



TEHRAN UNIVERSITY  
OF  
MEDICAL SCIENCES

PROGRAM **MATRIX**  
Non-Degree Programs

2016

## ABOUT TUMS

Tehran University of Medical Sciences is the oldest and most well-known medical center in Iran. It is one of the country's top research universities which accepts applications from the most qualified students, has the largest schools of medicine, dentistry, pharmacy, rehabilitation, allied medical sciences, public health, and nursing and midwifery in Iran, plus a virtual school, as well as over 80 specialized research centers such as Science and Technology in Medicine, Rheumatology, Digestive Disease, Skin Diseases and Leprosy, Trauma, Hematology and Oncology, Cardiovascular Diseases, Endocrinology and Metabolism, Reproductive Health, Urology, Immunology, and Asthma and Allergy.

In order to meet individual wishes and requirements of various international students from different countries, TUMS offers several types of non-degree programs varying in duration, from one week up to one year. Upon finishing these programs, students will be awarded a certificate.

Students can apply for the following non-degree programs offered by our university:

- Post-Doc Opportunities
- Research Fellowship (Research Internship/Research Assistantship)
- Training Programs (Less than a year)
- Medical Electives (Clinical Rotations/Internships)
- Summer Programs



## Post-Doc Opportunities

All TUMS schools and research centers offer a wide range of courses which are suitable for both academics and postgraduate students. Below are a few of the available research opportunities:

### School of Advanced Technologies in Medicine

- Neuroscience
- Addiction Studies
- Medical Nanotechnology
- Molecular Medicine
- Tissue Engineering
- Medical Biotechnology

### School of Medicine

*Department of Medical Physics and Biomedical Engineering*

- Developing Advanced Image Processing and Analysis Algorithms for Brain Tumors

### Eye Research Center

- Various subjects

### School of Traditional Medicine

*Department of Traditional Medicine*

- Integrative Oncology
- Integrative Neurology

You can find more comprehensive information on our website, where you will have access to our schools' and research centers' websites as well. Please visit:

<http://gsia.tums.ac.ir/en>

## Research Fellowship

(Research Internship/Research Assistantship)

### School of Medicine

*Department of Medical Physics and Biomedical Engineering*

- Evaluation of fMRI Data Analysis Methods in Presurgical Planning

*Department of Microbiology*

- Community and Nosocomial Infections
- HIV Latency and Pathogenesis
- Microbial Drug Resistance
- Molecular Epidemiology
- Mycobacterium Tuberculosis and Vaccine Development
- Rapid Diagnostic of Microbial Pathogens

### Immunology, Asthma and Allergy Research Institute (IAARI)

- Clinical Immunology (six to twelve months)

## Training Programs

Various training programs are offered by TUMS schools. The duration of these programs differs from less than a week up to twelve months. Students can choose specific courses from the programs offered. Other training programs can and may be reviewed and arranged as per the request of applicants.

### School of Advanced Technologies in Medicine

- Medical Application of Nanostructures
- Method of Preparation and Characterization of Nanostructures
- Medical Biotechnology
- Advances in Tissue Engineering
- Neurosciences
- Molecular Diagnosis (Genomics, Transcriptomics, Proteomics)





### **School of Allied Medical Sciences**

#### *Department of Hematology & Blood Transfusion*

- Stem Cells
- Cell Culture
- PCR
- RT-PCR
- Cloning

#### *Department of Medical Laboratory Sciences*

- Freeze & Refreeze of Sperm, Ovule & Fetus

### **School of Dentistry**

- Bleaching
- Dental Equipment Technician
- Endodontics Surgery
- Implantology
- Laser
- Microscopic Endodontics
- Oral and Maxillofacial Radiology Technician

