

BIOLOGY LABORATORY II

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| 1 | Course Title: | BIOLOGY LABORATORY II |
| 2 | Course Code: | FEN1116 |
| 3 | Type of Course: | Compulsory |
| 4 | Level of Course: | First Cycle |
| 5 | Year of Study: | 1 |
| 6 | Semester: | 2 |
| 7 | ECTS Credits Allocated: | 2.00 |
| 8 | Theoretical (hour/week): | 0.00 |
| 9 | Practice (hour/week): | 0.00 |
| 10 | Laboratory (hour/week): | 2 |
| 11 | Prerequisites: | |
| 12 | Language: | Turkish |
| 13 | Mode of Delivery: | Face to face |
| 14 | Course Coordinator: | Prof. Dr. MUSTAFA ÖZKAN |
| 15 | Course Lecturers: | |
| 16 | Contact information of the Course Coordinator: | Prof. Dr. Mustafa ÖZKAN Bursa Uludağ Üniversitesi Eğitim Fakültesi Matematik ve Fen Bilimleri Bölümü Fen Bilgisi Anabilim dalı Öğretim Üyesi Tel :40683 |
| 17 | Website: | |
| 18 | Objective of the Course: | The objectives of this lesson are: To introduce the structures of the organ systems of animal organisms To explain how the organ systems of animal organisms operate |
| 19 | Contribution of the Course to Professional Development: | This course will provide students with an advanced level of theoretical, methodological and factual knowledge in the field of "Teaching Profession General Competencies" and "Professional Knowledge" in a way that includes an interrogative perspective. In addition, this course contributes to the students' ability to acquire competencies specific to the field, by enabling them to obtain advanced theoretical knowledge from the basic field of teacher training and educational sciences and the ability to use them. |
| 20 | Learning Outcomes: | |
| | 1 | The students will learn the differences between living and non-living and between plants and animals.; |
| | 2 | The students will explain and compare the classification of animals and sexual and asexual reproduction.; |
| | 3 | The students will have information about animal tissues; |
| | 4 | The students will describe feeding mechanisms and digestion in animals; |
| | 5 | The students will describe the types, structures and functions of circulation in animals.; |
| | 6 | The students will explain how and with what mechanisms animals realize gas exchange ; |
| | 7 | The students will compare and explain excretory systems and products in animals; |
| | 8 | The students will explain the nervous systems and sensory mechanisms in animals with their structure and functions; |
| | 9 | The students will explain the structure and functions of the endocrine system; |
| | 10 | The students will explain the structures and functions of support and movement systems in animals; |
| 21 | Course Content: | |

| Course Content: | | | |
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| Week | Theoretical | Practice | |
| 1 | | Laboratuvarı rules | |
| 2 | | Microscope and Parts, Measuring under the microscope | |
| 3 | | Plant cell and animal cell | |
| 4 | | Plazmolysis, deplazmolysis, turgor | |
| 5 | | Cell concept, tongue and cheek epithelial cell, frog epithelial cell | |
| 6 | | Single-layered and multi-layered epithelium cell: Single-layered cylindrical epithelium cell Mammal skin prepare, frog skin prepare | |
| 7 | | Blood tissue, blood types, | |
| 8 | | Midterm Exam | |
| 9 | | Mitosis and meiosis | |
| 10 | | Ligaments, collagen fibers Adipose tissue | |
| 11 | | Muscle tissue: smooth muscle and striated muscle, heart muscle | |
| 12 | | Bone tissue, cartilage tissue | |
| 13 | | Protista, Euglena, Plathelminthes | |
| 14 | | | |
| 22 | Textbooks, References and/or Other Materials: | Neil A. Campbell-Jane B. Reece. Biology (Çeviri Ed. Gündüz E., Demirsoy A., Türkan İ) 6. Baskı 2006, Palme Yayıncılık, Ankara. William T. Keeton, James L. Gould ve Carol Grant Gould (Çeviri Ed. Ali Demirsoy ve İsmail Türkkan) Palme Yayıncılık, Ankara. Demirsoy A. Yaşamın Temel Kuralları. Cilt I-II 2. Baskı. Hacettepe Üniversitesi Yayınları A/52. 1985, Ankara | |
| 23 | Assesment | | |
| TERM LEARNING ACTIVITIES | | NUMBER | WEIGHT |
| Midterm Exam | | 1 | 40.00 |
| Quiz | | 0 | 0.00 |
| Home work-project | | 0 | 0.00 |
| Final Exam | | 1 | 60.00 |
| Total | | 2 | 100.00 |
| Contribution of Term (Year) Learning Activities to Success Grade | | 40.00 | |
| Contribution of Final Exam to Success Grade | | 60.00 | |
| Total | | 100.00 | |
| Measurement and Evaluation Techniques Used in the Course | | Measurement and evaluation is carried out according to the principles of Bursa uludag University Associate and Undergraduate Education Regulation. | |
| 24 | ECTS / WORK LOAD TABLE | | |

| Activites | Number | Duration (hour) | Total Work Load (hour) |
|----------------------------|--------|-----------------|------------------------|
| Theoretical | 0 | 0.00 | 0.00 |
| Practicals/Labs | 14 | 2.00 | 28.00 |
| Self study and preperation | 0 | 0.00 | 0.00 |
| Homeworks | 0 | 0.00 | 0.00 |
| Projects | 0 | 0.00 | 0.00 |
| Field Studies | 0 | 0.00 | 0.00 |
| Midterm exams | 1 | 10.00 | 10.00 |
| Others | 0 | 0.00 | 0.00 |
| Final Exams | 1 | 16.00 | 16.00 |
| Total Work Load | | | 64.00 |
| Total work load/ 30 hr | | | 1.80 |
| ECTS Credit of the Course | | | 2.00 |

| 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 | 5 | 5 | 4 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 3 | 4 | 4 | 4 | 4 | 4 |
| ÖK2 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 3 | 4 |
| ÖK3 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 4 | 5 | 4 |
| ÖK4 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 5 | 5 | 5 |
| ÖK5 | 4 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 4 | 3 | 5 | 4 |
| ÖK6 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 5 | 4 | 5 | 5 | 5 | 4 | 4 | 4 | 5 |
| ÖK7 | 4 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 5 | 5 | 4 | 4 | 4 | 4 |
| ÖK8 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 4 |
| ÖK9 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| ÖK10 | 5 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 4 | 5 | 5 | 5 | 4 |
| LO: Learning Objectives PQ: Program Qualifications | | | | | | | | | | | | | | | | |
| Contribution Level: | 1 very low | | | 2 low | | | 3 Medium | | | 4 High | | | 5 Very High | | | |