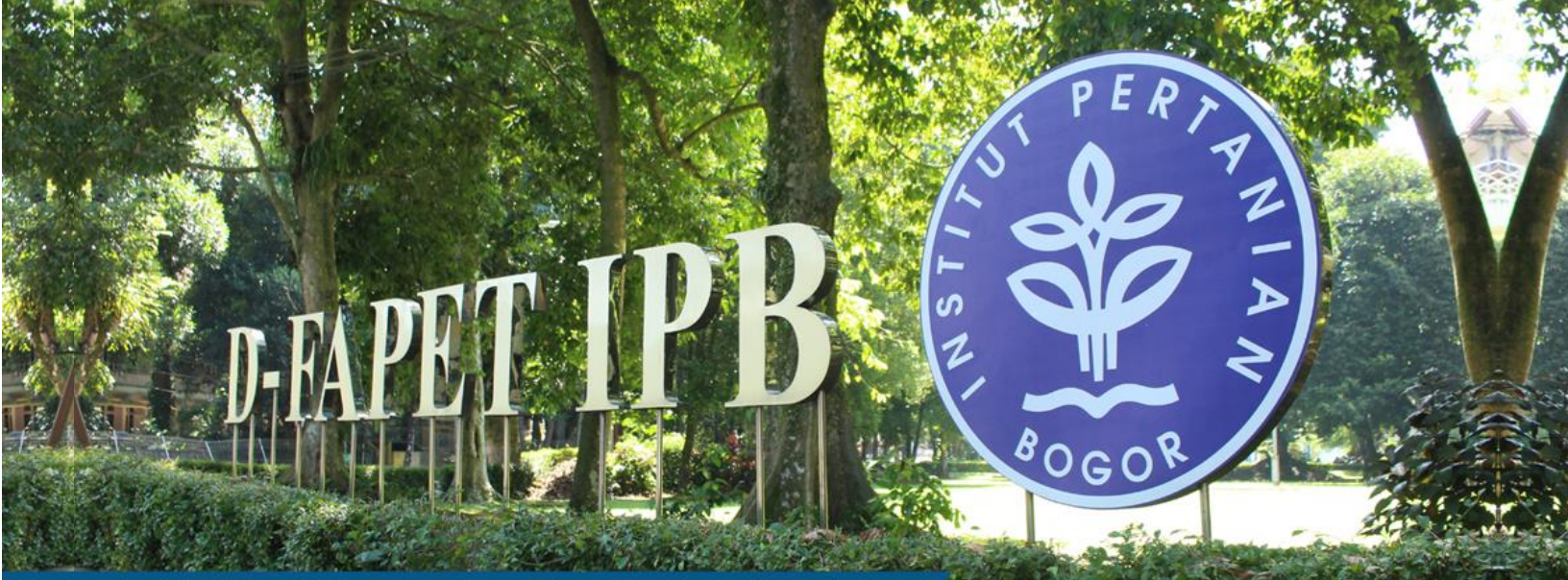

MODULE HANDBOOK

IPB University
Bogor Indonesia

Department of Animal Production Technology
Faculty of Animal Science
IPB University

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TABLE OF CONTENTS

1st SEMESTER

IPB100 RELIGION EDUCATION

Module designation	Religion Education
Semester(s) in which the module is taught	1st Semester
Person responsible for the module	Drs. Romli, M.Ag
Language	Indonesian
Relation to curriculum	Compulsory Course
Teaching methods	Contextual Learning, Cooperative Learning, Discussion
Workload (inc. Contact hours, self- study hours)	• Lecture class: 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Discussion class: 60 minutes x 2 sch x 14 weeks = 1680 minutes = 28 hours • Exam: 120 minutes x 2 times = 240 minutes = 4 hours • Self-study: 60 minutes x 6 times x 14 weeks = 4780 minutes = 80 hours • Total: 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Required and recommended prerequisites for joining the module	1. Registered in this course 2. Minimum 80% attendance in this course
Module objectives/intended learning outcomes	1. Skilled in inventorying and analyzing verses of the Qur'an and Sunnah in the PAI Lab 2. Able to show and explain the verses of the Qur'an and Sunnah about science 3. Able to understand human concepts and human relations with religion 4. Able to decipher the 6 Pillars of Iman (Faith) to develop a noble personality 5. Able to demonstrate mahdhah and muamalah worship 6. Able to accustom noble behavior (morals) in the community environment.

Content	Religion Education course is taught in order to equip students with insight in Islamic knowledge comprehensively (broadly and deeply), encourage students to study, study and live the verses of Allah SWT (Qauliyah and Kauniyah) and not to be dichotomous and to give an understanding of human nature who need a guide to life (al Islam), both individually and socially in order to achieve happiness in this world and the afterlife.
Examination forms	Midterm exam, Final exam, Quizzes, Assignments
Study and examination requirements	*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. Assessment of students' achievement using proportion as follow: midterm exam (35%), final exam (35%), practicum (30%). The proportion of practicum score consists of report (50%), quiz (15%), attendance (10%), and practicum examination (25%)
Reading list	Mandatory Reading: Al-Qur'an and Translations, Islamic Religious Education Guidebook compiled by TIM PAI-IPB Additional Readings: 1. Miftah Faridz, 1999. Pokok-pokok ajaran Islam karya Mifta Faridz, Penerbit Pustaka. Jakarta 2. Yunahar Ilyas.1999. Kuliah Akhlak. LIPPI 3. Yusuf Qardhawy, 1997. Pengantar Kajian Islam (terjmhan.). Pustaka Kautsar. Jakarta. 4. Hamzah Yaqub, 1996. Etika Islam. CV. Diponegoro. Bandung 5. Yunahar Ilyas.2002. Kuliah Aqidah Islam. LPDI UMY. 6. Yusuf Qardhawy.1996. Tahuhid dan Fenomena Kemusyrikan (terjmhn). Pustaka Progresif. Surabaya 7. Shalih bin Fauzan. 1999. Kitab Tauhid I (terjemahan). Darul Haq. Jakarta. Ismail Fauzi. Al- Islam dan Ilmu Pengetahuan

IPB106 INDONESIAN LANGUAGE

Module designation	Indonesian Language
Semester(s) in which the module is taught	1st Semester
Person responsible for the module	
Language	Indonesian
Relation to curriculum	Compulsory Course
Teaching methods	Contextual Learning, Cooperative Learning, Discussion
Workload (inc. Contact hours, self- study hours)	Lecture class: 50 minutes x 1 sch x 14 weeks = 700 minutes = 12 hours Discussion class: 60 minutes x 2 sch x 14 weeks = 1680 minutes = 28 hours Exam: 120 minutes x 2 times = 240 minutes = 4 hours Self-study: 60 minutes x 6 times x 14 weeks = 4780 minutes = 80 hours Total: 8100 minutes = 135 hours
Credit points	2 SCH x (1.6) = 3.2 ECTS
Required and recommended prerequisites for joining the module	1. Registered in this course 2. Minimum 80% attendance in this course
Module objectives/intended learning outcomes	Student is able to understand and choose the right Indonesian vocabulary; skilled at writing papers according to their competencies; communicate verbally well; proud to speak Bahasa as the basis for applying the field of science according to its competence
Content	Indonesian Language course includes in general subjects. This course is expected to shape the personality of students who are ethical, cultured in Indonesia, and proud of Indonesian language. The material provided in this course is history, position and function of Indonesian language, spelling (letter and punctuation), terminology, effective sentences: diction and reasoning, paragraphs, type of writing (description, narration, exposition, argumentation, and persuasion), reproduction: summary, abstract, or synthesis, quotation, reference system,

	and bibliography, writing scientific papers, and oral presentation techniques.
Examination forms	Midterm exam, Final exam, Quizzes, Assignments
Study and examination requirements	*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. Assessment of students' achievement using proportion as follow: midterm exam (35%), final exam (35%), practicum (30%). The proportion of practicum score consists of report (50%), quiz (15%), attendance (10%), and practicum examination (25%)

IPB107 INTRODUCTION TO AGRICULTURAL SCIENCE

Module designation	Introduction to Agricultural Science
Semester(s) in which the module is taught	1st Semester
Person responsible for the module	Prof. Dr. Ir. Hadi Susilo Arifin, M.S. (Koordinaotor) Prof. Dr. Ir. Kukuh Murtilaksono, M.S. Prof. Dr. Ir. Ahmad Sulaeman, M.S. Dr. Ir. Budi Setiawan, M.S. Prof. Dr. Ir. I. Komang Gede Wiryawan Prof. Dr. Ir. Didi Sopandie, M.Agr. Dr. Ir. Sugeng Santoso, M.Agr" Dr. drh. Ligaya ITA Tumbelaka, SpMP., M.Sc Dr. Ir. Tania June, M.Sc Dr. drh. Koekoeh Santoso
Language	Indonesian
Relation to curriculum	Compulsory Course
Teaching methods	Contextual Learning, Cooperative Learning, Discussion

Workload (inc. Contact hours, self- study hours)	• Lecture class: 50 minutes x 1 sch x 14 weeks = 700 minutes • = 12 hours • Discussion class: 60 minutes x 2 sch x 14 weeks = 1680 minutes = 28 hours • Exam: 120 minutes x 2 times = 240 minutes = 4 hours • Self-study: 60 minutes x 6 times x 14 weeks = 4780 minutes = 80 hours • Total: 8100 minutes = 135 hours
Credit points	2 SCH x (1.6) = 3.2 ECTS
Required and recommended prerequisites for joining the module	1. Registered in this course 2. Minimum 80% attendance in this course
Module objectives/intended learning outcomes	After taking this course, students is able to explain agriculture in a broad sense and the supporting sciences.
Content	This course is designed and structured to take IPB University students to the world of agriculture in abroad sense.
Examination forms	Midterm exam, Final exam, Quizzes, Assignments
Study and examination requirements	*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. Assessment of students' achievement using proportion as follow: midterm exam (35%), final exam (35%), practicum (30%). The proportion of practicum score consists of report (50%), quiz (15%), attendance (10%), and practicum examination (25%)
Reading list	AHN: Buku PIP Author AHN (Book 1-Soft File) KM: Buku Kumpulan Makalah (Book 2-Soft File) TGM: Buku Tantangan Generasi Muda (Hard File)

IPB111 CIVICS EDUCATION

Module designation	Civics Education
Semester(s) in which the module is taught	1st Semester
Person responsible for the module	
Language	Indonesian
Relation to curriculum	Compulsory Course
Teaching methods	Contextual Learning, Cooperative Learning, Discussion
Workload (inc. Contact hours, self- study hours)	• Lecture class: 50 minutes x 1 sch x 14 weeks = 700 minutes • = 12 hours • Discussion class: 60 minutes x 2 sch x 14 weeks = 1680 minutes = 28 hours • Exam: 120 minutes x 2 times = 240 minutes = 4 hours • Self-study: 60 minutes x 6 times x 14 weeks = 4780 minutes = 80 hours • Total: 8100 minutes = 135 hours
Credit points	2 SCH x (1.6) = 3.2 ECTS
Required and recommended prerequisites for joining the module	1. Registered in this course 2. Minimum 80% attendance in this course
Module objectives/intended learning outcomes	1. Students understand the vision, mission and goals of Civics Education. 2. Students identify disturbances and threats to the nation and the Republic of Indonesia and state defense efforts adapted to global challenges. 3. Students is able to analyze the formation of the Republic of Indonesia based on history and elements of the state formation, analyze the concept of national integration. 4. Student is able to explain the meaning of nationalism. 5. Student is able to analyze the importance of the state constitution. 6. Student is able to describe the atmosphere when making the 1945 Constitution. 7. Student is able to explain the meaning of the Preamble of the 1945 Constitution and its relationship with the Proclamation of Independence and the Body

