

Physics Of Radiation Therapy Khan 4th Edition

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Physics and Radiobiology of Nuclear Medicine - Gopal B. Saha 2010-05-05

From a distinguished author comes this new edition for technologists, practitioners, residents, and students in radiology and nuclear medicine. Encompassing major topics in nuclear medicine from the basic physics of radioactive decay to instrumentation and radiobiology, it is an ideal review for Board and Registry examinations. The material is well organized and written with clarity. The book is supplemented with tables and illustrations throughout. It provides a quick reference book that is concise but comprehensive, and offers a complete discussion of topics for the nuclear medicine and radiology physician in training.

The Essential Physics of Medical Imaging - Jerold T. Bushberg 2020-11-24

Widely regarded as the cornerstone text in the field, the successful series of editions continues to follow the tradition of a clear and comprehensive presentation of the physical principles and operational aspects of medical imaging. The Essential Physics of Medical Imaging, 4th Edition, is a coherent and thorough compendium of the fundamental principles of the physics, radiation protection, and radiation biology that underlie the

practice and profession of medical imaging. Distinguished scientists and educators from the University of California, Davis, provide up-to-date, readable information on the production, characteristics, and interactions of non-ionizing and ionizing radiation, magnetic fields and ultrasound used in medical imaging and the imaging modalities in which they are used, including radiography, mammography, fluoroscopy, computed tomography, magnetic resonance, ultrasound, and nuclear medicine. This vibrant, full-color text is enhanced by more than 1,000 images, charts, and graphs, including hundreds of new illustrations. This text is a must-have resource for medical imaging professionals, radiology residents who are preparing for Core Exams, and teachers and students in medical physics and biomedical engineering.

Khan's The Physics of Radiation Therapy - John P. Gibbons 2019-08-14

A vital reference for the entire radiation oncology team, Khan's The Physics of Radiation Therapy thoroughly covers the physics and practical clinical applications of advanced radiation therapy technologies. Dr. John Gibbons carries on the tradition established by Dr. Khan in previous editions, ensuring that the 6th Edition provides state-of-the-art information for radiation

oncologists, medical physicists, dosimetrists, radiation therapists, and residents alike. This updated classic remains the most practical radiation therapy physics text available, offering an ideal balance between theory and clinical application.

Applied Physics for Radiation Oncology - Robert Stanton 1996

Radiobiology for the Radiologist - Eric J. Hall 2012-03-28

In print since 1972, this seventh edition of *Radiobiology for the Radiologist* is the most extensively revised to date. It consists of two sections, one for those studying or practicing diagnostic radiology, nuclear medicine and radiation oncology; the other for those engaged in the study or clinical practice of radiation oncology--a new chapter, on radiologic terrorism, is specifically for those in the radiation sciences who would manage exposed individuals in the event of a terrorist event. The 17 chapters in Section I represent a general introduction to radiation biology and a complete, self-contained course especially for residents in diagnostic radiology and nuclear medicine that follows the Syllabus in Radiation Biology of the RSNA. The 11 chapters in Section II address more in-depth topics in radiation oncology, such as cancer biology, retreatment after radiotherapy, chemotherapeutic agents and hyperthermia. Now in full color, this lavishly illustrated new edition is replete with tables and figures that underscore essential concepts. Each chapter concludes with a "summary of pertinent conclusions" to facilitate quick review and help readers retain important information.

Khan's Lectures: Handbook of the Physics of Radiation Therapy - Faiz M. Khan 2012-03-28

Khan's Lectures: Handbook of the Physics of Radiation Therapy will provide a digest of the material contained in *The Physics of Radiation Therapy*. Lectures will be presented somewhat similar to a PowerPoint format, discussing key points of individual chapters. Selected diagrams from the textbook will be used to initiate the discussion. New illustrations will be used, wherever

needed, to enhance the understanding of important concepts. Discussion will be condensed and often bulleted. Theoretical details will be referred to the textbook and the cited literature. A problem set (practice questions) will be provided at the end of each chapter topic.

