وزارة التعليم العالي والبحث العلمي

دليل الدراسة لكليات الطب البيطري بالجامعات الليبية

2022 م

توطئة

الدول الحريصة على التعليم واكتساب المعرفة والخبرة اللازمة تعد أهم استثماراتها و ثرواتها ألا وهي عقول أبنائها . لهذا اقتضت المنهجية العلمية أن تطرح النتيجة التي جاءت بها والفكرة التي اهتدت إليها ومن ثم يتبعها التطبيق الكاشف عن دقائقها الموضح لجزئياتها.

لهذا تم وضع هذا الدليل بشأن اللوائح التنظيمية لكليات الطب البيطري بالجامعات الليبية والخطة الدراسية المعتمدة وفق توصيف المقررات الدراسية.

من هنا ينبغي العمل بهذا الدليل للرفع من النتاج العلمي بحثاً وتدريساً لشتى علوم الطب البيطري.

ولأنها توطئة سنأخذها ونسعى إلى تطبيقها للوصول إلى الجمع بمضمون الدليل بآلية متبعة من أجل الهدف وتحقيق الفكرة.

ونحن إذ نقدم هذه الجهود فإننا نأمل أن نكون قد قدمنا شئاً يساعدنا على فتح الأبواب أمام أهل العلم والمعرفة خدمة لوطننا الحبيب ليبيا مما يلبي احتياجات بلدنا لمؤهلين في مجال الطب البيطري وعلومه الكافية تمكنهم من إحداث التطوير والتنمية في عالم يتسابق فيه الجميع نحو البناء ولا مكان فيه لغير العلماء والمتعلمين والمبدعين.

أ.د. عمران محمد القيب

وزير التعليم العالي والبحث العلمي

قـــرار وزيـــر التعـــليـــم العالي والبحث العلمي
رقم (340) لسنة 2022 م
بشـأن اعتماد دليل الدراسة لكليات الطب البيطري بالجامعات الليبية

وزيـر التعليم العالي والبحث العلمي.

- بعـد الاطـلاع علـى الإعـلان الدسـتوري المؤقـت وتعـديـلاته.
- وعلـى الاتفـاق السياسـي الليبي الموقع فـي (17 ديسـمبر 2015 ميـلادي).
- وعلى القانون رقم (12) لسنة (2010 مسيحي) بشـأن إصدار قـانون عـلاقـات العمل ولائحتـه التنفـيذية.
- وعلـى القـانـون رقـم (18) لسـنة 2010 م بشأن التـعـلـيـم
- وعلى قرار مجلس النواب رقم (1) لسنة 2021م بشأن منح الثقة لحكومة الوحدة الوطنية
- وعلى قرار مجلس وزراء حكومة الوحدة الوطنية رقم (39) لسنة 2021م بشأن اعتماد الهيكل التنظيمي وتحديد اختصاصات وزارة التعليم العالي والبحث العلمي وتنظيم جهازها الاداري.
- وعلى قرار مجلس الوزراء رقم (501) لسنة 2010 م بشأن اصدار لائحة تنظيم التعليم العالي وتعديلاته.
- وعلى ما عرضه السيد/ رئيس اللجنة العليا للمكتبات الطبية والطبية المساعدة بالجامعات الليبية.

قـــــــرر

مـــادة (1)

يتم بموجب أحكام هذا القرار اعتماد دليل الدراسة لمكتبات الطب البيطري بالجامعات الليبية الملحق بهذا القرار.

مـــادة (2)

يعمـل بهـــذا القـرار مـن تاريـــخ صـــدوره وعلى الجهـــات المعنيـــة تنفيـــذه.

عبدالرحمن محمد الكيب
وزير التعليم العالي والبحث العلمي

فهرس المحتويات

اللائحة الداخلية لنظام الدراسة والامتحانات
بالجامعات الليبية
2022م

الفصل الأول: احكام عامة

مادة (1) : تعريفات

تدل العبارات الآتية أينما وردت في هذه اللائحة علي المدلولات المبنية قرين كل منها مالم يدل السياق علي خلاف ذلك:

مجلس الكلية: يتألف مجلس الكلية من عميد الكلية وكيل الكلية للشؤون العلمية، ورؤساء الأقسام العلمية، مسجل الكلية وبحضور مدير مكتب الشؤون الإدارية والمالية بالكلية، ورؤساء نقابات أعضاء هيئة التدريس، والموظفين، والطلاب بالكلية فيما يتعلق بشؤونهم، ولا يكون لهم حق التصويت وهذا بناءً علي ما ذكر في قانون رقم (4) للجامعات لسنة 2018م.

عميد الكلية : هو الشخص الذي يتولى الإشراف المباشر على سير العمل بالكلية وتصريف أمورها العلمية والإدارية في حدود السياسات التي ترسمها الجامعة.

رئيس القسم العلمي: هو عضو هيئة تدريس يرأس المجلس العلمي للقسم.

المجلس العلمي للقسم: يتشكل المجلس العلمي للقسم من رئيس القسم وعضوية جميع أعضاء هيئة التدريس القارين به، ويتم اختيار مقرر من بينهم, ويجوز حضور أي من الأساتذة المتعاونين وذلك عند مناقشة الجانب الذي يخصه فقط ولا يحق له التصويت على قرارات المجلس.

عضو هيئة التدريس: وهو كل من يحمل مؤهلاً علمياً عالياً (الماجستير أو الدكتوراة) أو ما يعادلهما من الشهادات التي تعترف بها الجهة المختصة بذلك؛ يؤهله للتدريس بإحدى مؤسسات التعليم العالي في إحدي التخصصات المعتمدة في الكلية ويقوم بعملية التدريس بها.

الطالب: هو الشخص الذي يدرس في هذه الكلية ابتداءً من تاريخ تسجيله في الدراسة حتى زوال هذه الصفة عنه إما بتخرجه أو بانسحابه أو بفصله من الكلية.

رقم القيد: رقم تسلسلي يمنح للطالب عند تسجيله في الكلية، يدل على الكلية والعام الجامعي والسنة الدراسية التي بدأ فيها الطالب.

الساعة الدراسية: هي انتظام الطالب في الدراسة لمدة ساعة أسبوعياً على مدى عام دراسي كامل.

المقرر الدراسي: هو مادة دراسية متخصصة يدرسها الطالب، ويكون لكل مقرر اسم ورمز وتوصيف مفصل لمفرداته يميزه من حيث المحتوى عما سواه من مقررات

الممتلكات: هي جميع ما تمتلكه الكلية من أصول مادية منقولة وغير منقولة.

الكليات المناظرة: وهي أي كلية من كليات الطب البيطري في أي جامعة ليبية أو غير ليبية معترف بها من قبل وزارة التعليم.

الخطة الدراسية : هي مجموعة المقررات الدراسية والتي تشكل من وحداتها متطلبات التخرج التي يجب على الطالب اجتيازها بنجاح للحصول على درجة البكالوريوس في العلوم الطبية البيطرية.

الوحدة الدراسية المعتمدة: ساعة واحدة تدريس "محا ضرة + عدد (ساعتين أو ثلاث) تدريب عملي" على مدى عام دراسي كامل.

المادة (2): نبذة عن كلية الطب البيطري

تأسست أول كلية طب بيطري سنة 1975م كواحدة من قلاع العلم بجامعة طرابلس، ومؤسسة علمية تلبي احتياجات المجتمع من الأطباء البيطريين وتساهم في دعم الاقتصاد الوطني من خلال العناية بصحة الحيوان وزيادة الإنتاج الحيواني والمحافظة على صحة الإنسان وحماية البيئة. و تأسست ثاني كلية طب بيطري عام 1988 م تحت اسم قسم صحة الحيوان والطب البيطري

المـادة (3) أهداف الكلية

تهدف الدراسة والتدريب العملي والإكلينيكي بكلية الطب البيطري إلى:

1. تخريج أطباء بمعرفة وخبرات مهنية في العلوم الطبية البيطرية والتي تمكنهم من أداء دورهم الفعال والحيوي في المجتمع.
2. تأهيل حملة البكالوريوس في الطب البيطري بمستويات علمية عالية عن طريق الدراسات العليا.
3. توفير الخدمات الصحية البيطرية والدراسات والاستشارات العلمية والتدريب والتعليم المستمر.
4. المشاركة في التنمية الاقتصادية في ليبيا عن طريق حماية الثروةا لحيواني ةمن الأمراض.
5. المشاركة في البرامج العلمية الثقافية وورش العمل والندوات والمؤتمرات المحلية والدولية والتواصل مع الهيئات والمنظمات العالمية ذات العلاقة.
6. المساهمةفي نشر الوعي الطبي المجتمعي عن طريق إعداد برامج إرشادية وإقامة دورات وندواتعلمية.
7. التعاون مع الكليات المناظرة لها بالجامعات الأخرى في التدريس والبحث العلمي.

المادة (4) لغة الدراسة

اللغة الانجليزية هي لغة الدراسة بالكليات الطبية البيطرية، ويجوز استخدام اللغة العربية وفق ما يتطلبه تنفيذ البرنامج الدراسي المعتمد بموجب هذه اللائحة.

المادة (5) الدرجات العلمية

وفقاً لنظم الدراسة والامتحانات المقررة بهذه اللائحة مع عدم الأخلال بالشروط والأسس المنظمة والمنصوص عليها في هذه اللائحة تمنح كلياتالطب البيطري بليبيادرجة الإجازة الجامعية المتخصصة "بكالوريوس العلوم الطبية البيطرية" بعد اجتياز الطالب جميع المقررات الدراسية بنجاح وقضاء فترة التدريب (الامتياز).