	8. Student is able to compare the implementation of the 1945 Constitution from time to time 9. Student is able to analyze and show changes in amendments to the 1945 Constitution, especially in state institutions as executors of people's sovereignty 10. Student is able to explain Pancasila as a system of philosophy and unity of precepts in Pancasila. 11. Student is able to analyze Pancasila as a source of values. 12. Describe the meaning of Pancasila as the basis of the state, comparing Pancasila as an open ideology with other ideologies, and its function as well as a national development paradigm. 13. Student is able to explain the problem of Indonesian citizenship. 14. Student is able to categorize the rights and obligations of Indonesian citizens. 15. Student is able to link the implementation of democracy withthe enforcement of human rights. 16. Analyzing the implementation of democracy in Indonesia since the old order, new order and reform 17. Analyzing the efforts to promote, respect and uphold human rights in Indonesia and the world. 18. Student is able to relate the concept of geopolitics and archipelago insight. 19. Student is able to explain the concept of Indonesian territory. 20. Student is able to describe the implementation of national insights in national development. 21. Student is able to explain Indonesia's national resilience and implementation 22. Student is able to explain analyzing problems and formulating politics and national strategies. 23. Student is able to explain the principles of good governance in public organizations and state administration. 24. Student is able to explain the implementation of regional autonomy. 25. Student is able to categorize corrupt acts and the importance of effots to prevent corruption.
Content	Civics education gives understanding to students as the next generation to apply the fundamental values of the nation and state of Indonesia in effort to strengthen awareness of national defense, strengthen attitudes and behaviors of citizens, master in knowledge of the basic problems of national and state life,

	and to be pro-active towards change. That occurs in order to realize the integration of science and technology and development.
Examination forms	Midterm exam, Final exam, Quizzes, Assignments
Study and examination requirements	*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. Assessment of students' achievement using proportion as follow: midterm exam (35%), final exam (35%), practicum (30%). The proportion of practicum score consists of report (50%), quiz (15%), attendance (10%), and practicum examination (25%)
Reading list	1. Membangun Kesadaran Bela Negara Dr. Ir. Parlaungan Adil Rangkuti,M.Si. IPB Press 2. Paradigma Baru Pendidikan Kewarganegaraan. Winarno,S.Pd, M.Si. PT.Bumi Aksara: 2008 3. Cerdas Kritis dan Aktif Berwarganegara, Pendidikan Kewarganegaraan Untuk Perguruan Tinggi. Heru Herdiawanto,M.Si dan Jumanta Hamdayama,M.Si, Erlangga: 2010 4. Panduan Kuliah Pendidikan Pancasila untuk Perguruan Tinggi. Elly M.Setiadi.M.Si. Gramedia: 2007 5. Pendidikan Kewarganegaraan: Demokrasi, Hak Asasi Manusia, Masyarakat Madani. ICCE UIN dan Prenada Media: 2003

MAT101 FUNDAMENTALS OF MATHEMATICS

Module designation	**Fundamentals of Mathematics**
Semester(s) in which the module is taught	1st Semester
Person responsible for the module	Windiani Erliana
Language	Indonesian

Relation to curriculum	Compulsory Course
Teaching methods	Contextual Learning, Cooperative Learning, Discussion
Workload (inc. Contact hours, self- study hours)	● Lecture class: 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours ● Discussion class: 60 minutes x 2 sch x 14 weeks = 1680 minutes = 28 hours ● Exam: 120 minutes x 2 times = 240 minutes = 4 hours ● Self-study: 60 minutes x 6 times x 14 weeks = 4780 minutes = 80 hours ● Total: 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Required and recommended prerequisites for joining the module	1. Registered in this course 2. Minimum 80% attendance in this course
Module objectives/intended learning outcomes	1. Student is able to explain basic mathematical concepts (interval, inequality and absolute value; function; limit and continuous function; derivative; integral; matrix; and system of linear equations). 2. Able to use basic mathematical techniques to solve simple mathematical problems. 3. 3) Able to apply basic mathematical concepts and techniques to solve applied problems.
Content	This course discusses the basic concepts of mathematics which include concepts of inequality and absolute value, function and model, limit and continuous function, derivative, integral, matrix and system of linear equations with more emphasis onaspects of calculation.
Examination forms	Midterm exam, Final exam, Quizzes, Assignments
Study and examination requirements	*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.

	Assessment of students' achievement using proportion as follow: midterm exam (35%), final exam (35%), practicum (30%). The proportion of practicum score consists of report (50%), quiz (15%), attendance (10%), and practicum examination (25%)
Reading list	1. Tim Penulis. Diktat Kuliah Landasan Matematika. Departemen Matematika FMIPA IPB, Bogor, 2017. 2. Varberg D, Purcell EJ, Rigdon SE. 2011. Kalkulus. Ed ke-9. Jilid 1. Susila IN, penerjemah. Jakarta (ID): Penerbit Erlangga. Terjemahan dari: Calculus. 9th Ed. 3. Stewart J. 2002. Kalkulus. Ed ke-4. Jilid 1. Susila IN, Gunawan H, penerjemah. Jakarta (ID): Penerbit Erlangga. Terjemahan dari: Calculus. 4th Ed.

BIO100 BIOLOGY

Module designation	**Biology**
Semester(s) in which the module is taught	1st Semester
Person responsible for the module	
Language	Indonesian
Relation to curriculum	Compulsory Course
Teaching methods	Contextual Learning, Cooperative Learning, Discussion
Workload (inc. Contact hours, self- study hours)	• Lecture class: 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Discussion class: 60 minutes x 2 sch x 14 weeks = 1680 minutes = 28 hours • Exam: 120 minutes x 2 times = 240 minutes = 4 hours • Self-study: 60 minutes x 6 times x 14 weeks = 4780 minutes = 80 hours • Total: 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS

Required and recommended prerequisites for joining the module	1. Registered in this course 2. Minimum 80% attendance in this course
Module objectives/intended learning outcomes	1. Explaining the scope of biology, observe and explain the structure and metabolism of cells. 2. Observing and explaining the basic cellular reproduction and patterns of inheritance. 3. Observing and explaining the structure andexpression of genes, and biotechnology. 4. Observing and explaining the diversity, structureand biological functions of organisms: monera, protists, fungi, plantae, animalia. 5. Observing and explaining the ecology: population, community, and ecosystem and bio conservation.
Content	This course explains the theories and basic principles of biology that form the basis for further courses in the major/department. The lecture begins by explaining the scope of biology and the origins of life, then proceeding to the Midterm Examination, lecturesexplaining the structure and function of biology at thecellular level, genetics and its application in biotechnology. In the next section until the Final Examination, the lecture explains about biodiversity and biological functions at the level of organisms (monera, protists, fungi, plantae, and animalia), population, community, ecosystem, and conservation biology. Examples and the application of each topic are given to help students understand basic principles and theories. This course is equipped with practicum as a support of theoretical knowledge provided in lectures. This course is offered in 1st semester (odd) and 2nd semester (even), as well as short semesters (over the year) specifically for repeaters.
Examination forms	Midterm exam, Final exam, Quizzes, Assignments
Study and examination requirements	*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. Assessment of students' achievement using proportion as follow: midterm exam (35%), final exam (35%), practicum (30%). The proportion of practicum score consists of report (50%), quiz (15%), attendance (10%), and

	practicum examination (25%)
Reading list	Jane B. Reece, Lisa A. Urry, Michael L. Cain, Steven A. Wasserman, Peter V. Minorsky, Robert B. Jackson. 2014. Campbell Biology.10th. PearsonEducation, Inc. *Neil A. Campbell, Jane B. Reece. 2008.* Biology *8th.* Pearson Benjamin Cummings: San Francisco.

EKO100 GENERAL ECONOMICS

Module designation	**General Economics**
Semester(s) in which the module is taught	1st Semester
Person responsible for the module	
Language	Indonesian
Relation to curriculum	Compulsory Course
Teaching methods	Contextual Learning, Cooperative Learning, Discussion
Workload (inc. Contact hours, self- study hours)	• Lecture class: 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Discussion class: 60 minutes x 2 sch x 14 weeks = 1680 minutes = 28 hours • Exam: 120 minutes x 2 times = 240 minutes = 4 hours • Self-study: 60 minutes x 6 times x 14 weeks = 4780 minutes = 80 hours • Total: 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Required and recommended prerequisites for joining the module	1. Registered in this course 2. Minimum 80% attendance in this course
Module objectives/intended learning outcomes	After attending this course, student is able to understand of economics as a branch of science, understand the behavior of households, companies and markets in economic decision making, understand macroeconomics, problems and the actual conditions of Indonesian macroeconomics.
Content	This course is designed to provide a general overview of Indonesian economics and economics.

Examination forms	Midterm exam, Final exam, Quizzes, Assignments
Study and examination requirements	*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. Assessment of students' achievement using proportion as follow: midterm exam (35%), final exam (35%), practicum (30%). The proportion of practicum score consists of report (50%), quiz (15%), attendance (10%), and practicum examination (25%)
Reading list	Books for lecture class: Lipsey. R. G., P. O Steiner, and D. D. Purpis. 1987. Economics. Harper International Edition. Books for practical class: Penuntun Responsi Ekonomi Umum. 2013.Departemen Ilmu Ekonomi (IE), Fakultas Ekonomi dan Manajemen (FEM). IPB. Lipsey. R. G., P. O Steiner, and D. D. Purpis. 1987. Economics. Harper International Edition. 3 Gregory, M. 2006. Principles of Economics (Pengantar Ekonomi Mikro) Edisi 3. Salemba Empat.

2nd SEMESTER

IPB108 ENGLISH

Module designation	English
Semester(s) in which the module is taught	2nd Semester
Person responsible for the module	
Language	English
Relation to curriculum	Compulsory Course
Teaching methods	Contextual Learning, Cooperative Learning, Discussion
Workload (inc. Contact hours, self- study hours)	• Lecture class: 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Discussion class: 60 minutes x 2 sch x 14 weeks = 1680 minutes = 28 hours • Exam: 120 minutes x 2 times = 240 minutes = 4 hours • Self-study: 60 minutes x 6 times x 14 weeks = 4780 minutes = 80 hours • Total: 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Required and recommended prerequisites for joining the module	1. Registered in this course 2. Minimum 80% attendance in this course
Module objectives/intended learning outcomes	1. Able to applying "reading skills" in understanding texts in English; 2. Knowing the structure of language to support understanding of texts in English;
Content	This course is designed and structured to guide IPB University students so they can face the era of globalization with sufficient English language. The topics discussed are knowledge of grammar and reading techniques that are very useful such as: skimming, scanning, guessing meanings from context, text organization and transferring information.
Examination forms	Midterm exam, Final exam, Quizzes, Assignments

Study and examination requirements	*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. Assessment of students' achievement using proportion as follow: midterm exam (35%), final exam (35%), practicum (30%). The proportion of practicum score consists of report (50%), quiz (15%), attendance (10%), and practicum examination (25%)
Reading list	1. Abdulaziz, Helen Taylor, & Alfred D. Stover. 1980. Academic Challenges in Reading. Prentice-Hall, Inc.Englewood Cliffs, N.J. 2. Anson M. Chris, Schwegler A. Robert. 2001. The Longman Handbook for Writers and Readers, An Imprint of Addision Wesley Longman, Inc. 3. Dobbs, Carrie. 1989. Reading for a Reason. Prentice Hall Regents Englewood Cliffs, N.J. 4. Feverstein, Tamar and Miriam S. 1995. Enhancing Reading Comprehension in the Language Learning Clasroom. Alta Book Center Pub. San Fransisco, California. 5. Grellet, Francois. 1981. A Practical Guide to Reading Comprehension Exercises. Cambridge University Press. 6. Hornby, A.S. 1991. Oxford Advanced Learner's Dictionary. Oxford UP. 7. Karen Blanchard et.al. 1997. For Your Information 3. Longman. 8. Kranhlee, Karl. 1976. Reading Together: A Reading Activities Text. St. Martin Press. 9. Labarca. Angela and James M. Hendrickson. 1984. Our Global Village. Harcourt Brace Jovanovichy, Inc. 10. Latulippe, L.D. 1987. Developing Academic Reading Skills. Prentice Hall Regents, Englewood Cliffs, N.J. 11. Maingay, S. 1983. Making Sense of Reading: an Introduction to Reading Skills in English. Australia Nelson. 12. Marcelino, M. 1999. Materials for Foundations of Academic Writing Course. AMINEF, Jakarta.

	13. Mickulecky, Beatrice S. 2004. More Reading Power, Reading for Pleasure, Comprehension Skills, Thinking Skills, Reading Faster. Pearson Education, Inc. 14. Oshima, Alice, and Ann Hogue. 1999. Writing Academic English. Longman. 15. Praninkas, Jean. 1975. Rapid Review of English Grammar. Prentice Hall. 16. Rowland, Black S. and Lisa Rosenthal. 1986. Academic English and Study Skills for International Students. Prentice Hall. N.J. 17. Skykes, J.B. 1989. The Concise Oxford Dictionary. Oxford UP. 18. The British Council. 1979. Reading and Thinking: Exploring Functions. Oxford UP. 19. Torres G, Eunice. Smith L. Michael. English for Fisheries Technology. National Bookstore, Inc. 20. Valerie Kay. 1985. Biological Sciences "Developing Reading Skill in English". Pergamon Press. 21. Woods, Enid Nolan and David Foll. 1986. Penguin Advanced Reading Skills. Penguin Book Ltd. England.

