



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

|                                                  |   |                                                                                                                                                                                |                     |                                              |   |                                |   |            |   |
|--------------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------------------|---|--------------------------------|---|------------|---|
| Course Title                                     |   | Udder Traits and Lactation                                                                                                                                                     |                     |                                              |   |                                |   |            |   |
| Course Code                                      |   | VZO534                                                                                                                                                                         |                     | Course Level                                 |   | Second Cycle (Master's Degree) |   |            |   |
| ECTS Credit                                      | 4 | Workload                                                                                                                                                                       | 95 ( <i>Hours</i> ) | Theory                                       | 2 | Practice                       | 0 | Laboratory | 0 |
| Objectives of the Course                         |   | To teach the udder development, milk synthesis and downloading, lactation characteristics                                                                                      |                     |                                              |   |                                |   |            |   |
| Course Content                                   |   | The udder development and morphological structure, milk synthesis, lactation and lactation curve, factors effecting lactation, dry period, service period, milk yield records. |                     |                                              |   |                                |   |            |   |
| Work Placement                                   |   | N/A                                                                                                                                                                            |                     |                                              |   |                                |   |            |   |
| Planned Learning Activities and Teaching Methods |   |                                                                                                                                                                                |                     | Explanation (Presentation), 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 | Alpan, O. (1994): Sığır Yetiştiriciliği ve Besiciliği. Şahin matbaası, Ankara.                                    |
| 2 | Homan, J.E., Wattiaux, M.A. (2006): Laktasyon ve Sağım. Adnan Menderes Üniversitesi Yayın no: 29                  |
| 3 | Wing, M.J. (1963): Dairy cattle Management principles and Aplications. Reinhold Publishing Corporation, New York. |
| 4 | Hogeveen, H. (2005): Mastitis in Dairy Production. Wageningen Academic Publishers, The Netherlands.               |
| 5 | Haskell, R.R.S. (2008): Blackwell's Five-Minute Veterinary Consult: Ruminant. Wiley-Blackwell.                    |
| 6 | Battoglia, R.A. (2001): Handbook of, Livestock Management. Prentice-Hall International (UK)Limited, London        |
| 7 | Aland, A., Madec, F. (2009): Sustainable Animal Production. Wageningen Academic Publishers, The Netherlands.      |

| Week | Weekly Detailed Course Contents |                                                    |
|------|---------------------------------|----------------------------------------------------|
| 1    | Theoretical                     | Udder development in all livestock animals         |
| 2    | Theoretical                     | Morphological structure of udder in cattle         |
| 3    | Theoretical                     | Morphological structure of udder in sheep and goat |
| 4    | Theoretical                     | The udder structure in lactation                   |
| 5    | Theoretical                     | The udder structure in dry                         |
| 6    | Theoretical                     | The neuro-hormonal mechanisms of udder             |
| 7    | Theoretical                     | The milk downloading                               |
| 8    | Intermediate Exam               | Midterm exam                                       |
| 9    | Theoretical                     | The milk withdrawal                                |
| 10   | Theoretical                     | Lactation                                          |
| 11   | Theoretical                     | The factors effecting lactation                    |
| 12   | Theoretical                     | Factors affecting of lactation                     |
| 13   | Theoretical                     | Dry period and service period                      |
| 14   | Theoretical                     | Udder and teat defects                             |
| 15   | Theoretical                     | Hygiene of the udder                               |
| 16   | Final Exam                      | Final exam                                         |

### Workload Calculation

| Activity            | Quantity | Preparation | Duration | Total Workload |
|---------------------|----------|-------------|----------|----------------|
| Lecture - Theory    | 14       | 0           | 2        | 28             |
| Assignment          | 2        | 0           | 10       | 20             |
| Reading             | 1        | 0           | 30       | 30             |
| Midterm Examination | 1        | 5           | 1        | 6              |



|                                         |   |    |   |    |
|-----------------------------------------|---|----|---|----|
| Final Examination                       | 1 | 10 | 1 | 11 |
| Total Workload (Hours)                  |   |    |   | 95 |
| [Total Workload (Hours) / 25*] = ECTS   |   |    |   | 4  |
| *25 hour workload is accepted as 1 ECTS |   |    |   |    |

### Learning Outcomes

|   |                                                                 |
|---|-----------------------------------------------------------------|
| 1 | Knows the udder development and morphological structure.        |
| 2 | Makes cleaning and disinfection of the udder.                   |
| 3 | Knows the lactation curve and it's traits.                      |
| 4 | Be taken dry period of cows and can apply caring of dry period. |
| 5 | Makes milk controls.                                            |

### Programme Outcomes (Animal Science (Veterinary Medicine) Master)

|    |                                                                                                                                                                                                                                                                                                                                          |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Knows basic principles of animal rearing and breeding.                                                                                                                                                                                                                                                                                   |
| 2  | Knows physiological and morphological traits of farm animals. He/she can achieve a successful herd management by means of transferring his/her knowledge to the rural area.                                                                                                                                                              |
| 3  | Knows management of the animals and can take required measurements in the farm. He/She controls the productivity in the farm and keeps all farm records.                                                                                                                                                                                 |
| 4  | Knows selection and culling methods.                                                                                                                                                                                                                                                                                                     |
| 5  | He/She can involve in all stages of production in the farm. Knows how to establish and manage of farm enterprises. He/She can help to the entrepreneurs who will enter the farm business.                                                                                                                                                |
| 6  | He/She can detect and eliminate hereditary defects and problems by using his/her basic genetic knowledge.                                                                                                                                                                                                                                |
| 7  | Knows production traits due to his/her knowledge about hereditary principles. He/She can achieve heifer selection and determine breeding strategies for maximum production.                                                                                                                                                              |
| 8  | He/She can involve as an expert in scientific researches, breeding programs and judicial issues with his/her knowledge about race determination, parenthood tests, blood groups etc.                                                                                                                                                     |
| 9  | Knows how to reach resources and knows selection criterions of scientific researches. He/She can systematically present data. Knows statistical concepts and how to can get data, and present those as figures and tables and how to comment them. Knows different statistical methods. He/She can design a topic as a scientific paper. |
| 10 | Knows animal behaviours. Knows legal directives about animal welfare and can design some facilities such as housing, feeding, transferring and slaughtering processes according to these directives.                                                                                                                                     |

### 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  | 1  | 1  | 1  | 1  |
| P2  | 3  | 3  | 3  | 3  | 3  |
| P3  | 4  | 4  | 4  | 4  | 4  |
| P5  | 3  | 3  | 3  | 3  | 3  |
| P10 |    | 2  | 1  |    | 1  |