المادة (6) الأقسام العلمية

أ- تضم كلية الطب البيطريعشرةأقسام علمية تشرف على تدريس المقررات الدراسية وهي:

الرقم	القسم	Department
1	قسم التشريح والانسجة والاجنة ويشمل تدريس: علم التشريح – علم الانسجة والاجنة.	Department of Anatomy, Histology and Embryology Histology and Embryology)، Anatomy(
2	قسم وظائف الأعضاء والكمياء الحيوية والتغذية ويشمل تدريس: علم وظائف الأعضاء-الكيمياء الحيوية – تغدية الحيوان.	Department of Physiology, Biochemistry and Nutrition (Physiology, Biochemistry and Animal Nutrition)
3	قسم الاحياء الدقيقة والطفيليات ويشمل تدريس: علم الاحياء الدقيقة – علم الطفيليات.	Department of Microbiology and Parasitology (Microbiology and Parasitology)
a	قسم الامراض والتشخيص المعملي ويشمل تدريس: علم الامراض – التشخيص المعملي.	Department of Pathology and Clinic pathology (Pathology and Clinical pathology)
5	قسم الادوية والطب الشرعيوالسموم ويشمل تدريس: علم الادوية – علم الطب الشرعي والسموم).	Forensic & Toxicology Department of Pharmacology, Medicine (Pharmacology, Toxicology&Forensic Medicine)
6	قسم الطب الوقائي ويشمل تدريس: علم الوبائيات – علم الامراض المشتركة – صحة الحيوان– رعاية الحيوان –الوراثة والانسال.	Department of Preventive Medicine Epidemiology, Zoonosis, Animal Health – Animal Husbandry
7	قسم الرقابة الصحية على الاغدية ويشمل تدريس: الرقابة الصحية على اللحوم – الرقابة الصحية على الالبان	Department of Food Hygiene (Meat Hygiene, Milk Hygiene)
8	قسم امراض الدواجن والاسماك ويشمل تدريس: امراض الدواجن – امراض الاسماك	Department of Poultry and Fish Diseases (Poultry Disease and Fish Diseases)
9	قسم الباطنة والامراض المعدية ويشمل تدريس: امراض الباطنة – الامراض المعدية.	Department of Medicine and Infectious Disease (Medicine, Infectious Disease)
10	قسم الجراحة والتناسليات ويشمل تدريس: علم الجراحة والتخدير والاشعة – علم الولادة والتناسليات.	Department of Surgery and Theriogenology & Radiology – Theriogenology) (Surgery, Anesthesia

ب- لمجلس الكلية استحداث أو إلغاء أو دمج أقسام علمية أخرى إذا اقتضت الحاجة إلى ذلك لمواكبة التطورات العلمية في مجالات العلوم الطبية البيطرية وذلك بعد الاعتماد من مجلس الجامعة، على أن يصدر بذلك قرار من وزارة التعليمالعالي والبحث العلمي بناءً على توصية مجلسي الجامعة والكلية.

المادة (7) منظومة التسجيل والدراسة والامتحانات

أ. يكون بالكلية منظومة الكترونية تسمى منظومة التسجيل والدراسة والامتحانات مركزية تعمل بإشراف قسم الدراسة والامتحانات ومسجل الكلية، تحفظ بها بيانات الطلاب وكل ما يتعلق بالدراسة والامتحانات وعلى الأخص:

- ملف الطالب الشخصي، وهو ملف إداري يتضمن البيانات الشاملة عن الطالب وفق النموذج المُعد لذلك.
- الملف الدراسي، ويحتوي على بطاقة الطالب الدراسية من تاريخ تسجيله بالكلية إلى تاريخ تخرجه أو انتقاله أو فصله منها وتتضمن المقررات المسجل بها والمقررات المعادلة والنتائج وإيقاف القيد والمراجعة الموضوعية والتحقيق والتأديب والإنذار والفصل من الدراسة.

ب. تُوثق البيانات بمعرفة مكتب التسجيل المختص، ولا يُعتد بأي وثيقة صادرة تخص الطالب ما لم تكن مطابقة لبيانات المنظومة ومعتمدة من الجهة المختصة بإصدارها.

مـادة (8) المشرف الأكاديمي

تُكلف الكلية لكل طالب أستاذا مشرفا ويكون من بين أعضاء هيئة التدريس بالكلية حيث يتولى الأستاذ المشرف على وجه الخصوص:

1. إعداد وحفظ ملف علمي للطالب به نسخا من نتائجه الدراسية يزوده به قسم الدراسة والامتحانات أولا بأول، ويتم تخصيص ساعتين ضمن الحمل الدراسي للأستاذ المشرف مقابل إشرافه على مجموعة من طلاب الدراسات الجامعية.
2. الأشراف على برنامج الطالب الدراسي وتدوين كافة المقررات التي درسها الطالب ونتائجه لكل سنة دراسيةوحساب المعدل السنوي ببطاقة الطالب الدراسية والتأكد من مطابقتها لما هو بمنظومة التسجيل المركزي.
3. تدوين حالات انقطاع الطالب وإيقاف القيد وكذلك العقوبات التي توقع على الطالب ببطاقته الدراسية وإبلاغه بذلك.
4. تدوين عدد مرات الرسوب في أي مقرر ولفت انتباه الطالب لذلك.
5. تدوين الإنذارات ببطاقة الطالب الدراسية ولفت انتباهه لذلك
6. توضيح النقاط أو المواد المهمة بهذه اللائحة للطالب والرد على استفساراته
7. إبلاغ قسم الدراسة والامتحانات بالكلية بوضع الطلبة الخاضعين لإشرافه ممن:
   أ- أنجزوا المقررات اللازمة للتخرج
   ب- استنفدوا المدة القانونية وفق المادة (29) من هذه اللائحة

ج- تحصلوا على تقدير ضعيف جدا لسنة دراسية

د- تجاوز الحد الأقصى للإنذارات

ه- انهوا المدة القانونية للدراسة

و- أي حالات أخرى تستلزم التبليغ أو الإجراء

ز- إحالة طلبات الطلبة الخاضعين لإشرافه مدعمة برأيه إلى قسم الدراسة والامتحانات

مـادة (9) طلاب الكلية

يتم قبول وقيد الطلاب بالكلية كطلاب نظاميين وجمعيهم متفرغون للدراسة النظامية بالكلية وفق الشروط والأسس المنصوص عليها في هذه اللائحة ويتولى كل طالب في بداية كل عام دراسي تجديد قيده وفقا للنماذج والإجراءات المعتمدة بالكلية. وعلى الطالب المواظبة على حضور المحاضرات والدروس والرحلات الميدانية المقررة وإعداد الواجبات والأوراق والتقارير العلمية المكلف بها وإجراء الاختبارات والامتحانات حسب ما يتم إقراره. كما يجب على كل طالب التقيد باللوائح والنظم والتعليمات المنظمة لسير العملية التعليمية والمحافظة على مظهر ونظافة الكلية والقاعات الدراسية ومخالفة ذلك يعد من المخالفات التي يعاقب عليها.

مـادة (10) النشاط العام

يجوز لأى طالب مقيد بالكلية ممارسة الأنشطة العامة بمرافق النشاط العام المتوفرة بالكلية أو الجامعة في أوقات فراغه وخارج أوقات الدروس العملية والنظرية ومن بين الأنشطة العامة:

1- إقامة المعارض أو المسابقات العلمية

2- الأنشطة الرياضية المختلفة

3- الأنشطة الفنية والثقافية

4- المخيمات على إن يحدد مجلس الكلية المدة والزمان.

مـادة (11) احتفالات التخرج

تنظم الكلية عقب نهاية كل سنة دراسية حفلة تخرج يتم خلالها:

1- توزيع الشهادات وتكريم المتفوقين والمتميزين من الطلبة

2- تكريم أعضاء هيئة التدريس المشهود لهم ببذل الجهد وحسن الأداء

3- تكريم العاملين المتميزين

يحدد مجلس الكلية موعد وتاريخ الحفل بالتنسيق مع مجلس الجامعة.

الفصل الثانى : القبول والدراسة

المادة (12) نظام القبول والقيد والانتقال

مع عدم الاخلال بشروط التعليم بالجامعات الليبية المقررة بالتشريعات النافذة،يحدد مجلس الكلية القدرة الاستيعابية للكلية قبل بداية كل عام دراسي ويشترط لقبول من يتقدم للدراسة بكلية الطب البيطري للحصول على الاجازة الجامعية الاولى (بكالوريوس العلوم الطبية البيطرية) أن يكون مستوفيا للشروط العامة التي تحددها التشريعات النافذة للقبول وهي كالتالي:

- أن يكون حاصلا على الشهادة الثانوية العامة القسم العلمي أو ما يعادلها.
- أن يكون متحصلاً على مجموع درجات النجاح كما تحددها الكلية والجامعة.
- أن يكون حسن السيرة والسلوك.
- أن يكون لائقا صحيا.
- أن يجتاز امتحان القبول والمقابلة الشخصية.
- ألا يكون مسجلا بأي كلية او جامعة اخرى.
- أن يكون متفرغ للدراسة بالكلية.
- يجوزقبولالطلابالوافدين بعد استيفاءكافةالشروط.
- على الطلاب غير العرب تقديم ما يفيد قدرتهم على التحصيل العلمي باللغة العربية.

المادة (13) قبول طلبة من جنسيات أخرى

يجوز قبول طلبة من جنسيات أخرى بشرط:

ا. ان يكون الطالب مستوفي لشروط القبول بالكلية الواردة بالمادة (13) من هده اللائحة.

ب. الحصول على الموافقة للدراسة من قبل جهات الاختصاص.

ج. ان يكون مقيما بليبيا إقامة اعتيادية ووفق إجراءات قانونية طيلة فترة دراسته.

د. الالتزام بدفعالرسومونفقاتالدراسةوفقاللوائحوالقراراتوالتشريعاتالصادرة والمعمول بها في الجامعة.

هـ. تقدم مستندات القبول مستوفية للاعتمادات المطلوبة من الجهات المختصة وتسلم عن طريق المسجل العام بالجامعة.

المادة (14) شروط النقل

مع مراعاة ما جاء في المادة (13) من هذه اللائحة، يجوز قبول انتقال الطلاب المقيدين بإحدى المؤسسات التعليمية المعترف بها وأن يكون مستوفيا للشروط الواردة باللائحة العامة بالإضافة للشروط التالية:

أ- يشترط على الطالب المنتقل للحصول على الإجازة المتخصصة دراسة 50 % على الأقل من المتطلبات اللازمة للتخرج بالكلية

ب- ألا يكون قد صدر قرار بفصله من كليته الأصلية.

ج- أن يتقدم الطالب بطلب الانتقال للكلية في خلال مدة أقصاها 4 أسابيع قبل بدء الدراسة لمكتب المسجل.

د- يرفق بالطلب المستندات الرسمية من الكلية المنتقل منها معتمدة من جهات الاختصاص موضحا الفصل الدراسي المقيد به وقت تقديم الطلب، بيانات تفصيلية عن المقررات التي أجتازها، عدد الساعات لكل مقرر ونتيجة امتحانه في كل مقرر.

ه- يحيل مكتب مسجل الكلية طلبات الانتقال المستوفية للشروط للعرض على لجنة علمية مختصة (لجنة المعادلة) للنظر في المقررات التي درسها الطالب ومدى مطابقتها للمقررات المعتمدة بكلية الطب البيطري.

و- للجنة العلمية المختصة أن تقرر قبول الطالب وقيده بالفصل الدراسي المناسب.

ز- وللجنة أن تقرر امتحان تكميلي إذا ما رات أن مستوى الطالب لا يعادل مستوى المقررات بالكلية. وفي هذه الحالة تعتمد الكلية قيد الطالب في السنة الدراسية المنتقل إليها بعد اجتيازه بنجاح الامتحانات المقررة في موعدها المحدد لكل مقرر بالكلية بدون استثناء. وفي جميع الحالات لا يجوز قبول الطالب الذي ترى اللجنة أن مستوى ما درسه من مقررات لا يعادل المستوى المقرر بالكلية فيما يزيد على مادة واحدة.