KIM101 CHEMISTRY

Module designation	**Chemistry**
Semester(s) in which the module is taught	2nd Semester
Person responsible for the module	
Language	Indonesian
Relation to curriculum	Compulsory Course
Teaching methods	Contextual Learning, Cooperative Learning, Discussion
Workload (inc. Contact hours, self- study hours)	• Lecture class: 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Discussion class: 60 minutes x 2 sch x 14 weeks = 1680 minutes = 28 hours • Exam: 120 minutes x 2 times = 240 minutes = 4 hours • Self-study: 60 minutes x 6 times x 14 weeks = 4780 minutes = 80 hours • Total: 8100 minutes = 135 hours

Credit points	3 SCH x (1.6) = 4.8 ECTS
Required and recommended prerequisites for joining the module	1. Registered in this course 2. Minimum 80% attendance in this course
Module objectives/intended learning outcomes	1. After taking this course, students will be able to explain the chemical linkages in life processes related to aspects of daily life. 2. After attending this lecture, students will be ableto explain the relationship between chemistry and life, physical and chemical properties, and atoms as basic components of elements, compounds formed from elements, mixtures, pure and impure materials, and periodic tables.
Content	Look at the world of atoms and molecules:understanding the language of chemistry.
Examination forms	Midterm exam, Final exam, Quizzes, Assignments
Study and examination requirements	*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. Assessment of students' achievement using proportion as follow: midterm exam (35%), final exam (35%), practicum (30%). The proportion of practicum score consists of report (50%), quiz (15%), attendance (10%), and practicum examination (25%)
Reading list	Suchocki J. 2007. *Conceptual Chemistry: Understanding Our World of Atoms and Molecules*.Ed. Ke-3. San Fransisco (US): Pearson Benjamin Cummings.

FIS100 PHYSICS

Module designation	Physics
Semester(s) in which the module is taught	2nd Semester
Person responsible for the module	
Language	Indonesian
Relation to curriculum	Compulsory Course
Teaching methods	Contextual Learning, Cooperative Learning, Discussion
Workload (inc. Contact hours, self- study hours)	• Lecture class: 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Discussion class: 60 minutes x 2 sch x 14 weeks = 1680 minutes = 28 hours • Exam: 120 minutes x 2 times = 240 minutes = 4 hours • Self-study: 60 minutes x 6 times x 14 weeks = 4780 minutes = 80 hours • Total: 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Required and recommended prerequisites for joining the module	1. Registered in this course 2. Minimum 80% attendance in this course
Module objectives/intended learning outcomes	Student is able to use various physical formulations inthe scope of solving simple physics problems and applying them to other fields.
Content	This course is taught to provide students with insight into the scope of mechanics, vibration waves, dynamics, electricity, electromagnetism and modern physics as well as providing a basis that is suitable for studentswho need basic physics.
Examination forms	Midterm exam, Final exam, Quizzes, Assignments

Study and examination requirements	*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. Assessment of students' achievement using proportion as follow: midterm exam (35%), final exam (35%), practicum (30%). The proportion of practicum score consists of report (50%), quiz (15%), attendance (10%), and practicum examination (25%)

KPM130 GENERAL SOCIOLOGY

Module designation	**General Sociology**
Semester(s) in which the module is taught	2nd Semester
Person responsible for the module	
Language	Indonesian
Relation to curriculum	Compulsory Course
Teaching methods	Contextual Learning, Cooperative Learning, Discussion
Workload (inc. Contact hours, self- study hours)	• Lecture class: 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Discussion class: 60 minutes x 2 sch x 14 weeks = 1680 minutes = 28 hours • Exam: 120 minutes x 2 times = 240 minutes = 4 hours • Self-study: 60 minutes x 6 times x 14 weeks = 4780 minutes = 80 hours • Total: 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS

Required and recommended prerequisites for joining the module	1. Registered in this course 2. Minimum 80% attendance in this course
Module objectives/intended learning outcomes	After attending this course student is able to understand the concepts, analyze situations and social changes in society, and identify social realities and problems at the level of groups, organizations, institutions, communities, and global by considering power and authority, ecology and gender. In addition,student is able to conduct sociological studies, communicate the results of studies for decision making based on qualitative and quantitative approaches that can be accounted for.
Content	After attending this course student is able to understand the concepts, analyze situations and social changes in society, and identify social realities and problems at the level of groups, organizations, institutions, communities, and global by considering power and authority, ecology and gender. In addition,student is able to conduct sociological studies, communicate the results of studies for decision making based on qualitative and quantitativeapproaches that can be accounted for.
Examination forms	Midterm exam, Final exam, Quizzes, Assignments
Study and examination requirements	*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. Assessment of students' achievement using proportion as follow: midterm exam (35%), final exam (35%), practicum (30%). The proportion of practicum score consists of report (50%), quiz (15%), attendance (10%), and practicum examination (25%)
Reading list	1. Charon, J.M. 1980. *The Meaning of Sociology*. Alfred Publishing Co. Inc. America. 2. Calhoun, C., *et.al.* 1994. *Sociology* (6th edition). McGraw-Hill, Inc. USA. 3. Wibisono, Koento. 1982. Arti PerkembanganMenurut Filsafat Positivisme Auguste Comte. Yogyakarta: Gadjah Mada University Press. 4. Gillin, J.L. & J.P. Gillin, 1954. *Cultural Sociology* (3rd printing). New York: The Macmillan Co. 5. Maiolo, J., et.al., 1991. *Study Guide to Accompany Bassis, Gelles and Levine: Sociology An Introduction*. McGraw-Hill, Inc.USA. 6. Soekanto, S., 1990. Sosiologi Suatu Pengantar. Jakarta: Rajawali Press. 7. Geertz, C. 1976. *Agricultural Involution: process of ecological change in Indonesia.*Berkeley: University of California Press. 8. Herskovits, M.J. 1955. *Cultural Anthropology.* New York: Alfred A. Knopf. 9. Koentjaraningrat (Ed.). 1979. *Manusia dan Kebudayaan di Indonesia.* Jakarta: Penerbit Djambatan. 10. Kluckhohn, F.R. 1961. "Dominant and variantvalue- orientation" in: FR Cluchohn & HA Murray (Eds.), *Personality in Nature, Societyand Culture.* New York: Alfred A Knoff. 11. Redfield, R. 1956. *Peasant society and culture.* Chicago: University of Chicago Press. 12. Tan, M.G. 1973. "Masalah perencanaan penelitian" dalam Koentjaraningrat

(Ed.),*Metode-metode Penelitian Masyarakat*.Jakarta: LIPI.

13. Dorn, J.A.A. van & C.J. Lammers. 1959. *Modern Sosiologie een sijstematische inleiding.* Utreacht Antwerpen: Het Spectrum.
14. Koentjaraningrat. 1964. Pengatar Antropologi, Jakarta: Penerbit Universitas.
15. 1979. Kebudayaan, Mentalitas dan Pembangunan. Jakarta: Gramedia.
16. MacIver, R.M. & C.H. Page. 1957. *Society and Introductory Analysis.* New York: Rinehart and Company, Inc.
17. Merton, R.K. 1967. *Social Theory and Social Structure*. New York: The Free Press. Polak,
18. J.B.A.F.M. 1966. Sosiologi: Suatu Buku Pengantar

Ringkas. Jakarta: Penerbit danBalai Buku "Ichtiar".

19. Soemardjan, S. & S. Soemardi (Eds.). 1974. Setangkai Bunga Sosiologi. Jakarta: YayasanBadan Penerbit Fakultas Ekonomi UniversitasIndonesia.
20. Uphoff, N. 1993. "Grassroots Organizations and NGOs in Rural Development: Opportunities with Diminishing States and Expanding Markets." *World Development*, Vol 21(4):pp607-622.
21. 1986. *Local Institutional Development: An Analytical Sourcebook withCases.* New York: Kumarian Press.
22. Bierstedt, R. 1982. *The Social Order.* Bombay:Tata McGraw Hill Publishing.
23. Koentjaraningrat, 1979, "Isi konsep desa di Indonesia" dalam Koentjaraningrat (Ed.), Masyarakat Desa di Indonesia Masa Ini. Jakarta: Yayasan Penerbit Fakultas EkonomiUniversitas Indonesia.
24. Merton, R.K. 1967. *Social Theory and Social Structure.* New York: The Free Press.
25. Bassis, M.S., R.G. Jelles, and A. Levine, 1991,

Sociology An Introdution, New York: Mc GrawHill.

26. Berelson, B. & G.A. Steiner. 1964. *Human Behaviour.* Harcourt: Brase & World.

27. Etzioni, A.1982. *Organisasi-organisasi Modern*. Jakarta: UI Press.
28. Himes (1976). *The Study of Sociology An Introduction*. Ilinois: Scott, Foresman and Co.
29. Schoorl, J.W., 1982. Modernisasi. Jakarta:Gramedia.
30. Soekanto, S. 1983. Struktur Sosil Masyarakat. Jakarta: Gramedia.
31. Weber, Max. 1974. *The Theory of Social and Economic Organization*. New York: The FreePress.
32. Bierstedt, R. 1970. *The Social Order An Introduction to Sociology*. New York: McGrawHill Book Co.
33. Calhoun, C. et al. 1994. *Sociology AnIntroduction.* McGraw Hill, Inc.
34. Sorokin, P.A. 1959. *Social and Cultural Mobility.* London: Collier-Macmillan Ltd.
35. Wertheim, W.F. 1959. *Indonesian Society in Transition A Study of Social Change.* S'Gravenhage: W van Hoeve.
36. Nisbet, R.A. 1993. *The Sociological Tradition*. London: Transaction Publishers.
37. Mulyana, D. 2001. Ilmu Komunikasi: Suatu Pengantar. Bandung: Remaja Rosdakarya.
38. Lerner, D. 1978. Memudarnya Masyarakat Tradisional. Yogyakarta: Penerbit UniversitasGadjah Mada.
39. Wright, H. N. 1997. Komunikasi: Kunci Perkawinan Bahagia. Yogyakarta: PenerbitGloria.
40. Odum E.P., 1971
41. Ellen C. Semple (1911),
42. Carl Ritter dan Ellsworth Huntington. Alfred L. Kroeber. 1939

AGB100 INTRODUCTION TO ENTREPRENEURSHIPS

Module designation	Introduction to Entrepreneurships
Semester(s) in which the module is taught	2nd Semester
Person responsible for the module	
Language	Indonesian
Relation to curriculum	Compulsory Course
Teaching methods	Contextual Learning, Cooperative Learning, Discussion
Workload (inc. Contact hours, self-study hours)	• Lecture class: 50 minutes x 1 sch x 14 weeks = 700 minutes = 12 hours • Exam: 120 minutes x 2 times = 240 minutes = 4 hours • Self-study: 60 minutes x 2 times x 14 weeks = 1740 minutes = 29 hours • Total: 2700 minutes = 45 hours
Credit points	1 SCH x (1.6) = 1.6 ECTS
Required and recommended prerequisites for joining the module	1. Registered in this course 2. Minimum 80% attendance in this course
Module objectives/intended learning outcomes	After taking this course, students will have new insights about the entrepreneurial potential and be motivated to develop themselves and be able to change the way of thinking in developing the entrepreneurial spirit.
Content	Students will be able to explain the role and importanceof entrepreneurship which includes: (1) explaining the importance of entrepreneurship education; (2) mention and explain the category of entrepreneurs.
Examination forms	Midterm exam, Final exam, Quizzes, Assignments

Study and examination requirements	*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. Assessment of students' achievement using proportion as follow: midterm exam (35%), final exam (35%), practicum (30%). The proportion of practicum score consists of report (50%), quiz (15%), attendance (10%), and practicum examination (25%)
Reading list	1. Ciputra. 2009. Ciputra Quantum Leap Entrepreneurship Mengubah Masa Depan Bangsa dan Masa Depan Anda. PT Elex Mediacomputindo,Jakarta. 2. Drucker, Peter, F. 1991. Inovasi dan Kewiraswastaan, Praktik dan Dasar-dasar. AlihBahasa oleh Rusjdi Naib. Penerbit Erlangga. 3. Longenecker, Justin G. Carlos W. Moore, J. William Petty. 2000. Kewirausahaan, Manajemen Usaha Kecil. Penerbit Salemba Empat. 4. Wijayanto, Dian dan Sofuan Salim. 2007. The Secret Behind Your Dream: Dahsyatnya Kekuatan Impian yang Mempengaruhi Kesuksesan Anda. Sketsa Inti Media. Jakarta.

