

English
for the Students of
Biomedical Engineering

Dr. Siamak Najarian
Mahnaz Kargar Sohi
Roshanak Daraie

Tehran
2009/1388



The Organization for Researching and Composing
University Textbooks in the Humanities (SAMT)
The Center for Research and Development in Humanities

Table of Contents

Unit	Title	Page
1.	Electromyography	1
2.	Bioelectricity	13
3.	Blood Flow: Invasive and Noninvasive Measurement	23
4.	Electroretinography	35
5.	Ultrasound in Medicine	46
6.	Electroencephalography	57
7.	Electrocardiography	67
8.	Computerized Axial Tomography	78
9.	Biomechanics	90
10.	Bone: Mechanical Properties	100
11.	Colorimetry	109
12.	Artificial Pacemaker Unit	119
13.	Electrosurgery	128
14.	Static Electricity in Hospitals	138
15.	Biomaterials	147
16.	Endoscopes	160
	References	169

Acknowledgements

We acknowledge with gratitude the splendid cooperation, helpful suggestions, and assistance of Mr. Kianoush Amiri.

Our gratitude extends also to all our good friends and colleagues in the Biomedical Engineering Faculty, Amirkabir University of Technology.

Our special thanks go to Professor M. R. Hashemi Golpayegani for his steadfast encouragement throughout the entire project of writing this book.