# THE CELL

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| **1** | Course Title: | THE CELL | |
| **2** | Course Code: | THE5001 | |
| **3** | Type of Course: | Compulsory | |
| **4** | Level of Course: | Second Cycle | |
| **5** | Year of Study: | 1 | |
| **6** | Semester: | 1 | |
| **7** | ECTS Credits Allocated: | 3.00 | |
| **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: | Prof. Dr. ZEHRA MİNBAY | |
| **15** | Course Lecturers: | Prof. Dr. F. Zehra MİNBAY<br>Prof. Dr. Semiha ERSOY<br>Dr. Öğr. Üyesi Duygu GÖK YURTSEVEN | |
| **16** | Contact information of the Course Coordinator: | zminbay@uludag.edu.tr<br>(224) 295 40 64<br>Uludağ Üniversitesi Tıp Fakültesi Histoloji ve Embriyoloji AD 16059 Nilüfer Bursa | |
| **17** | Website: | | |
| **18** | Objective of the Course: | The purpose is to provide students with an understanding of eukaryotic cell structure and function. It also provides students with an appreciation of the interaction of cells within and among the various tissues and organ systems. Such an understanding will lead to a better comprehension of the processes that occur in pathology and pathophysiology. | |
| **19** | Contribution of the Course to Professional Development: | This course is important in terms of gaining basic knowledge within the scope of  in master degree education. | |
| **20** | Learning Outcomes: | | |
| | | **1** | Perceive the inseparability of structure and function in living organisms. |
| | | **2** | Know the names and functions of the various structural components of cells. |
| | | **3** | Know the important subunits of each cellular component and the relationship of each subunit to the component's function. |
| | | **4** | Name the general and specialized functions of cells, and know the role of the various cellular components in each function. |
| | | **5** | Recognize a cell's structural components in a light or electron photomicrograph and from this predict the cell's function(s). |
| | | **6** | Predict which structures will be present in a cell from its function. |
| | | **7** | Predict the functional deficit(s) that would occur in a cell as a result of specific structural aberrations. |
| | | **8** | Predict the cell component(s) most likely to be involved in a particular functional deficit. |

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| | | **9** | Understand and give examples of cell differentiation. |
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| **21** | Course Content: | | |
| | **Course Content:** | | |
| Week | Theoretical | | Practice |
| **1** | Introduction | | |
| **2** | Cell membranes I | | |
| **3** | Cell membranes II | | |
| **4** | Mitochondria | | |
| **5** | Ribosomes | | |
| **6** | Endoplasmic reticulum | | |
| **7** | Golgi apparatus | | |
| **8** | Lysosomes, proteasomes, and peroxisomes | | |
| **9** | Microfilaments, microtubules, and intermediate filaments | | |
| **10** | Cell nucleus I | | |
| **11** | Cell nucleus II | | |
| **12** | Cell cycle | | |
| **13** | Mitosis | | |
| **14** | Programed cell death | | |
| | | | |
| **22** | Textbooks, References and/or Other Materials: | | 1. Kierszenbaum AL, Tres LL. Histology and Cell Biology. 4rd edition. Philadelphia: Saunders; 2016.<br>2. Ovalle WK, Nahirney PC. Netter's Essential Histology. 2nd edition. Philadelphia: Saunders; 2013.<br>3. Pawlina W. Histology. A Text and Atlas. 7th edition. Baltimore: Wolters Kluwer Health; 2016.<br>4. Mescher AL. Junqueira's Basic Histology, 15th edition, New York: Lange; 2018.<br>5. Young B, ODowd G, Woodford P. Wheaters Functional Histology: A Text and Colour Atlas. 6th edition. Philadelphia: Churchill&Livingstone 2014. |
| **23** | Assesment | | |
| **TERM LEARNING ACTIVITIES** | | **NUMBER** | **WEIGHT** |
| Midterm Exam | | 0 | 0.00 |
| Quiz | | 4 | 20.00 |
| Home work-project | | 0 | 0.00 |
| Final Exam | | 1 | 80.00 |
| Total | | 5 | 100.00 |
| Contribution of Term (Year) Learning Activities to Success Grade | | | 20.00 |
| Contribution of Final Exam to Success Grade | | | 80.00 |
| Total | | | 100.00 |
| Measurement and Evaluation Techniques Used in the Course | | | Measurement and evaluation are performed according to the Rules & Regulations of Bursa Uludağ University on Undergraduate Education. |
| **24** | **ECTS / WORK LOAD TABLE** | | |

| Activites | Number | Duration (hour) | Total Work Load (hour) |
|---|---|---|---|
| Theoretical | 14 | 1.00 | 14.00 |
| Practicals/Labs | 0 | 0.00 | 0.00 |
| Self study and preperation | 14 | 3.00 | 42.00 |
| 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 | 4 | 2.00 | 8.00 |
| Final Exams | 1 | 20.00 | 20.00 |
| Total Work Load | | | 84.00 |
| Total work load/ 30 hr | | | 2.80 |
| ECTS Credit of the Course | | | 3.00 |

| 25 | CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS | | | | | | | | | | | | | | | |
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| | **PQ1** | **PQ2** | **PQ3** | **PQ4** | **PQ5** | **PQ6** | **PQ7** | **PQ8** | **PQ9** | **PQ10** | **PQ11** | **PQ12** | **PQ13** | **PQ14** | **PQ15** | **PQ16** |
| **ÖK1** | 5 | 1 | 1 | 2 | 1 | 5 | 2 | 5 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| **ÖK2** | 5 | 1 | 1 | 2 | 1 | 5 | 2 | 5 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| **ÖK3** | 5 | 1 | 1 | 2 | 1 | 5 | 2 | 5 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| **ÖK4** | 5 | 1 | 1 | 2 | 1 | 5 | 2 | 5 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| **ÖK5** | 5 | 1 | 1 | 2 | 1 | 5 | 2 | 5 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| **ÖK6** | 5 | 1 | 1 | 2 | 1 | 5 | 2 | 5 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| **ÖK7** | 5 | 1 | 1 | 2 | 1 | 5 | 2 | 5 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| **ÖK8** | 5 | 1 | 1 | 2 | 1 | 5 | 2 | 5 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| **ÖK9** | 5 | 1 | 1 | 2 | 1 | 5 | 2 | 5 | 4 | 4 | 0 | 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** | | | | | | |