SEMESTER 1
LEARNING AND FOCUS GROUP DISCUSSION GUIDELINES

STUDENT BOOK

UNIVERSITAS GADJAH MADA
FACULTY OF VETERINARY MEDICINE
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Learning and Focus Group Discussion Guidelines Semester 1
Second Edition
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FGD Book for Student

Semester 1

Scenario 1-4

Integration and Synergy Courses:

- General Animal Husbandry and Entrepreneurship
- Animal Welfare and Veterinary Ethics
- Religion
- Osteology, Arthrology, Myology and Splanchnology
- Veterinary Biochemistry I

Second Edition
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PREFACE

Education goals of Faculty of Veterinary Medicine Universitas Gadjah Mada (FKH UGM) which has been set in Renstra FKH UGM 2013-2017 are generating competent veterinarian in handling animal diseases and harmonizing animal health, human and its environment health, as problem solver pioneer of animal health problem, and ready to carry technical duties that fulfill standard competency of veterinary profession. Therefore it needs Higher Education curriculum that adjusted and harmonized to existing needs and developments, assessed periodically minimum once in 5 (five) years so that it fits to needs and demands of Higher Education graduates public user. Faculty of Veterinary Medicine hereafter, develops new curriculum with competency basis with SK Rektor (Rector Decree) No: 484/SK/HT/2013 on 24 July 2013, starting effectively since academic year of 2013/2014.

Main competency of Program Study FKH UGM graduates that develops in that curriculum is adjusted with mutual agreement in Provisions of Professional Education of Veterinary Assembly of Indonesian Veterinary Association (9 competencies), added with 9 supporting competencies that are development and characterization of Faculty of Veterinary Medicine UGM competencies.

Learning method applied is Student Teacher Aesthetic Rolesharing (STAR) or Student Centered Learning plus (SCL+) that combine Teacher Centered

Learning (TCL) and Student Centered Learning (SCL) proportionally according to learning outcome that will be achieved in learning. STAR principle is existence of harmonious relationship between lecturers and students, enhancement of reciprocal learning partners between students and lecturer, so *Patrap Triloka* is created, *ing ngarsa sung tulada, ing madya mangun karsa, tut wuri handayani,* lecturers properly becomes an example in front of students, motivates in the middle, gives supports behind with lecturers authority so that the students will develop. Harmonious relationship between lecturers and students is created since the beginning of the lectures through interaction in class and more focus through tutorial in Forum Group Discussion (FGD), and added with guidance to students to be long life learner.

Lecture delivery method in class is done by cooperative learning method, lecturers deliver materials and discussion, deliver what will be learn and why it needs to be learned by the students. On the inaugural lecture, coordinator of the Course (MK) deliver learning contract to students, learning contract content is suitable with Plan of Semester Learning Activities Program (RPKPS) that has compiled by lecturers team, introducing all lectures with each of their expertise with goal that the students know the lecturers and their expert since the beginning of the lecture, so that the lecturers are expected to be a role model for their students. After lectures in class are done, it is followed by tutorial activities in small classes through FGD for SCL application. Delivery method in FGD at the beginning of the semester is done with collaborative learning method, while for the next semester it can be done using

competitive learning, case-based learning, research-based learning, problem-based learning, and other way used according to learning objective.

This learning and FGD guidelines book is used for guiding the student during the FGD process and doing FGD program. We wish that output result in this learning and education process in Faculty of Veterinary Medicine UGM is able to prioritize intellectual ability for sharpening hard skills and improving soft skills based on moral and veterinary Ethics, can conduct its students to achieve competencies that have set.

February, 2018
Dean

INTRODUCTION

Focus Group Discussion is done through discussion inside small classes to discuss existing tasks in a designed scenario so that students can understand significantly, deeply, not only in the form of theory but more realistic in the form of scenario through synergy and integration of General Animal Husbandry and Entrepreneurship, Animal Welfare and Veterinary Ethics, Religion, Osteology, Arthrology, Myology and Splanchnology, and Veterinary Biochemistry I Courses. Integral discussion from various course aims to support achievement of curriculum learning competency of Faculty of Veterinary Medicine.

