**Bachelor of Education in Science           MODULE HANDBOOK**

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| Module designation | Basic Physics I |
| Module level, if applicable | Undergraduate |
| Code, if applicable | PIPAUM6201 |
| Subtitle, if applicable | *-* |
| Courses, if applicable | *-* |
| Semester(s) in which the module is taught | Odd |
| Person responsible for the module | Erni Yulianti, S.Pd., M.Pd |
| Lecturer | Erni Yulianti, S.Pd., M.Pd Yessi Affriyenni, S.Pd., M.Sc |
| Language | Bahasa Indonesia  |
| Relation to curriculum | Undergraduate degree program, compulsory, 1st semester. |
| Type of teaching, contact hours | Undergraduate degree program: cooperative learning, presentation, laboratory work, 3 x 50 = 150 minutes and 1 x 170 minutes  |
| Workload | 1. Lectures: 3 x 50 = 150 minutes (2.5 hours) per week.
2. Exercises and Assignments: 3 x 60 = 180 minutes (3 hours) per week.
3. Laboratory work: 1 x 170 minutes (2.83 hours) per week.
4. Private study: 3 x 60 = 180 minutes (3 hours) per week.
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| Credit points | 4 credit points (~6.35 ECTS-eq) |
| Requirements according to the examination regulations | A student must have attended at least 80% of the lectures to sit in the exams. |
| Recommended prerequisites | - |
| Module objectives/intended learning outcomes | After completing this module, a student is expected to:LO2: Demonstrate knowledge of basic physics and earth scienceLO11: Demonstrate logical thinking and good scientific manner in teamwork and communicate their results in writing and orally |
| Content | This course covers the following two main topics: 1) Measurement; quantities and units (principal quantity, derivative quantity, dimensions), figures important, measuring tools, vectors, 2) Mechanics; kinematics (straight motion, parabolic motion, circular motion), dynamics (translation and rotation) |
| Study and examination requirements and forms of examination | Assignment, Quiz, Midterm examination, Final examination, Performance |
| Media employed | LCD, power point, white board, video and moodle (Sipejar) |
| Reading list | 1. Halliday, D., Resnick, R. & Walker, J. 2010. *Fundamentals of Physics Extended* (9th edition). New York: Wiley.
2. Knight, D Randall. 2016. *Physics for Scientists and Engineers: A Strategy Approach*. California: Pearson.
3. Serway, R. A. & Jewett, J. W. 2014. *Physics for Scientists and Engineers* (9th edition). New York: Thomson Brooks.
4. Young, H. D., Freedman, R. A., Sears, & Zemansky’s. 2012. *University Physics with Modern Physics* (13th edition). San Fransisco: Pearson Education.
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