FPT101 INTRODUCTION TO ANIMAL SCIENCE

Module designation	**Introduction to Animal Science**
Semester(s) in which the module is taught	2nd Semester
Person responsible for the module	
Language	Indonesian

Relation to curriculum	Compulsory Course
Teaching methods	Contextual Learning, Cooperative Learning, Discussion
Workload (inc. Contact hours, self- study hours)	• Lecture class: 50 minutes x 1 sch x 14 weeks = 700 minutes 12 hours • Discussion class: 60 minutes x 2 sch x 14 weeks = 1680 minutes = 28 hours • Exam: 120 minutes x 2 times = 240 minutes = 4 hours • Self-study: 60 minutes x 6 times x 14 weeks = 4780 minutes = 80 hours • Total: 8100 minutes = 135 hours
Credit points	2 SCH x (1.6) = 3.2 ECTS
Required and recommended prerequisites for joining the module	1. Registered in this course 2. Minimum 80% attendance in this course
Module objectives/intended learning outcomes	After taking this course, students will have new insights about the entrepreneurial potential and be motivated to develop themselves and be able to change the way of thinking in developing the entrepreneurial spirit.
Content	Students will be able to explain the role and importanceof entrepreneurship which includes: (1) explaining the importance of entrepreneurship education; (2) mention and explain the category of entrepreneurs.
Examination forms	Midterm exam, Final exam, Quizzes, Assignments
Study and examination requirements	*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. Assessment of students' achievement using proportion as follow: midterm exam (35%), final exam (35%), practicum (30%). The proportion of practicum score consists of report (50%), quiz (15%), attendance (10%), and practicum examination (25%)

3th SEMESTER

PTP201 ANIMAL BEHAVIOR AND WELFARE

Module Name	**Animal Behavior and Welfare**
Semester(s) in which the module is taught	3rd Semester
Person responsible for the module	Prof. Dr. Ir. Iman Rahayu HS
Lecturer	Team Teaching from Department of Animal Production Technology
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours • Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to master applicable poultry behavior 2. Able to master the concepts of 5F, 3R, and bioethics in poultry 3. Able to explain knowledge and apply behavior management of large ruminants (beef cattle, dairy cows, buffalo) and small ruminants (sheep, goats, rabbits), as well as horses, deer and pigs.
Content	This course is discuss about domestication, animal welfare and bioethics, poultry behavior, poultry welfare, 5F and 3R concept and poultry bioethics, behavior and welfare concept for research, behavior management of large ruminants (cattle, cows, stiff), behavior management of small ruminants (sheep, goat, rabbit), behavior management of horses, deer, and pig
Study and examination requirement 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, language), (b) Being on time, (c) Effort.
Media employed	Classical teaching tools with white board and presentation

THT211 BASIC OF ANIMAL PRODUCT

Module Name	**Basic of Animal Product**
Semester(s) in which the module is taught	3rd Semester
Person responsible for the module	Dr Zakiah Wulandari, STP. MSi
Lecturer	Dr Tuti Suryati, SPt. MSi
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours • Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to explain the basic principles of processing technology and preservation of livestock products which include heating, drying, cooling, freezing and the use of food additives. 2. Able to explain some of the reactions that can occur during the processing process and their effects on the resulting product 3. Able to explain several food safety principles that must be applied to the handling, processing and storage of livestock products 4. Able to choose safe and appropriate technology according to material characteristics and orientation of livestock products produced
Content	Learn the basic technology of processing and preservation that can be done on livestock products which include: drying, heating, cooling, freezing and the use of food additives as well as some of the reactions that can occur during the processing and preservation process. In addition, it also discusses several food safety principles that are applied to the handling, processing and storage of livestock products.
Study and examination	***Cognitive***: Midterm exam, Final exam, Quizzes, Assignments

requirement and forms of examination	***Psychomotor***: Practice ***Affective***: Assessed from the element /variables achievement, namely (a) Contributions (attendance, active, role, initiative, language), (b) Being on time, (c) Effort.
Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Meilgaard, M., GV. Ceville & B.T.Carr. 1999. Sensory Evaluation Techniques. CRC Press New York. 2. Buckle, K.A., R.A. Edwards, G.H. Fleet, M. Wootton. 1987. Ilmu Pangan. Terjemahan: H. Purnomo dan Adiono. UI Press. Jakarta.

NTP231 INTRODUCING OF ANIMAL NUTRITION

Module Name	**Introducing of Animal Nutrition**
Semester(s) in which the module is taught	3rd Semester
Person responsible for the module	Dr. Ir. Dwierra Evvyernie Amirroenas, M.Sc.
Lecturer	Team Teaching from Department of Animal Nutrition
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 100 minutes x 14 weeks per Semester
Workload	● Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours ● Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours ● Exam : 120 minutes x 2 times = 240 minutes = 4 hours ● Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Know the composition of feed and digestive organs of livestock (ruminant / monogastric) 2. Knowing the nutritional benefits of feed in livestock and the impact of antinutrients on feed 3. Knowing the nutritional needs of livestock
Content	This course discusses knowledge of the composition of feed and animal organs (ruminants and monogastrics), content and energy partition of feed, evaluation of the benefits of protein, the role of

Module Name	Introducing of Animal Nutrition
	minerals and vitamins, the effect of and overcoming antinutrients in feed ingredients, the role of water in the body, nutrient needs in livestock ruminants and monogastrics and development research on nutrition.
Study and examination requirement and forms of examination	***Cognitive:*** Midterm & Final exam, Quizzes, Assignments ***Psychomotor:*** Practice ***Affective:*** Assessed from the element /variables achievement, namely (a) Contributions (attendance,active, role, initiative, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation

NTP211 INTRODUCING OF FEED INGREDIENTS

Module Name	Introducing of Feed Ingredients
Semester(s) in which the module is taught	3rd Semester
Person responsible for the module	Dr. Ir. Muhammad Ridla, M.Agr.
Lecturer	Team Teaching from Department of Animal Nutrition
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 100 minutes x 14 weeks per Semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to understand about feed quality criteria in terms of physical and chemical aspects 2. Able to analyze feed and use of various conventional feed ingredients for livestock
Content	This course discusses knowledge about feed quality criteria in terms of physical and chemical aspects as well as the introduction of conventional feed ingredients and feed
Study and examination	***Cognitive:*** Midterm & Final exam, Quizzes, Assignments

Module Name	Introducing of Feed Ingredients
requirement and forms of examination	***Psychomotor:*** Practice ***Affective:*** Assessed from the element /variables achievement, namely (a) Contributions (attendance,active, role, initiative, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Tim Laboratorium Ilmu dan Teknologi Pakan Fakultas Peternakan IPB. 2020. Pengetahuan Bahan Pakan Ternak 2. Cullison AE. 1982. Feed and Feeding. Reston Pub Inc. Virginia

NTP243 INTRODUCING OF PASTURE SCIENCE

Module Name	Introducing of Pasture Science
Semester(s) in which the module is taught	3th Semester
Person responsible for the module	Prof. Dr. Ir. Panca Dewi Manu Hara Karti Soewondo, M.Si.
Lecturer	M Agus Setiana Nur Rohmah Kumalasari Asep Tata Permana
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 100 minutes x 14 weeks per Semester
Workload	● Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours ● Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours ● Exam : 120 minutes x 2 times = 240 minutes = 4 hours ● Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Understand the role and development of agrostology 2. Able to identify grass and legume species for animal feed 3. Able to understand the factors that influence the growth of forage plants
Content	Discusses knowledge about the role and development of Agrostology in a broad sense (classification and morphology, distribution of natural feed plant biotic commodities), introduction to

	types of grass and legume, physiological processes of growth and development of forage plants, and factors that influence growth.
Study and examination requirement and forms of examination	***Cognitive:*** Midterm & Final exam, Quizzes, Assignments ***Psychomotor:*** Practice ***Affective:*** Assessed from the element /variables achievement, namely (a) Contributions (attendance,active, role, initiative, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation
Reading list	Halls, LK, RH hughes, RL Rummel, and BL Southwel. 1964. Forage and Cattle Management in Longleaf-Slaash Pine forest. Farmer's Bulletin, 2199, Washington. Mannetje L.'t and Jones RM. 2000. Field and Laboratory Methods for Grassland and Animal Production Research. CABI Publishing. Mendra K, MAP Duarsa, NN Candraasih K, IW Suarna, IBG Partama, dan IGN Sarka. 1994. Diktat. Tatalaksana padang penggembalaan tropika. Fakultas Peternakan, Universitas Udayana. Denpasar. Susetyo S. 1978. Pengelolaan dan Potensi Hijauan Makanan Ternak untuk Produksi Ternak Daging. Fakultas Peternakan. Institut Pertanian Bogor.

STK211STATISTICAL METHOD

Module Name	**Statistical Method**
Semester(s) in which the module is taught	3rd Semester
Person responsible for the module	Dr Ir Sri Rahayu, MSi
Lecturer	Dr Ir Sri Darwati, MSi
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 100 minutes x 14 weeks per Semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to	1. Registered in this course

Module Name	Statistical Method
the examination regulation	2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	After completing this course students will be able to explain the basic principles of statistical methods and use simple statistical analysis in agriculture
Content	The topics cover in this courses include descriptive statistics, probability, principles of hypothesis testing, hypothesis testing for proportion, mean, correlation, simple linear regression and contingency table
Study and examination requirement and forms of examination	***Cognitive:*** Midterm & Final exam, Quizzes, Assignments ***Psychomotor:*** Practice ***Affective:*** Assessed from the element /variables achievement, namely (a) Contributions (attendance,active, role, initiative, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Agresti A, Frankli C, Klingenberg B. 2018. Statistics: The Art and Science of Learning from Data. 4th edition, Edinburg:Pearson Education Limited 2. Koopmans, LH. 1987. Introduction to contemporary Statistical Methods, 2nd ed., Duxbury Press, Boston.

AFF233 ANIMAL PHYSIOLOGY

Module Name	Animal Physiology
Semester(s) in which the module is taught	3rd Semester
Person responsible for the module	Dr drh damiana Rita Ekastuti, MSi
Lecturer	Team teaching from the Physiology Department of the Faculty of Veterinary Medicine IPB University
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 100 minutes x 14 weeks per Semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to	1. Registered in this course

the examination regulation	2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to explain the function of organs in the body of livestock (ruminants and monogastrics) 2. Able to analyze the impact of abnormalities from the organ function of livestock life and productivity
Content	This course discusses the function of cells and organs in a functional system that is carried out in a coordinated and integrative manner. The systems discussed are the cardiovascular system, the respiratory system, the digestive system, metabolism, growth and thermoregulation, kidney and osmoregulation as well as reproduction and lactation.
Study and examination requirement and forms of examination	***Cognitive:*** Midterm & Final exam, Quizzes, Assignments ***Psychomotor:*** Practice ***Affective:*** Assessed from the element /variables achievement, namely (a) Contributions (attendance,active, role, initiative, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Donham RS dan Haase E. 1980. *Hormones and Domestication*. Avian Endocrinology Ed.: A. Epple and M.H. Stetson. 2. Ganong WF. 2008. *Buku Ajar Fisiologi Kedokteran*. Ed 22. Terjemahan. Jakarta. Penerbit Buku Kedokteran EGC. 3. Squires EJ. 2003. *Applied Animal Endocrinology*. Wallingford, Oxon. CABI Publishing.. 4. Sturkie PD. 1976. *Avian Physiology*. 3rdEd. New York. Springer-Verlag

4th SEMESTER

PTP211 DAIRY PRODUCTION TECHNOLOGY

Module Name	**Dairy Production Technology**
Semester(s) in which the module is taught	4th Semester
Person responsible for the module	Dr. Ir. Afton Atabany
Lecturer	Dr. Ir. Bagus P. Purwanto, M.Agr Iyep Komala, S.Pt, M.Si.
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to identify and make an inventory of Feeding (concentrate and forage feed and its provision) in dairy livestock 2. Able to explain and apply the maintenance management of lactating and non-lactating dairy cattle 3. Able to explain the productivity and production of milk in dairy livestock 4. Able to explain about the factors that affect the quality of milk in dairy cattle
Content	This course is offered knowledge for student to capable explain and understand the technology production and maintain dairy cows based on the composition and animal status, dairy cows judging, recording programme and estimation of milk production, selection method of dairy cows, planning for dairy cows entrepreunership
Study and examination requirement 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, language), (b) Being on time, (c) Effort.
Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Freddie L. Barnard, John C. Foltz, Elizabeth A. Yeager. 2016. Agribusiness Management (Routledge Textbooks in Environmental and Agricultural Economics). 5th Ed. Routledge 2. Nicholas Kalaitzandonakes, Elias G. Carayannis, Evangelos Grigoroudis, Stelios Rozakis (Eds.). 2018. From Agriscience to Agribusiness: Theories, Policies and Practices in Technology Transfer and Commercialization (Innovation, Technology, and Knowledge Management). 1st Ed. Kindle Edition. Springer 3. Siswanto Imam Santosa, Agus Setiadi, dan Ratih Wulandari. 2013. Analisis Potensi Pengembangan Usaha Peternakan Sapi Perah dengan Menggunakan Paradigma Agribisnis di Kecamatan Musuk Kabupaten Boyolali. Buletin Peternakan 37(2): 125-135 4. Ronald Kay, William Edwards, Patricia Duffy. 2015. Farm Management. 8th Ed. McGraw-Hill 5. Garry Stephenson. 2019. Whole Farm Management: From Start-Up to Sustainability. Storey Publishing

