScience. |
| **Learning outcomes of thecourse** | Öğrenciler jeoistatistik analizlerini R ve ArcGIS programında yapmayı öğrenir. Elde edilen haritaları yorumlayabilir.Thestudentslearn how toperformgeostatisticalanalysesusing R andArcGIS program. They can interpretthemapsobtained.At theend of thiscoursestudents can learn:1. Geostatisticalmethods,
2. Alternativegeostatisticalmethodsandcomparethem
3. Application of differentgeostatisticalmethods,
4. Krigingmethod
5. IDW (InverseDistanceWeighting) method,
6. Multivariategeostatisticalmethods
 |
| **Course content** | Performinggeostatisticalanalyses in soilscience, interpretation of theresultsandsharingtheresultswithin GIS environmentarethecontent of thecourse. |
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| **Haftalar** | **SUBJECTS** |
| 1 | Gelenekselistatistikler; ortalama, standard sapma, varyasyonTraditional statistics ( average, standard deviation and variation)  |
| 2 | Obtaininghistograms |
| 3 | Samplingmethodsandcomparison |
| 4 | The useof Inverse DistanceWeigthingmethod |
| 5 | Variograms |
| 6 | Eztimation of soilpropertiesusingKrigingmethod |
| 7 | Eztimation of soilpropertiesusingKrigingmethod |
| 8 | Multivariategeostatisticalmethods |
| 9 | Covariables in multivariategeostatisticalmethods |
| 10 | Cokrigingmethodanditsapplication |
| 11 | Regressionkrigingmethodanditsapplication |
| 12 | KrigingwithExternalDriftmethodanditsapplication |
| 13 | Comparison of differentmultivariategeostatisticalmethods |
| 14 | Comparison of differentmultivariategeostatisticalmethods |
| **General competency** |
| Abletocharacterizesoilsusinggeostatisticalmethods; Abletomapsoilvariables; Abletointerprettheresultsobtainedfromgeostatisticalmethods. |
|  |
| **References** |
| 1. Journel, A.G.,Huijbregts, Ch.J. 1991. MiningGeostatistics. TheBlackburnPress.
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| **Course Evaluation**  |
| 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** |
| Geostatisiıcs | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 |