مـادة (15) لجنة المعادلة

تُشكل لجنة بقرار من عميد الكلية تسمى لجنة المعادلة وتتكون من مسجل الكلية واثنين من أعضاء هيئة التدريس بها، تتولى معادلة المقررات الدراسية للطلبة المتقدمين بطلبات نقل للدراسة بالكلية وفق الضوابط الآتية:

أ- أن تكون المقررات المطلوب معادلتها متفقة من حيث مفرداتها مع المقررات التي تُدرّس بالكلية بنسبة لا تقل عن 75%.

ب- الارتباط الموضوعي بين المقررات الدراسية.

ج- البت في الطلبات في أجل لا يتجاوز أسبوعين من تاريخ استلامها.

د- تُتخذ قرارات اللجنة بالأغلبية.

تُرفع توصيات اللجنة لمجلس الكلية للاعتماد وإصدار قرار بخصوص الطلبة المقبول نقلهم

مـادة (16) تجديد القيد

أ- يتم قبول وقيد الطلاب بالكلية كطلاب نظاميين وجمعيهم متفرغون للدراسة النظامية بالكلية وفق الشروط والأسس المنصوص عليها في هذه اللائحة

ب- يبدأ التسجيل في المقررات الدراسية خلال الأسبوع الأول من السنة الدراسية ويجوز للطالب إجراء التسجيل بالحضور الشخصي أو إلكترونيا وذلك حسب السياق المتبع بالكلية أو الجامعة، ولا يعتبر هذا التسجيل رسميا إلا بعد توقيعه من الطالب واعتماده من الأستاذ المشرف وقسم الدراسة والامتحانات

ج- علي الطالب مراعات أداء الرسوم المالية المقررة للتجديد؛ إذا لم يقم الطالب بتجديد قيده في الميعاد المحدد اعتبر منقطعاً عن الدراسة، ما لم يقدم عذراً تقبله الكلية خلال أجل لا يتجاوز أسبوع من نهاية الموعد المحدد لتجديد القيد.

د- يتولى كل طالب في بداية كل سنة دراسية تجديد قيده وفقا للنماذج والإجراءات المعتمدة بالكلية.

الفصل الثالث: نظام الدراسة

المادة (17) السنوات الدراسية

تتبع الكليات نظام السنة الدراسية وتستمر الدراسة للحصول على الدرجة الجامعية الأولى مدة خمس سنوات.

المادة (18) البرنامج الدراسي

تنقسم الدراسة بالكلية الى ثلاث مراحل:

المرحلة الأولى: وتشمل السنة الدراسية الأولى والثانية.

المرحلة الثانية: وتشمل السنة الدراسية الثالثة.

المرحلة الثالثة: وتشمل السنة الدراسية الرابعة والخامسة.

المرحلة الرابعة: وتسمى مرحلة الامتياز وهي فترة التدريب التي يقضيها الطالب في التدريب الاكلينيكي بعد اجتيازه المرحلة الثالثة بنجاح.

المادة (19) العام الدراسي

تكون بداية العام الدراسي الجامعي الأول من شهر سبتمبر من كل عام وينتهي بنهاية شهر مايو يتخلله إجازة نصف العام الدراسي لمدة اسبوعين.

المادة (20) الدروس النظرية والعملية

يجب على الطالب ان يتابع الدروس النظرية والعملية وأن يؤدي التدريبات العملية المقررة في الأماكن والمواعيد التي تحددها الكلية.

يحرم الطالب من دخول الامتحان النهائي في أي مقرر إذا تجاوزت نسبة غيابه 25% من الدروس العملية والنظرية وترصد له درجة (الصفر) في المقرر مالم يتقدم بعذر تقبله الكلية في مدة أقصاها أسبوعين من تاريخ انتهاء العذر.

المادة (21) إيقاف القيد

يجوز لمجلس الكلية إيقاف قيد الطالب مدة أقصاها سنة دراسية واحدة إذا ثبت أن لديه عذر يمنعه من مواصلة الدراسة ولا يجوز النظر في الطلب إذا تقدم به الطالب بعد زوال العذر وفي جميع الأحوال لا يجوز إيقاف قيد الطالب لأكثر من مرة واحدة خلال مدة الدراسة بالكلية.

المادة (22) رموز المقررات الدراسية

يرمز كل مقرر بثلاثة حروفكبيرة (XYZ)وثلاثة ارقام (abc) ويكتب على الصيغة (XYZabc)حيث:

ا-تدل الحرف (XYZ) على رمز التخصص.

ب-تدل خانة الأرقام (abc) على مستوى المقرر بالسنوات الدراسية.

المادة (23) توزيع المقررات على السنوات الدراسية

تُوزع المقررات الدراسية على السنوات الدراسية وفق الآتي

أ- المرحلة الأولى: ما قبل الاكلينيكي Pre clinic

1. السنة الدراسية الأولى

Subject	المقرر	رمز المقرر	عدد الساعات	نظري ساعة/اسبوع	عملي ساعة/اسبوع
Veterinary Anatomy	علم التشريح	ANA101	150	3	2
Veterinary Biochemistry	الكيمياء الحيوية	BIC103	180	4	2
Veterinary Physiology I	علم وظائف الاعضاء	PHY104	150	3	2
Embryology&Histology	الأنسجة والأجنة	HIE102	180	4	2
Arabic Languish	اللغة العربية	ARA100	60	2	-
English Languish	اللغة الإنجليزية	ENG101	60	2	-

2. السنة الدراسية الثانية

Subject	المقرر	رمز المقرر	عدد الساعات	نظري ساعة/اسبوع	عملي ساعة/اسبوع
Veterinary Physiology II	علم وظائف الاعضاء	PHY201	150	3	2
Veterinary Anatomy II	علم التشريح	ANA206	150	3	2
Animal Husbandry	سلوكيات ورعاية الحيوان	AHU202	150	3	2
Animal Nutrition	تغذية الحيوان	ANT203	150	3	2
Genetics and breeding	الوراثة والانسال	GEB204	120	2	2
Biostatistics	علم الاحصاء	STA205	60	2	-

ب-المرحلة الثانية: Para clinic

3. السنة الدراسية الثالثة

Subject	المقرر	رمز المقرر	عدد الساعات	نظري/ ساعة/اسبوع	عملي ساعة/اسبوع
Veterinary Microbiology	الأحياء الدقيقة	MIC301	240	6	2
Veterinary Parasitology	علم الطفيليات	PAR302	240	6	2
Veterinary Pathology	علم الامراض	PAT303	240	6	2
Veterinary Pharmacology	علم الادوية	PHA304	180	4	2

ج- المرحلة الثالثة: الاكلينيكية Clinic

4. السنة الدراسية الرابعة

Subject	المقرر	رمز المقرر	عدد الساعات	نظري/ ساعة/اسبوع	عملي ساعة/اسبوع
Clinical Pathology	التشخيـص المعملي	CLP401	120	2	2
Meat Hygiene	الرقابة الصحية على اللحـوم	MEH402	150	3	2
Milk Hygiene	الرقابة الصحية على الالبـان	MIH403	120	2	2
Toxicology & Forensic Medicine	الطب الشرعي والسموم	TFM404	150	3	2
Medicine I	الباطنةI	MED405	120	2	2
General Veterinary Surgery	الجراحة العامة	GSU406	120	2	2
Theriogenology I	علم التناسلياتI	THE407	120	2	2
Infectious Diseases I	الامراض المعديةI	INF408	120	2	2

5. السنة الدراسية الخامسة

Subject	المقرر	رمز المقرر	عدد الساعات	نظري/ ساعة/اسبوع	عملي ساعة/اسبوع
Medicine II	الباطنةII	MED500	120	2	2
Special Surgery	الجراحة الخاصة	SUR501	160	3	2
Theriogenology II	علم التناسليات II	THE502	120	2	2
Infectious Diseases II	الامراض المعديةII	INF503	120	2	2
Preventive Medicine	الطب الوقائي	PRM504	240	6	2
Poultry Diseases	امراض الدواجن	POU505	150	3	2
Fish Disease	امراض الاسماك	FIS506	120	2	2

مـادة (24) الجدول الدراسي

عند وضع الجدول الدراسي يجب مراعاة الآتي:

أ- أن يحتوي الجدول على رمز المقرر ورقم المجموعة والقاعة وتوقيت المحاضرة واسم الأستاذ الذي يُدرّسها، على أن يكون استعمال القاعات الدراسية والمعامل والمختبرات والمدرجات وفق نظام العمل الذي يقرره مجلس الكلية.

ب- توزيع المقررات الدراسية على أيام الأسبوع الدراسي.

ج- لا يسمح بأن يكون لأي مقرر أكثر من محاضرتين في اليوم الواحد باستثناء المقررات المعملية والمقررات الإكلينيكية.

د- يُعلن الجدول الدراسي قبل بداية الدراسة.

ه- لا يجوز تغيير مواعيد الجدول الأسبوعي لأي مقرر إلا بعد موافقة قسم الدراسة والامتحانات.

الفصل الرابع: نظام الامتحانات والتقييم

المادة (25) شروط التنقدم للإمتحانات

يشترط في الطالب المتقدم للامتحانات النصفية والامتحانات النهائية أن يكون مستوفيا لشروط القيد لأحكام هذه اللائحة.

المادة (26) عقد الامتحانات

تعقد الامتحانات النهائية للدورين الأول والثاني بجميع السنوات على النحو التالي:

الدور الأول: ويعقد مع بداية شهر يونيو (6) وحتى منتصف شهر يوليو (7) متضمنة تسليم النتائج من انتهاء الدراسة.

الدور الثاني: -ويعقد خلال الأسبوع الاول من شهر سبتمبر.

ويتولى القائمون بتدريس المادة بإجراء هذه الامتحانات وفقا للنظام الذي يقرره القسم المختص.

المادة (28) الفرص الإستثنائية

يجوز بقرار من مجلس الكلية بناء على اقتراح من قسم الدراسة والامتحانات منح فرصة استثنائية ولمدة سنة دراسية واحدة بالنسبة للمرحلة الدراسية الأولى والتي تشمل السنة الأولى والثانية، وكذلك سنة استثنائية واحدة للمرحلة الدراسية الثانية والثالثة والتي تشمل السنة الثالثة والرابعة والخامسة لمن تجاوز المدة الدراسية المحددة بالكلية.

كما يجوز إضافة مدة سنة دراسية لمن استنفذ المدة القانونية والاستثنائية ويتوقع تخرجهم خلال هذه المدة بناء على اقتراح قسم الدراسة والامتحانات وموافقة مجلس الكلية كفرصة أخيرة . ويعتبر الطالب مفصولا تلقائيا في حالة استنفاد الحد الأقصى المحدد بهذه اللائحة.