## School of Medicine

### *Department of Anatomy*

- Education in Anatomy

### *Department of Biochemistry*

- Biochemistry

### *Department of Pharmacology*

- Pharmacology
- Toxicology

### *Department of Cardiology*

- Endovascular Peripheral Vessel Intervention

### *Department of Dermatology*

- Procedural Dermatology

### *Department of ENT*

- Temporal Bone Dissection, Ear Surgery

### *Department of Physiology*

- Physiology
- Sport Physiology

### *Department of Medical Physics and Biomedical Engineering*

- Clinical Application of fMRI and DTI
- MRI-Molecular Imaging (MRMI)
- Theoretical and Practical Training in MRI (a basic course on MR Physics for technologists and radiologists)
- Theoretical and Practical Training in MRI (an advanced course on MR Physics for technologists and radiologists)

- Theoretical and Practical Training in MRI (an intermediate course on MR Physics for technologists and radiologists)

### *Department of Anesthesiology Critical Care and Pain Management*

- Critical Care
- Pain Management

### *Department of General Surgery*

- Breast Surgery
- Laparoscopic Surgery
- Vascular and Endovascular Surgery
- Cancer Surgery

### *Department of Nuclear Medicine*

- Nuclear Cardiology for Physicians
- Nuclear Cardiology for Technologists
- Preceptorships in Cardiac SPECT

### *Department of Obstetrics and Gynecology*

- Diagnostic & Operative Laparoscopy
- Diagnostic Hysteroscopy
- Observational IVF, ART
- Operative Hysteroscopy

### *Department of Occupational Medicine*

- Occupational Lung Disease and PFT
- Occupational Medicine
- Sleep Disorder and Polysomnography

A hand holding a magnifying glass over a yellow background with a stethoscope. The magnifying glass is held over the text area, and the stethoscope is visible at the bottom left.

#### *Department of Ophthalmology*

- Cataract Surgery (Phacoemulsification)
- Ocular Surface
- Keratoplasty
- Refractive Surgery
- Contact Lens (& Keratoconus)
- Ocular Trauma and Emergency Ophthalmology
- Glaucoma
- Vitreo-Retinal Surgery
- Electrophysiology
- ROP
- Strabismus
- Orbit and Oculoplasty
- Neuro-Ophthalmology
- Ocular Oncology

#### *Department of Radiation Oncology*

- Radiation Oncology
- Radiotherapy Physics

#### *Department of Microbiology (Bacteriology and Virology)*

- Theoretical and Practical Training in Microbiology for Students of Medicine and Dentistry
- Theoretical and Practical Training in Microbiology for M.Sc. and Ph.D. Students

## School of Nursing and Midwifery

- Critical Care Nursing
- Emergency Nursing Care
- Health Care Entrepreneurship
- Maternal & Child Health Care
- Nursing Care in Neonatal Intensive Care Unit and Pediatric Care Units
- Qualitative Research

## School of Nutritional Sciences and Dietetics

- Nutritional Sciences
- Public Health in Nutrition

## School of Public Health

- Bacteriology
- Biostatistics
- Disaster in Emergency
- Environmental Health Engineering
- Epidemiology
- Ergonomics
- Health & Food Safety
- Health Economics
- Health Education
- Health Management
- Health Policy
- Health Technology Assessment
- Immunology
- Medical Entomology and Vector Control
- Microbiology of Food
- Mycology
- Occupational Health
- Parasitology
- Virology

## Eye Research Center (ERC)

- ICO Fellowship (three months)



## School of Rehabilitation



### *Department of Audiology*

- Videonystagmography (VNG)
- Diagnosis and Management of Meniere's Disease
- Assessment and Clinical Application of Head Impulse Test in Balance System Disorders

### *Department of Optometry*

- Strabismus and Binocular Vision Anomalies

### *Department of Physiotherapy*

- Electroneurophysiology in Neuromuscular Rehabilitation

## School of Traditional Medicine



### *Department of Traditional Medicine*

- Acupuncture
- Cupping and Hijamat
- Lifestyle in Iranian Medicine
- Medical Massage
- Nutrition in Traditional Medicine

### *Department of Pharmacy in Traditional Medicine*

- Herbal Medicine

## Immunology, Asthma and Allergy Research Institute (IAARI)

- Research in Clinical Immunology (one to three months)