Walter and Miller's Textbook of Radiotherapy - C. K. Bomford 2003

A comprehensive textbook of radiotherapy and related radiation physics and oncology for use by all those concerned with the uses of radiation and cytotoxic drugs in the treatment of patients with malignant diseases.

Khan's the Physics of Radiation Therapy - Faiz M. Khan 2014

This classic full-color text helps the entire radiation therapy team--radiation oncologists, medical physicists, dosimetrists, and radiation therapists develop a thorough understanding of 3D conformal radiotherapy (3D-CRT), stereotactic radiosurgery (SRS), high dose-rate remote afterloaders (HDR), intensity modulated radiation therapy (IMRT), image-guided radiation therapy (IGRT), Volumetric Modulated Arc Therapy (VMAT), and proton beam therapy, as well as the physical concepts underlying treatment planning, treatment delivery, and dosimetry.

Fundamentals of Semiconductors - Peter YU 2007-05-08

Excellent bridge between general solid-state physics textbook and research articles packed with providing detailed explanations of the electronic, vibrational, transport, and optical properties of semiconductors "The most striking feature of the book is its modern outlook ... provides a wonderful foundation. The most wonderful feature is its efficient style of exposition ... an excellent book." *Physics Today* "Presents the theoretical derivations carefully and in detail and gives thorough discussions of the experimental results it presents. This makes it an excellent textbook both for learners and for more experienced researchers wishing to check facts. I have enjoyed reading it and strongly recommend it as a text for anyone working with semiconductors

... I know of no better text ... I am sure most semiconductor physicists will find this book useful and I recommend it to them." Contemporary Physics Offers much new material: an extensive appendix about the important and by now well-established, deep center known as the DX center, additional problems and the solutions to over fifty of the problems at the end of the various chapters.

Radiation Therapy Physics - Alfred R. Smith 2014-04-18

The aim of this book is to provide a uniquely comprehensive source of information on the entire field of radiation therapy physics. The very significant advances in imaging, computational, and accelerator technologies receive full consideration, as do such topics as the dosimetry of radiolabeled antibodies and dose calculation models. The scope of the book and the expertise of the authors make it essential reading for interested physicians and physicists and for radiation dosimetrists.

Principles and Practice of Radiation Therapy - Charles M. Washington 2015-04-01

The only radiation therapy text written by radiation therapists, *Principles and Practice of Radiation Therapy*, 4th Edition helps you understand cancer management and improve clinical techniques for delivering doses of radiation. A problem-based approach makes it easy to apply principles to treatment planning and delivery. New to this edition are updates on current equipment, procedures, and treatment planning. Written by radiation therapy experts Charles Washington and Dennis Leaver, this comprehensive text will be useful throughout your radiation therapy courses and beyond. Comprehensive coverage of radiation therapy includes a clear introduction and overview plus complete information on physics, simulation, and treatment planning. Spotlights and shaded boxes identify the most important concepts. End-of-chapter questions provide a useful review. Chapter objectives, key terms, outlines, and summaries make it easier to prioritize, understand, and retain key

information. Key terms are bolded and defined at first mention in the text, and included in the glossary for easy reference.

UPDATED chemotherapy section, expansion of What Causes Cancer, and inclusions of additional cancer biology terms and principles provide the essential information needed for clinical success. UPDATED coverage of post-image manipulation techniques includes new material on Cone beam utilization, MR imaging, image guided therapy, and kV imaging. NEW section on radiation safety and misadministration of treatment beams addresses the most up-to-date practice requirements. Content updates also include new ASRT Practice Standards and AHA Patient Care Partnership Standards, keeping you current with practice requirements. UPDATED full-color insert is expanded to 32 pages, and displays images from newer modalities.

Radiation Oncology - Carlos A. Perez 2011

Ideal for on-the-spot consultation, this pocket manual, *Radiation Oncology: Management Decisions*, provides easily accessible information for residents and practitioners in radiation oncology. It presents the most essential information that is immediately required in the clinical setting. The first eight chapters of the book focus on key basic concepts; the remaining 46 chapters describe treatment regimens for all cancer sites and tumor types. Includes coverage of pain and palliation, and covers all latest therapeutic techniques. This edition includes expanded information on image-guided therapy, 3D techniques, and 4D protocols. The updated cancer staging guidelines have been used throughout the manual. In addition, there is a brand-new chapter devoted to QUANTEC dosage recommendations.

