Module Handbook

Module Name:	Physical Pharmacy
Module Level:	Bachelor
Abbreviation, if applicable:	Lecture FAF201
	Practical Work FAF206
Sub-heading, if applicable:	
Courses included in the module, if applicable:	
Semester/term:	2 / Second year
Module coordinator(s):	Dr. Dwi Setyawan, MSi., Apt.
Lecturer(s):	Dr. Dwi Setyawan, MSi., Apt.
	Dra. Dewi Isadiartuti, MSi., Apt.
	Dr. Achmad Radjaram.,Apt
	Dra. Esti Hendradi, MSI., Ph.D., Apt.
	Dra. Noorma Rosita, MSi., Apt.
	Dra. Retno Sari, MSc. Apt.
	Dr.rer.nat. ML Ardhani L, S.Farm., M.Sc., Apt.
Language:	Bahasa Indonesia
Classification within the curriculum:	Compulsory Course/~~Elective Studies~~
Teaching format/class hours per week during the semester:	Lecture 100 minutes lectures, 13 lecture classes/semester
	Practical Work 100 minutes practical work classes, 13 practical work classes /semester
Workload:	Lecture Total 22 hours a semester
	Practical Work Total 22 hours a semester
Credit Points:	Lecture 2
	Practical Work 1
Requirements:	
Learning goal/competencies:	Knowledge – To understand the concept of physico-chemical aspects of substances used in pharmacy and medicine – The undertsand the concept of physical phenomena and basic concepts and principles in system of pharmaceutical preparations
	Skills – Discipline, empathy, communication, honesty, accuracy, cooperation, tolerance, initiative, leadership, decision maker
	Competence – To understand and able to apply the concept of Describe the phases of matter with particular reference to pharmaceutical systems

	– To understand and able to apply the concept of physicochemical parameters in relation to drug absorption and distribution – To understand and able to apply the concept of the stability of pharmaceutical agents in solution – To understand and able to apply the concept of surface and interfacial phenomena as applicable to pharmaceutical systems
Content:	Lecture Aspects of the system solids (BAF), the phenomenon of solubility, dissolution, mikromiretika, interfacial phenomena, rheology, dispersion system emulsions, suspensions, kinetics and stability.
	Practical Work Determination and evaluation of the phenomenon of solubility, dissolution testing, mikromiretika, chemical stability test, the rheological properties of powders, liquids and emulsions, emulsification phenomenon and surface tension.
Study/exam achievements:	Lecture Student are considered to be competent and pass if at least get 50% of maximum mark of the exams based learning. Final score (NA) is calculated as follow : 45% Exam I + 45% Exam II + 10% softskill Final index is defined as follow : A : 100 > NA > 75 AB : 75 > NA > 70 B : 70 > NA > 65 BC : 65 > NA > 60 C : 60 > NA > 55 D : 55 > NA > 50 E : 50 < NA
	Practical Work Student are considered to be competent and pass if at least get 50% of maximum mark of the exams based learning. Final score (NA) is calculated as follow : 50% Laboratory Report + 50% Exam II Final index is defined as follow : A : 100 > NA > 75 AB : 75 > NA > 70 B : 70 > NA > 65 BC : 65 > NA > 60 C : 60 > NA > 55 D : 55 > NA > 50 E : 50 < NA
Forms of Media:	LCD projector, whiteboard, Laboratory material and tools practical, and journal

Literature:	1. Martin A, Swarbrick J. Cammarata A, 1993, *Physical Pharmacy, Phys. Chem. Principles in the Pharm. Sci.*, 3th Ed., Lea & Febiger, Philadelphia.
	2. Ansel H.C., et al., 1995. *Pharmaceutical Dosage Forms and Drug Delivery Systems*. 6th Ed. Lea and Febiger Malvern.
	3. Carstensen J.T., 1977. *Pharmaceutics Solids and Solid Dosage Forms*. John Wiley & Sons. New York.
	4. Departemen Kesehatan, 1995. *Farmakope Indonesia Edisi IV*, Departemen Kesehatan Republik Indonesia, Jakarta.
	5. Florence A.T., and Attwood D, 1998. *Physicocemical Principles of Pharmacy*. 3rd Ed/Mac Millan Education, London.
Notes:	The course is more theori based as compared to physical chemistry