

## Program Title: Master of Biomedical Engineering (Bioelectric)

[Apply Here](#)

Contact: [Dr. Mansour Vali](#)

### Admission Requirements:

- Previous degree(s) in original form, along with the complete transcript of the records for all degrees translated to Persian/English by a certified translator and sealed by the Ministry of Foreign Affairs (if not in English).
  - Sc. candidates shall provide both their B.Sc. and High School Diploma
- Motivation Letter/Statement of Purpose: in which you clearly specify your major and level of interest.
- A Resume or C.V.
- Two letters of Recommendation
- Proof of Persian Language Proficiency ([Samfa Exam](#))
- A Scan of your passport-formatted Photo
- A high quality scan of the main pages of your passport

*[Selected Regulations of Master Programs \(Link\)](#)*

### Program Outline and Objectives, and Outcomes:

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### Course Plan:

#### Compensatory Courses

Course Number	Course Name	Credits
	Biomedical Eng. Internship Prerequisite	2
	Physiology Prerequisite	3
	Anatomy Prerequisite	2
	Biological Statistics	2

#### Compulsory Specialized Courses

Course Number	Course Name	Credits
	Bio-Instruments	3
	Modeling of Biological Systems	3

	Neuro-Muscular Systems Control	3
	Medical Imaging Systems	3
	Electrophysiology	3
	Biological Signal Processing (BSP)	3

All students are required to successfully pass at least four Compulsory Specialized courses.

### Elective Specialized Courses

Course Number	Course Name	Credits

All students are required to successfully pass two Elective Specialized Courses.

### Optional Courses

Course Number	Course Name	Credits
	Machine Vision	3
	Digital Signal Processing (DSP)	3
	Medical Image Processing	3
	Functional Brain Imaging Systems	3
	Sound Processing in Medical Assessment	3
	Ultrasound in Medicine	3
	Artificial Neural Networks	3
	Statistical Pattern Recognition	3
	Wearable Medical Systems	3
	Bio-Mechatronics Systems	3
	Bio-Implantable Microsystems	3
	Deep Artificial Neural Networks	3
	Stochastic Processes	3
	Machine Learning	3
	Analytics and Systems of Big Data	3
	Data Mining	3
	Evolutionary Computing	3
	Reinforcement Learning	3
	Fuzzy Systems	3

	Adaptive Control Systems	3
	Advanced Digital Signal Processing	3
	System Identification	3
	Fuzzy Control Systems	3
	Wavelet Transform and its Application	3
	Medical Robotics	3
	Predictive Control	3
	Digital and Nonlinear Control Systems	3

### **Thesis and Seminar Courses**

<b>Course Name</b>	<b>Credits</b>
MSc Seminar	2
MSc Thesis	6