# AYDIN ADNAN MENDERES UNIVERSITY
# COURSE INFORMATION FORM

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|---|---|---|---|---|---|---|---|---|---|
| Course Title | Medicinal Plants | | | | | | | | |
| Course Code | TB304 | | Couse Level | First Cycle (Bachelor's Degree) | | | | | |
| ECTS Credit | 3 | Workload | 75 *(Hours)* | Theory | 2 | Practice | 2 | Laboratory | 0 |
| Objectives of the Course | The importance of medicinal plants, its economy, growing techniques, the importance of secondary materials and its variability, to teach the general principles of growing some plants of economic importance for Turkey. | | | | | | | | |
| Course Content | The importance of medicinal plants, classification, economic, ecological requirements, culture, post-harvest operations, drugs, the importance of secondary metabolites, variability of effective substances, features of essential oils, its obtaining, determine of the quality in drugs, Introduction to plants containing essential oil, morphological, growing and consumption to some plants of including family Apiaceae, Asteraceae, Lamiaceae, and Ranunculaceae. | | | | | | | | |
| Work Placement | N/A | | | | | | | | |
| Planned Learning Activities and Teaching Methods | Explanation (Presentation), Demonstration, Discussion, Individual Study | | | | | | | | |
| Name of Lecturer(s) | Prof. Olcay ARABACI | | | | | | | | |

| Assessment Methods and Criteria | | |
|---|---|---|
| Method | Quantity | Percentage (%) |
| Midterm Examination | 1 | 40 |
| Final Examination | 1 | 70 |

| Recommended or Required Reading | |
|---|---|
| 1 | Ceylan, A., 1995. Medicinal plants I, Ege Univ, Faculty of Agriculture Publications, No: 312 |
| 2 | Ceylan, A., 1996. Medicinal Plants II, Ege Univ, Faculty of Agriculture Publications, No: 481 |
| 3 | Baydar, H., 2009. Science and Technology of Medicinal and Aromatic Plants, Faculty of Agriculture, Suleyman Demirel Publication No.: 51 |
| 4 | Compiled from different sources, and Lecture Notes Presentations Internet Resources |

| Week | Weekly Detailed Course Contents | |
|---|---|---|
| 1 | Theoretical | The historical development of medicinal plants, and the importance of endemism |
| | Practice | literature review |
| 2 | Theoretical | Classification of medicinal plants and its uses |
| | Practice | Examination of Medicinal plant |
| 3 | Theoretical | Economic importance of medicinal plants |
| | Practice | Preparation of seedling |
| 4 | Theoretical | Ecological aspects of medicinal plants |
| | Practice | Showing of medicinal plant studies in field |
| 5 | Theoretical | Culture of medicinal plants |
| | Practice | Care and presentation of plants in field |
| 6 | Theoretical | Drying, sterilization and storage of medicinal plants, drugs |
| | Practice | Cutting and planting of some medicinal plants |
| 7 | Theoretical | Secondary metabolites and its importance |
| | Practice | Preparation of herbarium |
| 8 | Intermediate Exam | Midterm exam |
| 9 | Theoretical | Variability of effective substances in medicinal plants |
| | Practice | Care and examination of seedlings |
| 10 | Theoretical | Essential oils, its specification and acquisition, and determination of the quality of drugs |
| | Practice | Presentation of Medicinal and aromatic plants laboratory |
| 11 | Theoretical | Morphological, culture, consumption of some plants of including Apiaceae family, (Pimpinella anisum, Coriandrum sativum, Carum carvi) |
| | Practice | Analyze of essential oil |

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|---|---|---|
| 12 | Theoretical | Morphological, culture, consumption of some plants of including Apiaceae, Asteraceae and Ranunculaceae family, (Foeniculum vulgare, pyrethrum cinerariaefolium, Nigella sativa) |
| | Practice | Planting of seedlings in field |
| 13 | Theoretical | Morphological, culture, consumption of some plants of including Lamiaceae(Lavandula officinalis, Origanum onites, Mentha piperita) |
| | Practice | Planting of cuttings in field |
| 14 | Theoretical | Term project presentations |
| | Practice | Care of cuttings and seedlings |
| 15 | Theoretical | Term project presentations |
| 16 | Final Exam | Final exam |

**Workload Calculation**

| Activity | Quantity | Preparation | Duration | Total Workload |
|---|---|---|---|---|
| Lecture - Theory | 14 | 1 | 2 | 42 |
| Lecture - Practice | 14 | 0 | 1 | 14 |
| Midterm Examination | 1 | 5 | 1 | 6 |
| Final Examination | 1 | 12 | 1 | 13 |
| | | | Total Workload (Hours) | 75 |
| | | | [Total Workload (Hours) / 25*] = **ECTS** | 3 |

**25 hour workload is accepted as 1 ECTS*

**Learning Outcomes**

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|---|---|
| 1 | To be able to comprehend the importance of medicinal plants |
| 2 | To be able to perceive the morphological characteristics with the general principles of cultivation of medicinal plants and to evaluate its practice |
| 3 | To be able to distingish the differences in the cultivation of medical plant according to field crops |
| 4 | To able to get information on drugs, and, drying, sterilization, storage of medicinal plants |
| 5 | To be able to grasp the duration of design to production and evaluation of some plant species for new plant gain |

**Programme Outcomes** *(Agricultural Biotechnology)*

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|---|---|
| 1 | To be able to develop skills in identifying, modeling and solving problems in agricultural biotechnology |
| 2 | To be able to synthesize life and engineering sciences for the effective resource planning of agricultural biotechnology applications |
| 3 | To be able to interpret about living organisms structure, metabolic and physiological processes in order to propose biotechnological solutions to the agricultural problems |
| 4 | To be able to analyze genomic, metabolomic and proteomic information via bioinformatic tools. |
| 5 | To have the ability to analyze collected data and interpret the results. |
| 6 | To have the ability of individual working ability and to make independent decisions, to work in inter-disciplinary and interdisciplinary teamwork, to communicate by expressing their ideas orally and in writing, clearly and concisely |
| 7 | To have the awareness of professional liabilities and ethics |
| 8 | To be able to follow current national and international problems |

**Contribution of Learning Outcomes to Programme Outcomes** *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

| | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|
| P1 | 3 | 4 | 5 | 3 | 5 |
| P2 | 4 | 5 | 4 | 4 | 4 |
| P3 | 4 | 3 | 5 | 3 | 4 |
| P4 | 4 | 3 | 4 | 3 | 3 |
| P5 | 3 | 3 | 3 | 2 | 3 |
| P6 | 5 | 4 | 3 | 3 | 2 |
| P7 | 2 | 3 | 3 | 3 | 3 |
| P8 | 5 | 4 | 3 | 3 | 3 |