COURSE CONTRACT OF BIOSECURITY, BIOSAFETY, BIOPRODUCT BACHELOR'S VETERINARY MEDICINE EDUCATION PROGRAMME

1. **Subject** : Bioproduct Biosafety Biosecurity
2. **Subject Code** : KHL 421
3. **Credit Hours** : 2 SKS
4. **Semester** : VII
5. **Department / Study Programme** : S1 Faculty of Veterinary Medicine
6. **Precondition** : Biochemistry, Study of Microbiology, Virology , Parasitolgy, Kesmavet, Epidemiology
7. **Subject Description** :This lecture discusses the Definition of Bioproducts, Biosafety, Biosecurity, Bioproduct Types, Definition of Biomaterial / Biotech Bio Life Safety., Animal Life. , Feed. Food. Potential Zoonosis. Techniques for Safeguarding Biomaterial / Biotech Wealth, Bio Life., Animal Life. , Feed. Food. Potential Zoonosis. Regulations / laws relating to safeguarding Bio Materials (Bacteria, viruses, parasites, fungi, etc.), Biological Resilience, Methods of identification of Bio Materials as Agro-Bioterrorism agents, Biosecurity at the Laboratory Level, Inter-Regional Levels and Aspects of State Resilience
8. **Lecturer In Charge** : **EmyKoestantiSabdoningrum,drh., M.Kes**
9. **Supporting Lecturer**
    1. **EmyKoestantiSabdoningrum,drh., M.Kes**
    2. **Prof. RomziahSidiq, Drh., PhD**
    3. **MuchammadYunus, Ph.D., Drh.,M.Kes.**
    4. **Prof. Dr.Chairul Anwar Nidom,drh., MS**
    5. **Prof. Dr. PudjiSrianto, Drh., M.S**

10. Day / Time / Place	**Bioproduct Biosafety Biosecurity Lecture** **Class A, B, C, D, E**: Class 3C, Thursday, 09.00 – 10.50 WIB
11. Atributte*Soft Skills*	*1. Self-motivation/initiative* *2. Work ethic/dependability* *3. Critical thinking* *4. Questioning skills* *5. Academic/learning skills* ***6.** Teaching/training skills*
12. Learning Outcome Achievement	: LO3 : Assess the system of epidemiology and surveillance in controlling, preventing strategic, bio-products, bio-safety, bio-security and bio-materials from animals causing zoonotic diseases to eliminate them
13. Subject Learning Outcomes	: Students are able to understand about the challenges and opportunities of all aspects of biological material (biological resistance), biosafety and biosecurity. As knowledge about Understanding: Bioproducts, Biosafety, biosecurity, Bioproduct Types, Understanding Biomaterial / Biotech Bio Life Safety., Animal Life. , Feed. Food. Potential Zoonosis. Techniques for Safeguarding Biomaterial / Biotech Wealth, Bio Life., Animal Life. , Feed. Food. Potential Zoonosis. Regulations / laws relating to safeguarding Bio Materials (Bacteria, viruses, parasites, fungi, etc.), Biological Resilience, Methods of identification of Bio Materials as Agro-Bioterrorism agents. Biosecurity at the Laboratory Level, Inter-Regional Levels and Aspects of State Resilience.

12. Sub Learning Outcome Achievement :

After attending this Bioproduct Biosecurity Bioproductslecture , students will be able to explain the importance and usefulness of Bioproduct Biosafety Biosecurity . Specifically, it can be described as follows:
After taking this lecture , students know the rules that must be followed and adhered during the lecture, know the meaning and scope: History of courses, lecturers and lecture schedules; Course benefits and descriptions; Objectives of the course; Course evaluation and evaluation; Other explanations such as percentage presentations, reading material and assignments; understanding of Bioproduct, Biosafety and biosecurity Students know and able to explain about the nations and characteristics of beef cattle and know the characteristics of good beef cattle. After attending this lecture, students are able to explain and present Bioproduct Types

1. After attending this lecture, students are able to explain and present Bioproduct Types
2. After following this lecture students can explain the Specifications of Bioproducts
3. After attending this lecture students can explain the Biological Product Process
4. After following this lecture students can explain the Biochemical Product Process
5. After following this lecture students can explain the Definition of Biomaterial / Biotech Bio Life Safety, Animal Life. , Feed. Food. Potential Zoonosis
6. After attending this lecture students can explain Bio Life Biomaterial / Biotech Wealth., Animal Life. , Feed. Food. Zoonosis that has the potential for Indonesia I (Infective / Microbial)
7. After following this lecture students can explain Bio Life Biomaterial / Biotech Wealth Technique for Security, Animal Life.
8. After following this lecture students can explain the Technique for Safeguarding Feed Wealth. Food. Potential Indonesian Zoonosis (Infective / Microbial)
9. After following this lecture students can explain the rules / laws related to the safeguarding of Bio Materials ((Bacteria, viruses, parasites, fungi, etc.)
10. After following this lecture students can explain the rules / laws related to the safeguarding of Bio Materials ((Bacteria, viruses, parasites, fungi, etc.)
11. After following this lecture students can explain the Method of Identifying Bio Materials (Bacteria, viruses, parasites, fungi, etc.). as an Agro-Bioterrorism agent
12. After attending this lecture students can explain Biosecurity at the Laboratory Level
13. After attending this course students can explain Biosecurity at Inter-Regional Levels and Aspects of State Resilience

