# AYDIN ADNAN MENDERES UNIVERSITY
# COURSE INFORMATION FORM

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Course Title | Design of Plant Protection Machines | | | | | | | | |
| Course Code | ZTM534 | | Couse Level | Second Cycle (Master's Degree) | | | | | |
| ECTS Credit | 8 | Workload | 197 *(Hours)* | Theory | 3 | Practice | 0 | Laboratory | 0 |
| Objectives of the Course | Understanding the process of struggling with the basic functions of the processes of plant protection, plant protection machines, design and research and development aimed to gain knowledge. | | | | | | | | |
| Course Content | Classification of the structure and properties of plant protection machinery, sprayer design the basic steps of the project identification and design features, features that require creativity, determination, literature, and information collection and preparation of the project scheme, choice of materials and cost elements. | | | | | | | | |
| Work Placement | N/A | | | | | | | | |
| Planned Learning Activities and Teaching Methods | Explanation (Presentation), Discussion, Case Study, Project Based Study, Problem Solving | | | | | | | | |
| Name of Lecturer(s) | | | | | | | | | |

| Assessment Methods and Criteria | | |
|---|---|---|
| Method | Quantity | Percentage (%) |
| Midterm Examination | 1 | 20 |
| Final Examination | 1 | 60 |
| Project | 1 | 20 |

| Recommended or Required Reading | |
|---|---|
| 1 | Yağcıoğlu, A., (1993) Plant Protection Machines, E.Ü. Ziraat Fakültesi Ofset Basımevi. |
| 2 | Çilingir, İ., Dursun, E., (2002)Plant Protection Machines. Ziraat Fakültesi Yayın No: 1531 |

| Week | Weekly Detailed Course Contents | |
|---|---|---|
| 1 | Theoretical | Structural features and classification of plant protection machines |
| 2 | Theoretical | Plant protection machinery use features |
| 3 | Theoretical | Basic steps in the design of sprayer |
| 4 | Theoretical | Description of the project |
| 5 | Theoretical | Design features |
| 6 | Theoretical | Determining the features that require creativity |
| 7 | Intermediate Exam | Midterm exam |
| 8 | Theoretical | Ways to experts on the subject of applications |
| 9 | Theoretical | Literature, and information-gathering |
| 10 | Theoretical | Preparation of the project scheme |
| 11 | Theoretical | Material selection |
| 12 | Theoretical | Cost elements |
| 13 | Theoretical | Standardization |
| 14 | Theoretical | Adjustment and maintenance |
| 15 | Final Exam | Final exam |

| Workload Calculation | | | | |
|---|---|---|---|---|
| Activity | Quantity | Preparation | Duration | Total Workload |
| Lecture - Theory | 14 | 3 | 3 | 84 |
| Assignment | 14 | 0 | 2 | 28 |
| Project | 1 | 0 | 25 | 25 |
| Reading | 14 | 0 | 2 | 28 |
| Midterm Examination | 1 | 12 | 1 | 13 |

| | | | | |
|---|---|---|---|---|
| Final Examination | 1 | 18 | 1 | 19 |
| | | | Total Workload (Hours) | 197 |
| | | | [Total Workload (Hours) / 25*] = **ECTS** | 8 |
| **25 hour workload is accepted as 1 ECTS* | | | | |

| **Learning Outcomes** | |
|---|---|
| 1 | Learning design philosophy |
| 2 | Understanding the philosophy of chemical and integrated pest management |
| 3 | Understanding the technique and the characteristics of spraying |
| 4 | Understanding the theory of the formation of drops |
| 5 | The basic engineering concepts to integrate plant protection practices. |

| **Programme Outcomes** *(Agricultural Machinery Master)* | |
|---|---|
| 1 | Identification, formulation and solving the problems in the field of Agricultural Machinery |
| 2 | The ability to use modern engineering tools and techniques |
| 3 | The ability to use the information, which is obtained by following the scientific and technological developments, in the academic life and practice. |
| 4 | The ability to evaluate multi-faced relationship between them by understanding interaction among agricultural technology, soil, plants and animals |
| 5 | Professionalism and ethical responsibility |
| 6 | The ability to work in disciplinary and multi-disciplinary teams |
| 7 | The ability to communicate effectively |
| 8 | The ability to do research for accessing information and to use data base and other resources |
| 9 | The ability to do analyze and interpret the experimental results and the design of experiment |
| 10 | The ability to identify and interpret knowledge of current professional issues and events |
| 11 | The ability to get aware the universal and social effects of engineering solutions and applications |
| 12 | Accordance with the requirements of science and technology, ability to use scientific knowledge creative |

**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 | 5 | | 5 | | |
| P2 | 5 | 4 | 4 | 3 | |
| P3 | 5 | | 4 | | |
| P4 | 5 | | | | |
| P5 | 5 | | | | |
| P8 | | | | 4 | |
| P9 | | | 4 | | |
| P10 | | | | | 5 |
| P12 | 5 | | | | |