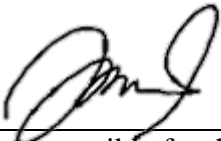






Faculty of Natural Sciences and Mathematics
Chemistry Department
Chemistry Education Study Program

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|---|------------|---|--|----------|
| Module name | | Physics | | |
| Module level, if applicable | | 1st Year | | |
| Code, if applicable | | SPK – 102 | | |
| Semester(s) in which the module is taught | | 1 st semester | | |
| Person responsible for the module | | R.Yosi Aprian Sari, S.Si., M.Si. | | |
| Lecturer | | R.Yosi Aprian Sari, S.Si., M.Si. | | |
| Language | | Indonesia | | |
| Relation to curriculum | | Compulsory | | |
| Teaching methods | Class size | Forms of active participation | Workload 91 hours | |
| Problem based learning | 50-60 | Discussion | Lecture: 100 (min) x 16 (meeting) | 27 hours |
| | | | Assignment: 120 (min) x 16 (week) | 32 hours |
| | | | Independent study: 120 (min) x 16 (week) | 32 hours |
| ECTS credit | | 3.25 | | |
| Credit points | | 2 SCU | | |
| Requirements according to the examination regulations | | Minimum attendance at lectures is 75% (according to UII regulation) | | |
| Recommended prerequisites | | N/A | | |
| Related course | | Physics lab work | | |
| Module objectives/intended learning outcomes | | On successful completion of the course students should be able to: 1. Explain the concept of physical properties of matter, physical quantities, and their measurements 2. Explain the concept of energy, energy changes, electromagnetic waves, and light in chemical applications 3. Explain the concept of thermodynamics 4. Explain the basic concepts of mechanical properties of solids and fluids 5. Explain the basic concepts of charge electricity and electric field 6. Explain the concept of electromagnetic waves | | |

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|---|--|------------|---|
| Content | <ul style="list-style-type: none"> • Concepts of physical properties of matter, physical quantities and their measurements • Energy, energy changes, electromagnetic waves and light in chemical applications • Thermodynamic concept • Basic concepts of mechanical properties of solids and fluids • Basic concepts of electric charge and electric field • Electromagnetic wave concept | | |
| Study and examination requirements and forms of examination | Final score (NA) is calculated as follows: | | |
| | Intended learning outcomes | Weight (%) | Technique of assessment |
| | 1 | 10 | Written test: assignment, midterm |
| | 2 | 20 | Written test: assignment, midterm |
| | 3 | 20 | Written test: assignment, midterm |
| | 4 | 20 | Written test: assignment, final examination |
| | 5 | 20 | Written test: assignment, final examination |
| | 6 | 10 | Written test: assignment, final examination |
| Media employed | Power point slide presentation, video, Google classroom | | |
| Reading list | <p>Cutnell, J.D., and Johnson, K.W., 2012, Physics, John Welly and Sons Inc., New York.</p> <p>Giancoli, D.C., 2004, Physics: Principles with Applications, John Welly and Sons Inc., New York.</p> <p>Hallida, David and R.Resnik, 1990, Fisika Jilid I, 3rd edition, Translation: Pantur Silaban & Erwin Sucipto, Erlangga, Jakarta.</p> <p>Halliday, D., 2007, Fundamentals of Physics (Regular Edition), Jearl Walker.</p> | | |

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| Prepared by: | Verified by: | Authorized by: |
|  |  |  |
| Person responsible for the module | Student representative | Coordinator Program |