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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, varyasyon  Traditional 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. | | | | | | |
| **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 |