المادة (29) التغيب عن الامتحانات

كل طالب يتغيب عن الامتحان النهائي في مقرر أو أكثر بدون عذر مقبول يعتبر راسبا وترصد له درجة (صفر). أما إذا تغيب بعذر يقبله مجلس الكلية فيسمح له بالدخول الى الدور الثاني ويشترط أن يقدم العذر في مدة لا تتجاوز أسبوع من تاريخ امتحان المادة المتغيب عنها.

المادة (30) الامتحانات الإستثنائية

يجوز للجنة الامتحانات والمراقبة عقد امتحان للطالب النزيل بالمستشفى أو الموقوف جنائيا في حال توفر الظروف الملائمة لعقد الامتحان خارج الكلية.

المادة (31) الإنتقال بين المراحل

لا يسمح للطالب الانتقال من مرحلة إلى أخرى إلا إذا نجح في جميع المقررات ويجوز الانتقال بمقرر دراسي واحد فقطداخل كل مرحلة دراسية.

المادة (32) إعادة الامتحانات

على الطالب الراسب إعادة المواد التي رسب فيها فقط. كما ينطبق عليه ما ينطبق على طلاب تلك السنة فيما يستحدث من مقررات جديدة أو تغييرات منهجية مختلفة.

المادة (33) التقييم والتقديرات

أ. يُقيم أداء الطالب في كل مقرر وفقاً للتقديرات الآتية:

ت	الدرجة	التقدير	
1	من 85 % إلى 100%	ممتاز	
2	من 75 % إلى أقل من 85 %	جيد جداً	
3	من 65 % إلى أقل من 75 %	جيد	
4	من 60 % إلى أقل 65 %	مقبول	لمواد التخصص)
5	من 50 % إلى أقل 65 %	مقبول	(للمواد العامة)
6	من 35 % إلى أقل من 50 %	ضعيف	
7	من صفر إلى أقل 35 %	ضعيف جداً	

ب. وفي جميع الأحوال لا يعتبر الطالب ناجحاً في مقررات (الموادالعامة) إلا إذا تحصل على 50 % على الأقل من مجموع الدرجات و60 % على الأقل في المقررات التخصصية.

المادة (34) التقدير العام

يحسب التقدير العام لنجاح الطالب عن كل سنة على حدة كما هو موضحا بالمعادلة.

الدرجة المتحصل عليها بالمادة (س1) × عدد الساعات الدراسية للمادة(س1)

المجموع الكلي للساعات للسنة الدراسية

بالإضافة (+)

الدرجة المتحصل عليها بالمادة (س2) × عدد الساعات الدراسية للمادة (س2)

المجموع الكلي للساعات للسنة الدراسية

ويحسب التقدير النهائي للطالب الذي اجتاز جميع المقررات بكلية الطب البيطري على أساس متوسط تقديراته التي تحصل عليها في جميع السنوات.

المادة (35) الامتحانات النهائية

توزع الدرجات للمقررات قبل الإكلينيكية على النحو التالي:

إعمال السنة	النظري النهائي	العملي	الشفوي	المجموع
% 20	% 50	% 20	%10	% 100

ويكون توزيع الدرجات النظرية والعملية والشفوية للمقررات الدراسية الاتية على النحو التالي:

المادة	إعمال السنة	النظري النهائي	العملي	الشفوي	المجموع
الجراحة والتخدير والاشعة	%20	% 40	% 30	% 10	% 100
علم التوليد والتناسليات	%20	% 40	%30	%10	%100
الباطنة والمعدية	%20	% 40	%30	%10	%100
أمراض الدواجن	%20	% 40	% 30	% 10	% 100
الطب الوقائى	%20	% 40	% 30	% 10	% 100
الرقابة الصحية على اللحوم	%20	% 40	%30	%10	%100
رعاية الحيوان	%20	% 40	%30	%10	%100

وتوزع درجات الامتحان العملي على النحو التالي:

1- 80 % من الدرجة تخصص للحالات الاكلينيكية.

2- 20 % من الدرجة تخصص للتعريفات (spots)

مع مراعاة النقاط التالية بالنسبة للامتحانات النظرية والعملية:

أ- تجرى الامتحانات العملية النهائية في مواعيد تدريسها الأسبوعية خلال الأسبوع الأخير من الدراسة، اما بخصوص الامتحانات العملية الإكلينيكية تجرى في اليوم الذي يلي الامتحان النظري للمقرر.

ب- تجرى الامتحانات النظرية النهائية بعد نهاية الدراسة مباشرة.

مادة (36) مرتبة الشرف

تمنح مرتبة الشرف الأولى للطالب الناجح بتقدير عام ممتاز في جميع السنوات الدراسية بالكلية شريطة ألا يقل تقديره العام جيد جدا بالسنوات السابقة.

مـادة (37) الإفادة وكشف الدرجات

يُمنح الطالب الذي استكمل متطلبات التخرج ما يلي:

أ- كشف درجات باللغتين العربية والإنجليزية مبيناً فيه درجات المقررات الدراسية ووحداتها والمتوسط الفصلي والمعدل التراكمي والتقدير العام المبين وفق هذه اللائحة.

ب- إفادة تخرج باللغتين العربية والإنجليزية مبيناً فيها حصوله على درجة الإجازة المتخصصة.

ج- إفادة جدارية تعتمد من رئيس الجامعة.

وفي جميع الأحوال يتم إعداد كشوف الدرجات النهائية وإفادات التخرج من قبل قسم الخريجين لدى مسجل الكلية وبعد توقيعه على تحريرها تعتمد من مسجل الكلية وعميد الكلية ولا تسلم للخريج إلا بعد أداء الرسوم المقررة وفقاً للتشريعات النافذة.

المادة (38) اعتماد النتائج

يعتمد مجلس الكلية نتائج امتحانات الدور الأول والثاني ويجوز تفويض عميد الكلية باعتماد النتائج.

المادة (39) إعلان النتائج

تعلن نتائج الامتحانات من قبل قسم الدراسة والامتحانات بعد اعتمادها من قبل مجلس الكلية.

المادة (40) كراسات الإجابة

يتم تسليم أوراق إجابة الامتحانات النهائية فور تقييمها ورصدها للجنة الامتحانات والمراقبة ولا يجوز اعتماد نتيجة أي مقرر ما لم تسلم أوراق الإجابة مصحوبة بالنتائج النهائية. كما يتولى قسم الدراسة والامتحانات حفظ أوراق الإجابة للامتحانات النهائية بالكلية لمدة سنة كاملة على الاقل من تاريخ إعلان النتيجة.

المادة (41) طلب المراجعة الموضوعية

يجوز للطالب التقدم بطلب المراجعة الموضوعية لأوراق إجابته على الا تزيد عن مقررين مرة واحدة وفق الإجراءات والضوابط التالية:

1. أن يقدم طلب المراجعة إلى قسم الدراسة والامتحانات بالكلية خلال مدة لأتزيد عن أسبوعين من إعلان النتائج.

2. يشكل عميد الكلية لجان للمراجعة الموضوعية بحسب طلبات المراجعة التي يتقدم بها الطلاب على أن تتكون كل لجنة من ثلاثة أعضاء هيئة تدريس على الأقل متخصصين من بينهم أستاذ المقرر.

3. يجوز للطالب المعنى أو من ينوب عنه حضور المراجعة.

4. على كل لجنة إعداد تقرير مسبب بالخصوص يقدم لعميد الكلية خلال الفترة التي يحددها قرار التكليف.

5. اذا ثبت صحة ادعاء الطالب تعدل النتيجة وتودع نسخة من التقرير في ملف الطالب ويقدم عضو هيئة التدريس (أستاذ المقرر) تبريرا مكتوبا بالخصوص.

الفصل الخامس: المرحلة الثالثة (مرحلة الامتياز)

المادة (42) التدريب العملي الميداني (الامتياز)

يؤدي الطالب بعد اجتيازه امتحانات السنة النهائية تدريبا عمليا وميدانيا لمدة ستة عشر اسبوعا وفقا للنظام الذي تضعه الكلية، داخل الكلية أو خارجها وفي الأماكن والمواعيد والمجالات التي تحددها وذلك تحت إشراف أعضاء هيئة التدريس وتسري أحكام الدراسة والامتحانات على التدريب العملي والميداني الذي يكلف به الطالب. لا يعتبر الطالب خريجا الابعد استكمال مدة التدريب العملي الميداني (الامتياز).

مـادة (43) موعد بدء الامتياز

أ- يلتزم الطلبة الذين أنجزوا المرحلتين الأولى والثانية للبرنامج الدراسي مباشرة بأداء التدريب العملي (الامتياز)، ولا يعتبر الطالب خريجاً من الكلية إلا بعد اجتيازه لمرحلة الامتياز.

ب- يخضع الطلبة المقبولين بالكلية لأداء مرحلة التدريب العملي بها للأحكام المنظمة لمرحلة الامتياز بهذه اللائحة.

مـادة (44) مكان أداء الامتياز

يكون تنفيذ برامج التدريب العملي في المرافق الصحية التعليمية المعتمدة للكلية، ويجوز لطالب الامتياز قضاء فترة التدريب العملي في الأماكن والمرافق التي يتم تحديدها من قبل الكلية ويمكن أداء الامتياز في بلد آخر بعد موافقة مجلس الكلية.

مـادة (45) لجنة شؤون الامتياز

أ- تُشكل بقرار من عميد الكلية لجنة تسمى " لجنة شؤون الامتياز ":

ب- تتول اللجنة المشكلة وفق الفقرة السابقة ما يلي:

- إعداد البرنامج التدريبي وخطة تنفيذه وفق البرامج التعليمية في مجال الطب البيطري.

- إعداد جداول توزيع طلبة الامتياز على المرافق الصحية التعليمية المستهدفة للتدريب فيها.
- اقتراح تكليف أعضاء هيئة التدريس للإشراف على الطلبة بالتنسيق مع الأقسام العلمية ذات العلاقة وفق جداول توزيع الطلاب على جهات التدريب.
- متابعة تنفيذ برامج التدريب العملي بالأقسام العلميةبالكلية.
- دراسة واعتماد تقارير تقييم الطلبة المقدمة إليها من المكلفين بالإشراف على تنفيذ البرنامج التدريبي.
- دراسة الشكاوى والصعوبات التي قدتعوق تنفيذبرامج التدريب و تقديم التوصيات بشأن معالجتها.

ج- تُعتمد محاضر اللجنة المشكلة وفق هذه المادةمن مجلس الكلية.

مـادة (46) الإشراف على طلبة الامتياز

يُكلف أعضاء هيئة التدريس المشرفون على طلبة الامتياز من الأقسام العلمية ويُوكل إليهم الآتي:

أ- توجيه الطالب داخل الوحدات والمراكز والعيادات البيطرية.

