Module Handbook

<table>
<tr><td colspan="2">Module name</td><td colspan="4">Basic Physics 1</td></tr>
<tr><td colspan="2">Module level, if applicable</td><td colspan="4">1st year</td></tr>
<tr><td colspan="2">Code, if applicable</td><td colspan="4">SCPH601101</td></tr>
<tr><td colspan="2">Semester(s) in which the module is taught</td><td colspan="4">1st semester</td></tr>
<tr><td colspan="2">Person responsible for the module</td><td colspan="4">Dr. sc. hum. Deni Hardiansyah</td></tr>
<tr><td colspan="2">Lecturer</td><td colspan="4">Dr. sc. hum. Deni Hardiansyah</td></tr>
<tr><td colspan="2">Language</td><td colspan="4">Indonesian</td></tr>
<tr><td colspan="2">Relation to curriculum</td><td colspan="4">Compulsory Course</td></tr>
<tr><td>Types of teaching and learning</td><td>Class size</td><td>Attendance time (hour per week per semester)</td><td>Forms of active participation</td><td colspan="2">Workload</td></tr>
<tr><td rowspan="3">Interactive learning</td><td rowspan="3">50</td><td rowspan="3">4</td><td rowspan="3">Question-based learning</td><td>Interactive learning</td><td>56</td></tr>
<tr><td>Self-directed study</td><td>56</td></tr>
<tr><td>Assignments</td><td>56</td></tr>
<tr><td colspan="2">Workload</td><td colspan="4">168 hours</td></tr>
<tr><td colspan="2">Credit points</td><td colspan="4">4 Credits</td></tr>
<tr><td colspan="2">Requirements according to the examination regulations</td><td colspan="4">Minimum attendance of 75% (according to UI regulation). Final score is evaluated based on individual assignment (15%), group assignment (15%), quizzes (20%), mid-term exam (25%), and final exam (25%).</td></tr>
<tr><td colspan="2">Recommended prerequisites</td><td colspan="4">None</td></tr>
<tr><td colspan="2">Related course</td><td colspan="4">None</td></tr>
<tr><td colspan="2">Module objectives/intended learning outcomes</td><td colspan="4">Intended Learning Outcomes:
Students are able to apply basic physics concepts to formulate a solution as well as its application in physics phenomenon in everyday life.

Skill & Knowledge:
1. Able to apply motion mechanics concepts to physics phenomenon in everyday life.
2. Able to apply fluid mechanics concepts to physics phenomenon in everyday life.
3. Able to apply vibrations and waves concepts to physics phenomenon in everyday life.
4. Able to apply heat physics concepts to physics phenomenon in everyday life.</td></tr>
<tr><td colspan="2">Content</td><td colspan="4">• Units, Dimension, and Measurements.
• Motion Kinematics
• Motion Dynamics
• Work and Energy
• Momentum and Impulse
• Rotating Motion
• Equilibrium
• Gravity
• Vibrations
• Waves
• Fluid Mechanics
• Calor and Kinetic Theory of Gas
• 1st and 2nd Law of Termodynamics</td></tr>
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Study and examination requirements and forms of examination	Online Exam
Media employed	PowerPoint
Reading list	1. Halliday, Resnick, dan Walker, Principles of Physics 10th Edition, Wiley, 2014. 2. Serway Jewett, Physics for Scientists and Engineers 9th Edition, Thomson Brooks/Cole, 2014. 3. Giancoli, Physics for Scientists and Engineers 7th Edition, Pearson, 2014