Khan's Treatment Planning in Radiation Oncology - Faiz M. Khan 2016-05-11

This unique, full-color reference offers a total team approach to radiation oncology treatment planning, incorporating the newest imaging techniques and offering a comprehensive discussion of clinical, physical, biological and technical aspects. A clear focus

on the application of physical and clinical concepts to solve treatment planning problems helps you provide effective, state-of-the-art care for cancer patients. With authoritative coverage of the latest in sophisticated radiation oncology treatment modalities, the 4th Edition of Khan's Treatment Planning in Radiation Oncology is an essential resource for the radiation oncologist, medical physicist, dosimetrist, and radiation therapist. [Practical Radiation Oncology Physics](#) - Sonja Dieterich 2015-08-21

Perfect for radiation oncologists, medical physicists, and residents in both fields, Practical Radiation Oncology Physics provides a concise and practical summary of the current practice standards in therapeutic medical physics. A companion to the fourth edition of Clinical Radiation Oncology, by Drs. Leonard Gunderson and Joel Tepper, this indispensable guide helps you ensure a current, state-of-the-art clinical practice. Covers key topics such as relative and in-vivo dosimetry, imaging and clinical imaging, stereotactic body radiation therapy, and brachytherapy. Describes technical aspects and patient-related aspects of current clinical practice. Offers key practice guideline recommendations from professional societies throughout - including AAPM, ASTRO, ABS, ACR, IAEA, and others. Includes therapeutic applications of x-rays, gamma rays, electron and charged particle beams, neutrons, and radiation from sealed radionuclide sources, plus the equipment associated with their production, use, measurement, and evaluation. Features a "For the Physician" box in each chapter, which summarizes the key points with the most impact on the quality and safety of patient care. Provides a user-friendly appendix with annotated compilations of all relevant recommendation documents. Includes an enhanced Expert Consult eBook with open-ended questions, ideal for self-assessment and highlighting key points from each chapter. Download and search all of the text, figures, and references on any mobile device.

Childhood Cancer and Functional Impacts Across the Care Continuum - National Academies of Sciences Engineering and Medicine 2021-09-09

Since the late 1960s, the survival rate in children and adolescents diagnosed with cancer has steadily improved, with a corresponding decline in the cancer-specific death rate. Although the improvements in survival are encouraging, they have come at the cost of acute, chronic, and late adverse effects precipitated by the toxicities associated with the individual or combined use of different types of treatment (e.g., surgery, radiation, chemotherapy). In some cases, the impairments resulting from cancer and its treatment are severe enough to qualify a child for U.S. Social Security Administration disability benefits. At the request of Social Security Administration, Childhood Cancer and Functional Impacts Across the Care Continuum provides current information and findings and conclusions regarding the diagnosis, treatment, and prognosis of selected childhood cancers, including different types of malignant solid tumors, and the effect of those cancers on children's health and functional capacity, including the relative levels of functional limitation typically associated with the cancers and their treatment. This report also provides a summary of selected treatments currently being studied in clinical trials and identifies any limitations on the availability of these treatments, such as whether treatments are available only in certain geographic areas.

Mosby's Radiation Therapy Study Guide and Exam Review - E-Book - Leia Levy 2010-10-20

Reinforce your understanding of radiation therapy and prepare for the Registry exam! Mosby's Radiation Therapy Study Guide and Exam Review is both a study companion for Principles and Practice of Radiation Therapy, by Charles Washington and Dennis Leaver, and a superior review for the certification exam offered by the American Registry for Radiologic Technology (ARRT). An easy-to-read format simplifies study by presenting information in

concise bullets and tables. Over 1,000 review questions are included. Written by radiation therapy expert Leia Levy, with contributions by other radiation therapy educators and clinicians, this study tool provides everything you need to prepare for the ARRT Radiation Therapy Certification Exam. This title includes additional digital media when purchased in print format. For this digital book edition, media content is not included. Over 1000 multiple-choice questions in Registry format are provided in the text, allowing you to both study and simulate the actual exam experience. Focus questions and key information in tables make it easy to find and remember information for the exam. Review exercises reinforce learning with a variety of question formats to fit different learning styles. Questions are organized by ARRT content categories and are available in study mode with immediate feedback after each question, or in exam mode, which simulates the test-taking experience in a timed environment with ARRT exam-style questions.

