

**ATILIM UNIVERSITY**  
**SCHOOL OF MEDICINE**  
**2025-2026 ACADEMIC YEAR / FALL TERM**

<b>MED 325</b>	<b>Experimental Medicine</b> <b>Instructor: Assist. Prof. Dr. Atakan TEVLEK</b>
<b>TIME (Weeks/Hours)</b>	<b>TOPICS</b>
25 September 2025 15:30-17:20	Introduction to Experimental Medicine: Definitions, Importance, and Scope Lecture Hall: C004
2 October 2025 15:30-17:20	Scientific Research Process and Principles of Experimental Design Lecture Hall: C004
9 October 2025 15:30-17:20	Ethical Principles in Preclinical Research and the 3R Rule Lecture Hall: C004
16 October 2025 15:30-17:20	Introduction to Cell Culture: Basic Principles Lecture Hall: C004
23 October 2025 15:30-17:20	In Vitro Cell Culture Models: Model Selection and Implementation Principles Lecture Hall: C004
30 October 2025	<b>Committee Exam Week: No Classes</b>
6 November 2025 15:30-17:20	2D and 3D Cell Culture Models: Organoids and Spheroids Lecture Hall: C004
13 November 2025 15:30-17:20	In Vivo Animal Models: Model Organism Selection and Implementation Lecture Hall: C004
20 November 2025 15:30-17:20	Genetically Modified Animal Models: Transgenic and Knock-out Models Lecture Hall: C004
27 November 2025 15:30-17:20	<b>Application I: Evaluation of Apoptosis and Necrosis in Cell Culture Using Acridine Orange/Propidium Iodide (AO/PI) Dual Staining</b> Lecture Hall: C004

4 December 2025 15:30-17:20	Genomic Techniques: DNA/RNA Isolation, PCR, RT-qPCR, Gene Expression, Gene Editing (CRISPR-Cas9), and NGS Applications Lecture Hall: C004
11 December 2025 15:30-17:20	Proteomic Techniques: Protein Isolation, Western Blot, ELISA, Mass Spectrometry (LC-MS/MS), and Data Interpretation Lecture Hall: C004
18 December 2025 15:30-17:20	Translational Medicine: From Bench to Bedside Lecture Hall: C004
25 December 2025 15:30-16:20	<b>Application II:</b> Functional Analysis of a Gene, miRNA, or Protein Using NCBI or Ensembl Database Lecture Hall: C004
25 December 2025 16:30-17:20	Current Advances and Student Project Presentations I – Sample Experimental Designs Lecture Hall: C004
1 January 2026	<b>HAPPY NEW YEAR</b>
8 January 2026 15:30-17:20	<b>FINAL EXAM</b> Lecture Hall: C004