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LEARNING OBJECTIVES

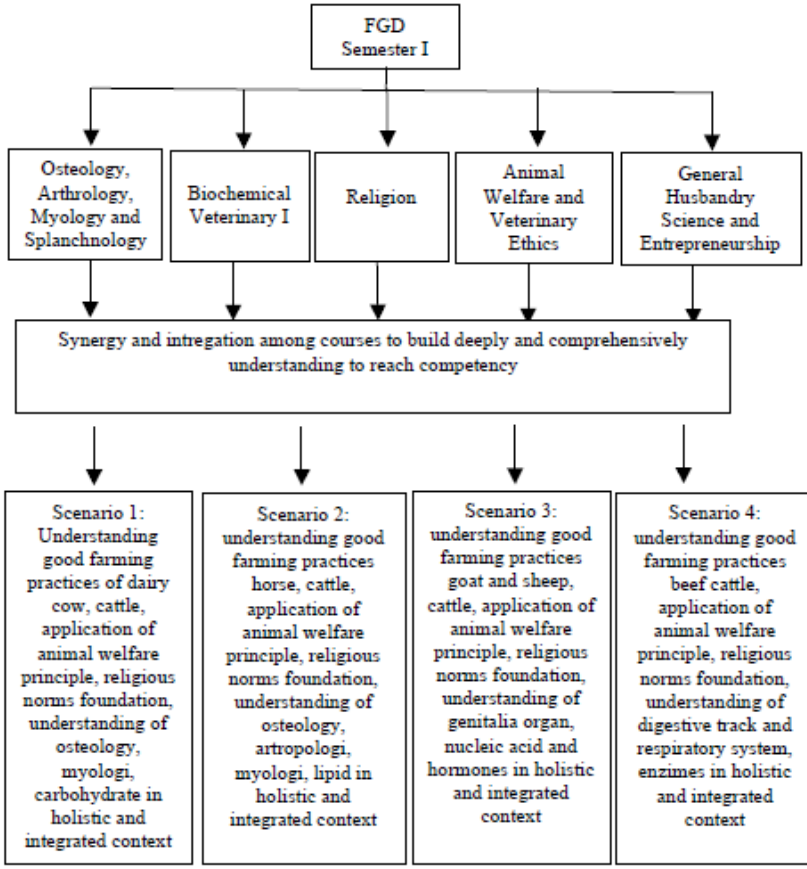
General Instructional Goal

Students are able to understand courses that learned through implementation of integration and synergy among courses to complete/ improve/ sharpen each other and share scientific, skill, and behavior concepts.

Specific Instructional Goal

Students are able to understand significantly of of General Animal Husbandry and Entrepreneurship, Animal Welfare and Veterinary Ethics, Religion, Osteology, Arthrology, Myology and Splanchnology, and Veterinary Biochemistry I Courses that mutually synergized and integrated in a scenario to be discussed.

LEARNING SCHEME



LEARNING OUTCOME

Integral discussion from various courses through scenario in FGD aims to support curriculum competency learning achievement of Faculty of Veterinary Medicine.

Learning Outcome of Veterinary Biochemistry I Course:

Students are able to understand the meaning and role of biochemical science in veterinary world, including general structure and functions of mono, oligo, and polysaccharide, glicoidic bond, differences of aldosan and ketosa sugar, reducting and non-reducting sugar, general structure and characters of fatty acid, categorizations of lipid and its functions; general structure of nucleoside, nucleotide, nucleic acid (DNA and RNA), functions and its characters; general structure, types and characters of amino acids, peptide bond, differences of essential-nonessential amino acids, amino acids building blocks of protein, functions and its characters; General structure, types, characters and functions of vitamin, mineral, and enzyme.

Learning Outcome of Osteology, Arthrology, Myology, Splanchnology Course:

Students are able to understand nomina anatomica related to science field of osteology, arthrology, myology, splanchnology; able to understand directions and position of body parts, structures, and position of bones building axial skeleton, appendicular

skeleton, and visceral skeleton; able to explain bones classification based on its form or morphology (long bones, short bones, flat bones, irregular bones), joints classification based on joints forming structure, moving and joints position; able to understand the terms used in studying muscle, muscle classifications based on its attachment, forms, and functions, muscle structures and accessory structures in locomotor system (fascia, tendon, ligament); able to understand name of main organs, channels and additional organs constructing organ system based on nomina anatomica and functions in general, form variations and position of visceral organs, constructing organ system in domestic animals (cow, horse, goat, pig, dog, cat); able to relate and integrate constructing structures of body frame, that are bones, joints, and muscles; able to compare variation of forms, positions and amount of body frame constructing structures among domestic animals; able to integrate organs constructing organ system inside the body, able to compare variation of forms and positions of organs constructing organ system; skillful in observing organ structure in detail direction orientation according to nomina anatomica, Specific structures that differentiate among species; able to both identificate organs and identificate species based on organ morphology normally, integrate structures that have learned specifically, partially.