ب- الإشراف على الطالب ومتابعة تدريبه.

ج- متابعة سلوك الطالب أثناء فترة الامتياز.

د- تقييم أداء الطالب وفق البرنامج التدريبي المعتمد وتقديم تقرير بشأنه.

مـادة (47) مدة الامتياز

ه- يلتزم الطالب بالتسجيل بالتدريب العملي في المواعيد المعلن عنها.

و- تكون مدة التدريب العملي من 14 الى 16 اسبوع.

ز- يجوز تمديد فترة التدريب العملي بقرار من مجلس الكلية بناءً على توصية من لجنة شؤون الامتياز إذا لم يتجاوز غياب طالب الامتياز 25% من مدة التدريب ولمدة تساوي مدة الغياب.

ح- يُعيد طالب الامتياز مدة التدريب العملي إذا تجاوز غيابه 25% من مدته المقررة.

مـادة (48) ضوابط الامتياز

يلتزم طالب الامتياز بالضوابط الآتية:

أ- التقيدبالمواعيد المقررة بفترة الامتياز من الكلية.

ب- الحضور المستمر وفق التنسيب المعتمد بأحد المرافق الصحية البيطرية التعليمية طيلة مدة التدريب.

ج- التقيد بتوجيهات وتعليمات الأستاذ المشرف.

الفصل السادس: الإنذار والفصل من الدراسة

المادة (49) الإنذارات

يلفت نظر الطالب وينذر كتابيا في الحالات التالية:

أ. إذا انقطع عن الدراسة لأي سبب كان مدة تزيد عن الشهر.

ب. اذا تحصل على تقدير ضعيف جدا في أي سنة من السنوات الدراسية.

ت. إذاأخفق في اجتياز أي مقرر للمرة الثانية خلال دراسته.

المادة (50) الفصل من الدراسة بالكلية

أ- يفصل الطالب وينتهي حقه في الدراسة على حساب الدولة في الحالات الاتية:

1) إذا انقطع عن الدراسة لسبب غير مشروع سنة دراسية كاملة.

2) إذا اعيد تنسيبه وتحصل على تقدير عام ضعيف جدا في نهاية أي من العامين الدراسيين الاوليين.

3) إذا اعيد تنسيبه ورسب سنتين دراسيتين متتاليتين، أيا كان متوسط تقديره العام.

ب- كما يعتبر الطالب مفصولا من الدراسة بالكلية في إحدى الحالات التالية:

1) إذا تحصل على تقدير عام ضعيف جدا خلال السنة الأولى.

2) إذا رسب في أي مقرر سنتين متتاليتين.

3) إذا صدر بشأنه قرار فصل من الكلية بناء على قرار صادر من مجلس التأديب.

4) إذا تحصل على أربعة إنذارات خلال مدة دراسته بالكلية.

5) إذا جاوز عدد مرات الرسوب في أي مقررين أربع مرات أيا كان معدله.

الفصل السابع: المخالفات التأديبية

المادة (51) التحقيق والتأديب

يخضع الطالب للتحقيق والتأديب إذا ارتكب فعلا داخل الجامعة أو في أيمكان من ملحقاتها يشكل مخالفةللقوانين واللوائح والأنظمةالمعمول بهافي الجامعةوالكلية.

ويظل الطالب خاضعا لأحكام التأديب من تاريخ تسجيله بالدراسة وحتى زوال هذه الصفة بتخرجه أو إلغاء تسجيله.

المادة (52) المخالفات

لا يجوز للطالب ارتكاب المخالفات التالية:

1) الاعتداء على أعضاء هيئة التدريس أو الطلاب أو العاملين بالكلية أو الجامعة.

2) الاعتداء على أموال الكلية أو الجامعة أو المرافق التابع لها.

3) الإخلال بنظام الدراسة والامتحانات.

4) ارتكاب أي سلوك مناف للأخلاق أو يمس النظام العام والآداب العامة.

المادة (53) الإعتداء على عضو هيئة التدريس

يعد من المخالفات الاعتداء على أعضاء هيئة التدريس أو العاملين أو الطلاب، من أعمال الشجار أو الضرب أو الإيذاء أو السب أو القذف أو التهديد او التعرض او المنع من أداء العمل .

ويتحقق الاعتداء إذا تم بصورة علنية وبحضور المعتدي عليه سواء ارتكب الفعل شفاهية أو كتابة أو بالإشارة.

المادة (54) إتلاف المعدات والأدوات

يعد من مخالفات الاعتداء على أموال الجامعة أو الكلية كل استيلاء أو إتلاف للمعدات أو الأدوات التابعة للجامعة أو الكلية أو إحدى المرافق التابعة لها سواء بإتلافها أو بجعلها ليست صالحة للاستعمال كليا أو جزئيا وتقع المخالفة سواء تمت بصورة متعمدة أو بالإهمال.

مادة (55) الإخلال بنظام الدراسة

يعد من مخالفات الإخلال بنظام الدراسة والامتحانات ما يلي:

1- تزوير المحررات الرسمية مثل الشهادات والإفادات أو الوثائق سواء كانت صادرة عن الجامعة أو عن غيرها إذا كانت ذات صلة بإجراءات الدراسة.

2- انتحال الشخصية سواء لتحقيق مصلحة للفاعل أو لغيره ويعد انتحالا للشخصية دخول طالب او غيره بدلا عن الممتحن لأداء الامتحان وتسري العقوبة على الطالبين وكل من سهل ذلك أو كان شريكا فيه من الطلاب.

3- إثارة الفوضى أو الشغب وعرقلة سير الدراسة أو الامتحانات بأية صورة كانت.

4- التأثير على الأساتذة أو العاملين فيما يخص سير الامتحانات أو التقييم أو النتائج أو غيرها مما يتعلق بشؤون الدراسة والامتحانات.

5- ممارسة أعمال الغش في الامتحانات أو الشروع فيها بأية صورة من الصور ويعتبر من قبيل الشروع في الغش إدخال الطالب إلى قاعة الامتحانات أية أوراق أو أدوات أو أجهزة تساعد على الغش ذات علاقة بالمنهج الدراسي موضوع الامتحانات ما لم يكن مرخصا بإدخالها من قبل لجنة الامتحانات.

6- الامتناع عن الإدلاء بالشهادة أمام لجان التحقيق أو مجالس التأديب المشكلة وفقا لإحكام هذه اللائحة.

7- أية مخالفة للقوانين واللوائح والنظم المتعلقة بالتعليم العالي.

مـادة (56) السلوك المناف للأ خلاق العامة

يعد سلوكا منافيا للأخلاق والنظام العام والآداب العامة الأفعال التالية:

أ- الاعتداء على العرض ولو تم برضا الطرف الأخر وفى حالة الرضا يعد الطرف الأخر شريكا في الفعل وكذلك خدش الحياء العام.

ب- تعاطي المخدرات أو المسكرات أو التعامل فيها بأية صورة من الصور.

ت- تداول الأشياء الفاضحة أو توزيعها أو عرضها.

ث- كل ما من شأنه الإخلال بالشرف وفقا للقوانين النافذة أو المساس بالآداب والأخلاق العامة.

ج- الظهور بمظهر غير لائق داخل المؤسسة التعليمية أو إحدى مكوناتها أو ارتداء الأزياء المنافية للحشمة أو المبالغة في التزين.

مـادة (57) السلوك المحظور

يعد التعداد الوارد في المواد (52- 53 – 54 – 55-56) على سبيل المثال لا الحصر وأي سلوكا محظورا اخر يعتبر مخالفا للتشريعات والنظم المعمول بها في الجامعات والكليات.

الفصل الثامن: العقوبات التأديبية

مـادة (58) الإيقاف عن الدراسية

يعاقب الطالب بالإيقاف عن الدراسة لمدة لا تقل عن سنتين دراسيتين إذا ارتكب أحد الأفعال المنصوص عليها في المادة (53) من هذه اللائحة. ويفصل الطالب من الكلية إذا تكرر ارتكابه لأحد هذه الأفعال.

مـادة (59) تكرار المخالفات

يعاقب الطالب بالإيقاف عن الدراسة لمدة لا تقل عن سنة دراسية إذا ارتكب أحد الأفعال المنصوص عليها في المادة (54) وتضاعف العقوبة عند تكرار الأفعال وفى جميع الأحوال لا يحوز عودة الطالب لمواصلة الدراسة إلا إذا دفع قيمة الإضرار التي أحدثها بأموال الجامعة.

مـادة (60) التوقف على الدراسة

1. يعاقب على المخالفات المنصوص عليها في المادة (55) على النحو التالي:
2. يعاقب بالوقوف عن الدراسة لمدة لا يقل عن سنة دراسية ولا تزيد على سنتين دراسيتين كل من ارتكب المخالفات الواردة في الفقرتين (1-2)، ويفصل الطالب من الدراسة فصلا نهائيا عند تكرار الأفعال.
3. يعاقب الطالب بالحرمان من دخول الامتحانات كليا أو جزئيا إذا ارتكب المخالفات المحددة في الفقرتين (3-4)، وفى جميع الأحوال يعتبر امتحانه ملغيا في المادة النى ارتكب فيها المخالفة.
4. يعاقب كل من ارتكب المخالفة الوارد بيانها في الفقرة (5) بإلغاء نتيجة امتحانه في دور واحد على الأقل ويجوز لمجلس التأديب إلغاء امتحانه لسنة كاملة ويفصل الطالب فصلا نهائيا عند تكرار الفعل.
5. يعاقب على المخالفات المنصوص عليا في الفقرتين (6-7) بالحرمان من حقوق الطالب النظامي أو الإيقاف عن الدراسة مدة لا تزيد على سنة دراسية واحدة.

مـادة (61) لجنة المراقبة على الامتحانات

يجوز للجنة المراقبة أو المشرفين على قاعة الامتحان تفتيش الطالب إذا وجدت قرائن تدعو للاشتباه بأن فى حيازته أوراقا أو أدوات أو أجهزة لها علاقة بالمقرر موضوع الامتحان، كما يجوز لهم إخراج الطالب من قاعة الامتحان إذا خالف تعليمات لجنة الامتحان أو بدأ في ارتكاب أعمال الغش وفي جميع الأحوال يعتبر امتحانه ملغيا.

مـادة (62) مدة التوقف على الدراسة

يعاقب بالوقف عن الدراسة لمدة لا تقل عن سنة دراسية ولا تزيد على سنتين كل طالب ارتكب إحدى الأفعال المنصوص عليها في المادة (56) ويفصل الطالب نهائيا عند تكرار هذه الأفعال.

مادة (63) الحرمان من دخول الامتحان

يترتب على الإيقاف عن الدراسة حرمان الطالب من التقدم إلى الامتحانات طيلة مدة الوقف، ولا يجوز للطالب الانتقال إلى أي كلية أو معهد أخر إثناء سريان مدة العقوبة.

