



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

|                                                  |   |                                                                              |                      |                                           |   |                                  |   |            |   |
|--------------------------------------------------|---|------------------------------------------------------------------------------|----------------------|-------------------------------------------|---|----------------------------------|---|------------|---|
| Course Title                                     |   | Drying Technology                                                            |                      |                                           |   |                                  |   |            |   |
| Course Code                                      |   | MSİ203                                                                       |                      | Couse Level                               |   | Short Cycle (Associate's Degree) |   |            |   |
| ECTS Credit                                      | 4 | Workload                                                                     | 100 ( <i>Hours</i> ) | Theory                                    | 2 | Practice                         | 2 | Laboratory | 0 |
| Objectives of the Course                         |   | To have knowledge about drying methods of fruit vegetables                   |                      |                                           |   |                                  |   |            |   |
| Course Content                                   |   | Drying methods, have knowledge about packaging and storage of dried products |                      |                                           |   |                                  |   |            |   |
| Work Placement                                   |   | N/A                                                                          |                      |                                           |   |                                  |   |            |   |
| Planned Learning Activities and Teaching Methods |   |                                                                              |                      | Explanation (Presentation), Demonstration |   |                                  |   |            |   |
| Name of Lecturer(s)                              |   |                                                                              |                      |                                           |   |                                  |   |            |   |

### Assessment Methods and Criteria

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

### Recommended or Required Reading

|   |                                                                                                                                               |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Cemeroğlu, B., Karadeniz, F., 2001. "Fruit Juice Technology", Food Technology Association, İzmir                                              |
| 2 | Acar, J. ve Cemeroğlu, B., 1998. "Fruit and Vegetables Technology", Volume II, Hacettepe University, Engineering Faculty Publications, Ankara |

| Week | Weekly Detailed Course Contents |                                          |
|------|---------------------------------|------------------------------------------|
| 1    | Theoretical                     | Drying history                           |
|      | Practice                        | General promotion                        |
| 2    | Theoretical                     | Principles of drying                     |
|      | Practice                        | Boiling test                             |
| 3    | Theoretical                     | Degrading microorganisms                 |
|      | Practice                        | Dried fruit production                   |
| 4    | Theoretical                     | Water activity and measurement methods   |
|      | Practice                        | Production of dried vegetables           |
| 5    | Theoretical                     | Sorption Isotherm                        |
|      | Practice                        | Determination of Sulfur Dioxide          |
| 6    | Theoretical                     | Drying methods                           |
|      | Practice                        | Determination of water activity          |
| 7    | Theoretical                     | Changes during drying                    |
|      | Practice                        | Dry matter analysis methods              |
| 8    | Intermediate Exam               | Midterm                                  |
| 9    | Theoretical                     | Pre-treatment before drying              |
|      | Practice                        | Dry matter analysis with DFA             |
| 10   | Theoretical                     | Packaging and storage of dried products  |
|      | Practice                        | Dry matter analysis with infrared        |
| 11   | Theoretical                     | Changes of dried products during storage |



|    |             |                                |
|----|-------------|--------------------------------|
| 11 | Practice    | Preservative analysis          |
| 12 | Theoretical | Mass balance of dried products |
|    | Practice    | Color analysis                 |
| 13 | Theoretical | Consumption of dried products  |
|    | Practice    | Mass equivalence calculations  |
| 14 | Theoretical | Semi-dried products            |
|    | Practice    | Mass equivalence calculations  |
| 15 | Theoretical | Semi-dried products            |
|    | Practice    | Mass equivalence calculations  |
| 16 | Final Exam  | Final Exam                     |

### Workload Calculation

| Activity                                | Quantity | Preparation | Duration | Total Workload |
|-----------------------------------------|----------|-------------|----------|----------------|
| Lecture - Theory                        | 14       | 0           | 2        | 28             |
| Lecture - Practice                      | 14       | 0           | 2        | 28             |
| Individual Work                         | 14       | 0           | 2        | 28             |
| Midterm Examination                     | 1        | 7           | 1        | 8              |
| Final Examination                       | 1        | 7           | 1        | 8              |
| Total Workload (Hours)                  |          |             |          | 100            |
| [Total Workload (Hours) / 25*] = ECTS   |          |             |          | 4              |
| *25 hour workload is accepted as 1 ECTS |          |             |          |                |

### Learning Outcomes

|   |                                                                                                                         |
|---|-------------------------------------------------------------------------------------------------------------------------|
| 1 | To comprehend the importance of the composition and structure of fruits and vegetables in fruit and vegetable processes |
| 2 | To have knowledge about drying methods of fruit vegetables                                                              |
| 3 | Learning the basic process steps of a process                                                                           |
| 4 | To be able to grasp the important points in each process for quality production                                         |
| 5 | To have information about safe fruit and vegetable products production                                                  |

### Programme Outcomes (Fruit and Vegetables Processing Technology)

|   |                                                                                                                                                                                                                                                                                                                                                                                                          |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | To be able to understand social, cultural and social responsibilities and to have the ability to follow national and international contemporary                                                                                                                                                                                                                                                          |
| 2 | In line with the principles and reforms of Atatürk; Adopting the national, moral, spiritual and cultural values ??of the Turkish Nation, open to universal and contemporary developments, the Turkish language is a rich, rooted and productive language; love and awareness of language; to have the ability to use the foreign language sufficiently and with the habit of reading and professionally. |
| 3 | To know the basic hardware units and operating systems of computer, internet to be able to prepare documents, spreadsheets and presentations on the computer by using office programs                                                                                                                                                                                                                    |
| 4 | Gains the theoretical and practical knowledge at the basic level in mathematics, science and professional fields                                                                                                                                                                                                                                                                                         |
| 5 | Recognize and analyze the problems with the knowledge of fruit and vegetable technology in the field, interpret the data and propose solutions.                                                                                                                                                                                                                                                          |
| 6 | According to the prepared work plan and program in laboratories, it can carry out the necessary works to obtain the desired quality product.                                                                                                                                                                                                                                                             |
| 7 | To have professional and ethical responsibility in business life.                                                                                                                                                                                                                                                                                                                                        |
| 8 | It is open to development and change, follows scientific social and cultural innovations and constantly improves itself.                                                                                                                                                                                                                                                                                 |

### 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 | 2  | 2  | 3  | 2  | 5  |
| P2 | 2  | 2  | 3  | 2  | 2  |
| P3 | 1  | 1  | 1  | 1  | 1  |
| P4 | 3  | 3  | 4  | 4  | 4  |
| P5 | 5  | 4  | 4  | 5  | 5  |



|    |   |   |   |   |   |
|----|---|---|---|---|---|
| P6 | 4 | 4 | 5 | 4 | 5 |
| P7 | 4 | 4 | 3 | 3 | 5 |
| P8 | 3 | 3 | 3 | 3 | 5 |

