# GAMETOGENESIS, FERTILIZATION AND IMPLANTATION

| | | |
|---|---|---|
| 1 | Course Title: | GAMETOGENESIS, FERTILIZATION AND IMPLANTATION |
| 2 | Course Code: | VDT 6001 |
| 3 | Type of Course: | Compulsory |
| 4 | Level of Course: | Third Cycle |
| 5 | Year of Study: | 1 |
| 6 | Semester: | 1 |
| 7 | ECTS Credits Allocated: | 5.00 |
| 8 | Theoretical (hour/week): | 1.00 |
| 9 | Practice (hour/week): | 0.00 |
| 10 | Laboratory (hour/week): | 0 |
| 11 | Prerequisites: | None |
| 12 | Language: | Turkish |
| 13 | Mode of Delivery: | Face to face |
| 14 | Course Coordinator: | Yrd.Doç.Dr. BURCU ÜSTÜNER |
| 15 | Course Lecturers: | Yok |
| 16 | Contact information of the Course Coordinator: | Prof.Dr.M.Kemal SOYLU<br>U.Ü.Veteriner Fakültesi A Blok Görükle-BURSA<br>mks@uludag.edu.tr |
| 17 | Website: | |
| 18 | Objective of the Course: | To educate students who know the developing of gametes and have the knowledge about the fusion of gametes and the develapment after fusion of gametes in domestic animals |
| 19 | Contribution of the Course to Professional Development: | |
| 20 | Learning Outcomes: | |

| | | |
|---|---|---|
| | 1 | To learn the development of gonads in female and male animals |
| | 2 | To describe the development of the female and the male animals |
| | 3 | To explain the hormonal mechanism of oogenesis and spermatogenesis |
| | 4 | To understand the transport of the oocytes and the spermatozoa in the female genital tract |
| | 5 | To describe the sperm capacitation and acrosome reaction |
| | 6 | To have knowledge about the estrus cycle and ovulation |
| | 7 | To understand the fertilization, zygote formation and implantation |
| | 8 | |
| | 9 | |
| | 10 | |

| | |
|---|---|
| 21 | Course Content: |

**Course Content:**

| Week | Theoretical | Practice |
|---|---|---|
| 1 | Development of ovaries in domestic animals | |
| 2 | Development of testes in domestic animals | |
| 3 | Formation process of oogenesis | |

| | | |
|---|---|---|
| **4** | Hormonal mechanism of oogenesis | |
| **5** | Formation process of spermatogenesis | |
| **6** | Hormonal mechanism of spermatogenesis | |
| **7** | Transport of oocyte in female genital tract | |
| **8** | Transport of spermatozoa in female genital tract | |
| **9** | Sperm capacitation and acrosome reaction | |
| **10** | Estrus cycle and ovulation | |
| **11** | Fertilization | |
| **12** | Zygote formation | |
| **13** | Implantation | |
| **14** | Embryonic devevlopment and determination of gestation | |

| | | |
|---|---|---|
| **22** | Textbooks, References and/or Other Materials: | 1-Hafez ESE, Hafez B (2000): Reproduction in Farm Animals, 7th edition, Lippincott Williams & Wilkins, Baltimore, Maryland, USA.<br>2- Morrow DA (1986): Current THerapy in Theriogenology, SAunders Inc., New York, USA.<br>3- Noakes DE, Parkinson TJ, England GCW (2003): Arthur's Veterinary Reproduction and Obstetrics, Saunders Inc., New York, USA.<br>4- Gordon I (2003): Laboratory Production of Cattle Embryos, 2nd edition. CABI Publisihg, Cambridge, MA, USA. |

| Activites | Number | Duration (hour) | Total Work Load (hour) |
|---|---|---|---|
| Theoretical | 14 | 1.00 | 14.00 |
| Assesment | | | |
| Practicals/Labs | 0 | 0.00 | 0.00 |
| Self study and preperation | 14 | 4.00 | 56.00 |
| Homeworks | 0 | 0.00 | 0.00 |
| Projects | 0 | 0.00 | 0.00 |
| Field Studies | 0 | 0.00 | 0.00 |
| Midterm exams | 0 | 0.00 | 0.00 |
| Others | 0 | 0.00 | 0.00 |
| Final Exams | 1 | 20.00 | 20.00 |
| Total Work Load | | | 90.00 |
| Total work load/ 30 hr | | | 3.00 |
| ECTS Credit of the Course | | | 5.00 |

**23** Measurement and Evaluation Techniques Used in the Course

**24** **ECTS / WORK LOAD TABLE**

**25** **CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS**

| | PQ1 | PQ2 | PQ3 | PQ4 | PQ5 | PQ6 | PQ7 | PQ8 | PQ9 | PQ10 | PQ11 | PQ12 | PQ13 | PQ14 | PQ15 | PQ16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ÖK1** | 3 | 5 | 5 | 5 | 3 | 3 | 5 | 4 | 5 | 3 | 2 | 0 | 0 | 0 | 0 | 0 |
| **ÖK2** | 3 | 5 | 3 | 4 | 3 | 4 | 5 | 4 | 5 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| **ÖK3** | 5 | 5 | 4 | 4 | 3 | 3 | 4 | 3 | 5 | 3 | 2 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ÖK4** | 3 | 5 | 5 | 4 | 3 | 2 | 2 | 3 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| **ÖK5** | 2 | 5 | 4 | 3 | 2 | 2 | 4 | 4 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| **ÖK6** | 5 | 3 | 2 | 5 | 4 | 4 | 5 | 5 | 5 | 4 | 3 | 0 | 0 | 0 | 0 | 0 |
| **ÖK7** | 3 | 5 | 2 | 5 | 4 | 4 | 4 | 4 | 4 | 3 | 1 | 0 | 0 | 0 | 0 | 0 |

**LO: Learning Objectives PQ: Program Qualifications**

| **Contribution Level:** | **1 very low** | **2 low** | **3 Medium** | **4 High** | **5 Very High** |
|---|---|---|---|---|---|