

Module Handbook

Nama modul:	Osteology, arthrology, myology, and splanchnology
Level modul:	Bachelor
Abbreviation, if applicable:	KHU 1011
Sub-Heading, if applicable	-
Courses included in the module, if applicable	-
Semester/term:	First semester/First year
Module Coordinator(s):	Dwi Liliek Kusindarta, DVM., M.Sc., Ph.D.
Lecturer(s):	Dr. Hery Wijayanto, DVM., M.Sc. Woro Danur Wendo, DVM., M.Sc.
Language:	Indonesian
Classifications within the curriculum:	Compulsory Course
Teaching Format/ class hours per weeks during the semester:	2 hours lectures every weeks, 1 hours practicum (laboratory work) every weeks, 2 hours Focus Group Discussion (FGD)
Workload	2 hours lecturer every weeks (in total 28 hours in 1 semester) and 2 hours practicum, 1 hours practicum reports, 16 hours FGD ; in total 92 jam/ semester (1 semesters consist of 16 weeks)
Credit points:	3 (2/1)
Requirements	-
Learning goals/ competencies:	<p>Knowledge and understanding in terms of:</p> <ol style="list-style-type: none"> 1. Nomina anatomica associated with the field of osteology, artrology, myology, and splanchnology. 2. Directions and position of the limb. 3. The structure and location of skeleton axial skeletal bones, appendicular skeleton, and visceral skeleton. 4. Bone classification by shape or morphology (bone length, short bone, flat bone, irregular bone). 5. Classification of joints based on the structure of joints, relationships between structures of joints, movements and joints positions. 6. Terms which used on the muscles. 7. Muscles classification according to the place of attachment, shape, and function 8. The structure of muscles and additional structures (accessories) on the locomotion system (fascia, tendo, ligaments). 9. Name of the major organs, tunnels and additional organs of the organ system according to nomina anatomica and general function

10. Variations in the shape and location of visceral organs which is arrange an organ system in domestic animals (cattle, horses, goats, pigs, dogs, cat).

Analytical ability or competence:

1. To have an ability to linking and integrating the structures that build the body's skeletons, bones, joints, and muscles.
2. able to compare the variety of shapes, locations, and the number of skeletons among domestic animals.
3. Have an ability to make an integration on the organ which compose organ system in the body.
4. Compare variations in the shape and location of the organ system

Practical skills:

1. To elucidate and identify the organ structure in detail based on direction orientation according to nomina anatomica.
2. To find the specific structures which sign the differentiation between species.
3. To demonstrate identification of organs as well as species-based on identification normally organ morphology.
4. To combine the structures which is specifically and partially studied

Managerial and Transferable Skill

1. Communicate knowledge about gross anatomy of the bone, joint, muscle and visceral muscles effectively through oral, writting and drawing.
2. Learning independently or groups with open and critical spirit.
3. Mastering information and communication technologies to enrich knowledge of the macroscopic structure of the bone, joints, muscles and visceral organs.

Attitude

1. Faithful and fearful to God Almighty.
2. Having a high motivation, curiosity. (curiosity), innovative, dynamic, and efficient.
3. Independence in learning by utilizing learning materials, information technology.
4. Honest, integrity and polite.
5. Proficient, academic, and professional.
6. Appreciate the originality of ideas, concepts, works and other discoveries.
7. Appreciate the interdisciplinary efforts in exploring, utilize and conserve natural resources.
8. Pay attention and be able to appreciate views and opinions other people.
9. Prepare and equip his or herself with knowledge, skills to anticipate the structure of damaged organs, have undergone changes due to the disease, forgery, or physiological changes.
10. Loving and upholding profession and professional ethics.