Learning Outcome of Religion Course:

Students are able to apply veterinary science and husbandry science based on religious moral.

Learning Outcome of General Animal Husbandry and Entrepreneurship Course:

Students are able to explain biological characteristic of various types of livestock, livestock production (nursery, maintenance, feeding, cage, reproduction and production, health, and marketing) and livestock related environmental management. Students are able to understand and develop knowledge and skills about entrepreneurship.

Learning Outcome of Animal Welfare and Veterinary Ethics Course:

Students are able to do assessment of animal welfare and able to be supervisor of animal welfare based on The Five Freedoms application in various activities related to animals, and able to adapt global demands about animal welfare that harmonized with religion, culture, and local tradition. Students are able to understand and apply Ethics with development of veterinary science, relation among ethics, discipline and law, veterinary Ethics as combination between medical and business Ethics, veterinarian vows and Ethics code of veterinarian applied in subject about prevailing regulations, policy, animal protection, livestock utilization and development, animal health, veterinary public health (kesmavet) and quarantine.

LEARNING ACTIVITIES

This learning activities series is prepared to direct the students reach learning objectives:

1. Learning method

Learning method used is through Student Teacher Aesthetic Rolesharing (STAR), by combining proportionally between teacher centered learning (TCL) and student centered learning (SCL) according to learning outcome that will be achieved.

STAR principle is harmonious relationship between lecturers and students, enhancement of reciprocal learning partners between students and lecturer, so *Patrap Triloka* is created, *ing ngarsa sung tulada, ing madya mangun karsa, tut wuri handayani,* lecturers properly becomes an example in front of students, motivates in the middle, gives supports behind with lecturers authority so that the students will develop. Harmonious relationship between lecturers and students is created since the beginning of the lectures through interaction in class and more focus through discussion activities in forum group discussion (FGD), and students guidance to be a long life learner.

2. Lectures

Lectures method is used by lecturers delivering/presenting materials and discussion, delivering what will be learned by the students and why should it be learned. On the inaugural lecture,

coordinator of the Course (MK) deliver learning contract to students, learning contract content is suitable with Plan of Semester Learning Activities Program (RPKPS) that has compiled by lecturers team, introducing all lectures with each of their expertise with goal that the students know the lecturers and their expert since the beginning of the lecture, so that the lecturers are expected to be a role model for their students. Plan of Semester Learning Activities Program (RPKPS) and teaching materials must be given to students to be copied (or given to Library as narration/ reference/ students learning materials). Coordinator of MK introduces all of lecturer team and facilitators involved from each division with each expertise.

In applying curriculum competency basis, lectures are held by combining with group discussion in small classes, aim to make students obtain enough lecture materials and followed by self study time addition. Lectures are held based on specified learning outcome in reaching competencies. Integration and synergy among courses are held through FGD that discuss certain scenario, to increase and sharpen students understanding. Lectures can be held between FGD schedule, to give chance to student for clarifying and discussing unanswered students question in group discussion.

3. Group discussion in FGD with facilitator mentoring

FGD is scheduled twice a week. If facilitator could not come because of certain reasons, it should be

substitute by other facilitator. If at the fixed schedule the facilitator has not come yet, relevant students group should inform academic as soon as possible. During discussion process, all of the groups should bring relevant learning sources that might be needed during tutorial.

To reach learning objective in the first semester, collaborative learning method is used, that held in twice discussion meeting in discussing one same scenario. Basic questions that should be underlined are: What have we known? What else that we expected to know?

