Module Handbook

Module Name:	**Basic Physic II**
Module Level:	Bachelor
Abbreviation, if applicable:	FID104
Sub-heading, if applicable:	-
Courses included in the module, if applicable:	-
Semester/term:	2nd / First Year
Module coordinator(s):	Drs. R. Arif Wibowo, M.Si.
Lecturer(s):	Drs. R. Arif Wibowo, M.Si.; Prof. Dr. Suhariningsih; Prof. Dr. Retna Apsari, M.Si.; Dr. Moh. Yasin, M.Si.; Dr. Suryani D Astuti, M.Si.; A. H. Zaidan, S.Si. M.Si. Ph.D.; Drs. Pujiyanto, M.S.; Drs. Siswanto, M.Si.; Drs. Bambang Suprijanto, M.Si.; Supadi. S.Si., M.Si.; Jan Ady. S.Si., M.Si.; Samian, S.Si., M.Si. and Dyah H., 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 lecturers (50 min per hours)
Workload:	2 hours lectures, 2 hours structured activity , 2 hours individual activity, 13 weeks per semester, total 78 hours per semester ~ 2.6 ECTS *
Credit Points:	2
Requirements:	Fundamental Physic I
Learning goals/competencies:	**General Competence (Knowledge):** To understand the concepts and principles in Electromagnetism and Introduction of Atomic and Nuclear Physics. **Specific Competence:** 1. To compute the Coulomb force and electric field due to discrete charges. 2. To compute potential energy and electric potential due to discrete charges and apply it on capasitors. 3. To have an ability to solve problems of DC electric current and circuits. 4. To have an ability to formulate, solve and analyze problems of magnetic fields generated by a current-carrying wire 5. To apply the Faraday and Lenz's law of magnetic induction to generate electromotive force (emf). 6. To understand and have an ability to solve problems in Electromagnetism and optics. 7. To understand and have an ability to solve problems in Atomic and Nuclear Physics.
Content:	Electrostatic (electric field, Coulomb Law, eletric dipole), Electric potential energy, Electrical potential, capasitor, electric current, Magnetostatic, Electromotive Force, Magnetism in Matter, Alternating Current, Electromagnetic wave, Optics, Introduction of Atomic and Nuclear Physics
Soft skill	Discipline, teamwork, effort

Study/exam achievements:	Students are considered to be competent and pass if at least get 55 The final value is calculated as follows: 35% middle examination (UTS) , 35% Final examination (UAS), 20% assignment , 10%*Softskill* **Final index is defined as follows** A : 100>NA≥75 AB: 74,9>NA≥70 B : 69,9>NA≥65 BC : 64,9>NA≥60 C : 59,9>NA≥55 D : 54,9>NA≥40 E : 39,9≥NA
Learning Methods	Lectures, discussion, assignments
Forms of Media:	LCD, laptop, White board
Literature:	1. Tipler, P.A., Mosca G. *Physics for scientists and engineers* (5ed., extended version) 2. Halliday, D., Resnick, R., and Walker, J., Principle of Physics, 9th edition (extended), John Wiley & Sons, 2011 3. *Jewet*, *J.W. and Serway*, *R.A.*, *2008*, *Physics For Scientists and Engineers with Modern Physics*, Vol. 2., 7th Edition, Thomson & Brooks/Cole, Australia. 4. Alonso and Finn, *1980*, *Fundamental University Physics*, *Vol. 2*, Addison-Wesley Publishing Company
Notes:	*Total ECTS = {(total hours workload x 50 min) / 60 min } / 25 hours **Each ECTS is equals with 25 hours**