Appendix 4.1

Module Name	**Biochemistry**
Module Level, if applicable	Beginner
Code if Applicable	120350242
Subtitle, if applicable	-
Courses, if applicable	120350242, Ir. Asmah Hidayati, MP
Semester(s) in which the module is taught	Semester II
Person responsible for the module	Ir. Asmah Hidayati, MP
Lecturer	Ir. Asmah Hidayati, MP
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in Department of Animal Science Faculty Agriculture and Animal Science
Type of teaching, contact hours	Type of teaching: Discussion and Theory Contact hours : 3 hours x 14 weeks
Workload	Class : 2 hours x 14 weeks = 28 hours Practical class : 1 hours x 14 weeks = 14 hours Examination 2 hours x 2 time = 4 hours Total: 46 hours
Credit points	SKS 3 SCH x (1.4) = 4.2 ECTS
Requirements according to the examination regulations	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	No Recommended prerequisites
Module Objectives (Intended learning outcomes)	By the end of the module, students should be able to: 1. Students are able to provide a foundation of knowledge, students' understanding of the biochemical processes that occur in living things. 2. Students are able to provide a foundation of knowledge and understanding of students about biochemical processes in life in accordance with the disciplines taken (Animal Husbandry and Fisheries). 3. Students are able to provide a foundation of knowledge and understanding of students about changes and anomalies that occur in living things based on biochemistry.

	4. Students are able to provide a foundation of knowledge and understanding of students so that they can think critically and analytically about environmental changes that have an impact on the behavior of living things based on biochemistry.
Module Content	Biochemistry course studies the substances/compounds contained in living things along with the changes that occur in every life process. The subjects related to and supporting Biochemistry are: Inorganic chemistry, organic chemistry, Physiology, Biology, Microbiology, Environmental Science and Climatology. The general discussion in this course is human and is complemented by a discussion of biochemistry in other living things, including: livestock/animals, fish, and microbes, in accordance with the disciplines of Animal Husbandry and Fisheries.
Study and examination requirements and forms of examination	**Cognitive:** Midterm exam, Final exam, Quizzes, Assignments **Psychomotor:** Practice **Affective:** Assessed from the element /variables achievement, namely (a) Contributions (attendance, active, role, initiative, and language), (b) Being on time, (c) Effort.
Media employed	Classical teaching tools with white board and power point presentation
Recommended Literature	For Class A. Compulsory 1. Aisyah, G., 1990. Enzim Pangan. IPB 2. Boden, G., 1990. Endocrinology and Metabolism. Mc Graw Hill. 3. Gurr AI, James AT., 1980. Lipid Biochemistry. An Introduction. 3 rd ed. Wiley. 4. Harper HA, Rodwell VW, Mayes PA., 1992. Biokimia. Terjemahan, Alih Bahasa : Iyan Darmawan. Edisi ke-20. Penerbit Buku Kedokteran. EGC. 5. Ismadi, 1990. Biokimia Dasar. Materi Kuliah. UGM. Yogyakarta. 6. Iamadi dan Ismadi, SD., 1993. Biokimia. Suatu Pendekatan Berorientasi Kasus. Edisi ke-4. Gadjah Mada University Press. Lehninger, 1993. Biokimia.

	7. Linder, C., 1992. Biokimia dan Metabolisme. 8. Ratners, S., 1977. Long View of Nitrogen Metabolism. Annu Rev Biochem. 9. Singer SJ, Nicolson GL., 1972. The Fluid Mossaic Model of The structure of Cell Membrane. Science. 10. Wibowo, A., 1990. Biokimia Lanjut. Materi Kuliah. UGM. Yogyakarta. For Practical Class B. Compulsory 1. Aisyah, G., 1990. Enzim Pangan. IPB 2. Boden, G., 1990. Endocrinology and Metabolism. Mc Graw Hill. 3. Gurr AI, James AT., 1980. Lipid Biochemistry. An Introduction. 3 rd ed. Wiley. 4. Harper HA, Rodwell VW, Mayes PA., 1992. Biokimia. Terjemahan, Alih Bahasa : Iyan Darmawan. Edisi ke-20. Penerbit Buku Kedokteran. EGC. 5. Ismadi, 1990. Biokimia Dasar. Materi Kuliah. UGM. Yogyakarta. 6. Iamadi dan Ismadi, SD., 1993. Biokimia. Suatu Pendekatan Berorientasi Kasus. Edisi ke-4. Gadjah Mada University Press. Lehninger, 1993. Biokimia. 7. Linder, C., 1992. Biokimia dan Metabolisme. 8. Ratners, S., 1977. Long View of Nitrogen Metabolism. Annu Rev Biochem. 9. Singer SJ, Nicolson GL., 1972. The Fluid Mossaic Model of The structure of Cell Membrane. Science. 10. Wibowo, A., 1990. Biokimia Lanjut. Materi Kuliah. UGM. Yogyakarta.
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