First FGD:

- All students are divided into 12 classes, each of class consist of 12-16 students.
- Facilitator explains the discussion process and scenario for discussion
- Facilitator divides the class into small groups of 5-6 students
- Facilitator asks each students to read the scenario relevant to materials learned
- Facilitator asks the students to do task relevant with perception and solution towards cases/problems in scenario
- Facilitator asks students to discuss their work results in each of their small groups, led by one of the students (as chairman) helped by one other students (as secretary)
- Facilitator asks each of small groups discuss the group agreement

- Facilitator asks each of the students to make report of discussion results with by searching reference sources as wide as possible. Contents of the report are: discussion topic, learning objective, learning scheme, analysis, conclusion, learning outcome (explaining student ability after discussing topic in scenario), references.
- Facilitator asks every small groups prepare their discussion results in the form of power point that presented by one of the group representatives in the second FGD meeting.

Second FGD:

- Facilitator asks every students to submit complete report
- Facilitator asks each of the group to present group discussion result
- Facilitator asks other groups to give feedback to presentation result

Facilitator Job:

- Facilitator must be present on schedule. The facilitator's delay in attending is a maximum of 10 minutes (the rest will be replaced by a substitute facilitator).
- Directing and facilitating the discussion, lecturers put themselves as trend setter applying *patrap triloka ing ngarsa sung tulada, ing madya mangun karsa, tut wuri handayani* (in front becomes example, in the middle motivates, at behind gives support with lecturers authority so that students can develop).

- Giving assessment to students activities during discussion in the first and second FGD, with assessment through 3 aspects:
  1. A = Attitude (mental and manner) = affective
  2. S = Skill (competent, expert, adaptable to positive competency) = psychomotor
  3. K = Knowledge (building intellectual capital) = cognitive

4. **Group discussion without facilitator mentoring**
   According to group needs, students can held a meeting without facilitator. Aims of this discussion are varies, for example, identificate theoritical questions, identificate group learning objective, ensure that group have already submitted all of the information needed, and identificate practical questions.

5. **Practice**
   Held by Laboratorium in Division to enrich students understanding about discussed concept related to science development. Exercise to improve skills that needed by veterinarians to fulfill their competencies also given intensively (such as communication with clients skill, clinical skill, etc.)

6. **Expert consultation**
   This activity is held based on needs and held by groups of students, by directly contacting the relevant competent lecturer. It is very recommended for the chairman of the group make an appointment before with the relevant experts.

7. Self study

As mature learner, students are expected to able to applied self study, a kind of important skills for developing personality and career in the future. This skill including ability to find personal interest, find more information from various learning sources, decided the appropriate learning style, and identificate further learning needs. Students will not feel enough to study only from lecture notes or text books. Self study is the most important character of SCL approach, and in the certain level, study will be an unlimited journey.

8. Class discussion

Class discussion can be held through lectures between FGD schedules. The aims of this discussion are to give explanation and compare learning process among groups to prevent wrong direction groups in the discussion. All of the groups can propose certain issues to be discussed, and facilitator or lecturers will answer questions based on their own competencies.

GENERAL ASSESSMENT

Some assessments to evaluate students learning results achievement:

- **Formative Exam**
  Students will be given series of pre-test or post-test during lectures. This test is unscheduled, so that will force students to learn the materials since the beginning of learning. This test gives contribution to student final grade. So that, if there is a students disturbed in their final tests, this tests will help the final grade result.

- **Summative Exam**
  This exam is done in the mid-semester (mid-semester exam/UTS) and semester final exam (UAS). Students should prepare themselves to take summative exam. A mature learner can achive better result because s/he can utilize time effectively to achieve goals.

- **Remidial Exam**
  Students are possible to tak eremidial exam to improve grades of certain MK that failed. This exam is held at the end of final semester exam.

BLUE PRINT OF ASSESSMENT

STUDENTS ASSESSMENT COMPONENTS

- ✓ FGD 15 %
- ✓ Practice 25%
- ✓ UTS + UAS 60 %

Types of question:

- MCQ with answer types of a, b, c, d, e
- Essay
- etc.

