**Bachelor of Education in Science           MODULE HANDBOOK**

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| Module designation | Science Technology Engineering Mathematics |
| Module level, if applicable | Undergraduate |
| Code, if applicable | PIPAUM6405 |
| 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.Sc |
| Lecturer | Erni Yulianti, S.Pd., M.Pd  Erti Hamimi, S.Pd., M.Sc |
| Language | Bahasa Indonesia |
| Relation to curriculum | Undergraduate degree program, compulsory, 5th semester. |
| Type of teaching, contact hours | Undergraduate degree program: cooperative learning, presentation 3 x 50 = 150 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. Private study: 3 x 60 = 180 minutes (3 hours) per week. |
| Credit points | 3 credit points (~4.76 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: LO6: Design, implement, and evaluate innovative and productive science learning based on developmental psychology and learning theories |
| Content | This course covers the following three main topics:  1) The essence of science, 2) Science literacy, 3) STEM in science learning, 4) STEM analysis as a science learning approach and model, 5) STEM development in the world, 6) STEM learning analysis in the curriculum in Indonesia, 7) Learning design development Science uses a STEM approach / model, 8) Developing STEM integrated science learning resources and learning media (educators, prototypes, simple tools). |
| Study and examination requirements and forms of examination | Assignment, Quiz, Midterm examination, Project |
| Media employed | LCD, power point, white board, video and moodle (Sipejar) |
| Reading list | 1. Poedjiadi, A. 2005. *Model Pembelajaran Kontekstual Bermuatan Nilai Sains Teknologi Masyarakat*. Bandung: PT. R Rosdakarya. 2. Sellers, S.L., Roberts, J., Giovanetto L., Friedrich K. & Hammargren, C. 2007. *Reaching All Students, A Resource for Teaching in Science, Technology, & Environments* (2nd edition)*.* Wisconsin: Center for the Integration of Research, Teaching, and Learning (CIRTL). |