Content	<ol style="list-style-type: none"> 1. Introduction lecture, introduction of nomina anatomica, agreement of direction and position of the limbs, the bones that built the skeleton of the animal body in general 2. Structure and location of skeletal skeleton axial bone, appendicular skeleton, and visceral skeleton; The classification of the bone by shape or morphology (long bones, short bones, flat bones, irregular bone) 3. Joint structures (the joints on the head, the joints on the columna vertebral, costae and sternum, the joints on extremities thoracalis, the joints on extremities pelvina) 4. Muscles (scientific names and commercial names), location and function normally in animals (muscles on the head, the muscles of the thoracic and abdominal). Additional structures (fascia, tendo, ligaments) 5. Muscles (scientific names and commercial names), location and function normally in animals (the muscles of the cranial extremity, the muscles of the caudal extremity). Additional structures (fascia, tendo, ligaments) 6. The organs of the Digestive system 7. The organs of the Respiration system 8. The organs of the Genitalia Masculina system 9. The organs of the Genitalia Feminina system 10. The Organs of the uropoetics system
Study/ exam achievement:	<p>Assessment of students includes practicum, Focus grup Discussion (FGD), Mid Term Examination, and Final Examination.</p> <p>Quizzes held at the beginning or end of the meeting are preferred to evaluate discipline (attendance, presenting signature correction), hours of attendance, and understanding. The quiz value for the final consideration item on changing the value of a number to a letter grade.</p> <p>The final value composition is: 15% FGD, 25% Practicum, and 30% mid term examination + 30% final examination.</p> <p>The FGD assessment component includes: attitude (discipline of arrival, dress order and way of discussion), discussion and understanding activities.</p> <p>The practicum component includes: pretest and / or post test values, and responses (practice test, preparatory identification). Final indexed is defined as follow:</p> <p style="margin-left: 40px;"> A : 100 >NA ≥75 A- : 75 >NA ≥72.5 A/B : 72.5 >NA ≥ 70 B+ : 70 >NA ≥67.5 B : 67.5 >NA ≥65 B- : 65 >NA ≥62.5 B/C : 62.5 >NA ≥60 C+ : 60 >NA ≥57.5 </p>

	<p>C : 57.5 > NA ≥ 55 C- : 55 > NA ≥ 52.5 C/D : 52.5 > NA ≥ 50 D+ : 50 > NA ≥ 47.5 D : 47.5 > NA ≥ 45 E : NA < 45 (absolute score)</p>
Forms of Media:	Power point slides and LCD projectors, whiteboard, laboratory
Literature:	<ol style="list-style-type: none"> 1. Ashdown, R. R., Done, S., and Barnett, S. W., 2001, Color atlas of Veterinary Anatomy: Ruminants, Mosby-Wolfe 2. Ashdown, R. R., Done, S., and Barnett, S. W., 2001, Color atlas of Veterinary Anatomy: Dog and Cat, Mosby-Wolfe 3. Getty.R.,1975,TheAnatomyofDomesticAnimal 4. Lehre buch der vergleichen den Anatomie der haus tiere (Teaching book of Different Anatomy of Domestic Animal (terjemahan Busono) 5. May, N. D. S., 1954, The Anatomy of The Sheep Shively, B.M.J., 1989 , Veterinary Anatomy Basic and Comparative, Texas, University Press 6. Miller,M.E.,Anatomyofthedog,W.B.SaundersCo. 7. Sisson. S and J.D. Grosman, 1975, The Anatomy of Domestic Animal, Philadelphia, Canada 8. Shively,M.J.,Veterinaryanatomybasic,comparativeandclinical,Texas A&M University press
Notes:	if absolute score on the Final Examination cannot be applied, the calculation with relative score will be conducted.