13. Advantage of the Subject

Bioproduct Biosafety Biosecurity courseis the study of Definition of Bioproducts, Biosafety, Biosecurity, Bioproduct Types, Understanding Biomaterial / Biotech Bio Life Safety., Animal Life. , Feed. Food.Potential Zoonosis. Techniques for Safeguarding Biomaterial / Biotech Wealth, Bio Life., Animal Life. , Feed. Food.Potential Zoonosis. Regulations / laws relating to safeguarding Bio Materials (Bacteria, viruses, parasites, fungi, etc.), Biological Resilience, Methods of identification of Bio Materials as Agro-Bioterrorism agents for Biosecurity at the Laboratory Level, Inter-Regional Levels and Aspect of State Resilience.

14. Lecture Strategy

In lectures students are expected to learn and understand the pre-requisite of this course that have been followed first and read the instructional material / hand out that has been determined. Prerequisite courses are Biochemistry, Microbiology , Virology , Parasitology , Kesmavet, Epidemiology.

Lecturers only provide outline contents of the subject matter or provide examples of the definition of Bioproduct, Biosafety, biosecurity, Bioproduct Types, Definition of Biomaterial / Biotech Bio Life Safety., Animal Life. , Feed. Food.Potential Zoonosis. Techniques for Safeguarding Biomaterial / Biotech Wealth, Bio Life., Animal Life. , Feed. Food.Potential Zoonosis. Regulations / laws relating to safeguarding Bio Materials (Bacteria, viruses, parasites, fungi, etc.), Biological Resilience, Methods of identification of Bio Materials as Agro-Bioterrorism agents for Biosecurity at the Laboratory Level, Inter-Regional Levels and Aspect of State Resilience. The students are expected to ask questions that are less clear and also answer the lecturersquestions. Students will also be given assignments in addition to midterms and final semester examinations.

15. Lecture Material or Reading

1. Handbook of Material for Medical Devices., 2003. Overview of Biomaterial and Their Use in Medical Devices. ASM. International
2. Pratiwi P. Sudarmono, 2015. Biosecurity in Medicine and Health
3. Australia Indonesia Partnership For Emerging Infectious Diseases. 2010.
4. Capacity and Capability Guidelines in Biological Risk Management Guidelines and International Biological Safety Standards. Bogor Bogor Agricultural University
5. RobertHeckert, 2010. Biosafety for Necropsy, Savevet. Biosafety Manual. Bell, Melbourne.

16. Lecture Assignments

Individual Tasks :

Students work on papers and collected based on 3 topics of the subject

Group Tasks:

On the week 6.12,14: One class is divided into groups with each group consisting of at least 5 people and students to present a scientific article presentation regarding the subject .

17. Assesment Criteria

Assesment System

Each test is given a raw score in the form of 0 to 100. Especially for the final score, the assessment is given in 7 grades, namely: A, AB, B, BC, C, D and E.

The final value of a subject is determined from the combined results of the evaluation of all test scores held by the lecturer concerned. Examples of test averages (quiz), (structured assignments), (practical examinations), (soft skills), (UTS), (UAS) tests are 1.5: 1.5: 2: 1: 2: 3.

Example :

Student X takes the Ruminant Livestock Science exam, the value for each exam is as follows:

Quiz I = 70
Quiz II = 70
UTS = 70
Task given = 80
Task given = 80
UAS = 75
Softskill = 80
Then the final value (still in raw value)

$$\frac{(140x1,5) + (160x1,5) + + (70 \times 2) + (75 \times 3) + 80}{1,5 + 1,5 + 2 + 3+1}$$

$$\frac{815}{11} = 74{,}09$$

Processing Final Value (raw value / in the form of numbers) becomes a Quality Value in the form of letters processed in 7 (seven) grades. From the final value (raw value), the mean value (X) can be processed. Value grouping is done by using PENILAIAN ACUAN PATOKAN (PAP) as follows :

Raw Value	Grades
≥ 75	A
70 – 74.9	AB
65 – 69.9	B
60 – 64.9	BC
55 – 59.9	C
40 – 54.9	D
< 40	E

The presentation of the value from the processing of the above values in the presentation uses 7 ratings, as follows:

Grades	Quality Value
A	4
AB	3,5
B	3
BC	2,5
C	2
D	1
E	0

18. Others

- Students are allowed to attend the UAS if 75% of the attendance are present in the lecture (min 11 times present, for new students) and 50% are present (for students repeating)

- If you do not take quizzes, uts, you must have a doctor's certificate and a maximum of 1 week after quiz / uts / you should immediately take the follow-up exam
- The collection of practical worksheets is carried and collected out at each turn after the lecture topic.
- Question type : for quizzes: essays
- For uts and uas: multiple choice