PTP221 LARGE RUMINANT PRODUCTION

Module Name	**Large Ruminant Production**
Semester(s) in which the module is taught	4thSemester
Person responsible for the module	Prof Dr Ir Rudy Priyanto
Lecturer	Dr Ir Henny Nuraini, MSi Dr Ir Komariah, MSi Edit Lesa A, SPt, MSc Bramada W.P, SPt, MSi
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	● Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours ● Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours ● Exam : 120 minutes x 2 times = 240 minutes = 4 hours

	• Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to understand the potential, prospects of meat ruminant farms in Indonesia and be able to explain the meat ruminant production system in Indonesia, the meat ruminant selection and mating system 2. Able to understand the buildings and housing of meat ruminants, to understand the evaluation of feeder livestock for seeds and fattening 3. Able to understand the management of parent, male and child maintenance and be able to understand feedlot management 4. Able to implement livestock health handling, livestock transportation to marketing 5. Able to evaluate ready-to-slaughter livestock
Content	This course is discuss about potency and prospect of cattle and meat in Indonesia, matting system and selection, evaluation system for replacement stock, cattle production system, maintain management of cattle, building and equipment of cattle, cattle health handling, feedlot management and evaluation, also market of cattle meat
Study and examination requirement 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, language), (b) Being on time, (c) Effort.
Media employed	Classical teaching tools with white board and power point presentation
Reading list	Bogart R, Taylor RE. 1992. Scientific Farm Animal. New York :Mcmillan Publishing.Co Boyles S, Flacoli T, Ringwali K. 1992. The FeederCalf Grading System. North Dakota State. University Agriculture and University Extension Briggs HM, Brigg DM, 2005. Modern Breed of Livestock. Fourth Edition. Mcmillan Publishing.Co Buhman M, Dewell G, Griffin D. 2005. Biosecurity Basics for Cattle Operation and Good Management Practises (GMP) for Controlling Infectious Deseases. University of Nebrasca-Lincoln Extension

	Cleere J, Gill R, Dement A.2008. Biosecurityfor Beef Cattle Operations. AgriLifeExtension. The Texas A&M System Departemen Pertanian. 2001. Beberapa Penyakit pada Ternak Ruminansia: Pencegahan dan Pengobatannya. Mataram (ID): Badan Penelitian dan Pengembangan Pertanian, Balai Pengkajian Teknologi Pertanian (BPTP) Departemen Pertanian. 2007. Petunjuk Teknis Perkandangan Sapi Potong. Pusat Penelitian dan Pengembangan Peternakan, Deprtemen Pertanian, Grati. Departement of Primary Industries. 1994. Designing Better Feedlot. Watts P, Tucker R. Brisbane: State of Queensland Departement of Primary Industries. Devendra, C. anda Marca Burns,1983. Goat Production in the Tropics Common Wealth Agricultural Bureaux. Malaysia. Direktorat Jenderal Peternakan. 2000. Pedoman Budidaya Ternak Sapi Potong yang Baik (Good Farming Practise) Jakarta (ID): Departemen Pertanian Ensminger ME. 1987. Beef Cattle Science.6th Ed. The Interstate Printers & Publisher, Inc. Danville, Illinois. Ensminger M.E 1970. Sheep and Wool Sience. 4 th ED. The Interstate Printers and Publishers. Inc. Illionis. Gatenby M.R.1986. Sheep Production in the Tropics and Sub Tropics. Longman Singapore Publishers Ltd. Singapore. Johnston. R.G. 1983. Introduction to Sheep Farming. Granada Publishers. Sidney.

PTP222 PIG AND HORSE PRODUCTION

Module Name	**Pig and Horse Production**
Semester(s) in which the module is taught	4th Semester
Person responsible for the module	Dr. Yuni Cahya Endrawati, S.Pt., M.Si.
Lecturer	1. Ir. Salundik, M.Si. 2. M. Baihaqi, S.Pt., M.Sc. 3. Dr. Amrozi
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours

	• Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Understand and explain the basic concepts of hog and horse production 2. Identify problems in pig and horse production 3. Describe alternative solutions to problems in the production of pigs and horses
Content	This course is offered knowledge about pig and horse development in Indonesia. Matting procedure, effected factors of gestation, procedure of lactation period pre and post weaning, ewe and mare replacement stock, feed formulation and feeding management, building for swine and horses
Study and examination requirement 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, language), (b) Being on time, (c) Effort.
Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Devendra, C and M.F. Fuller. 1979. Pig Production in The Tropis. Oxford University Press 2. Edwards, E. H. 2002. Horses. Dorling Kindersley Limited. London 3. Edwards, E. H. 2008. The Encyclopedia of The Horse. Dorling Kindersley Limited. London 4. Siagian, P. H. 2000. Budidaya Ternak Babi. Diktat Kuliah 5. Siagian, P. H. 2000. Budidaya Ternak Babi. Penuntun Praktikum 6. Sihombing, D.T.H. 1992. Ilmu Ternak Babi. UGM Press. Yogyakarya

PTP231 COMMERCIAL POULTRY PRODUCTION

Module Name	Commercial Poultry Production
Semester(s) in which the module is taught	4th Semester
Person responsible for the module	Prof. Dr. Ir. Iman Rahayu HS, MS
Lecturer	Dr. Maria Ulfah, S.Pt., M.Sc.Agr
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to master commercial broiler farming techniques 2. Able to master commercial laying poultry farming techniques 3. Able to master the factors of commercial poultry production 4. Able to master biosecurity, health, disease and prevention aspects
Content	This course is discuss about commercial poultry management (broiler, layer, local chicken, and local duck) included environmental aspect, feeding management and drinking management, health management, egg metabolism process and evaluate the performance of poultry product
Study and examination requirement 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, language), (b) Being on time, (c) Effort.
Media employed	Classical teaching tools with white board and power point presentation

PTP241 ANIMAL GENETICS

Module Name	Animal Genetics
Semester(s) in which the module is taught	4th Semester
Person responsible for the module	Dr Ir Rini H. Mulyono, MSi
Lecturer	Dr Jakaria, SPt. MSi Prof Dr Ir Cece Sumantri, MSc Prof Dr Asep Gunawan, SPt. MScAgr Prof Dr Ir Muladno, MSA Dr Ir Sri Darwati, MSi
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	● Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours ● Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours ● Exam : 120 minutes x 2 times = 240 minutes = 4 hours ● Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to understand the development of livestock genetics related to the process of cell biology, molecular genetics, patterns of inheritance, crossovers and cell deviation as well as understanding gene frequency and probability theory as well as quantitative genetics. 2. Able to analyze the frequency of genes in the population and the distribution of quantitative data and to apply the distribution of quantitative data in graphs
Content	This course discuss about animal genetics development, cell biology, molecular genetics, qualitative heritability pattern, gen frequency and probability theory, quantitative genetics, qualitative data spreading, double gen expression and graphic compose for qualitative trait data spreading
Study and examination requirement 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, language), (b) Being on time, (c) Effort.

Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Brown, T.A.1999. Genome. BIOS Scientific Publisher.Singapore. 2. Griffit, A.J.E.,J.H. Miller, D.T.Suzuki, R.C. Lewontin and W.M Gelbert.1993. Basic Genetic.W.H. Freeman and Company.New York. 3. Martojo, H. 2016. Peningkatan Mutu Genetik Ternak . Departemen pendidikan dan Kebudayaan, Direktorat JenderalPendidikan Tinggi, Pusat Antar Univerity Bioteknologi. Institut Pertanian Bogor.,Bogor. 4. Noor, R.R.2000. Genetika Ternak. Edisi 2. Penebar Swadaya.Jakarta. 5. Stanfield, W.D. 1983. Schaums Outline of Theory and Problems: Genetics.,2nd Ed. McGraw-Hill Book Company. NewYork.

PTP352 MEAT PROCESSING TECHNIQUE

Module Name	**Meat Processing Technique**
Semester(s) in which the module is taught	4th Semester
Person responsible for the module	Prof Dr Irma Isnafia Arief, S.Pt., M.Si.
Lecturer	Dr Tuti Suryati, SPt. MSi Dr Zakiah Wulandari, STP. MSi
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	● Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours ● Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours ● Exam : 120 minutes x 2 times = 240 minutes = 4 hours ● Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to understand and apply various meat processing techniques

	2. Able to apply food safety factors to processed meat products.
Content	This course discusses the development of the meat processing industry, the relationship between meat quality and meat processing, additional materials in meat processing, meat processing methods, meat industry byproducts, methods of packaging and storage of processed meat products and food safety for processed meat products.
Study and examination requirement 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, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Forrest, J.C., E.D. Aberle, H.B. Hedrick, M.D. Judge and R.A. Merkel, 1975. Principles of Meat Science. WH. Freeman & Co. San Fransisco. 2. Hui. Y. A., Wai-Kit Nip, R. W. Rogers, O. A. Young. 2001. Meat Science and Aplplications. Marcek Dekker, Inc. New York. 3. Price, J.F., and B.S. Schweigert, 1987. The Science of Meat and Meat Products. Food and Nutrition Press, Inc. Wesport Connecticut. 4. Varnam, A.H. and J.P. Sutherland, 1995. Meat and Meat Products: Technology, Chemistry and Microbiology. Chapman & Hall, New York.

FKH301 TROPICAL ANIMAL HEALTH

Module Name	**Tropical Animal Health**
Semester(s) in which the module is taught	4th Semester
Person responsible for the module	Prof. Dr. drh. Agik Suprayogi, MSc
Lecturer	Team teaching from the Faculty of Veterinary Medicine IPB University
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 100 minutes x 14 weeks per Semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours

	• Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to demonstrate the concept of integrated livestock health management by taking into account the preservation of the complex ecosystem 2. Able to recognize the characteristics of healthy and sick, and to carry out the first handling of sick livestock
Content	This course will provide an explanation of the concept of tropical livestock health management that outlines the definition and characteristics of the ecology and bioclimatology of the tropics, adaptation physiology, livestock management and its environmental impacts, biosecurity, animal welfare, sustainable livestock health management, characteristics of healthy and sick livestock, the introduction of tropical animal diseases and their handling
Study and examination requirement and forms of examination	***Cognitive:*** Midterm & Final exam, Quizzes, Assignments ***Psychomotor:*** Practice ***Affective:*** Assessed from the element /variables achievement, namely (a) Contributions (attendance,active, role, initiative, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation
Reading list	Buck L.F., J.P Lassoie, and E.C.M. Fernandes. 1999. Agroforestry in Sustainable Agricultural System. Lewis Publishers, Boca Raton-London-New York-Washington, DC. Close W. and K.H. Menke. 1986. In cooperatation with: H. STEINGASS and A. TRÖSCHER. Selected Topics in Animal Nutrition: A manual prepared for the 3rd Hohenheim Course on animal nutrition in the tropics and semi-tropics. 2nd edition. Deutsche Stiftung Fr Internationale Entwicklung, Feldafing and University of Hohenheim, The Institute of Animal Nutrition, Stuttgart, Germany. Ganong W.G. 2001. Review of Medical Physiology. 20th – edition, Lange Medical Books/McGraw-Hill Medical Publishing Division, New York Johnson H.D. 1987. Bioclimatology and the adaptation if livestock. Elsevier, Amsterdam-oxford-New York-Tokyo. Reijntjes C., B. Haverkort and A.W. Bayer. 1992. Farming For The Future: „An Introduction to Low-External Input and Sustainable Agriculture“. The Macmillan Press Ltd.

