1. Record Nr. UNINA9910766895003321 Autore Seeram Euclid Titolo X-Ray Imaging Systems for Biomedical Engineering Technology: An Essential Guide / / Euclid Seeram Pubbl/distr/stampa Cham, Switzerland: ,: Springer, , [2023] ©2023 **ISBN** 3-031-46266-1 Edizione [First edition.] Descrizione fisica 1 online resource (162 pages) Disciplina 616.07572 Soggetti Radiography, Medical X-rays Biomedical engineering Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Preface -- X-Ray Imaging Systems: An Overview -- Radiation Physics at a Glance -- Computed Radiography Imaging: Principles and System

a Glance -- Computed Radiography Imaging: Principles and System
Components -- Flat-Panel Digital Radiography: Principles and System
Components -- Digital Fluoroscopy: System Components and Principles
-- Digital Image Quality Descriptors and Performance Characteristics
-- Computed Tomography: Basic Physics and Technology -- Imaging
Informatics Essentials -- Artificial Intelligence in Medical Imaging: An
Overview -- Quality Control in Diagnostic X-Ray Imaging Systems -Radiation Protection in X-Ray Imaging -- Index.

Sommario/riassunto

This book addresses X-Ray Imaging Systems intended for biomedical engineering technology students and practitioners, and deals with the major technical components of x-ray imaging modalities. These modalities include film-based imaging, digital radiography, and computed tomography. Furthermore, principles and concepts essential to the understanding of how these modalities function will be described. These include fundamental radiation physics, imaging informatics, quality control, and radiation protection considerations. X-Ray Imaging Systems for Biomedical Engineering Technology: An Essential Guide is intended for biomedical engineering technologists, who provide technical advice and services relating to digital

radiography and CT departments not only in hospitals but in private facilities as well. Students in radiological technology programs may also find this to be a useful resource.