LECTURING SCHEDULE

Study Programme : Veterinary Medicine
Lecturer :

1. EmyKoestantiSabdoningrum,drh., M.Kes
2. Prof. RomziahSidiq, Drh., PhD
3. MuchammadYunus, Ph.D., Drh.,M.Kes.
4. Prof. Dr.Chairul Anwar Nidom,drh., MS
5. Prof. Dr. PudjiSrianto, Drh., M.S

Subject **:** Bioproduct Biosafety Biosecurity
Day/time : Thursday/ 09.00 – 10.50 (Classroom 3C)

LECTURING SCHEDULE BIOPRODUCT BIOSAFETY BIOSECURITY 2019
(Schedule based on the Academic Calender 2019/2020)

Study Programme/SKS : S1/2 (2-0)
Academic Year : 2019/2020
Semester : VII (Seven) ODD
Subject Code : KHL 421
Lecturing Place : Class 3C
Time : Thursday, 09.00 – 10.50

Lecturers : 1. EmyKoestanti S, Drh.,M.Kes. (EK)
2. MuchammadYunus, Ph.D., Drh.,M.Kes. (MY)
3. Prof. Dr. C.A Nidom, Drh.,MKes (CN)
4. Prof. Dr. PudjiSrianto, Drh., M.S. (PS)
5. Prof. RomziahSidik, Drh., Ph.D (RS)

No	Date	Tittle	Lecture Details	Lecturer
1	2	3	4	5
	8 September 2019	Introduction	Lecturing Contact, GBPP.	EK
	15 September 2019	Concept of Bioproduct , Biosafety and Biosecurity	Definition and scope of Bioproduct, Biosafety and biosecurity The concept of Bioproduct, Biosafety and biosecurity General study of Bioproducts, Biosafety and biosecurity.	RS
	22 September 2019	Types of Bioproduct	Vaccine & Sera (stem cells) Inoculant Probiotics , Enzyme, fermentation products	EK

No	Date	Tittle	Lecture Details	Lecturer
1	2	3	4	5
	29 September 2019	Bioproduct Specifications	Natural bioproduct Artificial bioproduct	EK
	6 October 2019	Process of Biological and Chemical Product	The biological process in producing final products for laboratory and commercial bioproducts scale The biochemical process in producing end products for laboratory and commercialbioproducts scale	MY
	13 October 2019	Understanding Biomaterial / Biotech Bio Life Safety, Animal Life. , Feed. Food. Potential Zoonosis **QUIZ I**	Biomaterial / Biotech Bio Life material safety aspects, Annnimal Life. , Feed. Food. Potential Zoonosis (sustainability from extinction) Biomaterial / Biotech Bio Life material hazard aspects, Annnimal Life. , Feed. Food. Potential Zoonotic diseases in the environment	EK

No	Date	Tittle	Lecture Details	Lecturer
1	2	3	4	5
	20 October 2019	Capacity and Potential of Bio Life Biomaterial / Biotech wealth, Animal Life. (field trip)	History (from time to time) Development that are related to changes in the environment, global warming, climate change and human resources	EK
	24 October- 04 November 2019	**MIDDLE SEMESTER ASSESMENT (UTS)**		**All Lecturers**
	10 November 2019	Capacity and Potential of Bio Life Biomaterial / Biotech wealth, Animal Life. (field trip)	History (from time to time) Development that are related to changes in the environment, global warming, climate change and human resources	MY
	17 November 2019	Integrated management process in anticipating risks	National Health Safety standard actions Several criteria in quarantine based on biological safety safeguards are in laboratory manner	EK
	24 November 2019	Rules regulations / laws relating to	International agreements and principles	CN

No	Date	Tittle	Lecture Details	Lecturer
1	2	3	4	5
		safeguarding Bio Materials (Bacteria, viruses, parasites, fungi, etc.)	Rule of law	
	1 December 2019	Method of Identifying Bio Materials (Bacteria, viruses, parasites, fungi, etc.), as Agro-Bioterrorism agents **QUIZ II**	Bioterrorism Biological materials as Agro-Bioterrorism agents	CN
	8 December 2019	Biosecurity at the Laboratory Level	Laboratory hazardous materials, labeling, and occupational safety and health	PS
	15 December 2019	Biosecurity at Inter-Regional Levels and Aspects of State Resilience	Chemical, radiological and biological weapons Weapon control Public sensitivity	CN
	19-23 December 2019		**Substitute for Holidays**	

No	Date	Tittle	Lecture Details	Lecturer
1	2	3	4	5
	26-30 December 2019		**Study Break Week**	
	02-13 January 2019		**END SEMESTER ASSESMENT (UAS)**	All Lecturers

Surabaya, 18 August 2019

PJMK,

EmyKoestantiSabdoningrum, drh.,M.Kes
NIP. 197012101999032002

Validated by

Head of Department

Dr.M. Anam Al-Arif, Drh, MP
NIP. 196209261989031004