	Seifert H.S.H. 1996. Tropical Animal Health. Kluwer Academic Publishers. Suprayogi A., Satridja F., Tumbelaka L. I.A., Indrawati A., Purnawarman T., Wijaya A., Noviana D., Ridwan Y., Yudi. 2013. Pengelolaan Kesehatan Hewan dan Lingkungan. IPB Press, Bogor

NTP339 FEED FORMULATION TECHNIQUE

Module Name	**Feed Formulation Technique**
Semester(s) in which the module is taught	5th Semester
Person responsible for the module	Dr Ir Idat Galih Permana, MScAgr
Lecturer	Team Teaching from Department of Animal Nutrition
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 100 minutes x 14 weeks per Semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	Able to compile feed formulations for livestock using computer applications
Content	This course discusses computer knowledge that can be applied in the field of nutrition and feed technology which includes the principles in ration formulation, ration preparation methods, estimating the nutritional needs of livestock and the use of common computer application programs in the feed industry.
Study and examination requirement and forms of examination	***Cognitive:*** Midterm & Final exam, Quizzes, Assignments ***Psychomotor:*** Practice ***Affective:*** Assessed from the element /variables achievement, namely (a) Contributions (attendance, active, role, initiative, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation

5th SEMESTER

PTP321 PROSPECTIVE ANIMAL PRODUCTION

Module Name	**Prospective Animal Production**
Semester(s) in which the module is taught	5th Semester
Person responsible for the module	Dr. Yuni Cahya Endrawati, S.Pt., M.Si.
Lecturer	Prof. Dr. Ir. Asnath Maria Fuah, MS Dr. Ir. Salundik, M.Si
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	● Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours ● Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours ● Exam : 120 minutes x 2 times = 240 minutes = 4 hours ● Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Students are able to explain biological characteristics and manipulate the behavior of hope animals that determine their cultivation / production techniques. 2. Able to apply their expertise in producing zero waste wildlife based on local resources and handling post-harvest products. 3. Able to make and analyze the feasibility of the hope animal cultivation 4. Able to select hope animals that are suitable to be developed into livestock commodities in terms of the economy, environment and socio-culture of Indonesia
Content	This course is offered knowledge and understanding about prospective animal (snail, earth worm, cricket, cockcroach, honey bee, silk worm), basic principle of zero waste production technology and conservation principle, post harvest management and kind of prospective animal product which is has value added, visibility analysis, and developmental potency of prospective animal
Study and examination requirement 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, language), (b) Being on time, (c) Effort.
Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Breen, J. F. 1974. *Encyclopedia of Reptiles and Amphibians.* T.F.H. Publications, Inc. Ltd, Hongkong 2. Catalan, G. I. 1981. *Earthworm A New-Resources of Protein*. Philippine Earthworm Center, Philippine 3. Cresswell, D. C. and I. P. Kompiang. 1980. *Studies on snail meal as a protein source for chicks. I. Chemical composition, metabolizable energy and feeding value for broiler*. Poultry Sci. 60 (8):1854-1860. 4. *Explore The World of Earthworms*. Inseat Lecture Hall, UPLB College, Laguna 5. Holland, W. J. 1955. *The Butterfly Book. Revised Edition*. Doubleday and Co. Inc., New York. 6. Julivert, A. 1995. Pesona Dunia Kupu-Kupu dan Ngengat. Elex Media Komputindo, Jakarta. 7. Klots, A. B. 1958. *The World of Butterlflies and Moths.* George G. Harrap and Co. Ltd., London. 8. Nanao, J. dan H. Oda. 1996. Siput. Elex Media Komputindo, Jakarta. 9. Rukmana, R. 1999. Budidaya Cacing Tanah. Penerbit Kanisius, Yogyakarta. 10. Sihombing, D.T.H. 1997. Ilmu Ternak Lebah Madu. Gadjah Mada University Press. Yogyakarta 11. Sihombing, D.T.H. 2000. Satwa Harapan I. Pustaka Wirausaha Muda. Bogor 12. Sihombing, D.T.H. 2003. Satwa Harapan II. Pustaka Wirausaha Muda. Bogor 13. Sihombing, D.T.H. 2003. Satwa Harapan III. Pustaka Wirausaha Muda. Bogor 14. Tim Penulis PS. 1991. Budidaya dan Prospek Bisnis Bekicot. Penebar Swadaya, Jakarta. 15. Tim Penulis PS. 1995. Budidaya Ulat Sutera. Penebar Swadaya, Jakarta. 16. Tjiptowiyono, A. 1995. Pengaruh penggunaan bahan pengempuk daging alami terhadap mutu organoleptik, kimia dan fisik keong mas (*Pomacea sp*). Skripsi. Fakultas Perikanan Institut Pertanian Bogor, Bogor. 17. Wangsadimiarta, A. dan Wibowo BSc. 1963. Pedoman Pemeliharaan Ulat Sutera dan Pengolahan Hasilnya. Arena Tekstil. 18. Hotnida C.H. Siregar, dkk. 2011. Propolis Madu Multikhasiat. Penebar Swadaya. Jakarta

	19. Dedy Duryadi S., dkk. 2010. Budidaya Ulat Sutera Liar Attacus atlas. Penebar Swadaya. Jakarta.

PTP322 SMALL RUMINANTS PRODUCTION

Module Name	**Small Ruminants Production**
Semester(s) in which the module is taught	5th Semester
Person responsible for the module	Dr. Ir. Sri Rahayu, M.Si.
Lecturer	Muhamad Baihaqi, S.Pt., M.Sc.
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to explain the sheep and goat nations and their differences 2. Able to identify and select goat breeding production techniques 3. Able to master knowledge and apply management of goat feed intensively / extensively 4. Able to analyze and implement management of goat fattening 5. Able to master implementing and diagnosing goat disease control 6. Able to master knowledge and apply rabbit cultivation techniques
Content	This course is learn and discuss about sheep and goat agribussines potency, judging and selection technique of sheep and goat, barn and equipment small ruminant, feeding management system, environmental management of sheep and goat (comfort zone and normal physiology data), feedlot management of sheep and goat, health and biosecurity

	management of sheep and goat, industry management of sheep and goat, rabbit breeding potential
Study and examination requirement 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, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Briggs, H.M. 1958. Moderens Breeds of Livestock Revised Edition. The Macmillan Company. New York. 2. Devendra, C. anda Marca Burns,1983. Goat Production in the Tropics Common Wealth Agricultural Bureaux. Malaysia. 3. Ensminger M.E 1970. Sheep and Wool Sience. 4 th ED. The Interstate Printers and Publishers. Inc. Illionis. 4. Gatenby M.R.1986. Sheep Production in the Tropics and Sub Tropics. Longman Singapore Publishers Ltd. Singapore. 5. Johnston. R.G. 1983. Introduction to Sheep Farming. Granada Publishers. Sidney. 6. Kammlade, W.G.R and W.S Kammlade Jr. 1955. Sheep Science. J.B. Lippincott Company. New York. 7. Marsh, H 1965. Sheep Diseas. 3 th Ed. The William and Wikins Company Baltimore. 8. May, N.D.S. 1964. The Anatomy of the Sheep. 2 Ed. Univ. of Queensland Prees. Queensland. 9. Romans, J.E and P.T Ziegler. 1974. The meat we eat. The Interstate Printers and Publishers.Inc. Illionis. 10. Wilkinson and Stark, B.A. 1987. Commercial Goat Production, BPS Profesisionil Books. Melbourn.

PTP331 POULTRY BREEDER PRODUCTION

Module Name	**Poultry Breeder Production**
Semester(s) in which the module is taught	5th Semester
Person responsible for the module	Dr. Ir. Rukmiasih, MS
Lecturer	Dr. Ir. Rudi Afnan, S.Pt., M.Sc.Agr
Language	Indonesia
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours

	• Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to explain and analyze the management of breeder poultry production 2. Able to explain and analyze the management of the superior hatchery of seedlings 3. 3. Able to communicate well about the management of breeding and hatching poultry
Content	This course is discuss about production process of hatch egg and breed poultry included cock and hen reproduction organ, egg formation process and hatchery management, maintain management of breed poultry (environmental aspect, feed and drinking water aspect, disease prevention and effected factors to production performance
Study and examination requirement 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, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Boiler Breeder Management. 2. User Management Guide. 3. Bell DD, Weaver WD. 2001. Commercial Chicken Meat and Egg Production. 5th Ed. Springer. USA 4. Funk EM, Irwin MR. 1955. Hatchery Operation and Management. John Wiley & Sons. New York 5. Nesheim MC, Austic RE, Card LE. 1979. Poultry Production. 12th Ed. Lea & Febiger. Philadelphia. 6. Tesis, Disertasi dan Jurnal/Publikasi Ilmiah terkait. 7. Tullett SG.1991. Avian Incubation. Poultry Science Symposium. No. 22. Butterworth-Heinemann. London.

PTP341 ANIMAL BREEDING

Module Name	Animal Breeding
Semester(s) in which the module is taught	5th Semester
Person responsible for the module	Dr. Jakaria, S.Pt., M.Si.
Lecturer	Prof. Dr. Asep Gunawan, S.Pt., M.Sc. Prof. Dr. Ir. Cece Sumantri, M.Agr.Sc. Prof. Dr. Ir. Ronny R. Noor, M.Rur.Sc. Prof. Dr. Ir. Muladno, MSA Dr. Ir. Rini H. Mulyono, M.Si. Dr. Ir. Sri Darwati, M.Si
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to explain the principles of breeding (diversity, genetic parameters, selection and crossover) 2. Able to explain and apply selection and crossing methods in livestock 3. Able to explain and analyze the role of genetic markers and reproductive technology in improving the genetic quality of livestock
Content	This course is offered knowledge for student to explain, understand about improvement genetics quality with selection and crossing approach. Utilitation the genetics markers and application in the animal breeding. Utilitation reproduction technology in the animal breeding. In addition offered knowledge for student to explain, understand about conservation of local genetics sources
Study and examination requirement 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, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Bourdon, R.M. 1997. Understanding of Animal Breeding. Prentice Hall, Inc., Upper Saddle River, New Jersey. 2. Noor, 2000. Genetika Ternak. Penebar Swadaya Jakarta. 3. Wiener, G. 1994. Animal Breeding. CTA Macmillan Ediburg. 4. Millar, P., J.J. Lauvergne and C. Dolling. 2000. Mendelian inheritance in Cattle. Wageningen Press.

PTP301 HOUSING AND EQUIPMENT OF ANIMAL SCIENCE

Module Name	**Housing and Equipment of Animal Science**
Semester(s) in which the module is taught	5th Semester
Person responsible for the module	Dr. Ahmad Yani, S.TP., M.Si.
Lecturer	Dr. Ir. Niken Ulupi, MS Iyep Komala, S.Pt., M.Si. Muhamad Baihaqi, S.Pt., M.Sc.
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommendedprerequisites	-
Module objectives/intended learning outcome	1. Able to inventory the functions and conditions of a comfortable housing for ruminants and poultry 2. Able to calculate the ventilation requirements for livestock production and the equipment needed 3. Able to compare open and closed housing systems

	4. Able to design housing buildings in accordance with the micro climate of the region
Content	This course is explain about housing and equipment border for animal production, composed material of animal production housing, tropical highland and lowland barn design, cost estimation of barn, principle and mechanism of equipment based on the movement, vibration, dynamic fluida, and electromagnetics
Study and examination requirement 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, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Bell DD, Weaver WD. 2001. Commercial Chicken Meat and Egg Production. 5th Ed. Springer. USA 2. Nesheim MC, Austic RE, Card LE. 1979. Poultry Production. 12th Ed. Lea & Febiger. Philadelphia 3. Devendra, C. anda Marca Burns,1983. Goat Production in the Tropics Common Wealth Agricultural Bureaux. Malaysia. 4. Ensminger M.E 1970. Sheep and Wool Sience. 4 th ED. The Interstate Printers and Publishers. Inc. Illionis. 5. Gatenby M.R.1986. Sheep Production in the Tropics and Sub Tropics. Longman Singapore Publishers Ltd. Singapore 6. Johnston. R.G. 1983. Introduction to Sheep Farming. Granada Publishers. Sidney. 7. Ronald Kay, William Edwards, Patricia Duffy. 2015. Farm Management. 8th Ed. McGraw-Hill

PTP355 HANDLING AND PROCESSING OF ANIMAL BY PRODUCT

Module Name	**Handling and Processing of Animal by Product**
Semester(s) in which the module is taught	5th Semester
Person responsible for the module	Dr M Sriduresta S, SPt. MSc
Lecturer	Prof Dr Irma Isnafia Arief, SPt. MSi
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester

Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes= 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to explain the potential of various livestock byproducts and manage and process them to increase their use value into food, feed, non-food and handicraft products. 2. Able to explain the physical and chemical properties of skin, skin preservation technology and leather tanning technology.
Content	This course discusses the potential and types of by-products along with their physical / chemical properties. It also discusses management and processing technology to produce food, non-food and handicraft arts and make the environment protected from pollution. This course also discusses the physical and chemical properties of skin, skin preservation technology and leather tanning technology.
Study and examination requirement 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, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Markel. J.A.1981. Managing Livestock Waste.The Avi Publishing Company Inc.Westport.Connecticut. 2. Muller.Z.O. 1980 Feed From Animal Waste. Food and Agriculture Organization Rome. 3. Dugan Jr .L.R.V Meat Animal By- Products and Their Utilization in Prices J.F and Sehweingert B.S. The Seience Of Reat and Reat Products. 3 rd Edit. Food and Nutrition Press . Inc. Westport , Connecticut. 4. Divakaran.S.1982. Animal Blood Processing and Utilization Food and Agriculture organization Rome. 5. Simamora .S.1999. Pengolahan Hasil- ikutan Ternak (Animal By-product Processing) in Workshop on Animal Product and Animal By- product Prosessing . Fakultas Peternakan .IPB.Bogor.

	6. Ockerman .H.W.and C.L.Hasen 2004 .Animal By-Product Processing and Utilization. C.H.I.P.S. Texas. 7. Sarkar. K.T. 1991. Theory and Practice of Leather manufacture. CLS Press. India 8. Buljan. J, G.Reich and J. Ludvik. 2000. Mass Balance in Leather Processing. United nations Industrial Development Organization (UNIDO) 9. Sudarjo. 1984. Teknologi Penyamakan Kulit. Akademi Teknologi Kulit Yogyakarta. 10. Purnomo. E. 1985. Pengetahuan dasar Teknologi Penyamakan Kulit. Akademi teknologi Kulit Yogyakarta.

