# GAZIANTEP ISLAMIC SCIENCE AND TECHNOLOGY UNIVERSITY

## GRADUATE EDUCATION INSTITUTE

## COURSE CONTENT FORM

| | **COURSE INFORMATION** | | | | | |
|---|---|---|---|---|---|---|
| **Curriculum year** | **Course name** | *Code* | *Semester* | *T+P Hour* | *Credit* | *ECTS* |
| | General Human Embryology | | II | 3+0 | 3 | 6 |

| | |
|---|---|
| **Language of the Course** | Turkish |
| **Level of the Course** | Master's Degree |
| **Department/Program** | Histology-Embryology |
| **Education Type** | Formal |
| **Type of Course** | Compulsory courses |
| **Prerequisite Courses** | No |
| **Department/Program coordinator** | Prof. Dr. Mehmet Yüncü |
| **Course Supervisor(s)** | Asst. Prof. Üyesi Mustafa Öztatlıcı |
| **Course Assistants** | Asst. Prof. Çiğdem Karaca<br>Asst. Prof. Ayşegül Burçin Yıldırım |
| **Course Objectives** | Teaching the basic concepts of general human embryology such as spermatogenesis, oogenesis, ovulation, fertilization, early embryo development, non-embryonic formations. |
| **Course Content** | Explanation of embryological terms; histological structure of ovum and spermium; spermatocytogenesis and oogenesis; ovarian and uterine cycle; ovulation, fertilization, segmentation, implantation, gastrulation; differentiation of embryo and embryonal leaves; bilaminar germ disc, trilaminar germ disc; embryonal and fetal periods; prenatal diagnosis methods, non-embryonic formations, placenta, umbilical cord, amniotic membrane and fluid. |
| **Teaching-Learning Methods and Techniques used in the Course** | Lecture (Presentation) method, student lecture presentations, Discussing scientific articles, Homeworks. |
| **Course Internship Status** | No |

| Course Learning Outcomes |
|---|
| 1. Explains the histological structures of male and female germ cells. Comprehends spermatogenesis and oogenesis processes, ovulation and fertilization processes. |
| 2. Learns the early developmental stages of the fertilized zygote; learns segmentation, implantation, gastrulation. |
| 3. Learns the differentiation of embryo and embryonal leaves, formation and development of bilaminar and trilaminar germ discs. Explains the embryonal period covers the first eight weeks. |
| 4. Learns non-embryo formations, placenta, umbilical cord, amniotic membrane and fluid, chorion membrane and fluid. Gains knowledge about IVF practices and IVF laboratory techniques. |

| COURSE FLOW | |
|---|---|
| **Week** | **Topics** |
| 1 | Structures of oocyte and spermatozoa |
| 2 | Spermatogenesis |
| 3 | Ovarian and uterine cycle |
| 4 | Oogenesis and Ovulation |
| 5 | Ovulation and Fertilization |
| 6 | Segmentation, implantation |
| 7 | Midterm exam |
| 8 | Gastrulation, Embryonic disc |
| 9 | Embryonic leaves |
| 10 | Embryonic period |
| 11 | Fetal period |
| 12 | Prenatal diagnostic methods |
| 13 | Non-embryonic formations |
| 14 | IVF applications and IVF laboratory techniques |
| 15 | Semester final exam |

| RESOURCES |
|---|
| - Moore K.L, Persaud T.V.N, Torchia M.G: The Developing Human. Elsevier-Saunders, 2011<br>- Sadler T.W: Langman's Medical Embryology. Lippincott Williams and Wilkins. 2011<br>- Schoenwolf G.C: Larsen'S Human Embryology. Churchill Livingstone. 2014<br>- Ross M.H, Pawlina W: Histology, A Text and Atlas. Lippincott Williams and Wilkins. 2011<br>- Junqueira L.C: Basic Histology. McGraw-Hill Medical. 2013<br>- YÜNCÜ M. Histobul. Çukurova Nobel Tıp Kitapevi, 2014 |

| ASSESSMENT SYSTEM | | |
|---|---|---|
| **SEMESTER STUDIES** | **number** | **PERCENTAGE OF CONTRIBUTION** |
| Midterm | 1 | %40 |
| Quiz | | |
| Homework | 1 | %10 |
| Attending the course | | |
| Seminar | | |
| Practice | | |
| Course Specific Internship (if applicable) | | |
| Project | | |
| Workshop | | |
| Presentation | | |
| Semester final exam | 1 | %50 |
| **Total** | 3 | %100 |
| Contribution of Midterm Studies to Success Grade | | |
| The Contribution of the Final Exam to the Success Grade | | |
| **Total** | | |

| ECTS / WORKLOAD TABLE | | | |
|---|---|---|---|
| **Activity** | **number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Duration (Including the exam week: 15x total course hours) | *15* | *3* | *45* |
| Out of Class Study Time (Pre-study, reinforcement) | *15* | *7* | *105* |

| | | | |
|---|---|---|---|
| Homework | *1* | *3* | *3* |
| Seminar | | | |
| Presentation | *3* | *4* | *12* |
| Practices | | | |
| Lab | *2* | *5* | *10* |
| Course Specific Internship (if applicable) | | | |
| Project | | | |
| Workshop | | | |
| Other (……..) | | | |
| Midterm exam | *1* | *1* | *1* |
| Quiz | | | |
| Semester final exam | *1* | *1* | *1* |
| **Total Workload** | | | *177* |
| **Total Workload / 30(s)** | | | |
| ***ECTS Credits of the Course*** | | | *6* |

**ASSOCIATION OF COURSE LEARNING OUTCOMES WITH PROGRAM OUTCOMES**

| No. | Program Learning Outcomes |
|---|---|
| **1** | Have general knowledge about the human body |
| **2** | Have detailed information about the histological structures of human tissues and organs. |
| **3** | Learns histological and histochemical techniques |
| **4** | Have detailed information about general human embryology. |
| **5** | Learn to use research lab tools and materials |
| **6** | Improves scientific article reading and evaluation proficiency |
| **7** | Can make histology laboratory applications to undergraduate students |
| **8** | Gains a general vision about basic medical sciences |
| **9** | Provides the necessary knowledge to participate in the doctoral program |
| **10** | Provides the competence to be a researcher in multidisciplinary research |

| **Learning Outcomes** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
|---|---|---|---|---|---|---|---|---|---|---|
| LO1. | 5 | 5 | 2 | 5 | 3 | 4 | 4 | 5 | 5 | 5 |
| LO2. | 5 | 5 | 2 | 5 | 3 | 4 | 4 | 5 | 5 | 5 |
| LO3. | 5 | 5 | 2 | 5 | 3 | 4 | 5 | 5 | 5 | 5 |
| LO4. | 5 | 5 | 2 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| **LO: Learning Outcomes PO: Program Outcomes** | | | | | | | | | | |
| **Contribution Level** | 1. Very Low | | 2. Low | | 3. Medium | | 4. High | | 5.Very High | |