

R2026 - Radiodiagnostic physics and equipment 2

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23 items

Radiographic Physics: Core Texts (7 items)

There are a number of books in this list but make sure you select texts which aid your own understanding.

Radiologic Science for Technologists: Physics, Biology, and Protection, by Stewart C. Bushong, 2017

Book | **Essential** | This is clear with some good illustrations. Unfortunately only the hard copy is available.

Radiologic science for technologists: physics, biology, and protection, by Stewart C. Bushong, c2013

Book | **Essential** | An older e-version of the above book.

Ball and Moore's Essential Physics for Radiographers, by John Ball; Adrian D. Moore; Steve Turner, 2008

Book | **Essential** | A good book but quite wordy.

Principles and Applications of Radiological Physics, by Donald T. Graham; Paul Cloke; Martin Vosper, 2011

Book | **Recommended** | Still only available in hard copy unfortunately.

Digital Imaging Systems for Plain Radiography, by Luis Lanca; Augusto Silva, 2013

Book | **Recommended** | Quite old but some good information

Medical imaging technology, by Victor I. Mikla; Victor V. Mikla, 2014

Book | **Recommended** | Quite a good basic text

Clark's essential physics in imaging for radiographers, by Ken Holmes; Marcus Elkington; Phil Harris, 2014

Book | **Recommended** | An older text but still relevant

Radiation Protection (3 items)

Radiation protection in diagnostic X-Ray imaging, by Euclid Seeram; Patrick C. Brennan, 2017

Book | **Essential** | A good e-book

An introduction to radiation protection, by Alan D. Martin; Samuel A. Harbison; K. Beach;

Peter Cole, 2019

Book | **Essential** | Only in hard copy unfortunately

Dose Optimization to Minimize Radiation Risk for Children Undergoing CT and Nuclear Medicine Imaging Is Misguided and Detrimental - in Journal of Nuclear Medicine, by Jeffry A. Siegel; Bill Sacks; Charles W. Pennington; James S. Welsh, 2017-06

Article | **Essential** | A useful paper putting some theoretical ideas into context.

Radiation Protection legislation (13 items)

You should already be familiar with these pieces of legislation. Ensure this information is always fresh in your mind.

The Ionising Radiations Regulations 2017

Legislation | **Essential** | You know it is!

Work with ionising radiation. Ionising Radiations Regulations 2017. Approved Code of Practice and guidance

Webpage | **Essential** | And this one too!

Week 21: Introduction to CR and DR (11 items)

Use the eBook by Bushong to develop your understanding of CR (Chapter 15: pages 680 - 703) and DR (Chapter 16: pages 704 - 724)

Radiologic science for technologists: physics, biology, and protection, by Stewart C. Bushong, c2013

Book | **Essential**

Week 22: Digital Image manipulation and Artefacts (8 items)

Use the eBook by Bushong to develop your understanding of Digital Radiographic Technique (Chapter 17), DR Viewing the Digital Image (Chapter 18) and Digital Radiographic Artefacts (Chapter 21)

Radiologic science for technologists: physics, biology, and protection, by Stewart C. Bushong, c2013

Book | **Essential**

Week 26: Dental Radiography (5 items)

Use the resource below to focus on the equipment relevant to dental radiography.

Imaging in Pediatric Dental Practice: A Guide to Equipment, Techniques and Clinical Considerations, by Johan Aps; SpringerLink (Online service), 2019

Book | **Essential** | Use this book to focus on the equipment relevant to dental radiography. Chapter 1 'X-ray Equipment in Dental Practice' pages 1-11

Imaging Techniques in Dental Radiology: Acquisition, Anatomic Analysis and Interpretation of Radiographic Images, by Ingrid Rozylo-Kalinowska; SpringerLink (Online service), 2020
Book | **Essential** | Use this book to focus on the equipment relevant to dental radiography, in particular the digital sensors and detectors. Chapter 2 'Materials and Preparation for Dental Radiographs' pages 7-12

Week 27: Image Intensification and Fluoroscopy (with an additional resource for screen-film technology) (3 items)
Use the book by Seeram to inform your learning this week.

Digital Radiography: Physical Principles and Quality Control, by Euclid Seeram; SpringerLink (Online service), 2019
Book | **Essential** | First read and make notes on Chapter 4 - Flat Panel Digital Radiography. In particular -
Section 4.3: What is Flat Panel Digital Radiography
Section 4.4: Types of Flat panel Detectors

Digital Radiography: Physical Principles and Quality Control, by Euclid Seeram; SpringerLink (Online service), 2019
Book | **Essential** | Secondly, read and makes notes on Chapter 6 - Digital Fluoroscopy

Radiologic science for technologists: physics, biology, and protection, by Stewart C. Bushong, c2013
Book | **Recommended** | Have a look at the section on Screen-Film Combinations in chapter 12

Radiologic science for technologists: physics, biology, and protection, by Stewart C. Bushong, 2017
Book | **Essential**

Radiologic science for technologists: physics, biology, and protection, by Stewart C. Bushong, 2017
Book | **Essential**