MODULE HANDBOOK

Course:	**Health Physics and Radiation Protection**
Module Level:	Undergraduate
Code:	FIB 303
Sub-heading, if applicable:	-
Courses included in the module, if applicable:	-
Semester/Term:	5th / Third Year
Module Coordinator(s):	Dr. Suryani Dyah Astuti, M.Si
Lecturer(s):	Dr. Suryani Dyah Astuti, M.Si and Prof. Dr. Ir. Suhariningsih
Language:	Bahasa Indonesia
Classification within the Curriculum	~~Compulsory Course~~ / Elective Course
Teaching format / class hours per week during semester:	2 hours of lectures (50 min / hour)
Workload:	2 hours of lectures, 2 hours of structural activities, 2 hours of individual study, 13 weeks per semester, and total 78 hours per
Credit Points:	2
Requirement(s):	(FIB307) Introduction of Radiotherapy Physics
Learning Goals/Competencies:	**General Competence (Knowledge):** To understand the relationship between the microscopic interactions with cell responses, deterministic and stochastic effects, radiation detection equipments and radiation protection. **Specific Competence:** To communicate scientific topic according to radiation detection equipment and radiation protection in oral and written.
Contents:	After following this course, the students are able to understand the relationship between the microscopic interactions with cell responses, deterministic and stochastic effects, radiation detection equipments and radiation protection. The course will provide some general topics including: shielding: The nature and design, statistics nuclear enumeration, monitoring of radiation for personnel, exposure to internal, dispersion environment, biological effects, regulations concerning radiation protection, waste disposal of low and high degrees and the non-ionizing radiation.
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 and final exams), structured activity (group discussion). Final score is calculated as follow: 15% assignment 1 + 15% assignment 2 + 35% midterm test + 35% final exam Final index 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. ICRP No. 60. 1990 *Recommendations of International Commission on Radiological Protection*. (Elsevier Science, 1990) 2. Herman Cember and Thomas E. Jhonson, *Introduction to Health Physics*. 4th ed., (McGraw Hill. New York, NY. 2009). 3. RL. Kathren, *Radiation Protection*. (Adam Hilger LTD., Bristol, 1985). 4. D. A. Gollnick. *Basic Radiation Protection Technology*. 2nd ed. (Pacific Radiation Corporation, Altadena, CA, 1993
Notes:	The course 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.