RPKPS

Nama Modul:	Osteologi, artrologi, miologi dan splanknologi
Program studi:	Sarjana
Singkatan/kode:	KHU 1011
Sub-Heading, if applicable	-
Courses included in the module, if applicable	-
Semester/ Periode:	Semester satu/ Tahun pertama
Koordinator:	drh. Dwi Liliek Kusindarta, M.P., Ph.D.
Pengajar:	Dr. drh. Hery Wijayanto, M.P. drh. Woro Danur Wendo, M.Sc.
Bahasa pengantar:	Bahasa Indonesia
Klasifikasi mata kuliah dalam kurikulum :	Mata Kuliah wajib
Format tatap muka / jumlah jam dalam seminggu selama 1 semester:	2 jam kuliah setiap minggu, 1 jam praktikum setiap minggu, dan 2 jam Focus Grup Discussion (FGD) setiap 2 minggu sekali
Beban Kerja:	2 jam mengajar/tatap muka (1 semester (14 minggu)) dan 1 sks / praktikum (1 semester): 2 jam praktikum, 1 jam kerja struktural (laporan praktikum), 8 jam FGD ; total 92 jam/ semester
Jumlah sks:	3 (2/1)
Prasyarat:	-
Tujuan pembelajaran/ kompetensi :	Pengetahuan dan Pemahaman (<i>knowledge and understanding</i>) dalam hal : <ol style="list-style-type: none">1. Nomina anatomica terkait dengan bidang ilmu osteologi, artrologi, miologi, splanknologi.2. Petunjuk arah dan kedudukan anggota tubuh.3. Struktur dan letak tulang-tulang penyusun axial skeleton, appendicular skeleton, dan visceral skeleton.4. Klasifikasi tulang berdasar bentuk atau morfologinya (tulang panjang, tulang pendek, tulang pipih, tulang ireguler).5. Klasifikasi sendi berdasarkan struktur pembentuk sendi, hubungan antar struktur penyusun sendi, pergerakan dan letak sendi.6. Istilah-istilah yang digunakan dalam mempelajari otot.7. Klasifikasi otot menurut tempat perlekatannya, bentuk, dan fungsi8. Struktur otot dan struktur tambahan (asesori) pada sistem lokomotor (fascia, tendo, ligamen).9. Nama organ utama, saluran dan organ tambahan penyusun sistem organ

menurut nomina anatomica serta fungsi secara umum.

10. Variasi bentuk dan letak organ-organ visceral penyusun sistem organ pada hewan domestik (sapi, kuda, kambing, babi, anjing, kucing).

Kemampuan analisis (*ability/ intellectual skill*)

1. Mengkaitkan dan mengintegrasikan struktur-struktur penyusun kerangka tubuh, yaitu tulang, persendian, dan otot.
2. Membandingkan variasi bentuk, letak, dan jumlah struktur penyusun kerangka tubuh diantara hewan domestik.
3. Mengintegrasikan organ-organ penyusun sistem organ dalam tubuh.
4. Membandingkan variasi bentuk dan letak organ-organ penyusun sistem organ.

Ketrampilan praktek (*practical skill*)

1. Mengamati struktur organ secara detil dengan orientasi arah sesuai nomina anatomica.
2. Menemukan struktur spesifik yang membedakan antar spesies.
3. Identifikasi organ sekaligus identifikasi spesies berdasarkan morfologi organ secara normal.
4. Mengintegrasikan struktur-struktur yang dipelajari secara spesifik, parsial.

Kemampuan Manajerial dan Alih Ilmu (*Managerial & Transferable skill*)

1. Mengkomunikasikan pengetahuan tentang makroanatomi tulang, persendian, otot dan organ-organ visceral secara efektif melalui lisan, tulisan maupun gambar.
2. Belajar mandiri maupun kelompok dengan semangat terbuka dan kritis.
3. Menguasai teknologi informasi dan komunikasi untuk memperkaya pengetahuan mengenai struktur makroskopik tulang, persendian, otot dan organ visceral.

Sikap (*Attitude*)

1. Beriman dan bertakwa kepada Tuhan Yang Maha Esa.
2. Memiliki motivasi, rasa ingin tahu yang tinggi. (*curiosity*), inovatif, dinamis, dan efisien.
3. Kemandirian dalam belajar dengan memanfaatkan materi pembelajaran, teknologi informasi.
4. Jujur, berintegritas dan santun.
5. Cakap, akademis, dan profesional.
6. Menghargai keorisinilan ide, konsep, karya dan penemuan lainnya.
7. Menghargai upaya interdisiplin dalam mengeksplorasi, memanfaatkan dan melestarikan sumber daya alam.
8. Memperhatikan dan dapat menghargai pandangan dan pendapat orang lain.
9. Mempersiapkan dan membekali diri dengan pengetahuan, keterampilan untuk mengantisipasi struktur organ yang rusak, telah mengalami perubahan akibat penyakit, pemalsuan, atau perubahan fisiologik.
10. Mencintai dan menjunjung tinggi profesi dan etik profesi.

