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| **COURSE IDENTIFICATION FORM** |
| **Course Code and Name:SM-5057 Microscope and Preparation Technique** | **Department of :** |
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| **Semester** |

 | **Theoretic Hour** | **Practice Hour** | **Total Hour** | **Credits** | **ECTS** | **Education Language** | **Type: Compulsory Elective** |
| Fall | 2 | 2 | 4 | 4 | 5 | Turkish | Optional |
| **Prerequisite (s)** |  |
| **Instructor** | Prof. Dr. Banu KUTLU | **Mail :** **Web :** |
| **Course Assistant** |  | **Mail :****Web :** |
| **Groups / Classes** |  |  |
| **Course Aim** | Thepurpose of thislesson is tohelpstudentsacquireknowledgeandskillstogetacquaintedwithmicroscopetypes, tocollectplantmaterialto be usedforthepreparation of preparates, toseparateplantmaterialintoappropriatepieces, tolabelplantmaterial, toobtaincross-sectionswithmanualandfinecross-sectioningtechniques, tostainthesectionswithappropriatedyes, topreparepreparateswiththesquashandsmearmethod |
| **Course Goals** | * Lightmicroscopesand how tousethem, collection of vegetablematter (collection of leaves,collection of stems,collection of roots,collection of budsandflowers, collection of lichenandbryophytes,collection of algae,collection of mushroom,collection of diseasedmaterial,
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| **Course Learning Outs and Proficiencie*s*** | 1.Gaining qualification in practicesperformedbyusingmicroscopyandpreparationtechniques2.Gaining skillstocarryoutinvestigation on plantmaterialsusingdifferentmethodsandequipments3.Being abletouseapproachesandknowledge of differentdisciplines of basicandappliedresearchareas in biology4.Being abletokeepupwithbiologyliteratureandtouse it, andtoexpresstheknowledgeandskillsgainedverballyor in writingandBeingabletointerpretandanalyzeproblems of agricultureandenvironmentbyusingdifferentpreparationtechniques |
| **Course Basic and Auxiliary Contexts** | Yildiz, Mustsfa, Yildiz, Handan (2003). Biyolojide Laboratuvar Teknikleri ve Uygulamaları. T.C.Afyon Kocatepe Üniversitesi Yayın No:48, ISBN: 975-7150-61-4. \*Ozban, Neriman , Özmutlu, Özden (1991). Mikropreparasyon Yöntemleri. İstanbul Üniversitesi Yayınları Sayı:3664, Fen Fakültesi No:221, ISBN: 975-404-243-8. \*İnce, H. (1989). Bitki Preparasyon Teknikleri. E.Ü. Fen Fakültesi Yayınları No:127,Bornova- İzmir, \*Purvis, M.J.,Collier, D.C., Walls, A.I.S.T. (1964). Laboratorytechniques in Botany. Butterworth&Co. (Publishers) Ltd. |
| **Methods of Give a Lecture** | Lecture, question and answer, discussion, brain storming, individual work |

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| **Assessment Criteria** |  | **If Available, to Sign (x)** | **General Average Percentage (%) Rate** |
| **1. Quiz** | **X** | **40** |
| **2. Quiz** |  |  |
| **3. Quiz** |  |  |
| **4. Quiz** |  |  |
| **5. Quiz** |  |  |
| **Oral Examination** |  |  |
| **Practice Examination (Laboratory, Project etc.)** |  |  |
| **Final Examination** | **X** | **60** |
| **Semester Course Plan** |
| **Week** | **Subjects** |
| **1** | Light microscopes and how to use them presentation of Light microscopes Practices regarding the use of light microscopy |
| **2** | Collection of material |
| **3** | Collection of algae |
| **4** | Labeling the materials collected and separating them into appropriate pieces |
| **5** | Pretreatment |
| **6** | Stabilization |
| **7** | Clarification |
| **8** | Mid-Term exam |
| **9** | Softening |
| **10** | Dyes and staining |
| **11** | Introduction of agglutinating material used for the preparation of preparates |
| **12** | Preparing preparates with hand cross-sections |
| **13** | Fine sectioning method used for the preparation of preparates |
| **14** | Exam |