

ATILIM UNIVERSITY
SCHOOL OF MEDICINE
2026-2027 Academic Year, Fall Term
Elective Course for Phase 3 Students
MED 313 Protein Analysis & Proteomics
Instructor: Prof. Dr. Nedret KILIÇ

Lecture Dates Lecture Hall: C-403	TOPICS
17.09.2026 15:30-17:20	Introduction to Proteomics: The proteome, The tasks in proteomics, Challenges in proteomics, Proteomics in relation to other -omics and system biology
24.09.2026 15:30-17:20	Separation and detection technologies-1: Introduction to experimental strategies in proteomics, Sample preparation
01.10.2026 15:30-17:20	Separation and detection technologies-2: Gel-based technologies/2D gels, Gel-based separation, Visualization and analysis of proteins/peptides in gels
08.10.2026 15:30-17:20	Separation and detection technologies-3: Gel-free separation technologies, HPLC, RPLC, IEC
15.10.2026 15:30-17:20	Separation and detection technologies-4: CE, SEC, Optical detectors
22.10.2026 15:30-17:20	Basic principles of mass spectrometry for proteomics
29.10.2026	REPUBLIC DAY – Official Holiday
05.11.2026 15:30-17:20	MIDTERM EXAM
12.11.2026 15:30-17:20	Mass analyzers and mass spectrometers-1
19.11.2026 15:30-17:20	Mass analyzers and mass spectrometers-2
26.11.2026 15:30-17:20	Analysis and interpretation of mass spectrometric and proteomic data: Analysis of MS data

03.12.2026 15:30-17:20	Analysis and interpretation of mass spectrometric and proteomic data: Analysis of MS/MS data
10.12.2026 15:30-17:20	Quantification of LC MS and MS/MS data from complex samples
17.12.2026 15:30-17:20	Novel strategies in proteomics: Imaging mass spectrometry
24.12.2026 15:30-17:20	Quantitative proteomics for biomarker discovery
31.12.2026 15:30-17:20	FINAL EXAM