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Soggetti	Biomedical engineering Radiology Regenerative medicine Tissue engineering Rehabilitation Medical ethics Biomedical Engineering/Biotechnology Imaging / Radiology Regenerative Medicine/Tissue Engineering Theory of Medicine/Bioethics Enginyeria biomèdica Radiologia Medicina regenerativa Enginyeria de teixits Ètica mèdica Llibres electrònics
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Formato	Materiale a stampa
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Chapter 1. Basic Overview of Human Physiology -- Chapter 2. Basics of Bioelectronics. Collection methods -- Chapter 3. Overview of Medical Physics -- Chapter 4. Biosensors and Transducers -- Chapter 5. Biomaterials and its medical applications -- Chapter 6.

Bioinstrumentation and its design aspects -- Chapter 7. Techniques related to disease diagnosis and therapeutics -- Chapter 8. Biosignals and its significance -- Chapter 9. Medical imaging and image processing -- Chapter 10. Pathophysiology of diseases causing physical disability -- Chapter 11. Rehabilitation engineering -- Chapter 12. Robotics and its applications -- Chapter 13. Calibration, repair and safety aspects -- Chapter 14. Medical ethics and policies -- Chapter 15. Modern diagnostics tools.

Sommario/riassunto

This book illustrates the significance of biomedical engineering in modern healthcare systems. Biomedical engineering plays an important role in a range of areas, from diagnosis and analysis to treatment and recovery and has entered the public consciousness through the proliferation of implantable medical devices, such as pacemakers and artificial hips, as well as the more futuristic technologies such as stem cell engineering and 3-D printing of biological organs. Starting with an introduction to biomedical engineering, the book then discusses various tools and techniques for medical diagnostics and treatment and recent advances. It also provides comprehensive and integrated information on rehabilitation engineering, including the design of artificial body parts, and the underlying principles, and standards. It also presents a conceptual framework to clarify the relationship between ethical policies in medical practice and philosophical moral reasoning. Lastly, the book highlights a number of challenges associated with modern healthcare technologies.