REFERENCES

General

- Buku Blok untuk Mahasiswa, Faculty of Veterinary Medicine UGM 2013

Veterinary Biochemistry I

- Lehninger, A.L; D.L. Nelsom; and M.M. Cox. 1993. Principles of Biochemistry Second Edition
- Stryer, Breg J.M; Tymoezko J.L; Stryer L. 2001. Biochemistry. Fith Edition. W.H. Freeman and Co. New York.
- Harper, Murray R.K; Granner D.K; Mayes P.A; Rod Well V.M. 2003. Biokimia Harper Edisi 25. Penerbit Buku Kedokteran. EGC. Jakarta
- Conn E.E; Stumpf P.K; Bruening G; Doi R.H. 1987. Outlines of Biochemestry
- Sheehan D. 2009. Physical Biochemistry
- Devlin T.M. 2011. Textbook of Biochemistry

Osteology, Arthrology, Myology and Splanchnology

- Ashdown, R. R., Done, S., and Barnett, S. W., 2001, Color atlas of Veterinary Anatomy: Ruminants, Mosby-Wolfe
- Ashdown, R. R., Done, S., and Barnett, S. W., 2001, Color atlas of Veterinary Anatomy: Dog and Cat, Mosby-Wolfe
- Getty.R., 1975, The Anatomy of Domestic Animal
- May, N. D. S., 1954, The Anatomy of The Sheep Shively, B.M.J., 1989, Veterinary Anatomy Basic and Comparative, Texas, University Press

- Sisson. S and J.D. Grosman, 1975, The Anatomy of Domestic Animal, Philadelphia, Canada

Religion

- Al Qaradhawi, Y., 2001. *Islam Agama ramah Lingkungan*, Pustaka Al-Kautsar, Jakarta.
- Afzalurrahman, 1997. *Muhammad sebagai Seorang Pedagang*. Yayasan Swara Bhumy, Jakarta.
- Alim, Sy., Baiquni, A., Sadali, A., and Lutfi, AM., 1995. *Islam untuk Ilmu Pengetahuan Alam dan Teknologi*, Buku Daras Pendidikan Agama Islam Pada Perguruan Tinggi. Dit Pembinaan Perguruan Tinggi Agama Islam, Ditjen Pembinaan Kelembagaan Agama Islam, Depag RI, Jakara.
- Saifuddin, A.M., Aziz, A., Rusli, S., and Widodo, S., 1996. *Islam Untuk Disiplin Ilmu Sosiologi*, Buku Daras Pendidikan Agama Islam Pada Perguruan Tinggi. Dit Pembinaan Perguruan Tinggi Agama Islam, Ditjen Pembinaan Kelembagaan Agama Islam, Depag RI, Jakara.

General Animal Husbandry and Entrepreneurship

- Frandson, R.D., Wilke, W.L., and Fails A.D., 2003. Anatomy and Physiology of Farm Animals, 6th ed. Lippincott Williams and Wilkins, Philadelphia USA
- Gillespie, J.R.,1990. Modern Livestock And Poultry Production. 4ed. Dammar Publisher Inc.
- Noakes, D.E., Parkinson, T.J., and England G.C.W., 2009. Veterinary Reproduction and Obstetrics, 9th ed. Saunders Elsevier, Edinburgh
- Smith, B.P., 2002. Large Animal Internal Medicine. 3rd ed. Mosby, St. Louis.

Animal Welfare and Veterinary Ethics

- Morton DB. 2000. *A systematic approach for establishing humane endpoints*. Institute for Lab Animal Research Journal 41:80-86.
- Seamer JH 1993. *Farm animal welfare in Britain*. SCAW (Scientists for Animal Welfare) Newsletter 14(4): 13-14
- Webster J 2005. *Animal Welfare*. Limping towards Eden. Blackwell, Oxford.

Scenario 1
(FGD Semester 1)

Dairy Cows and Calves

FKH students are invited to visit to people's dairy cows farming that cared traditionally, students see cows are free grazing with other cows, existing cattles run away and breastfed on their mothers comfortably. When visiting to other farms, cattles are housing in a shed with uneven floors and seems too slippery, that there is cows fall, cannot move and stand anymore. In the other side, calves should get milk from their mother, eliminated when they are one or two days aged. Then they are given artificial food and skim milk with lower quality than their mothers milk. According to the farmers, amount of milk needed by a calf during preweaning is quite big, that it becomes less economical because it will decrease amount of mother's milk production that can be milked to be sold. Calves really need mothers' milk that contains nutrient such as carbohydrate and fat in growth. Daily weight accretion of calves is decreasing.

Learning objectives:

1. Students are able to understand the maintenance way of dairy cows through good farming practices that are learned in General Animal Husbandry and Entrepreneurship course, according to animal welfare principle that are learned in Animal Welfare and Veterinary Ethics course, based on religious norms that are taught in Religion course, so each of these

courses can can complement/ increase/sharpen each other.