Johns and Cunningham's The Physics of Radiology - Eva Bezak
2021-03-01

The fifth edition of this respected book encompasses all the advances and changes that have been made since it was last revised. It not only presents new ideas and information, it shifts its emphases to accurately reflect the inevitably changing perspectives in the field engendered by progress in the understanding of radiological physics. The rapid development of computing technology in the three decades since the publication of the fourth edition has enabled the equally rapid expansion of radiology, radiation oncology, nuclear medicine and radiobiology. The understanding of these clinical disciplines is dependent on an appreciation of the underlying physics. The basic radiation physics of relevance to clinical oncology, radiology and nuclear medicine has undergone little change over the last 70 years, so much of the material in the introductory chapters retains the essential flavour of the fourth edition, updated as required. This

book is written to help the practitioners in these fields understand the physical science, as well as to serve as a basic tool for physics students who intend working as medical radiation physicists in these clinical fields. It is the authors' hope that students and practitioners alike will find the fifth edition of *The Physics of Radiology* lucid and straightforward.

Treatment Planning in Radiation Oncology - Faiz M. Khan 2007
Completely updated for its Second Edition, this text is a comprehensive guide to state-of-the-art treatment planning techniques in radiation oncology. The book provides the treatment planning team—radiation oncologists, medical physicists, and medical dosimetrists—with detailed information on both the physics of radiation treatment planning and the clinical aspects of radiotherapy for specific cancers. More than 600 illustrations provide practical examples of the methodologies. Brand-new chapters in this edition cover image-guided radiation therapy, high dose rate brachytherapy, and brachytherapy treatment planning algorithms. The chapters have been completely updated, particularly in areas including intensity-modulated radiation therapy and brachytherapy.

Handbook of Treatment Planning, 2nd Ed - Gregory M. M. Videtic
2014-08-14

This is a highly practical resource about the specific technical aspects of delivering radiation treatment. Pocket-sized and well organized for ease of use, the book is designed to lead radiation oncology trainees and residents step by step through the basics of radiotherapy planning and delivery for all major malignancies. This second edition retains the valued features of the first edition—comprehensive yet concise, practical, evidence-based—while incorporating recent advances in the field. This includes expanded and updated discussions of SBRT for prostate and GI tumors, intraoperative.

Radiation Detection and Measurement - Glenn F. Knoll 1989
This new edition of the methods and instrumentation used in the

detection of ionizing radiation has been revised and updated to reflect recent advances. It covers modern engineering practice, provides useful design information and contains an up-to-date review of the literature.

Review of Radiologic Physics - Walter Huda 2016-01-20

Now revised to reflect the new, clinically-focused certification exams, Review of Radiological Physics, Fourth Edition, offers a complete review for radiology residents and radiologic technologists preparing for certification. . This new edition covers x-ray production and interactions, projection and tomographic imaging, image quality, radiobiology, radiation protection, nuclear medicine, ultrasound, and magnetic resonance - all of the important physics information you need to understand the factors that improve or degrade image quality. Each chapter is followed by 20 questions for immediate self-assessment, and two end-of-book practice exams, each with 100 additional questions, offer a comprehensive review of the full range of topics.

Introduction to Radiological Physics and Radiation

Dosimetry - Frank Herbert Attix 2008-09-26

A straightforward presentation of the broad concepts underlying radiological physics and radiation dosimetry for the graduate-level student. Covers photon and neutron attenuation, radiation and charged particle equilibrium, interactions of photons and charged particles with matter, radiotherapy dosimetry, as well as photographic, calorimetric, chemical, and thermoluminescence dosimetry. Includes many new derivations, such as Kramers X-ray spectrum, as well as topics that have not been thoroughly analyzed in other texts, such as broad-beam attenuation and geometrics, and the reciprocity theorem. Subjects are laid out in a logical sequence, making the topics easier for students to follow. Supplemented with numerous diagrams and tables.

