



SAĞLIK  
BİLİMLERİ  
ENSTİTÜSÜ



**DEPARTMENT OF  
PHARMACEUTICAL TECHNOLOGY  
GRADUATE PROGRAMS**

# ACADEMIC STAFF

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- [Assist. Prof. Dr. Duygu YILMAZ USTA](#)
- [Res. Assist. Dr. Sinem SAAR](#)
- [Res. Assist. Dr. Ayşegül YILDIZ](#)
- [Res. Assist. Dr. Seval OLĞAC](#)
- [Res. Assist. Şeyma EDİSAN](#)
- [Res. Assist. Nihal Tuğçe ÖZAKSUN](#)
- [Res. Assist. Hilalnur İlayda BİÇİCİ](#)
- [Res. Assist. Gözde BEBEK](#)



# FIELDS OF RESEARCH-1



- Development of conventional formulations for therapeutic or cosmetic purposes (solutions, suspensions, emulsions, semi-solid preparations, gels, powders, tablets, capsules, parenteral preparations, transdermals, etc.)
- Development of micro- or nano-sized drug delivery systems for therapeutic or cosmetic purposes (micro/nanosuspensions, micro/nanoemulsions, micro/nanoliposomes, solid lipid nanoparticles, nanofibers, nanotubes, micelles, etc.)
- Determination of physicochemical properties of conventional formulations and nano-sized drug delivery systems, quality control, and stability studies
- Development of sustained release dosage forms and determination of their properties (matrix structures, transdermal systems, osmotic pressure controlled systems, etc.)
- Dissolution and in vitro release kinetics of drug delivery systems
- Increasing oral drug absorption and gastrointestinal drug permeability
- Bioavailability/Bioequivalence studies
- Biopharmaceutics classification systems (BCS)
- Carrying out skin penetration studies, modeling the permeation of drugs across the skin, using artificial neural networks in skin penetration
- Dermal microdialysis and dermatopharmacokinetics
- Iontophoresis
- Carbon nanotubes as drug delivery systems and their permeation across the skin



# FIELDS OF RESEARCH-2



- Design and development of peptide/protein formulations, their quality control and efficacy tests
- Mucoadhesion and bioadhesive drug delivery systems
- Design and development of drug formulations administered via transmucosal (oral, nasal, vaginal) route
- Pharmaceutical Biotechnology
- Drug permeability studies in cell cultures (Caco-2, MDCK, MCF7, MDA231)
- Studies on blood-brain barrier
- In vitro–in vivo correlation
- Quality by design (QbD)
- Targeting – colon-specific drug systems
- Development of drug delivery systems administered via the pulmonary route
- GMP studies
- Patent (for medicines, medical devices and cosmetic products)
- Cosmetology
- Design and quality control of dosage forms used in veterinary medicine
- Regulations on pharmaceutical and cosmetic products
- Stability testing of pharmaceutical and cosmetic products
- Wound healing and wound dressing products



# FIELDS OF RESEARCH-3



- Solutions to the challenging problems in the pharmaceutical industry
- Research and Development (R&D) and Scale-up
- Quality management in pharmaceutical manufacturing
- Intellectual and industrial property rights in the pharmaceutical and chemical industry
- Drug licensing
- Analytical process technology and quality by design
- Pharmacoconomics
- Quality control and instrumental analysis methods for pharmaceuticals
- Evaluation of Bioavailability/Bioequivalence of drug formulations



# FIELDS OF RESEARCH-4



- Structures and formulations of cosmetic products
- Manufacturing technologies
- Advanced delivery systems in cosmetics
- Dermocosmetic products
- Regulation and legislation for cosmetic products
- GMP rules, efficacy testing of cosmetic products
- Cosmetic dermatology
- Development of new delivery systems such as nanoemulsions, microemulsions, nanoparticles and liposomes for cosmetic purposes



