**UNIVERSITAS NEGERI MALANG**

FACULTY OF MATHEMATICS AND NATURAL SCIENCES

SCIENCE EDUCATION STUDY PROGRAM

Jalan Semarang No 5, Malang 65145

Call: 0341-551312 Ext. 251, Fax: 0341-562180

Website: <http://fmipa.um.ac.id/>

**Bachelor of Education in Science MODULE HANDBOOK**

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| Module designation | Micro Practice of Integrated Science Learning |
| Module level, if applicable | Undergraduate |
| Code, if applicable | PIPAUM6408 |
| Subtitle, if applicable | *-* |
| Courses, if applicable | *-* |
| Semester(s) in which the module is taught | Even semester |
| Person responsible for the module | Sugiyanto, S.Pd,. M.Si. |
| Lecturer | Sugiyanto, S.Pd,. M.Si. |
| Language | Bahasa Indonesia  |
| Relation to curriculum | Undergraduate degree program, compulsory, 6th semester. |
| Type of teaching, contact hours | Direct Instruction for Lectures, Cooperative Learning for Experiments, 100 minutes for lectures and 170 minutes for experiments per week |
| Workload | 1. Lectures: 2 x 50 = 100 minutes (1,67 hours) per week
2. Exercise and Assigments: 2 x 60 minutes = 120 minutes (2 hours) per week
3. Private Study: 2 x 60 minutes = 120 minutes (2 hours) per week
4. Experiments: 170 minutes per week
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| 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 | 1. *Curriculum and Design of Integrated Science Learning* (PIPAUM6404)
2. *Science Technology Engineering Mathematics.*
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| Module objectives/intended learning outcomes | After completing this module, a student is expectedto:mastering developmental psychology and learning theories to design, implement, and evaluate science learning that is innovative, productive, oriented towards developing student capabilities, and is able to adapt to changes in curriculum, technology and the environment upholds social sensitivity, cultural diversity, views and religions. |
| Content | 1. Pinciples of integrated science learning.
2. Characteristics of integrated science learning.
3. Objectives and competency standards of junior high school science graduates.
4. Science learning approaches and methods.
5. Integrated science learning models.
6. Types of integrated materials (integrated, connected, shared, webbed.
7. Concept analysis based on Junior High School Science basic Competencies
8. Maps
9. Essential concepts based on Junior High School Science basic Competencies
10. Development of IPKD learning indicators
11. identification of science learning problems
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| Study and examination requirements and forms of examination | Assessment of student learning achievement by assessing daily assignments, class discussions, practical performance, writing experiment reports, midterm and final semester exams |
| Media employed | Whiteboard, Power Point, Platform Youtube, Moodle (SIPEJAR) |
| Reading list | * + - 1. Byers, A. 2008. *Biology: Life on Earth with Physiology* (8thedition). New Jersey: Pearson.
			2. Hewitt, P.G., Lyons, S.A., Suchocki, J.A.&Yeh, J.2013.*Conceptual Integrated Science, 2/E*. New York: Addison-Wesley.
			3. Lynda Pennell, L. (Editor). 2007. *Life Science*. New Hampshire: CPO Science
			4. Tillery, B., Enger, E. &Ross, F. 2010. *Integrated Science*. New York: McGraw-Hill Science/Engineering/Math.
			5. Tim IPA Terpadu. 2010. *Panduan Pengembangan Pembelajaran IPA Secara Terpadu.* Jakarta: Direktorat Pembinaan Sekolah Menengah Pertama
			6. [Trefil](http://www.amazon.com/s/ref%3Dntt_athr_dp_sr_1?_encoding=UTF8&sort=relevancerank&search-alias=books&field-author=James%20Trefil), J.& Hazen, R. 2009. *The Sciences: An Integrated Approach*. New York: Wiley.
			7. Victor, E., Richard D., Kellough, R. D. &Tai, R. H. 2008. *Science K-8: An Integrated Approach, 11/E*. NewYork: Pearson
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