## Endocrinology and Metabolism Research Institute (EMRI)

- Osteoporosis Treatment and Prevention



### **Pharmaceutical Sciences Research Center (PSRC)**

- Clinical Pharmacy
- Pharmacology and Toxicology

### **Medical Imaging Center of Imam Khomeini Medical Center**

- Educational Course on Neurointervention
- Educational Course on Nonvascular Intervention
- Educational Course on Oncointervention
- Educational Course on Peripheral Vascular Intervention

### **Vali-e Asr Reproductive Health Research Center**

- Reproductive Endocrinology and Infertility

### **Cancer Institute at Imam Khomeini Medical Center**

- Basic Breast Imaging
- Advanced Breast Imaging

## **Department of Anesthesiology and Pain Medicine at Rasoul Akram Medical Center**

- Regional Anesthesia

## **Laparoscopy Training Center**

- General Laparoscopy Training Program
- Women Laparoscopy Training Program

## **Medical Electives (Clinical Rotations/Internships)**

We welcome elective medical students from other universities. This is a great opportunity to come and learn alongside TUMS medical students and enjoy the academic and social opportunities that TUMS has to offer. Available departments are listed below. Placements are arranged in 16 TUMS teaching hospitals.



## School of Medicine

- Anesthesiology
- Cardiology
- Dermatology
- Emergency Medicine
- ENT
- Family Medicine
- Forensic Medicine
- General Surgery
- Geriatrics
- Infectious Diseases
- Internal Medicine
- Neurology
- Neurosurgery
- Nuclear Medicine
- Obstetrics and Gynecology
- Occupational Medicine
- Ophthalmology
- Orthopedic Surgery
- Pathology
- Pediatrics
- Psychiatry
- Radiology
- Radiotherapy
- Sports Medicine
- Urology

## School of Nursing and Midwifery

- Community Health Nursing
- Geriatric Nursing
- Intensive Care Nursing
- Maternal & Child Health
- Medical Surgical Nursing
- Midwifery
- Pediatric Nursing and NICU
- Psychiatric Nursing
- Reproductive Health

## School of Dentistry

- Community Oral Health
- Dental Biomaterials
- Endodontics
- Oral & Maxillofacial Medicine
- Oral & Maxillofacial Pathology
- Oral & Maxillofacial Radiology
- Oral & Maxillofacial Surgery
- Orthodontics
- Pediatric Dentistry
- Periodontics
- Prosthodontics
- Restorative Dentistry

## School of Pharmacy

*Sina Hospital, Division of Critical Care Medicine and Critical Pharmacy Services*

- Clerkship in Intensive Care Medicine for Pharmacy and Medical Students



## Summer Programs

A number of schools offer specially designed summer programs. These summer programs are listed below:

### School of Dentistry

- Overview of Clinical Dentistry (in various disciplines of dentistry)
- Management in Oral Health Care Services
- Scientific Writing
- Oral and Maxillofacial Radiology Technician
- Dental Equipment Technician
- Implantology
- Laser

### School of Nursing and Midwifery

- Neonatal Critical Care
- Nursing Care in Neonatal Intensive Care Units and Pediatric Care Units
- Maternal & Child Health Care
- Emergency Nursing Care
- Nursing Informatics
- Critical Care Nursing

### School of Medicine

#### *Department of Anatomy*

- Sperm Analysis
- Dissection (Upper & Lower Limbs)
- Dissection (Thorax, Abdomen & Pelvic)
- Brain Ischemia Animal Model

#### *Department of Anesthesiology Critical Care and Pain Management*

- Acute Pain Management for Anesthesiologists
- Basic Critical Care for Anesthesiologists

### School of Traditional Medicine

#### *Department of Traditional Medicine*

- Acupuncture
- Cupping and Hijamat
- Lifestyle in Persian Medicine
- Medical Massage
- Nutrition in Traditional Medicine

#### *Department of Pharmacy in Traditional Medicine*

- Herbal Medicine

### Virtual School

- Research in Education (online program)

For more detailed and comprehensive information about our academic programs,  
please visit our website: [www.gsia.tums.ac.ir/en](http://www.gsia.tums.ac.ir/en)  
Or email us at: [admission\\_ic@tums.ac.ir](mailto:admission_ic@tums.ac.ir)



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