# RESEARCH FACILITIES-1 (LABORATORY INFRASTRUCTURE)



- Tablet Pressing Machine
- Rotary Tablet Pressing Machine
- Tablet Disintegration Tester
- Tablet Hardness Tester
- Friabilator
- Granulator
- V Type Mixer
- IR Moisture Analyzer
- Distilled Water Device
- Bidistilled Water Device
- HPLC
- UPLC
- UV-Vis Spectrophotometer
- Flow-Through Cell Dissolution Tester
- Dissolution Tester
- Texture Analyzer
- Particle Size Analyzer
- Viscometer
- AFM Device
- Differential Scanning Calorimetry (DCS)
- Differential Thermal Analyzer (DTA)
- Zeta Potential and Particle Size Analyzer
- Nano Spray Dryer
- Electrospinning Device
- Lyophilizer



# RESEARCH FACILITIES-2 (LABORATORY INFRASTRUCTURE)



- Heated Water Baths
- Ultrasonic Water Bath
- Rotary Evaporator
- Ultrasonic Homogenizer
- High Pressure Homogenizer
- Air Conditioning Cabinet
- Peristaltic Pump
- Vacuum Pump
- Heating Cabinet
- Digital Precision Scales
- Mechanical Mixers
- Magnetic Stirrers
- pH meter
- Deep freeze
- Light Microscope
- Laminar Flow Cabinet
- Centrifuge
- High Speed Centrifuge
- (Ultracentrifuge)
- Rotavapor
- TEER Device



# QUOTA NUMBERS AND PROGRAM ADMISSION REQUIREMENTS FOR SPRING SEMESTER 2025/2026



SAĞLIK  
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ENSTİTÜSÜ

QUOTA			SCORE TYPE	PROGRAM TYPE	SCORE CRITERIA		
MASTER'S DEGREE	DOCTORATE	FOREIGN NATIONAL MA/DR.			ALES SCORE/ *TUS*	FOREIGN LANGUAGE SCORE	GRADUATION GRADE (UNDERGRADUATE / MA)
4			E.W./NUM/V	MASTER'S DEGREE	60	55	2.5/4
	4		E.W./NUM/V	DR.	60	60	2.75/4

## UNDERGRADUATE PROGRAMS ADMITTING STUDENTS

DOCTORATE	2850	PHARMACEUTICAL TECHNOLOGY
	2544	PHARMACY (5 YEARS)
MASTER'S DEGREE	2850	PHARMACY



# QUOTA NUMBERS AND PROGRAM ADMISSION REQUIREMENTS FOR FALL SPRING 2025/2026 INDUSTRIAL PHARMACY PROGRAM



SAĞLIK  
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ENSTİTÜSÜ

QUOTA			SCORE TYPE	PROGRAM TYPE	SCORE CRITERIA		
MASTER'S DEGREE	DOCTORATE	FOREIGN NATIONAL MA/DR.			ALES SCORE/ *TUS*	FOREIGN LANGUAGE SCORE	GRADUATION GRADE (UNDERGRADUATE / MA)
2	-	-	E.W./NUM/V	MASTER'S DEGREE	60	55	2.5/4

UNDERGRADUATE PROGRAMS ADMITTING STUDENTS		
MASTER'S DEGREE	2544	PHARMACY
	3749	CHEMICAL ENGINEERING
	3759	CHEMIST
	2490	DENTIST
	2124	BIOLOGY
	5370	MEDICINE
	5719	VETERINARY MEDICINE



# QUOTA NUMBERS AND PROGRAM ADMISSION REQUIREMENTS FOR FALL SPRING 2025/2026 COSMETOLOGY PROGRAM



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QUOTA			SCORE TYPE	PROGRAM TYPE	SCORE CRITERIA		
MASTER'S DEGREE	DOCTORATE	FOREIGN NATIONAL MA/DR.			ALES SCORE/ *TUS*	FOREIGN LANGUAGE SCORE	GRADUATION GRADE (UNDERGRADUATE / MA)
-	-	1	E.W./NUM.	MASTER'S DEGREE	-	-	2.5/4

## UNDERGRADUATE PROGRAMS ADMITTING STUDENTS

MASTER'S DEGREE	2544	PHARMACY
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