الفصل التاسع إجراءات: التأديب

مادة (64) الإبلاغ عن المخالفة

على كل من يعلم بوقوع مخالفة للقوانين واللوائح والأنظمة المعمول بها في الكليات أو الجامعة أن يقدم بلاغا عن هذه المخالفة يتضمن تقريرا مكتوبا عن الواقعة الى مجلس الكلية أو الجامعة.

مادة (65) لجنة التحقيق

فور الإبلاغ عن الواقعة يتعين على عميد الكلية تكليف لجنة للتحقيق من ثلاثة أعضاء من هيئة التدريس يكون أحدهم مقررا للجنة وتحال إليها المخالفات من قبل العميد أو الوكيل فور الإبلاغ عنها.

مادة (66) إعلام الطالب بالتحقيق

يتم إعلام الطالب بالتحقيق قبل موعده بيوم كامل على الأقل، ولا يحسب اليوم الذي تم فيه الإعلام، ويجوز أن يتم التحقيق فورا في حالة الضرورة والاستعجال.

مادة (67) تقرير لجنة التحقيق

بعد الانتهاء من التحقيق، أو عند عدم حضور الطالب للتحقيق بالرغم من إعلامه به، يقدم المكلف بالتحقيق تقريره إلى الجهة التي كلفته.

مادة (68) ثبوت المخالفة

في حالة تبوث المخالفة التي لغرضها شكلت لجنة التحقيق يحال الطالب لمجلس تأديب.

مادة (69) مجلس التأديب

يشكل مجلس للتأديب بقرار من عميد الكلية يتكون من ثلاثة أعضاء من هيئة التدريس من ذوى الخبرة والدراية وبحضور مندوب من اتحاد الطلبة وعضو عن الشؤون القانونية، ويتم إعلام من تمت إحالته على المجلس المذكور بالموعد الذي ينبغي فيه المثول أمامه، وذلك خلال مدة لا تقل عن ثلاثة أيام، ولا يحتسب اليوم الذي تم فيه الإعلام من بينها، وفي حالة تغيب الطالب بعذر مقبول تعطى له فرصة ثانية للمثول امام المجلس خلال 48 ساعة.

وفى حالة التغيب بدون عذر مقبول يصدر المجلس قراره غيابيا. ولا يجوز لمن اشترك في لجنة التحقيق أن يكون عضوا بمجلس التأديب.

مـادة (70) قرارات مجلس التأديب

يصدر مجلس التأديب قراراته بعد سماع أقوال الطالب، ويجوز للمجلس استدعاء الشهود، كما يجوز له استدعاء من قام بالتحقيق.

مـادة (71) الإعلان عن موعد التحقيق أو التأديب

يتم الإعلان عن موعد التحقيق أو التأديب بلوحة الإعلانات بالكلية، ويعتبر ذلك قرينة على العلم بذلك

مـادة (72) قرارات مجلس التأديب

يصدر مجلس التأديب قراراته بأغلبية أصوات الأعضاء، ولا تعد نافذة إلا بعد اعتمادها من مجلس الكلية. أما القرارات الصادرة عن المجلس بالفصل فلا تعد نافذة إلا بعد اعتمادها من مجلس الجامعة، وتبلغ كافة الجامعات والمعاهد العليا في ليبيا بالقرار للحيلولة دون تسجيل الطالب المفصول في أي منها.

مـادة (73) إعلان قرار مجلس التأديب

يعلن قرار مجلس التأديب بلوحة الإعلانات بالكلية، وتسلم نسخة منه وتودع نسخة ثانية بالملف الشخصي للطالب.

مـادة (74) انقضاء الدعوى

تنقضي الدعوى التأديبية بوفاة الطالب أو انسحابه من الكلية ولا يؤثر انقضاء الدعوى التأديبية أو الحكم فيها على الدعاوى الجنائية أو المدنية الناشئة عن الواقعة.

مـادة (75) الطعن في قرارات مجلس التأديب

تعتبر قرارات مجالس التأديب التي تصدر طبقا لأحكام هذه اللائحة نهائية بعد اعتمادها، ولا يجوز الطعن فيها الا بالطرق القضائية المقررة بموجب التشريعات النافذة.

مادة (76) علاوة الطبيب البيطري

تصرف علاوة الأطباء البطريين لكل أعضاء هيئة التدريس من حملة بكالوريوس الطب البيطري طبقاً للمادة (1) من قرار الأمين المساعد لشؤون الخدمات رقم 326 لسنة 1372 ور. وقرار اللجنة الشعبية العامة رقم 199 لسنة 1369ور بخصوص العلاوة السريرية.

مادة (77): أحكام ختامية

أ. تسرى أحكام هذه اللائحة على جميع طلاب كليات الطب البيطري بالجامعات الليبية وتطبق لائحة الدراسة والامتحانات والتأديب بالجامعات ومؤسسات التعليم العالي الصادرة بالخصوص.

ب. يجوز للجنة العلمية إجراء ما تراه مناسبا من تطوير في محتويات المقررات الدراسية بعد موافقة إدارة الكلية ولا تعتبر سارية المفعول إلا بعد اعتمادها من إدارة الجامعة ، ويصبح التعديل ساريا مع بداية العام الجامعي أو الفصل الدراسي التالي.

ت. يجوز لإدارة الكلية وضع آلية لمتابعة تقييم المناهج والمقررات الدراسية وفقا لما تقتضيه التطورات العلمية.

ث. أي تغيير أو إضافة لمواد هذه اللائحة هو من اختصاص إدارة الكلية, على أن يتم اعتماده من الجهات المختصة وإدارة الجامعة حسب القوانين واللوائح المنظمة لذلك.

ج. تعتبر هذه اللائحة جزء لا يتجزأ من لائحة الدراسة والامتحانات والتأديب بالجامعات ومؤسسات التعليم العالي الصادرة بالخصوص في نطاق الكلية.

ح. يعمل بأحكام هذه اللائحة من تاريخ اعتمادها من قبل جهات الاختصاص.

خ. مرفق مع هذه اللائحة المقررات والوحدات الدراسية الخاصة بالفصول الدراسية لمدة الدراسة بالكلية.

مادة (78) تعديل أحكام اللائحة

يجوز تعديل الأحكام الواردة في هذه اللائحة بالإضافة أو الإلغاء وفقاً للتشريعات النافذة.

مادة (79) سريان أحكام اللائحة

تسري أحكام هذه اللائحة اعتباراً من تاريخ اعتمادها، وتسرى أحكام لائحة تنظيم التعليم العالي الصادرة بقرار اللجنة الشعبية العامة "سابقاً " رقم ((501)) لسنة 2010م على كل ما لم يرد بشأنه نص في هذه اللائحة، ولا يسري أي حكم يخالفها.

يعتمد /

تاريخ الاعتماد:...../...../2022 م

المقررات الدراسية

اللغة العربية

1	اسم المقرر الدراسي	اللغة العربية
2	رمز المقرر	ARA100
3	طبيعة المقرر : عام/تخصص/اختياري	عام
4	عدد الوحدات المعتمدة	وحدتان (2)
5	عدد الساعات التعليمية	.....
6	المتطلبات المطلوبة مسبقا	لا شيء
7	البرنامج التعليمي الذي يُقدم المقرر	بكالوريوس العلوم الطبية البيطرية
8	لغة التدريس	اللغة العربية
9	تاريخ اعتماد المقرر	2022

وصف موجز للمقرر	يساعد هذا المقرر الطالب في كليةالطب البيطري على معرفة قواعد اللغة العربية النحوية والصرفية والإملائية وكذلك يتعرف على كيفية البحث في المعاجم، كما يتعلم أصول التعبيرالكتابي باللغة العربية وتقنيات كتابة المقالة والبحث العلم يوالتقاريرويتعرف على أنواعها، كما يتعلم مواضع علامات الترقيم وكيفية استخدامها تؤهله للكتابة بشكل صحيح وتتكون لديه حصيلة لغوية ومعجم لغوي يمكنه من ترجمة الأعمال في تخصصه ونقلها إلى العربية لتعم الفائدة.
الكتب المقررة	عنوان الكتاب المقرر بعض الكتب النحوية مدكرات الاستاد
للمقرر المدة الزمنية	عام دراسي
طريقة التدريس	تعتمد الأساليب والطرق المستخدمة في تدريس المقرر على الاتي: ❖ عن طريق المحاضرات ❖ التدريبات .والتمرين
الأهداف والمستهدف من المقرر	1. حفظ اللسان من الخطأ النحوي والاعرابي. 2. .معرفة الطالب الشعر العربي وتدوقه 3. معرفته للعربية والتدريب على فهمها باعتبارها اللغة الام

طريقة التقييم	أساليب التقييم	الزمن	الدرجة	
النصفي الاول	تحريري	ساعة	%25	
النصف الثاني	تحريري	ساعة	%25	
النهائي	تحريري	3 ساعات	%50	
			%100	

الأسبوع	محتوى المقرر الدراسي
الأسبوع الاول	تمهيد على اهمية اللغة العربية و خصائصها
الأسبوع الثاني	الكلام و أقسامه و علامات كل قسم
الأسبوع الثالث	الإعراب و البناء المبنيات
الأسبوع الرابع	الإعراب الظاهر و التقديري علامات الإعراب الأصلية و الفرعية
الأسبوع الخامس	إعراب الفعل المضارع
الأسبوع السادس	بناء الفعل المضارع
لأسبوع السابع	الأفعال الخمسة
الأسبوع الثامن	الأسماء المعربة بالحركات و الحروف
الأسبوع التاسع	الأسماء المعربة بالحركات و الحروف
الأسبوع العاشر	الامتحان النصفي الاول
الأسبوع الحادي عشر	المذكر و المؤنث
الأسبوع الثاني عشر	الجملة الإسمية
الأسبوع الثالث عشر	النواسخ
الأسبوع الرابع عشر	النواسخ
الأسبوع الخامس عشر	قواعد إملائية
الأسبوع السادس عشر	المعاجم
الأسبوع السابع عشر	الجملة الفعلية)الفعل و أحكامه
الأسبوع الثامن عشر	الفاعل و أحكامه .. تذكير الفعل و تأنيث مع الفاعل
الأسبوع التاسع عشر	نائب الفاعل و أحكامه