2. Students understand and able to explain structures of bones, joints, and muscles in rear extremities in cows, that are taught in Osteology, Arthrology, Myology and Splanchnology course, and materials of carbohydrate that are taught in Veterinary Biochemistry 1 course can be learned deeplier, not only in the form of theories but more realistic in the form of scenario directing course to be mutually synergistic and integrated
3. Students can mutually collaborate, sharing concepts, skills and behavior in discussion.

Scenario 2
(FGD Semester 1)

Lame Horse

Banu is a first semester student at the Faculty of Veterinary Medicine. When semester break, Banu follows an internship activity at a horse farm in Salatiga. Banu helps almost all of the activities at the farm such as feeding, that are grass and concentrate with certain ratio, bathe horses, bringing horses walk on the field and clean the shed. Horses have always been trained to run every day so that the horse has body score athlete (not fat and not skinny). In other shed, Banu sees a foal in an individual shed, rarely move, looks fat, limp because swollen in right front ankle (fetlock joints). Banu pays attention when that horse is examined by a veterinarian. Banu tries to recall the lessons of anatomy and biochemistry he got in the faculty. Banu tries to connect the role of body fat causing obesity with lack activity of horse. Once the holiday is over Banu back to campus and discuss with friends about their experiences during the holidays.

Learning objectives:

1. Students are able to understand horse maintenance ways through good farming practices that are learned in General Animal Husbandry course and Entrepreneurship, based on animal welfare principle that is learned in Animal Welfare and Veterinary Ethics course, based on religious norms that are

taught in Religion course, so that each of these courses can complement/increase/sharpen each other.

2. Students understand and able to explain structures of bones, joints, and muscles in front leg extremities in horses, that are taught in Osteology, Arthrology, Myology and Splanchnology course, and materials of lipids that are taught in Veterinary Biochemistry 1 course can be learned deeplier, not only in the form of theories but more realistic in the form of scenario directing courses to be mutually synergistic and integrated.
3. Students can mutually collaborate, sharing concepts, skills and behavior in discussion.

Scenario 3
(FGD Semester 1)

Goats and Sheeps

FKH students are visiting sheeps and goats farm. Students have just understood that although sheeps and goats are both small ruminant livestocks, but they have physical and character differences. Types of the goat itself are also various, there are types of peanut goats, Etawah goats, Etawah crossbreed goats, Boer goats, etc. The diversity of this small ruminant has led to various amazements of diversity of God's creation of living things. To gain economic benefits, farmers also perform castration on goats and rams to accelerate growth and improve the quality of the carcass.

Learning objectives:

1. Students are able to differentiate goats and sheeps character, various types of goats and sheeps, able to explain good farming practices on goats and sheeps, castration view on animals viewed from religious norms and animal welfare.
2. Students are able to understand diversity of animals through understanding of learning materials of structures and biological functions of nucleic acid.
3. Students are able to understand male urogenitalia system and understand kinds, types and functions of involved hormones in animals castration.
4. Courses materials can be learned sharper, not only in the form of theory but also more realistic in the form

of scenario from various courses that mutually synergistic and integrated.

Scenario 4
(FGD Semester 1)

Slaughtering Sacrificial Animals

FKH students are following community service program to supervise the process of slaughtering sacrificial animals. Supervisor asks students to oversee sacrificial animals, since they come, recognize various types of sacrificial animal, learn how to estimate weight, estimate animals price, how to restrain, and casting. In the process of slaughter, butcher and officers lay sacrificial animals with the head on the south, tail on the north, left body part sticking to the ground. Sacrificial animals are then slaughtered with a sharp knife until blood flows completely. After completion of the sacrificial animal slaughter observation tasks, all students who are in various slaughter places are asked for discussion in small groups.

Learning objectives:

1. Students are able to do economical calculation in cattles selling, ways of animals restrain and casting, slaughtering way of sacrificial animals with animal welfare principle and slaughter guidance according to religious norms.
2. Students are able to recognize and identificate respiratory and digestive channel.
3. Students are able understand the rigormortis process reviewed from biochemical science.

4. Students can mutually collaborate, sharing concepts, skills and behavior in discussion.