



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

|                                                  |   |                                                                                                      |                      |                                                                      |   |                                |   |            |   |
|--------------------------------------------------|---|------------------------------------------------------------------------------------------------------|----------------------|----------------------------------------------------------------------|---|--------------------------------|---|------------|---|
| Course Title                                     |   | Food Fortification and Bioavailability                                                               |                      |                                                                      |   |                                |   |            |   |
| Course Code                                      |   | GMP506                                                                                               |                      | Course Level                                                         |   | Second Cycle (Master's Degree) |   |            |   |
| ECTS Credit                                      | 8 | Workload                                                                                             | 200 ( <i>Hours</i> ) | Theory                                                               | 3 | Practice                       | 0 | Laboratory | 0 |
| Objectives of the Course                         |   | Malnutrition and studies to solve this problem and food fortification will be handled in this course |                      |                                                                      |   |                                |   |            |   |
| Course Content                                   |   | Enrichment of foods, enriched methods and bioavailability will be covered.                           |                      |                                                                      |   |                                |   |            |   |
| Work Placement                                   |   | N/A                                                                                                  |                      |                                                                      |   |                                |   |            |   |
| Planned Learning Activities and Teaching Methods |   |                                                                                                      |                      | Explanation (Presentation), Discussion, Case Study, Individual Study |   |                                |   |            |   |
| Name of Lecturer(s)                              |   |                                                                                                      |                      |                                                                      |   |                                |   |            |   |

### Assessment Methods and Criteria

| Method              | Quantity | Percentage (%) |
|---------------------|----------|----------------|
| Midterm Examination | 1        | 40             |
| Final Examination   | 1        | 60             |

### Recommended or Required Reading

|   |                                                                                                                                                |
|---|------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Lotfi,M ; Mannar, V.G. ; Merx, R.; Heuvel,P. Micronutrient Fortification of Foods. International Agriculture Centre Publication, Canada,1996   |
| 2 | Jackson,J.M.; Fairweather-Tait,S.J. (Ed) Assessment of the Bioavailability of Micronutrients. Proceedings of an ILSI Europe Workshop, UK, 1996 |

| Week | Weekly Detailed Course Contents |                                                                    |
|------|---------------------------------|--------------------------------------------------------------------|
| 1    | Theoretical                     | Frequency and importance of malnutrition of micronutrients         |
| 2    | Theoretical                     | Causes of malnutrition of micronutrients                           |
| 3    | Theoretical                     | The choice of food for fortification                               |
| 4    | Theoretical                     | The choice of micronutrient for fortification                      |
| 5    | Theoretical                     | The cost and interaction of micronutrient for fortification        |
| 6    | Theoretical                     | The toxicity of micronutrient for fortification                    |
| 7    | Intermediate Exam               | Exam                                                               |
| 8    | Theoretical                     | The biological use of micronutrient                                |
| 9    | Theoretical                     | The biological transform of micronutrient                          |
| 10   | Theoretical                     | Food fortification techniques-I                                    |
| 11   | Theoretical                     | Food fortification techniques-II                                   |
| 12   | Theoretical                     | Food fortification techniques-III                                  |
| 13   | Theoretical                     | The examination of researches and applications about fortification |
| 14   | Final Exam                      | Final exam                                                         |

### Workload Calculation

| Activity                              | Quantity | Preparation | Duration | Total Workload |
|---------------------------------------|----------|-------------|----------|----------------|
| Lecture - Theory                      | 14       | 9           | 3        | 168            |
| Midterm Examination                   | 1        | 15          | 1        | 16             |
| Final Examination                     | 1        | 15          | 1        | 16             |
| Total Workload (Hours)                |          |             |          | 200            |
| [Total Workload (Hours) / 25*] = ECTS |          |             |          | 8              |

\*25 hour workload is accepted as 1 ECTS

### Learning Outcomes

|   |  |
|---|--|
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |



|   |  |
|---|--|
| 5 |  |
|---|--|

**Programme Outcomes** (*Food Engineering Master*)

|   |                                                                                                                                                                                                        |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | To provide further training and research opportunities to food engineers to meet the needs of the food industry                                                                                        |
| 2 | To develop and deepen the current and advanced knowledge in the field of food engineering with original thought and / or research at the level of expertise, based on the qualifications of the master |
| 3 | To identify, define, formulate and solve problems in applications related to Food Engineering and gain the ability to select and apply appropriate analytical methods and modeling techniques          |
| 4 | To gain the ability to evaluate the accuracy of the data obtained from food analysis                                                                                                                   |
| 5 | To educate students having research, entrepreneur qualifications                                                                                                                                       |

**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 | 1  |    |    |    |    |
| P2 | 5  | 5  | 5  | 5  | 5  |
| P3 | 5  | 5  | 5  | 5  | 5  |
| P4 | 1  |    |    |    |    |
| P5 | 2  | 2  | 2  | 2  | 2  |