6th SEMESTER

THT321 ANIMAL WASTE MANAGEMENT

Module Name	**Animal Waste Management**
Semester(s) in which the module is taught	6th Semester
Person responsible for the module	Dr. Ir. Salundik, MSi
Lecturer	-
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	
Module objectives/intended learning outcome	1. Understand the important role of the environment for humans and livestock 2. Able to understand the impact of livestock waste on the water and air environment 3. Able to explain livestock waste management techniques and their by-products
Content	This course discusses the concept of the environment and pollution as well as the impact of livestock on the environment. Also discussed with the waste management system, the nature and characteristics of livestock waste (physical, chemical and biological) i waste regarding the construction of livestock sheds and handling and processing techniques for livestock waste
Study and examination requirement 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, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation

KRP331 ANIMAL REPRODUCTION SCIENCE AND TECHNOLOGY

Module Name	**Animal Reproduction Science and Technology**
Semester(s) in which the module is taught	6th Semester
Person responsible for the module	Ligaya ITA Tumbelaka
Lecturer	R. Iis Arifiantini Ni Wayan Kurniani Karja
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 100 minutes x 14 weeks per Semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to understand the physiological functions and integral coordination of the reproductive organs of female and male animals 2. Able to apply reproductive biotechnology methods as well as midwifery management 3. Able to cope with the incidence of animals
Content	Studying the physiological functions and integral coordination of the reproductive organs of female and male animals, the mechanism of integration of the work of the reproductive endocrine glands and their hormones, which are directed as the basis for the application of reproductive biotechnology methods as well as obstetrics handling and coping with fadness in animal development
Study and examination requirement and forms of examination	***Cognitive:*** Midterm & Final exam, Quizzes, Assignments ***Psychomotor:*** Practice ***Affective:*** Assessed from the element /variables achievement, namely (a) Contributions (attendance, active, role, initiative, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point

	presentation
Reading list	Bearden, J. dan Fuquay John W. 1997. Applied Reproductoin Fourth Edition. Hall, Inc.USA. Hafez, E.S.E. 1993. Reproduction in Farm Animals. Sixth Ed. Lea and Febiger.Philadelphia

FPT301 FARM EXTENSION AND COMMUNICATION

Module Name	**Farm Extension and Communication**
Semester(s) in which the module is taught	6th Semester
Person responsible for the module	Dr. Ir. Lucia Cyrilla ENSD, MSi
Lecturer	Team Teaching from Faculty of Animal
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in Faculty of Animal Science
Type of teaching, contact hours	Lecture (Face to face lecture): 100 minutes x 14 weeks per Semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Mastering basic communication concepts and theories 2. Understand and design innovation communication methods 3. Designing innovation communication media 4. Designing an innovation communication strategy / approach
Content	This course discusses: basic concepts of communication in livestock extension, society and social systems, innovation communication methods, innovation communication media, extension media design and livestock innovation communication, as well as innovation communication strategies.
Study and examination requirement and forms of examination	***Cognitive:*** Midterm & Final exam, Quizzes, Assignments ***Psychomotor:*** Practice ***Affective:*** Assessed from the element /variables achievement, namely (a) Contributions (attendance,active, role, initiative, language), (b) Being on time, (c) Effort

Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Ardianto, E. 2011. Komunikasi Pembangunan dan Perubahan Sosial: Perspektif Dominan, Kaji Ulang dan Teoritis. Rajawali Press. 2. Arifin, B. 2005. Pembangunan Pertanian: Paradigma Kebijakan dan Strategi Revitalisasi. Grasindo, Jakarta. 3. Ison, RL dan Rusell, DB. 2000. Agricultural Extension and Rural Development: Breaking-out of Traditions. Cambridge University Press. 4. Leeuwis, C. 2009. Komunikasi untuk Inovasi Pedesaan: Berpikir Kembali tentang Penyuluhan Pertanian. Penerjemah: Sumarah. Kanisius, Yogyakarta.

PTP302 RESEARCH METHOD AND EXPERIMENTAL DESIGN

Module Name	**Research Method and Experimental Design**
Semester(s) in which the module is taught	6th Semester
Person responsible for the module	Prof Dr Ir Niken Ulupi, MS
Lecturer	Dr Ir Sri Darwati, MSi
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	
Module objectives/intended learning outcome	1. Able to understand scientific frame of mind 2. Able to explain the experimental design concept 3. Able to use analysis of variance, variety and testing with non-parametric methods in experimental design 4. Able to interpret the results of data analysis in experimental design 5. Able to compile a research plan

Content	This course is discuss scientific mind mapping, statistical implementation and scientific method on the experimental design, one way experimental, two way experimental, descriptive statistic, non parametric statistic experimental, and correlation and regression analysis.
Study and examination requirement 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, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Aunuddin. 2005. *Statistika: Rancangan dan Analisis Data*. Bogor, IPB-Press. 2. Daniel.W.W. 1990. *Applied Nonparametric Statistics.* 2nd Ed. Boston. Thomson Information/Publishing Group. 3. Gaspersz. V. 1992. *Teknis Analisis dalam Penelitian Percobaan*. Jilid 1. Bandung, Tarsito. 4. Mattjik,A.A, dan M. Sumertajaya. 2006. *Perancangan Percobaan dengan Aplikasi SAS dan MINITAB* Jilid 1. Bogor. IPB Press. 5. Minitab Inc. 2013. Minitab Statistical Software, Release 17 for Windows, State College, Pennysylvania. 6. Sprent P. 1991. Metode Statistik Nonparametrik Terapan. Osman E, Rudiansyah, penerjemah. Jakarta. UI-Press. 7. Steel R.G.D., J.H. Torrie and D.A. Dickey. 1997. *Principles and Procedures of Statistics a Biomedical Approach*, 3th Ed. Singapore. McGraw-Hill, Inc.

PTP303 INTERGRATED SYSTEM OF ANIMAL SCIENCE

Module Name	**Intergrated System of Animal Science**
Semester(s) in which the module is taught	6th Semester
Person responsible for the module	Prof. Dr. Ir. Asnath M. Fuah, MS
Lecturer	Dr. Ir. Salundik, M.Si. Prof. Dr. Ir. Rudy Priyanto Dr. Ir. Bagus P. Purwanto, M.Agr
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	● Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours

	• Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Explain the concept of integrated livestock farming using a systems approach 2. Describe the various classifications and characteristics of tropical livestock farming 3. Calculating the optimization of integrated integrated livestock farming systems based on economic value 4. Analyze the efficiency of SWOT-based integrated livestock farming 5. Design, verify and validate tropical livestock models
Content	This course is discuss about purpose and concepts of agribussines, agribussines definition and developmental with system approach; classification and characteristic system of animal agribussines; biology and economics efficiency from animal agribussines system, SWOT analysis, development design of animal agribussines system for efficiency and sustainability
Study and examination requirement 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, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Amir, P and H. C. Knipscheer. 1989.Conducting on farm-animal research: procedure and economics analysis. Winrock International Institute for Agricultural Development and International Development Research Center, Canada. 2. Gottingen. 2000. Floristic Composition and Biomas of Fallow Vegetation in Abandoned Agricultural Fields of South-East Sulawesi. La Karimuna, Doctoral Dissertation. 3. Livestock Development in Indonesia. 1998. DirektoratJenderalPeternakan. DepartemenPertanian. 4. MenujuMasyarakatMandiri. 2003. Tim Crescent. GramediaPustakaUtama.

5. Opportunities, Use, and Transfer of Systems Research Methods in Agriculture to Developing Countries. 1991. F.W.T. Penning de Vries, CABO-DLO, Wangeningen, Netherlands.
6. Petheram, J., I. Subagio and R. S. Copland, 1993.Animal Science-Short Course on Animal Farming System. University of Mataram-Lombok Indonesia.
7. Penning. F., Teng P., MetselaarK.System Approaches for Agricultural Development. Vol. 2., Kluwer Academic Publishers.
8. Proceeding 2001. Sustainable Development in the Context of Globalization and Locality: Challenges and Options for Networking in Southeast Asia., RUKKABA Press.
9. Panduan Seminar danEksposeNasionalSistemIntegrasiTanaman-Ternak. 2004. BadabPenelitiandanPengembanganPertanian.
10. Planning Technologies appropriate to Farmers, Concept and procedures Winkiluraner CIMMYT 1980, Mexico.
11. PenguranganKemiskinan Pembangunan AgribisnisdanRevitalisasiPertanian. 2006. PusatStudi Pembangunan PertaniandanPedesaan. InstitutPertanian Bogor.
12. Ruthunberg, H. 1980. Farming System in the Tropic 3nd Ed., Clarendon Press Oxford.
13. Speeding, C.R.W., 1979. An Introduction to Agricultural System. 2nd Ed. Elsevier Applied Science, London and New York
14. Saragih.,B. 1998. AgribisnisBerbasisPeternakan. PusatStudi Pembangunan. LembagaPenelitian. InstitutPertanian Bogor.
15. Shaner, W. W., P. F. Philip and W. R. Schurehl. 1982. Farming Systems Research and Development Guidelines for Development Countries, Westview Press Inc. Boulder, Colorado.
16. Sustainable animal production from small farm systems in South-East Asia. FAQ Animal Production and Health Paper. Vol. 106. 1993. Rome-Italy.
17. Sustainable Lombok. The Rich Nature and Rich People in the 21st Century
18. StatistikPeternakan. 2005. DirektoratJenderalPeternakan. DepartemenPertanian RI.
19. Systems Approaches for Agricultural Development. 1991. F.W.T. Penning de Vries, CABO-DLO, Wangeningen, Netherlands.
20. Undang-undang Peternakan dan Kesehatan Hewan Tahun 2009.

PTP 305 ENVIROMENTAL MANAGEMENT OF ANIMAL SCIENCE

Module Name	**Enviromental Management of Animal Science**
Semester(s) in which the module is taught	6th Semester
Person responsible for the module	Dr. Ahmad Yani, S.TP., M.Si.
Lecturer	Iyep Komala, S.Pt., M.Si. Sigid Prabowo, S.Pt., M.Si
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to explain the role of the macro environment on livestock production such as weather and atmosphere, tropical and wet tropical climates, air temperature, relative humidity, solar radiation, air pressure, wind speed. 2. Able to explain thermonetral zone and livestock stress due to hot and cold weather 3. Able to apply biofilter techniques to environmental control of livestock 4. Able to analyze heat transfer mechanism in livestock environment 5. Able to choose micro environmental control techniques on farm housings
Content	This course is explain about the important role of micro and macro environment in animal production, micro environment measurement technique in animal science building, behaviour recording technique and animal heat production, heat transfer mechanism in animal environment, principal and mechanism heat transfer of open and closed system, biofilter technique in animal environment controlling
Study and examination requirement 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, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation

PTP351 MILK PROCESSING TECHNIQUE

Module Name	**Milk Processing Technique**
Semester(s) in which the module is taught	6th Semester
Person responsible for the module	Dr Epi Taufik, SPt, MSi
Lecturer	Dr M Sriduresta S, STP. MSc
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to understand and apply various milk processing techniques 2. Able to apply food safety factors to dairy products.
Content	This subject discusses the urgency and development of the milk industry, the application of technology in post-harvest milk handling, packaging processing, milk storage and its problems as well as the handling and sanitation of milk product processing.
Study and examination requirement 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, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation

Reading list	1. Warner JN. 1976. Principle of Dairy Processing. Willey Eastern limited. New Delhi. 2. Walstra P. Jan T. M Wouters M. Geurts TJ. Dairy Science and Technology. 2ed CRC Press. 3. Naim R. 2008. Protein anti mikroba dalam susu. Universitas Diponegoro. Semarang.

PTP353 EGG AND POULTRY MEAT PROCESSING TECHNIQUE

Module Name	**Egg and Poultry Meat Processing Technique**
Semester(s) in which the module is taught	6th Semester
Person responsible for the module	Dr Tuti Suryati, SPt. MSi
Lecturer	Dr Zakiah Wulandari, STP. MSi Dr Ir Rukmiasih, MS
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours • Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to explain and apply the poultry meat processing process 2. Able to explain and apply poultry egg processing techniques
Content	This course discusses the benefits of meat and eggs, processing techniques, physical and chemical changes during processing, factors that affect processed products and how to test their processed products.
Study and examination requirement 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, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point

	presentation
Reading list	1. Mountney, G.J. 1976. Poultry product Technology. 2nd Ed. The AVI Publishing Company, Inc. 2. Stadelman, W.J. and O.J. Cotterill. 1973. Egg Sciences and Technology. AVI Publishing Co., Westport. 3. Desrosier, N.W. 1988. Teknologi Pengawetan Pangan. UI Press, Jakarta. 4. Stadelman, W.J., V.M. Olson, G.A. Shemwell, S. Pasch. 1988. Egg and Poultry-Meat Processing. Ellis Horwood Ltd., Chichester (England). 5. Richardson, R.I. and G.C. Mead. 1999. Poultry Meat Science. Poultry Science Symposium Series Vol. 25. CABI Publishing, USA.