<p>Materi:</p>	<ol style="list-style-type: none"> 1. Kuliah pengantar, pengenalan nomina anatomica, kesepakatan arah dan kedudukan anggota tubuh, tulang-tulang yang membentuk kerangka tubuh hewan secara umum. 2. Struktur dan letak tulang-tulang penyusun axial skeleton, appendicular skeleton, dan visceral skeleton. Klasifikasi tulang berdasar bentuk atau morfologinya (tulang panjang, tulang pendek, tulang pipih, tulang ireguler) 3. Macam-macam persendian: Struktur - struktur pembentuk sendi: Persendian pada kepala, Persendian pada columna vertebralis, costae dan sternum, Persendian pada extremitas thoracalis, Persendian pada extremitas pelvina. 4. Otot (nama ilmiah dan nama komersil), letak dan fungsinya secara normal pada hewan secara umum: Otot-otot pada kepala, Otot-otot pada thoracalis dan abdominalis, Struktur tambahan (fascia, tendo, ligamen) 5. Otot (nama ilmiah dan nama komersil), letak dan fungsinya secara normal pada hewan secara umum: Otot-otot pada extremitas cranialis, Otot-otot pada extremitas caudalis. Struktur tambahan (fascia, tendo, ligamen) 6. Organa sistema digestoria 7. Organa sistema respiratoria 8. Organa sistema genitalia masculina 9. Organa sistema genitalia feminina 10. Organa sistema uropoetica
<p>Penilaian studi/ pencapaian:</p>	<p>Penilaian mahasiswa meliputi praktikum, FGD, UTS, dan UAS. Kuis yang diadakan pada awal atau akhir pertemuan lebih diutamakan untuk mengevaluasi kedisiplinan (kehadiran, koreksi presensi tanda tangan), jam kehadiran, dan pemahaman. Nilai kuis untuk bahan pertimbangan akhir pada perubahan nilai angka ke nilai huruf. Komposisi nilai akhir adalah: FGD 15 %, Praktikum 25%, dan UTS + UAS 60%. Komponen penilaian FGD meliputi: attitude (kedisiplinan kedatangan, ketertiban berpakaian dan cara berdiskusi), aktifitas diskusi dan pemahaman. Komponen praktikum meliputi: nilai pretest dan atau post test, dan responsi (ujian praktikum, identifikasi preparat). Index nilai adalah sebagai berikut: A : 100 >NA ≥75 A- : 75 >NA ≥72.5 A/B : 72.5 >NA ≥ 70 B+ : 70 >NA ≥67.5 B : 67.5 >NA ≥65 B- : 65 >NA ≥62.5 B/C : 62.5 >NA ≥60 C+ : 60 >NA ≥57.5 C : 57.5 >NA ≥55 C- : 55 >NA ≥ 52.5 C/D : 52.5 >NA ≥50 D+ : 50 >NA ≥47.5 D : 47.5 >NA ≥45 E : NA < 45 (Nilai absolut)</p>

Media penyampaian materi:	Power point slides dan LCD projectors, whiteboard, laboratory
Referensi:	<ol style="list-style-type: none"> 1. Ashdown, R. R., Done, S., and Barnett, S. W., 2001, Color atlas of Veterinary Anatomy: Ruminants, Mosby-Wolfe 2. Ashdown, R. R., Done, S., and Barnett, S. W., 2001, Color atlas of Veterinary Anatomy: Dog and Cat, Mosby-Wolfe 3. Getty.R.,1975,The Anatomy of DomesticAnimal 4. Lehre buch der vergleichen den Anatomie der haus tiere (Buku Ajar Berbagai Macam Anatomi Hewan Ternak Domestik) (terjemahan Busono) 5. May, N. D. S., 1954, The Anatomy of The Sheep Shively, B.M.J., 1989 , Veterinary Anatomy Basic and Comparative, Texas, University Press 6. Miller,M.E.,Anatomy of the dog,W.B.SaundersCo. 7. Sisson. S and J.D. Grosman, 1975, The Anatomy of Domestic Animal, Philadelphia, Canada 8. Shively,M.J.,Veterinaryanatomybasic,comparativeandclinical,Texas A&M University press
Catatan:	jika penilaian absolut tidak tercapai pada saat ujian akhir maka akan dilakukan perhitungan menggunakan nilai relatif (rata-rata kelas).