السبوع العشرون	الامتحان النصفي الثاني
الأسبوع الحادي والعشرين	إسناد الفعل إلى الضمائر
الأسبوع الثاني والعشرون	إسناد الفعل إلى الضمائر
الأسبوع الثالث والعشرون	المفاعيل
الأسبوع الرابع والعشرون	المفاعيل
الأسبوع الخامس والعشرون	العدد و أحكامه و تمييزه و قراءة العدد
الأسبوع السادس والعشرون	الحال و الاستثناء
الأسبوع السابع والعشرون	التوابع
الأسبوع الثامن والعشرون	الهمزة في وسط الكلمة و آخرها
الأسبوع التاسع والعشرون	علامات الترقيم
الأسبوع الثلاثون	أنواع الكتابة
الحضور والغياب	يجب على الطلاب حضور كل المقرر الدراسي في الوقت المحدد ، ولا يسمح بالتغيب إلا لأسباب طبية ويجب دعمه بتقرير طبي. وبناءاً على اللائحة فإن الطالب يحرم من دخول الامتحان إذا تجاوز معدل غيابه 25%.
مهارات عامة	تلتزم الكلية بضمان حصول الطلاب على كامل المعرفة والمهارات اللازمة للمشاركة الكاملة في جميع جوانب حياتهم، بما في ذلك المهارات التي تمكنهم منالقدرة على التقييم وتقديم الملاحظات الطبية بطريقة أكاديمية مناسبة. كما تمكنهم ايضاً من الانخراط في عمل جماعي يتفاعل فيه أعضاؤه باحتراف من أجل أداء الانشطة و الالتزامات المطلوبة مع القدرة على استخدام التقنيات الطبية الحديثة والتعامل معها.
التغيير والتعديل في المقرر الدراسي	المعلومات الواردة في مخطط المقرر الدراسي هذا صحيحة وقت النشر. وينقح محتوى المقررات الدراسية على أساس مستمر لضمان ملاءمتها لتغير العملية التعليمية. وسيقوم استاذ المقرر بتقديم إشعار بالتغييرات للقسم و ادارة الكلية مع الاخذ بالاعتبار الجدول الزمني المحدد للمنهج.

Veterinary Anatomy I

1	**Course name**	Veterinary Anatomy I
2	**Course Code**	ANA101
3	**Course type: /general/specialty/optional**	specialty
4	**Accredited units**	4Credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences (BVMSc)
8	**Instruction Language**	English Language
9	**Date of course approval**	2022

Brief Description	The course of Veterinary Anatomy is designed to cover the basic knowledge of general and comparative anatomy of the domestic animals. It studies the normal shape and structure of all the different organs and systems of the body, such as locomotor, digestive and nervous systems, etc. The current course is considered a basic building block of clinical sciences which enable the student to identify the normal tissues and organs comparing them later with what is diseased or unhealthy.
Textbook	**Books:** **The Anatomy of the Domestic Animals**. ISBN: 9780721641027 **Veterinary anatomy of domestic mammals**. ISBN: 9783794524853 **Textbook of veterinary anatomy**. ISBN: 9780323442640 **Miller's anatomy of the dog**. ISBN: 9781455750092 **Anatomy of the dromedary**. ISBN: 9780198571889 **كتب اضافية** Anatomy of domestic animals, systemic and regional approach. ISBN: 9780962311420 Clinical anatomy of the horse. ISBN: 9780723433026 Anatomy of the Horse. ISBN: 9783899936667 **مجلات علمية** Anatomia, Histologia, Embryologia **مواقع انترنت** • Minnesota Veterinary Anatomy Courseware
Course Duration	One academic year.
Teaching Method	❖ Theoretical lectures by using data show projector ❖ Practical sessions by using data show projector, dissected specimen and alive animal

<table>
<tr><td></td><td colspan="4">❖ Handout of lectures and practices
❖ Library
❖ Student presentations and workshops</td></tr>
<tr><td>Course Objectives</td><td colspan="4">• Enable students to understand the principle structure and morphology of the domestic animals' tissues and organs as well as distinguishing between tissues or/and organs of different animals.
- Students become familiar with anatomical language and terminology which
make them able to follow up the updated knowledge, scientific articles and
new research comprehensively.
- Allowing students to understand the foundation of the course concept in
term of correlating anatomical information with the other sciences.
- Students would begin early to identify abnormalities of tissues and organs, whether congenital deformity or pathologically, and report them scientifically.
• Students become able to deal with dissectional and surgical instruments and techniques as well as the proper managing of a live animal and cadaver.</td></tr>
<tr><td rowspan="5">Assessment examination method</td><td>Time of Assessment</td><td>method of Assessment</td><td>hours</td><td>Marks</td></tr>
<tr><td>1sth assessment exam at 10th week</td><td>1sth midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td>2nd assessment exam at 20th Week</td><td>2nd midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td rowspan="3">3rd assessment → Final exam by the end of the year</td><td>Written exam</td><td>3hrs</td><td>40</td></tr>
<tr><td>Practice exam</td><td>3hr</td><td>30</td></tr>
<tr><td>Oral exam</td><td>1hr</td><td>10</td></tr>
<tr><td>Course Contents</td><td colspan="4"></td></tr>
<tr><td>1st week</td><td colspan="4">Introduction to anatomy, topographic terms and divisions of body</td></tr>
<tr><td>2nd week</td><td colspan="4">Osteology of fore limb</td></tr>
<tr><td>3rd week</td><td colspan="4">Osteology of hind limb</td></tr>
<tr><td>4th week</td><td colspan="4">Osteology of distal limbs</td></tr>
<tr><td>5th week</td><td colspan="4">Osteology of Axial skeleton</td></tr>
<tr><td>6th week</td><td colspan="4">Osteology of Axial skeleton</td></tr>
<tr><td>7th week</td><td colspan="4">Osteology of Axial skeleton - Comparative</td></tr>
<tr><td>8th week</td><td colspan="4">General myology
Myology of fore limb I</td></tr>
<tr><td>9th week</td><td colspan="4">General arthrology
Myology of fore limb II</td></tr>
</table>

10th week	First Midterm Exam
11st week	Arthrology of forelimbs Myology of hind limb I
12nd week	Arthrology of hind limbs Myology of hind limb II
13rd week	Arthrology of head, neck and trunk Myology of head and neck
14th week	Mouth – Oral cavity and Tongue Myology of neck and trunk
15th week	Tongue and Salivary glands Fetlock, Stifle joints and Nuchal ligament
16th week	Pharynx Mouth, salivary glands and pharynx
17th week	Oesophagus and Stomach Abdominal Cavity
18th week	Stomach
19th week	Small and Large intestines
20th week	**Second Midterm Exam**
21st week	Associated glands
22nd week	Nose and nasal cavity
23rd week	Nose and nasal cavity
24th week	Paranasal sinuses
25th week	Larynx and trachea Thoracic cavity
26th week	Lung and bronchial tree Mediastinum and pleura
27th week	Kidneys, ureters and urinary bladder
28th week	Male gonads and gonadal ducts Pelvic Cavity
29th week	Penis, ancillary St. and accessory G. gl. Female gonads
30th week	Female gonads and tubular genitalia
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.

Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Veterinary Anatomy II

1	**Course name**	Veterinary Anatomy II
2	**Course Code**	ANA206
3	**Course type: /general/specialty/optional**	specialty
4	**Accredited units**	3Credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences (BVMSc)
8	**Instruction Language**	English Language
9	**Date of course approval**	2022

Brief Description	The course of Veterinary Anatomy is designed to cover the basic knowledge of general and comparative anatomy of the domestic animals. It studies the normal shape and structure of all the different organs and systems of the body, such as locomotor, digestive and nervous systems, etc. The current course is considered a basic building block of clinical sciences which enable the student to identify the normal tissues and organs comparing them later with what is diseased or unhealthy.
Textbooks	**Books:** **The Anatomy of the Domestic Animals**. ISBN: 9780721641027 **Veterinary anatomy of domestic mammals**. ISBN: 9783794524853 **Textbook of veterinary anatomy**. ISBN: 9780323442640 **Miller's anatomy of the dog**. ISBN: 9781455750092 **Anatomy of the dromedary**. ISBN: 9780198571889 كتب اضافية Anatomy of domestic animals, systemic and regional approach. ISBN: 9780962311420 Clinical anatomy of the horse. ISBN: 9780723433026 Anatomy of the Horse. ISBN: 9783899936667

	مجلات علمية Anatomia, Histologia, Embryologia مواقع انترنت • Minnesota Veterinary Anatomy Courseware
Course Duration	One academic year.
Teaching Method	❖ Theoretical lectures by using data show projector ❖ Practical sessions by using data show projector, dissected specimen and alive animal ❖ Handout of lectures and practices ❖ Library ❖ Student presentations and workshops
Course Objectives	• Enable students to understand the principle structure and morphology of the domestic animals' tissues and organs as well as distinguishing between tissues or/and organs of different animals. - Students become familiar with anatomical language and terminology which make them able to follow up the updated knowledge, scientific articles and new research comprehensively. - Allowing students to understand the foundation of the course concept in term of correlating anatomical information with the other sciences. - Students would begin early to identify abnormalities of tissues and organs, whether congenital deformity or pathologically, and report them scientifically. • Students become able to deal with dissectional and surgical instruments and techniques as well as the proper managing of a live animal and cadaver.

Assessment examination method	**Time of Assessment**	**method of Assessment**	**hours**	**Marks**
	1sth assessment exam at 10th week	1sth midterm exam	1hrs	10
	2nd assessment exam at 20th Week	2nd midterm exam	1hrs	10
	3rd assessment ➔ Final exam by the end of the year	Written exam	3hrs	40
		Practice exam	3hr	30
		Oral exam	1hr	10

Course Contents	
1st week	Pericardium and Heart
2nd week	Heart
3rd week	Blood supply of thorax and abdomen
4th week	Blood supply of abdomen

5th week	Blood supply of head and neck
6th week	Blood supply of forelimb
7th week	Blood supply of hind limb
8th week	Blood supply of pelvis
9th week	Introduction to lymph and L. centres
10th week	**First Midterm Exam**
11st week	Lymph centres (thoracic, abdomen and pelvis)
12nd week	Lymphatic ducts and organs
13rd week	Brain, spinal cord
14th week	Brain, meninges and CSF
15th week	Cranial nerves
16th week	Cranial nerves
17th week	Spinal nerves (Cervical, thoracic, lumbar, sacral and caudal)
18th week	Brachial plexus
19th week	Lumbosacral plexus
20th week	**Second Midterm Exam**
21st week	Autonomic nervous system
22nd week	Sense organs: Eye
23rd week	Sense organs: Eye
24th week	Sense organs: Ear
25th week	Endocrinology
26th week	Common Integument: Hoof
27th week	Common Integument: Hoof (comparative)
28th week	Common Integument: Skin and its glands, horns
29th week	Mammary glands
30th week	Surface Anatomy
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to

	provide notice of changes to students in a timely manner. The schedule can also be revised.