Radiation Oncology Physics - International Atomic Energy Agency 2005

This publication is aimed at students and teachers involved in

teaching programmes in field of medical radiation physics, and it covers the basic medical physics knowledge required in the form of a syllabus for modern radiation oncology. The information will be useful to those preparing for professional certification exams in radiation oncology, medical physics, dosimetry or radiotherapy technology.

Physics for Clinical Oncology - Amen Sibtain 2012-01-05

To be able to perform radiotherapy effectively, oncologists and radiographers need to understand the physics behind it. This book is the first on radiation physics written specifically for the needs of the practising oncology team.

The Physics of Radiation Therapy - Faiz M. Khan 2012-03-28

Dr. Khan's classic textbook on radiation oncology physics is now in its thoroughly revised and updated Fourth Edition. It provides the entire radiation therapy team—radiation oncologists, medical physicists, dosimetrists, and radiation therapists—with a thorough understanding of the physics and practical clinical applications of advanced radiation therapy technologies, including 3D-CRT, stereotactic radiotherapy, HDR, IMRT, IGRT, and proton beam therapy. These technologies are discussed along with the physical concepts underlying treatment planning, treatment delivery, and dosimetry. This Fourth Edition includes brand-new chapters on image-guided radiation therapy (IGRT) and proton beam therapy. Other chapters have been revised to incorporate the most recent developments in the field. This edition also features more than 100 full-color illustrations throughout. A companion Website will offer the fully searchable text and an image bank.

Physics in Radiation Oncology Self-Assessment Guide - Ping Xia, PhD 2015-09-08

This guide & companion to the Radiation Oncology Self-Assessment Guide is a comprehensive physics review for anyone in the field of radiation oncology looking to enhance their knowledge of medical physics. It covers in depth the principles of

radiation physics as applied to radiation therapy along with their technical and clinical applications. To foster retention of key concepts and data, the resource utilizes a user-friendly iflash cardî question and answer format with over 800 questions. The questions are supported by detailed answers and rationales along with reference citations for source information. The Guide is comprised of 14 chapters that lead the reader through the radiation oncology physics field, from basic physics to current practice and latest innovations. Aspects of basic physics covered include fundamentals, photon and particle interactions, and dose measurement. A section on current practice covers treatment planning, safety, regulations, quality assurance, and SBRT, SRS, TBI, IMRT, and IGRT techniques. A chapter unique to this volume is dedicated to those topics in diagnostic imaging most relevant to radiology, including MRI, ultrasound, fluoroscopy, mammography, PET, SPECT, and CT. New technologies such as VMAT, novel IGRT devices, proton therapy, and MRI-guided therapy are also incorporated. Focused and authoritative, this must-have review combines the expertise of clinical radiation oncology and radiation physics faculty from the Cleveland Clinic Taussig Cancer Institute. Key Features: Includes more than 800 questions with detailed answers and rationales A one-stop guide for those studying the physics of radiation oncology including those wishing to reinforce their current knowledge of medical physics Delivered in a iflash cardî format to facilitate recall of key concepts and data Presents a unique chapter on diagnostic imaging topics most relevant to radiation oncology Content provided by a vast array of contributors, including physicists, radiation oncology residents, dosimetrists, and physicians About the Editors: Andrew Godley, PhD, is Staff Physicist, Department of Radiation Oncology, Taussig Cancer Institute, Cleveland Clinic, Cleveland OH Ping Xia, PhD, is Head of Medical Physics and Professor of Molecular Medicine, Taussig Cancer Institute, Cleveland Clinic, Cleveland, OH.