7th SEMESTER

FPT401 COMMUNITY SERVICE PROGRAM (KKNT)

Module Name	Community Service Program
Semester(s) in which the module is taught	7th Semester
Person responsible for the module	Dr. Jakaria, SPt. MSi
Lecturer	Team Teaching from Faculty of Animal Science
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in Faculty of Animal Science
Type of teaching, contact hours	2 months including debriefing and Community service
Workload	• Lecture class : 50 minutes • Proposal • Mapping location • Workshop x 2 • Program implementation ; 5 hours x • Field evaluation • Report • Exam 3 x 45 hours = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered as a student of KKN-T IPB in Dit AP IPB 2. Following lectures and practicing briefing (100%) KKN-T. 3. Take the debriefing exam. 4. Students who lack attendance in attending lectures and briefing practice (item 2), is not allowed to follow debriefing exams, and debriefing courses were given zero marks. 5. Carry out activities in the field / work area. College student required to live on site (mondok) during the KKNP implementation time, including Saturdays and Sundays; 6. Draft KKN-T reports per work area and submit to the IPB KKN-T Implementing Committee at the Faculty two weeks after completion of KKN-T. 7. Take the exam conducted by DPL two weeks after draft report submitted. 8. Submit the final KKN-T report that has been signed by DPL and approved by the Head of LPPM IPB no later than two week after the KKN-T exam to the KKN-T Secretariat at LPPM 1 copy and 1 CD softcopy of the report and to The Secretariat of the Faculty KKN-T Committee is 6 copies.
Recommended prerequisites	1. IPK ≥ 2.00

	2. 105 SCH
Module objectives/intended learning outcome	1. Develop students knowledge, attitudes, and skills in identifying, planning, implementing and evaluating community empowerment programs in the agricultural sector in a broad sense, including in the field animal husbandry and in integrated environmental (multi and inter-disciplinary between professions in IPB), 2. Increase awareness and commitment, and prepare students to skilled in communicating and collaborating among profession in overcoming problems in society, 3. Preparing students to be able to develop networks cooperation in problem solving efforts to fulfill needs in the dynamics of actual life in society.
Content	This course provide learning experience for student to apply their knowledge and skills for community service program.
Study and examination requirement and forms of examination	1. Debriefing (attendace, active, effort, exam) 2. Field (supervisors and village head) 3. Reports and Exams 4. Assessed from the element/variables achievement, namely (a) Contributions (attendance, active, role, initiative, language), (b) Being on time, (c) Effort.
Media employed	Students (5-7) from various fields of expertise are placed in one village to implement the KKN-T program in synergy with the development program that is being and will be implemented by the local government
Reading list	IPB University Guide book of Community Service Program

FPT406 ANIMAL LOGISTIC

Module Name	**Animal Logistic**
Semester(s) in which the module is taught	7th Semester
Person responsible for the module	Dr. Rudi Afnan, SPt. MScAgr
Lecturer	Team Teaching from Faculty of Animal
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in Faculty of Animal Science
Type of teaching, contact hours	Lecture (Face to face lecture): 100 minutes x 14 weeks per Semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours

	• Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	Able to understand: 1. Supply chain system for production materials and livestock output 2. Risk management in livestock logistics 3. Regulation of livestock logistics
Content	Discusses the supply chain system for production materials and livestock output, the role of trading, information systems, marketing problems and consumer characteristics. It also discusses risk management in the process of livestock production and logistics, which includes technical standards, efficiency and infrastructure, logistic networks, as well as livestock logistics regulations.
Study and examination requirement and forms of examination	***Cognitive:*** Midterm & Final exam, Quizzes, Assignments ***Psychomotor:*** Practice ***Affective:*** Assessed from the element /variables achievement, namely (a) Contributions (attendance,active, role, initiative, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation

FPT405 LIVESTOCK BUSSINESS MANAGEMENT

Module Name	**Livestock Bussiness Management**
Semester(s) in which the module is taught	7th Semester
Person responsible for the module	Dr. Ir. Lucia Cyrilla ENSD, MSi
Lecturer	Team Teaching from Faculty of Animal
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in Faculty of Animal Science
Type of teaching, contact hours	Lecture (Face to face lecture): 100 minutes x 14 weeks per Semester
Workload	• Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours • Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours

	• Exam : 120 minutes x 2 times = 240 minutes = 4 hours • Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	1. Able to understand the principles of business management and financial management in the field of animal husbandry 2. Able to compile the feasibility of a livestock business and 3. Train and cultivate an ethical entrepreneurial spirit
Content	Discusses livestock business, starting from the roles and functions of business management, business ethics, international trade, planning strategies and financial management, decision-making processes, and a feasibility analysis of animal husbandry businesses.
Study and examination requirement and forms of examination	***Cognitive:*** Midterm & Final exam, Quizzes, Assignments ***Psychomotor:*** Practice ***Affective:*** Assessed from the element /variables achievement, namely (a) Contributions (attendance,active, role, initiative, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Lipsey. R. G., P. O Steiner, and D. D. Purpis. 1987. Economics. Harper International Edition. 2. Ison, RL dan Rusell, DB. 2000. Agricultural Extension and Rural Development: Breaking-out of Traditions. Cambridge University Press. 3. Ciputra. 2009. Ciputra Quantum Leap Entrepreneurship Mengubah Masa Depan Bangsa dan Masa Depan Anda. PT Elex Mediacomputindo,Jakarta. 4. Drucker, Peter, F. 1991. Inovasi dan Kewiraswastaan, Praktik dan Dasar-dasar. Alih Bahasa oleh Rusjdi Naib. Penerbit Erlangga. 5. Longenecker, Justin G. Carlos W. Moore, J. William Petty. 2000. Kewirausahaan, Manajemen Usaha Kecil. Penerbit Salemba Empat.

PTP401 SLAUGHTER HOUSE MANAGEMENT

Module Name	**Slaughter House Management**
Semester(s) in which the module is taught	7th Semester
Person responsible for the module	Dr Ir Henny Nuraini, MSi
Lecturer	Prof Dr Ir Rudy Priyanto Prof Dr Ir Niken Ulupi, MS Dr Ir Komariah, MSi M Baihaqi, SPt, MSc Edit Lesa A, SPt, MSc
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Lecture (Face to face lecture): 2hours x 14 weeks per semester Student Centered Learning: 2 hours x 14 weeks per semester
Workload	● Lecture class : 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours ● Practical class : 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours ● Exam : 120 minutes x 2 times = 240 minutes = 4 hours ● Self-study : 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total : 8100 minutes = 135 hours
Credit points	3 SCH x (1.6) = 4.8 ECTS
Requirement according to the examination regulation	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	
Module objectives/intended learning outcome	1. Able to understand laws and policies on slaughterhouses, the principles of their establishment and management. 2. Able to apply aspects of animal health and welfare in handling livestock before slaughter 3. Understand and evaluate the process of slaughtering livestock (cattle, sheep, pigs and poultry) as well as carcass and meat handling to produce quality products. 4. Able to apply halal slaughtering procedures to ruminants and poultry
Content	This course discusses the Law and policies on Slaughterhouses, the principles of establishment and management, sanitation & hygiene, the process of slaughtering livestock and its relationship with the quality of carcass and meat produced, antemortem and postmortem examinations, characteristics and methods of carcass evaluation and classification and grading of carcasses of cattle, sheep and pigs and poultry, and handling of slaughterhouse waste
Study and examination	***Cognitive***: Midterm exam, Final exam, Quizzes, Assignments

requirement and forms of examination	***Psychomotor***: Practice ***Affective***: Assessed from the element /variables achievement, namely (a) Contributions (attendance, active, role, initiative, language), (b) Being on time, (c) Effort
Media employed	Classical teaching tools with white board and power point presentation
Reading list	1. Aberle, E.D., J.C. Forest, D.E. Gerrard, and E.W. Mils. 20001. Principles of Meat Sciences. 4th Ed. Hunt Publishing Company, Lowa. 2. Badan Pusat Statistik Indonesia. 2002. Statistik Industri Besar dan Sedang Bagian III. Badan Pusat Statistik Indonesia, Jakarta. 3. Badan Pusat Statistik Indonesia. 2003. Statistik Indonesia. Badan Pusat Statistik Indonesia, Jakarta. 4. Badan Standarisasi Nasional. SNI 01-6160-1999 tentang Rumah Pemotongan Unggas. Badan Standarisasi Nasional, Jakarta. 5. Badan Standarisasi Nasional. SNI 01-3924-1995 tentang Mutu Karkas dan Daging Ayam. Badan Standarisasi Nasional, Jakarta. 6. http://www.asiamaya.com (produk undang-undang) 7. http://www.wikipedia.com (online ensiklopedia) 8. Mountney, G.J. 1966. Poultry Product Technology. The AVI Publishing Company, Inc., Westport 9. Priyantono, M.A. 2003. Mendirikan Usaha Pemotongan Ayam. Penebar Swadaya, Jakarta 10. Simoons, F.J. 1961. Eat Not This Flesh. The University of Wisconsin Press, Madison.

8th SEMESTER

PTP491 SEMINAR

Module Name	Seminar
Semester(s) in which the module is taught	7th and 8th Semester
Person responsible for the module	Dr Yuni Cahya Endrawati, SPt. MSi
Lecturer	Team Teaching fromAPT-SP
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Final project presentation and discussion
Workload	• Lecture class : 50 minutes • Final project presentation : 50 minutes • Attendance 25 times x 50 minutes = 1250 minutes = 21 hours • Self-study = 60 minutes x 1 times x 14 weeks = 750 minutes = 66 hours Total : 2700 minutes = 45 hours
Credit points	1 SCH x (1.6) = 1.6 ECTS
Requirement according to the examination regulation	Registered in this course
Recommended prerequisites	-
Module objectives/intended learning outcome	Students are able to arrange and submit the results of their final assignment studies in scientific forums
Content	-
Study and examination requirement and forms of examination	Assessment includes: the ability to deliver seminar papers, the ability to answer and the accuracy of answers, language and attitude, paper format, timeliness
Media employed	Power point presentation
Reading list	Panduan Penyelesaian Tugas Akhir (Guide book for Final Project) IPB University

PTP492INTERNSHIP (PL)

Module Name	Internship (PL)
Semester(s) in which the module is taught	7th and 8th Semester
Person responsible for the module	Dr. Ir. Rukmiasih, MS
Lecturer	All lecturers in the study program who meet the requirements
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	1 month at the field practice
Workload	Field work: 2700 minutes x 1 time = 2700 minutes = 45 hours Writing article: 540 minutes x 1 time = 540 minutes = 9 hours Attending seminar: 60 minutes x 35 time = 2100 minutes = 35 hours Presentation: 60 minutes x 1 times = 60 minutes = 1 hours Total: 5400 minutes = 90 hours
Credit points	2 SCH x (1.6) = 3.2 ECTS
Requirement according to the examination regulation	1. Implementation of field practice has been completed 2. The draft report has been approved by the supervisor
Recommended prerequisites	1. Registered in this course 2. GPA ≥ 2.00
Module objectives/intended learning outcome	Give students the experience of working hard in the livestock industry
Content	-
Study and examination requirement and forms of examination	1. Debriefing (attendace, active, effort, exam) 2. Field (supervisors and village head) 3. Reports and Exams 4. Assessed from the element / variables achievement, namely (a) Contributions (attendance, active, role, initiative, language), (b) Being on time, (c) Effort
Media employed	Livestock industry or smallholder livestock with the requirements set by the APS-SP
Reading list	IPB University Guide book of PL

PTP493 UNDERGRADUATE THESIS

Module Name	Undergraduate Thesis
Semester(s) in which the module is taught	7th and 8th Semester
Person responsible for the module	Head of APT-SP
Lecturer	All lecturers in the study program who meet the requirements
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in APT-SP
Type of teaching, contact hours	Research or Internship or literature study
Workload	4 months
Credit points	6 SCH
Requirement according to the examination regulation	Have passed all other courses
Recommended prerequisites	1. Registered in this course 2. GPA ≥ 2.00 3. Pass PTP302 with grade minimum D
Module objectives/intended learning outcome	Students able to compile a scientific description of the results of the study in the form of a bachelor thesis or final project report
Content	-
Study and examination requirement and forms of examination	Assessment includes: the ability to deliver thesis, the ability to answer and the accuracy of answers, language and attitude, paper format, timeliness
Media employed	Power point presentation
Reading list	Panduan Penyelesaian Tugas Akhir (Guide book for Final Project IPB University)