



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

|                                                  |   |                                                                                                                                                                                                                                                                                                                                                                                  |             |                                                                   |   |                                  |   |            |   |
|--------------------------------------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------------------------------------------|---|----------------------------------|---|------------|---|
| Course Title                                     |   | Greenhouse                                                                                                                                                                                                                                                                                                                                                                       |             |                                                                   |   |                                  |   |            |   |
| Course Code                                      |   | TRİ120                                                                                                                                                                                                                                                                                                                                                                           |             | Course Level                                                      |   | Short Cycle (Associate's Degree) |   |            |   |
| ECTS Credit                                      | 4 | Workload                                                                                                                                                                                                                                                                                                                                                                         | 102 (Hours) | Theory                                                            | 2 | Practice                         | 1 | Laboratory | 0 |
| Objectives of the Course                         |   | With this lecture, the student will gain competencies in selection of the greenhouse building materials, in establishment of the system in the greenhouse in accordance with the location and type of the greenhouse, the light and temperature inside the greenhouse.                                                                                                           |             |                                                                   |   |                                  |   |            |   |
| Course Content                                   |   | Greenhouse and greenhouse definition, greenhouses in Turkey and the world, classification of greenhouses, factors affecting the choice of the location of the greenhouse, the greenhouse-up attention during the critical points, the greenhouse climate regulation, soil preparation greenhouses, greenhouses, irrigation and plant breeding techniques will be informed about. |             |                                                                   |   |                                  |   |            |   |
| Work Placement                                   |   | N/A                                                                                                                                                                                                                                                                                                                                                                              |             |                                                                   |   |                                  |   |            |   |
| Planned Learning Activities and Teaching Methods |   |                                                                                                                                                                                                                                                                                                                                                                                  |             | Explanation (Presentation), Demonstration, Discussion, Case Study |   |                                  |   |            |   |
| Name of Lecturer(s)                              |   |                                                                                                                                                                                                                                                                                                                                                                                  |             |                                                                   |   |                                  |   |            |   |

### Assessment Methods and Criteria

| Method              | Quantity | Percentage (%) |
|---------------------|----------|----------------|
| Midterm Examination | 1        | 40             |
| Final Examination   | 1        | 70             |

### Recommended or Required Reading

|   |                                                                      |
|---|----------------------------------------------------------------------|
| 1 | Sera Yapım Tekniği, Yüksel, A.N., 2004.                              |
| 2 | Örtüaltı Sebzeçiliği. Cilt I, Sevgican A., 1999a.                    |
| 3 | Örtüaltı Sebzeçiliği (Topraksız Tarım). Cilt II, Sevgican A., 1999b. |

| Week | Weekly Detailed Course Contents |                                                                                                                                                                                    |
|------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Theoretical                     | Greenhouse and greenhouse definition, importance and economic value of the greenhouse in the World and in Turkey.                                                                  |
|      | Practice                        | Introduction of Greenhouse building materials and building components                                                                                                              |
| 2    | Theoretical                     | classification of greenhouses                                                                                                                                                      |
|      | Practice                        | Introduction of Greenhouse building materials and building components                                                                                                              |
| 3    | Theoretical                     | Ecological and economic factors affecting the choice of the location of the greenhouse                                                                                             |
|      | Practice                        | Introduction of greenhouses are classified in different ways with visual way                                                                                                       |
| 4    | Theoretical                     | The issues that require attention during the establishment of the greenhouse (direction the main walls, frame, roof slope angle, covering material)                                |
|      | Practice                        | to determine the place where high tunnel will be established                                                                                                                       |
| 5    | Theoretical                     | The issues that require attention during the establishment of the greenhouse (direction the main walls, frame, roof slope angle, covering material)                                |
|      | Practice                        | The establishment of a high tunnel                                                                                                                                                 |
| 6    | Theoretical                     | The issues that require attention during the establishment of the greenhouse (greenhouse direction, dimensions, main walls, greenhouse frame, roof slope angle, greenhouse covers) |
|      | Practice                        | High tunnel covered with plastic sheeting                                                                                                                                          |
| 7    | Theoretical                     | Greenhouse climate (heating, cooling, radiation)                                                                                                                                   |
|      | Practice                        | Introduction of visual way on heating systems used in the greenhouse                                                                                                               |
| 8    | Intermediate Exam               | Midterm Exam                                                                                                                                                                       |
| 9    | Theoretical                     | Greenhouse climate (heating, cooling, radiation)                                                                                                                                   |
|      | Practice                        | Introduction of visual way on cooling systems used in the greenhouse                                                                                                               |
| 10   | Theoretical                     | Greenhouse climate (ventilation, humidity control, carbon dioxide fertilization)                                                                                                   |
|      | Practice                        | Introduction of visual way used in the greenhouse vents                                                                                                                            |
| 11   | Theoretical                     | soil preparation on greenhouse (drainage, cleaning, fix the physical structure of the soil, the chemical structure of soil correction)                                             |
|      | Practice                        | Sterilization of the soil in the greenhouse                                                                                                                                        |
| 12   | Theoretical                     | soil preparation on greenhouse (soil acidity, salinity, and removal, soil disinfection, preparation of sowing and planting sites)                                                  |