The Physics of Radiology - Harold Elford Johns 1969

Radiation Therapy Physics - William R. Hendee 2013-05-13
The Third Edition of Radiation Therapy Physics addresses in concise fashion the fundamental diagnostic radiologic physics principles as well as their clinical implications. Along with coverage of the concepts and applications for the radiation treatment of cancer patients, the authors have included reviews of the most up-to-date instrumentation and critical historical links. The text includes coverage of imaging in therapy planning and surveillance, calibration protocols, and precision radiation therapy, as well as discussion of relevant regulation and compliance activities. It contains an updated and expanded section on computer applications in radiation therapy and electron beam therapy, and features enhanced user-friendliness and visual appeal with a new, easy-to-follow format, including sidebars and a larger trim size. With its user-friendly presentation and broad, comprehensive coverage of radiotherapy physics, this Third Edition doubles as a medical text and handy professional reference.

Radiation Physics for Medical Physicists - Ervin B. Podgorsak 2010-02-02

This book summarizes basic knowledge of atomic, nuclear, and radiation physics that professionals need for efficient and safe use of ionizing radiation. Concentrating on the underlying principles of radiation physics, it covers prerequisite knowledge for medical physics courses on the graduate and post-graduate levels, providing the link between elementary physics on the one hand and the intricacies of the medical physics specialties on the other.

Medical Imaging Physics - William R. Hendee 2002-05-24
This comprehensive publication covers all aspects of image formation in modern medical imaging modalities, from radiography, fluoroscopy, and computed tomography, to magnetic resonance imaging and ultrasound. It addresses the techniques

and instrumentation used in the rapidly changing field of medical imaging. Now in its fourth edition, this text provides the reader with the tools necessary to be comfortable with the physical principles, equipment, and procedures used in diagnostic imaging, as well as appreciate the capabilities and limitations of the technologies.

Encyclopedia of Radiation Oncology - Luther W. Brady
2012-09-15

This comprehensive encyclopedia, comprising a wide range of entries written by leading experts, provides detailed information on radiation oncology, including the most recent developments in the field. It will be of particular value for basic and clinical scientists in academia, practice, and industry and will also be of benefit to those in related fields, students, teachers, and interested laypersons.

Radiation Oncology: A Physicist's-Eye View - Michael Goitein
2007-08-14

The papers collected in this hugely useful volume cover the principle physical and biological aspects of radiation therapy and in addition, address practical clinical considerations in the planning and delivering of that therapy. The importance of the assessment of uncertainties is emphasized. Topics include an overview of the physics of the interactions of radiation with matter and the definition of the goals and the design of radiation therapy approaches.

Physics in Nuclear Medicine - Simon R. Cherry 2012-04-12
Physics in Nuclear Medicine - by Drs. Simon R. Cherry, James A. Sorenson, and Michael E. Phelps - provides current, comprehensive guidance on the physics underlying modern nuclear medicine and imaging using radioactively labeled tracers. This revised and updated fourth edition features a new full-color layout, as well as the latest information on instrumentation and technology. Stay current on crucial developments in hybrid imaging (PET/CT and SPECT/CT), and small animal imaging, and

benefit from the new section on tracer kinetic modeling in neuroreceptor imaging. What's more, you can reinforce your understanding with graphical animations online at www.expertconsult.com, along with the fully searchable text and calculation tools. Master the physics of nuclear medicine with thorough explanations of analytic equations and illustrative graphs to make them accessible. Discover the technologies used in state-of-the-art nuclear medicine imaging systems Fully grasp the process of emission computed tomography with advanced mathematical concepts presented in the appendices. Utilize the extensive data in the day-to-day practice of nuclear medicine practice and research. Tap into the expertise of Dr. Simon Cherry, who contributes his cutting-edge knowledge in nuclear medicine instrumentation. Stay current on the latest developments in nuclear medicine technology and methods New sections to learn about hybrid imaging (PET/CT and SPECT/CT) and small animal imaging. View graphical animations online at www.expertconsult.com, where you can also access the fully searchable text and calculation tools. Get a better view of images and line art and find information more easily thanks to a brand-new, full-color layout. The perfect reference or textbook to comprehensively review physics principles in nuclear medicine. [Medical Dosimetry Certification Study Guide, Second Edition](#) - Govinda Rajan 2015-10-01

