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| **Name of the course** Plant Ecophysiology | **Code**  5115173 | **Term**  **1** | **T + P**  **3+0** | **Credit**  **3** | **ECTS**  **3** |

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| **ourse Prerequisite** | Plant physiology should be taken |

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| **Type of the course** | | Selective |
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| **Name of the instructor who taught the course last semester** | |  |
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| **Learning outcomes of thecourse** | | 1-In this course, it is intended to provide detailed information on some environmental factors affecting the development of the plant.  2-The relationships between environmental factors such as high and low temperature, salinity and plant physiology will be explained |
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| **Contents of the course** | |  |
| **Weeks** | **Semester Teaching Plan** | |
| **1** | Plant ecophysiology, environmental factors affecting plant plant growth are described.are in detail | |
| **2** | Insufficient and excessive watering causing advers effects on development of plants, provides an overview of the strategies developed by plant to reduce water stress effects. In addition, the water relations of plant | |
| **3** | Environmental and plant factors affecting plant water loss will be emphasized in detail. | |
| **4** | The effects of High-temperature on plant development and physiology biochemistry are described in detail. The strategies developed by the plant to tolerance high temperatures will be described in detail. | |
| **5** | The effects of Low-temperature on plant development and physiology biochemistry is described in detail. The strategies developed by the plant to tolerance low temperatures will be described in detail. | |
| **6** | Screening of the literature relating to the matters described above and homework about the developments on these issues is requested. | |
| **7** | Screening of the literature relating to the matters described above and homework about the developments on these issues is requested. | |
| **8** | The information obtained is discussed in detail with students and research topics developed are discussed in relation to these matters. | |
| **9** | The effects of high light intensity on plant development and physiology biochemistry is described in detail. The importance of plants to high light intensity is described in detail. | |
| **10** | The effects of low light intensity on plant development and physiology biochemistry is described in detail. The importance of plants to low light intensity is described in detail. | |
| **11** | Screening of the literature relating to the effects of high and low light intencities on plant growth plants and written assignments are required on developments on this topic. | |
| **12** | Adverse effects caused by salt stress in plants, the strategies developed by plant to reduce stress effects are described in detail. | |
| **13** | CO2 fixation in plants having different strategies. It describes the advantages and disadvantages of those plants. | |
| **14** | CO2 fixation in plants having different strategies. It describes the advantages and disadvantages of those plants. | |
| **General competency** | | |
| 1 Onegainabilityandknowledgetoidentifyproblems, proposesomesolutions, plan experiments, evaluatethedataobtainedfrom test studies in thedepartments of fieldcrops, horticulture, soilscienceandplantnutrition, plantprotection, foodengineering, agriculturaleconomicsandsomeotherrelatedfields.  2. Gainknowledgeandabilitytocontributeagriculturalsciencethroughproducingscientificinformationforfulfillingnationalandinternationalrantability, sustainabilityandquality in variousfields of agriculture  3. Gainabilitytoparticipateinterdisciplinarystudies, tofallowcurrentdevelopments in agriculture, topresentone’sstudiestorelevantstakeholdersthroughwritten, oral andothermethods  4. Gainabilitytotakeoverresponsibilityandproposesomealternativesolutionmethodsforunexpectedproblemsarise.  5. Gainawarenessaboutprofessionalethicrulesandimprovementstronginterrelationswithrelevantinstitutions in abroad. | | |
| **References**  Bozcuk, S. 2000. BitkiFizyolojisi, HatiboğluYayınları, Ankara  Kacar, B., Katkat, A.V. veÖztürk Ş. 2002, BitkiFizyolojisi, VipaşYayınları, BURSA  F. Salisbury and C.W. Ross. 1992. Plant Physiology. Wadsworth Pub. Comp., Belmont, California.  -F.P. Gardner, R.B. Pearce, R.L. Mitchell. 1985.Physiology of Crop Plants.IowasState Univ. Press, Ames, Iowa, USA. | | |
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| **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 |
| **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** |
| Plant Ecophysiology | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 |