|    |             |                                                         |
|----|-------------|---------------------------------------------------------|
| 12 | Practice    | Preparation plant in the greenhouse                     |
| 13 | Theoretical | Irrigation in greenhouses                               |
|    | Practice    | Installation of drip irrigation system in greenhouse    |
| 14 | Theoretical | Plant breeding techniques on greenhouse                 |
|    | Practice    | To show plants cultivation techniques in the greenhouse |
| 15 | Theoretical | Plant breeding techniques on greenhouse                 |
|    | Practice    | To show plants cultivation techniques in the greenhouse |
| 16 | Final Exam  | FINAL EXAM                                              |

**Workload Calculation**

| Activity                              | Quantity | Preparation | Duration | Total Workload |
|---------------------------------------|----------|-------------|----------|----------------|
| Lecture - Theory                      | 14       | 0           | 2        | 28             |
| Lecture - Practice                    | 14       | 0           | 1        | 14             |
| Assignment                            | 4        | 0           | 5        | 20             |
| Land Work                             | 5        | 0           | 2        | 10             |
| Reading                               | 14       | 0           | 2        | 28             |
| Midterm Examination                   | 1        | 0           | 1        | 1              |
| Final Examination                     | 1        | 0           | 1        | 1              |
| Total Workload (Hours)                |          |             |          | 102            |
| [Total Workload (Hours) / 25*] = ECTS |          |             |          | 4              |

\*25 hour workload is accepted as 1 ECTS

**Learning Outcomes**

|   |                                                                                                                                      |
|---|--------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Comprehend the issues to be considered to establish a greenhouse and the factors influencing the choice of the place of a greenhouse |
| 2 | Comprehend the importance of the air conditioning on green house and to learn how to do.                                             |
| 3 | Learn to do the preparation of the soil before planting in greenhouses.                                                              |
| 4 | Comprehend how to do irrigation in greenhouses and how often to do it                                                                |
| 5 | Knows to be open to innovations in greenhouse field and produce solutions                                                            |

**Programme Outcomes (Agricultural Management)**

|    |                                                                                                                                         |
|----|-----------------------------------------------------------------------------------------------------------------------------------------|
| 1  | To be able to comprehend the basic management, economy and agricultural management                                                      |
| 2  | To be able to acquire basic information in excessive, profitable and quality production of vegetable and animal products                |
| 3  | To be able to manage production in factory, to prepare project and to keep business records                                             |
| 4  | To be able to develop solutions in agricultural management                                                                              |
| 5  | To be able to comprehend optimally preparation and marketing in agricultural foods process                                              |
| 6  | To be able to follow professional developments and to acquire knowledge to use technological resources                                  |
| 7  | To be able to reach the scientific data using computer and the internet                                                                 |
| 8  | To be able to determine the problem about agricultural management, to analyze, to develop solutions and suggestions                     |
| 9  | To be able to comprehend Atatürk Principle and Revolution                                                                               |
| 10 | To be able to take precautions about the problems related to first aid and occupational safety in the enterprise, to solve the problems |
| 11 | To be able to use Turkish well, to communicate orally and in writing, to have knowledge of professional ethics and responsibility       |

**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 | 4  |    |    |    |    |
| P3 | 4  | 4  | 4  | 4  |    |
| P4 | 3  | 3  | 3  | 3  | 4  |
| P6 |    |    |    |    | 5  |
| P7 |    |    |    |    | 5  |
| P8 | 3  | 2  | 2  | 2  | 5  |

