**MODULE HANDBOOK**

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| Course: | **Basic Physics II (Practical)** |
| Module Level: | Undergraduate |
| Code: | FID105 |
| Sub-heading, if applicable: | - |
| Courses included in the module, if applicable: | - |
| Semester/Term: | 2nd / First year |
| Module Coordinator: | Supadi, S.Si., M.Si. |
| Lecturer(s): | Lecturers Team |
| Language: | Bahasa Indonesia |
| Classification within the Curriculum: | Compulsory Course / ~~Elective Course~~ |
| Teaching format / class hours per week during semester: | 2 hours of lectures (100 min / hour) |
| Workload: | 2 hours of worksheet and pretest, 2 hours of laboratory work, 2 hours of group discussion, writing report, 13 weeks per semester, total of 78 hours per semester ~ 2,6 ECTS* |
| Credit Points: | 1 |
| Requirement(s): | - |
| Learning Goals/Competences: | **General Competence (Skill):**<br>To demonstrate an ability to conduct experiment in basic physics.<br><br>**Specific Competence:**<br>1. Ability to plan and prepare practical laboratory investigations on electrical resistance, electrical capacitance, inductance, magnetism and oscilloscope.<br>2. Ability to plan and prepare practical laboratory investigations on equality of mechanical heat, positive and negative lens, wavelength experiment, refractive index of prism and microscope.<br>3. Ability to plan and prepare practical laboratory investigations on radioactive.<br>4. Ability to plan and prepare practical laboratory investigations on simulation of electrical circuit in Electronics Workbench. |
| Contents: | Electrical resistance, electrical capacitance, inductance, magnetism, oscilloscope, equality of mechanical heat, positive and negative lens, wavelength experiment, refractive index of prism, microscope, radioactive, and simulation of electrical circuit in Electronics Workbench. |
| Soft Skill Attribute: | Effort and ethic |
| Study/Exam Achievements: | Students are considered competent and eligible to pass the course upon obtaining at least 40 of maximum score for the exams. Final exam is skill test (to set up experiment).<br><br>Final score is calculated as follow:<br>21% pre test +21% homework +28%report+ + 30% final exam |

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| | Final grade is defined as follow:<br>A : 75 – 100<br>AB : 70 - 74.99<br>B : 65 - 69.99<br>BC : 60 - 64.99<br>C : 55 - 59.99<br>D : 40 - 54.99<br>E : 0 - 39.99 |
| Forms of Media: | Set up experiment and laboratory equipments |
| Learning Methods: | Powerpoint slides, LCD projectors, whiteboards and laboratory equipments. |
| Literature(s): | 1. Petunjuk Praktikum Fisika Dasar II, Departemen Fisika, FST Universitas Airlangga, 2015.<br>2. Alonso and Finn*, Fundamental University Physics, Vol. 2,* Addison Wesley, *1992,*<br>3. Tipler, P.A., Mosca G. *Physics for scientists and engineers* (5ed., extended version)<br>4. Halliday, D., Resnick, R., and Walker, J., *Principle of Physics*, 9th edition (extended), John Wiley & Sons, 2011<br>5. Jewet, J.W. and Serway, R. A., 2006*, Serway's Principles of Physics, A Calculus Based Text,* 4th Edition*,* Thomson & Brooks/Cole, Australia |
| Notes: | 3 Parallel classes/session<br><br>*Total ECTS={(total hours workloadx50 min)/60 min}/25 hours<br>Each ECTS is equals with 25 hours. |