Radiation Therapy Dosimetry - Arash Darafsheh 2021-03-09
This comprehensive book covers the everyday use and underlying principles of radiation dosimeters used in radiation oncology clinics. It provides an up-to-date reference spanning the full range of current modalities with emphasis on practical know-how. The main audience is medical physicists, radiation oncology physics residents, and medical physics graduate students. The reader gains the necessary tools for determining which detector is best for a given application. Dosimetry of cutting edge

techniques from radiosurgery to MRI-guided systems to small fields and proton therapy are all addressed. Main topics include fundamentals of radiation dosimeters, brachytherapy and external beam radiation therapy dosimetry, and dosimetry of imaging modalities. Comprised of 30 chapters authored by leading experts in the medical physics community, the book: Covers the basic principles and practical use of radiation dosimeters in radiation oncology clinics across the full range of current modalities. Focuses on providing practical guidance for those using these detectors in the clinic. Explains which detector is more suitable for a particular application. Discusses the state of the art in radiotherapy approaches, from radiosurgery and MR-guided systems to advanced range verification techniques in proton therapy. Gives critical comparisons of dosimeters for photon, electron, and proton therapies.

Basic Radiation Oncology - Murat Beyzadeoglu 2010-07-20

This practical, up-to-date, bedside-oriented radiation oncology book encompasses the essential aspects of the subject with coverage on radiation physics, radiobiology, and clinical radiation oncology. The first two sections examine concepts that are crucial in radiation physics and radiobiology. The third section describes radiation treatment regimens appropriate for the main cancer sites and tumor types.

Physics in Biology and Medicine - Paul Davidovits 2008

This third edition covers topics in physics as they apply to the life sciences, specifically medicine, physiology, nursing and other applied health fields. It includes many figures, examples and illustrative problems and appendices which provide convenient access to the most important concepts of mechanics, electricity, and optics.

Khan's The Physics of Radiation Therapy - Faiz M. Khan 2014-04-03

Expand your understanding of the physics and practical clinical applications of advanced radiation therapy technologies with

Khan's *The Physics of Radiation Therapy*, 5th edition, the book that set the standard in the field. This classic full-color text helps the entire radiation therapy team—radiation oncologists, medical physicists, dosimetrists, and radiation therapists—develop a thorough understanding of 3D conformal radiotherapy (3D-CRT), stereotactic radiosurgery (SRS), high dose-rate remote afterloaders (HDR), intensity modulated radiation therapy (IMRT), image-guided radiation therapy (IGRT), Volumetric Modulated Arc Therapy (VMAT), and proton beam therapy, as well as the physical concepts underlying treatment planning, treatment delivery, and dosimetry. In preparing this new Fifth Edition, Dr. Kahn and new co-author Dr. John Gibbons made chapter-by-chapter revisions in the light of the latest developments in the field, adding new discussions, a new chapter, and new color illustrations throughout. Now even more precise and relevant, this edition is ideal as a reference book for practitioners, a textbook for students, and a constant companion for those preparing for their board exams. Features Stay on top of the latest advances in the field with new sections and/or discussions of Image Guided Radiation Therapy (IGRT), Volumetric Modulated Arc Therapy (VMAT), and the Failure Mode Event Analysis (FMEA) approach to quality assurance. Deepen your knowledge of Stereotactic Body Radiotherapy (SBRT) through a completely new chapter that covers SBRT in greater detail. Expand your visual understanding with new full color illustrations that reflect current practice and depict new procedures. Access the authoritative information you need fast through the new companion website which features fully searchable text and an image bank for greater convenience in studying and teaching. This is the tablet version which does not include access to the supplemental content mentioned in the text.

The Modern Technology of Radiation Oncology - Jake Van Dyk 1999

Details technology associated with radiation oncology,

emphasizing design of all equipment allied with radiation treatment. Describes procedures required to implement equipment in clinical service, covering needs assessment, purchase, acceptance, and commissioning, and explains quality assurance issues. Also addresses less common and evolving technologies. For medical physicists and radiation oncologists, as

well as radiation therapists, dosimetrists, and engineering technologists. Includes bandw medical images and photos of equipment. Paper edition (unseen), \$145.95. Annotation copyrighted by Book News, Inc., Portland, OR
Principles and Practice of Radiation Oncology - Carlos A. Perez
1992