MODULE HANDBOOK

Course:	**Practical Work of Radiology Diagnostic and Radiotherapy**
Module Level:	Undergraduate
Code:	FIB 307
Sub-heading, if applicable:	-
Courses included in the module, if applicable:	-
Semester/Term:	6th / Third Year
Module Coordinator:	Dr. Suryani Dyah Astuti, M.Si
Lecturer:	Dr. Suryani Dyah Astuti, M.Si and Bambang Haris, S.Si., M.Si
Language:	Bahasa Indonesia
Classification within the Curriculum:	~~Compulsory Course~~ / Elective Studies
Teaching format / class hours per week during semester:	2 hours of lectures (50 min / hour)
Workload:	2 hours doing worksheet and pretest preparation, 2 hours of laboratory work, 2 hours of group discussion, searching literature and writting , 13 weeks per semester, and total 78 hours per semester ~ 2,6 ECTS*
Credit Points:	1
Requirement(s):	(FIB 307) Introduction of Radiotherapy Physics
Learning Goals/Competencies:	**General Competence (Knowledge):** To identify radiodiagnostic and radiotherapy facilities in hospitals, quality control processes, and dosimetry measurements **Specific Competence:** Students are able to identify radiodiagnostic and radiotherapy facilities in hospital
Contents:	After following this course, the students able to identify radiodiagnostic and radiotherapy facilities in hospitals, quality control processes, and dosimetry measurements. The course provide general topics including: Characteristics of the film radiodiagnostic to kV, mA and time, measurement of Kerma and dependence on kV, mA and time, determination of air HVL diagnostic radiology, measurement of Focal Spot and Beam Alignment, measurement of Air Kerma and Correction Movement Shutter (Transit Time Aircraft Co-60), Calibration Exodus Aircraft Co-60, percentage Depth Dose (PDD) Aircraft Co-60 teletherapy, Factors Aircraft Wedge Co-60 teletherapy, Tissue Phantom Ratio (TPR) Co-60 teletherapy Aircraft Output Calibration Aircraft Photon and linear elektron accelerator.
Soft Skill Attribute:	Good communication, Organization, Leadership, Logic, Ethics, Effort and Group
Study/Exam Achievements:	Students are considered to be competent and passed if at least get 40 of maximum mark of the exams (midterm exams and final exams), structured activity (group discussion). Final score is calculated as follow: 15% assignment 1 + 15% assignment 2 + 35% midterm exams + 35% final exams Final grade is defined as follow: A : 75 - 100

	AB : 70 - 74.99 B : 65 - 69.99 BC : 60 - 64.99 C : 55 - 59.99 D : 40 - 54.99 E : 0 - 39.99
Forms of Media:	Powerpoints slides, LCD projectors and whiteboards
Learning Methods:	Lecture, assessments and group discussion
Literature(s):	1. J. T. Bushberg, J. A. Seibert, E. M. Leidhodt, Jr., J. M. Boone. *The Essential Physics of Medical Imaging*. 2nd ed., (Williams and Wilkins, Baltimore, MD, 2002). 2. P.P Dendy and B. Heaton. *Physics of Diagnostic Radiology*. (Institute of Physics Publishing, London, UK, 1999). 3. P. Sprawl. *Physical Principles of Medical Imaging*. (Aspen Publishers,. Gaithersburg, Maryland, 1987). 4. Podgorsak, *Radiation Oncology Physics: Handbook for Teacher and Student*. (IAEA, 2005) 5. Metcalfe, et al, *The Physics of Radiotherapy X-rays and Electron*. (Medical Physics Publishing, 2007)
Notes:	This practical aims to give student about the implementation physics in radiotherapy. *Total ECTS = {(total hours workload × 50 min) / 25 hours Each ECTS is equals with 25 hours.