Animal Husbandry

1	**Course name**	Animal Husbandry
2	**Course code**	AHU202
3	**Course type: /general/specialty/optional**	Specialty
4	**Accredited units**	4 Credits
5	**Educational hours**	.....
6	**Pre-required requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences
8	**Teaching Language**	English
9	**Course approval date**	2022
Brief description of the course		• Use theoretical and practical knowledge in the subjects related to animal husbandry • Obtaining and applies social skills, communication skills, thinking skills, research skills, and self-management skills throughout the program. Is aware of his professional responsibilities with knowledge, skills, values, and competencies and transfer basic knowledge and skills through written and verbal communication. • Analyzes professional events and phenomena by using scientific techniques and methods, interprets results and offers solutions and gain the ability to apply mating methods and care in cattle, sheep and goat breeding Knows the basic principles and concepts in horse and poultry breeding and evaluates the efficiency of animal breeds according to their yield. Gain the ability to apply selection to increase race yields. • Knows the relationship between environment and animal, fulfills the service obligation for society through research and technology transfer in addition to Follow and implement the developments in management and organization practices of livestock enterprises.
Prescribed books		**Books:** Domestic Animal Behavior and Welfare. 978-1780645391. Farm Animals: Husbandry, Behavior and Veterinary Practice Hardcover. ISBN: 978-0839117698. Handbook of Lab

<table>
<tr><td></td><td>Textbook of Animal Husbandry. ISBN: 9788127258443.
Scientific Farm Animal Production. ISBN: 978-0133767209.
Animal husbandry and veterinary science. Volume I; Volume II.. ISBN: 9848094018.</td></tr>
<tr><td>Course duration</td><td>One academic year.</td></tr>
<tr><td>Teaching method</td><td>❖ Theoretical lectures by using data show projector.
❖ Practical sessions by using data show projector, dissected specimen, and alive animal.
❖ Handout of lectures and practices.
❖ Library.
❖ Student presentations and workshops.</td></tr>
<tr><td>Objectives and target of the course</td><td>• Use theoretical and practical knowledge in the subjects related to animal husbandry
• Obtaining and applies social skills, communication skills, thinking skills, research skills, and self-management skills throughout the program. Is aware of his professional responsibilities with knowledge, skills, values and competencies and transfer basic knowledge and skills through written and verbal communication.
• Analyzes professional events and phenomena by using scientific techniques and methods, interprets results and offers solutions and Gain the ability to apply mating methods and care in cattle, sheep and goat breeding Knows the basic principles and concepts in horse and poultry breeding and Evaluates the efficiency of animal breeds according to their yield. Gain the ability to apply selection to increase race yields.
• Knows the relationship between environment and animal, fulfills the service obligation for society through research and technology transfer in addition to Follow and implement the developments in management and organization practices of livestock enterprises.</td></tr>
<tr><td>Assessment examination method</td><td>
<table>
<tr><th>Time of Assessment</th><th>method of Assessment</th><th>hrs.</th><th>Marks</th></tr>
<tr><td>1sthassessment exam at 10thweek</td><td>1sth midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td>2ndassessment exam at 20th Week</td><td>2nd midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td rowspan="3">3rdassessment ➔ Final exam by the end of the year</td><td>Written exam</td><td>3hrs</td><td>40</td></tr>
<tr><td>Pract. exam</td><td>1hr</td><td>30</td></tr>
<tr><td>Oral exam</td><td>1hr</td><td>10</td></tr>
</table>
</td></tr>
<tr><td colspan="2">Course contents</td></tr>
<tr><td>1st week</td><td>INTRODUCTION:
• An overview
• Brief history
• Definition of common terms</td></tr>
<tr><td>2nd week</td><td>• Equine Care, Husbandry, and management.</td></tr>
</table>

3rd week	• Equine Care, Husbandry, and management
4th week	Cattle Care, Husbandry, and management (Identification and Records)
5th week	Cattle Care, Husbandry, and management (Identification and Records)
6th week	Cattle Care, Husbandry, and management (Identification and Records).
7th week	Sheep & goat Care, Husbandry, and management (Facilities & Equipment
8th week	Sheep & goat Care, Husbandry, and management (Facilities & Equipment
9th week	Camel Care, Husbandry and management
10th week	**1st MIDTERM EXAM**
11st week	Poultry Care, Husbandry, and management.
12nd week	Poultry Care, Husbandry, and management.
13rd week	• Dogs & cats Care, Husbandry, and management
14th week	• Dogs & cats Care, Husbandry, and management
15th week	• Lab animals Care, Husbandry, and management.
16thweek	• Lab animals Care, Husbandry, and management.
17th week	• Animal health Management veterinary care frequency.
18th week	• Animal health Management veterinary care frequency.
19th week	Approaching, handling & restrain a) equine b) cattle c) sheep and goat d) camel e) Dogs & cats
20th week	**2nd MIDTERM EXAM**
21st week	*INTRODUCTION: An overview.* • Overview of the livestock industry • History of Animal Breeding Animal breed characterization
22nd week	*INTRODUCTION: An overview.* • Overview of the livestock industry • History of Animal Breeding Animal breed characterization
23rd week	Description, Identification & Points of farm animals a) horse b) cattle c) sheep d) goat e) camel

	f) poultry g) Dogs & cats
24th week	Administration of Medicine • Equipment's & instrumentation Hardy-Weinberg principle, ABO
25th week	***Ageing livestock*** *a) dentition of the horse* *b) dentition of cattle* *c) dentition of sheep* *d) dentition of camel* *e) dentition of dogs*
26th week	***Grooming & clipping*** • Shearing & dipping • Bedding • Shoeing • Clothing *Animal health signs*
27th week	Introduction on animal's behavior • Types of animal behavior The special senses resting and sleeping behavior Aim of ethology
28th week	• Cattle behavior • Camel behavior • poultry behavior
29th week	• poultry behavior • Equine Behavior • Sheep and Goat behavior
30th week	• behavior of pet • Animal Environment and Housing • Behavioral Management • Artificial insemination
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
General skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Change and modification in the course	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Animal Nutrition

1	**Course name**	Animal Nutrition
2	**Course Code**	ANT203
3	**Course type: /general/specialty/optional**	Obligatory
4	**Accredited units**	4 credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences
8	**Instruction Language**	English Language
9	**Date of course approval**	2022

Brief description of the course	Aware with the dietary nutrients needs for animals, primarily those in Agriculture and food and to ensure that students have good information about healthy food is a choice, before you can fully explore that choice, which it helps to have a bit an understanding about what food is and what it delivers to your body. students should have sufficient knowledge about essential nutrients, which can't make either for we or form animals in sufficient quantities to meet daily requirements. So we should added to the diet such as minerals, most vitamins, some amino acids and some fatty acids. Also they should know about the Non-essential nutrients that can be synthesized within the body, but insufficient amounts to meet the requirements or may also come from the diet. Providing with full information about sources, chemical composition, digestion, absorption, physiological mode of action, deficiency symptoms of all nutrients such as water, CHO, Protein, Lipids, energy and vitamins and minerals at different growth stages. Sufficient knowledge to use laboratory facilities (apparatus) for determination the chemical compositions of different feed stuff to be used in the ratio formulation at maintenance and production levels for farm animal feedings. Provide them with the crucial information about classification of feeds, feed additive types, evaluation of feeds (***in-vivo, in-vitro in-sacoo***, **TDN** and in direct method using markers).
Prescribed Books	**Books:** •Animal Nutrition.ISBN 10: 1408204231 ISBN 13: 9781408204238. • Animal Nutrition SBN-100471308641. • Energy and Protein requirements of ruminants NRC for Sheep, Poultry, Cattle, and beef cattle.9780851988511
Course duration	One academic year.
Teaching method	❖ Lectures. ❖ group interaction and discussion. ❖ self-directed activities. ❖ active participation. ❖ laboratory experiments.

<table>
<tr><td>Objectives and target of the course</td><td colspan="4">• Aware with the dietary nutrients needs for animals, primarily those in Agriculture and food and to ensure that students have good information about healthy food is a choice, before you can fully explore that choice, which it helps to have a bit an understanding about what food actually is and what it delivers to your body.
• To be fully aware that students have sufficient knowledge about essential nutrients, which can't make either for we or form animals in sufficient quantities to meet daily requirements. So, we should add to the diet such as minerals, most vitamins, some amino acids and some fatty acids. Also, they should know about the non-essential nutrients that can be synthesized within the body, but insufficient amounts to meet the requirements or may also come from the diet.
• Providing with full information about sources, chemical composition, digestion, absorption, physiological mode of action, deficiency symptoms of all nutrients such as water, CHO, Protein, Lipids, energy and vitamins and minerals at different growth stages. Sufficient knowledge to use laboratory facilities (apparatus) for determination the chemical compositions of different feed stuff to be used in the ratio formulation at maintenance and production levels for farm animal feedings.
• Crucial information about classification of feeds, feed additive types, evaluation of feeds (in-vivo, in-vitro in-sacoo, TDN and in direct method using markers).</td></tr>
<tr><td rowspan="5">Assessment examination method</td><td>Time of Assessment</td><td>method of Assessment</td><td>hrs.</td><td>Marks</td></tr>
<tr><td>1sth assessment exam at 10th week</td><td>1sth midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td>2nd assessment exam at 20th Week</td><td>2nd midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td rowspan="3">3rd assessment➔ Final exam by the end of the year</td><td>Written exam</td><td>3hrs</td><td>50</td></tr>
<tr><td>Pract. exam</td><td>1hr</td><td>20</td></tr>
<tr><td>Oral exam</td><td>1hr</td><td>10</td></tr>
<tr><td colspan="5">Second Year</td></tr>
<tr><td colspan="5">Course contents</td></tr>
<tr><td>1st week</td><td colspan="4">Introduction of Nutrition
Introduction to course, expectation, world feed status, nutrient classes, Micro and Macro nutrients, Essential and Non- essential nutrients, Supplements and Factors improving the nutritional needs.</td></tr>
<tr><td>2nd week</td><td colspan="4">Water
Important, Sources, Structure, Sources, quality, Properties, metabolism and of water. In addition, water losses, Requirement of</td></tr>
</table>

	water, average daily requirement, Water turn over and Effect of lack of water.
3rd week	**Protein** Definitions, schemes, composition, classifications, functions and deficiencies. Methods of protein Assessments (chemical, Biological and Microbiological), Nitrogen Balance, A As Imbalance (A. As deficiency, A. As Antagonism and A.A toxicity). Utilization of Non protein nitrogenous compounds and Urea Properties and deficiencies.
4th week	**Protein Digestion** Protein digestion in Mon- gastric Animals. Digestion of Protein in Ruminant animals.
5th week	**Carbohydrate** Definitions, source, classifications, functions, Metabolism and deficiencies of CHO.
6th week	**Carbohydrate** Digestion of CHO in Mon-gastric Animals. Digestion of CHO in Ruminant Animals.
7th week	**Lipid** Definitions, functions, deficiencies, classification of Lipids. Fatty acids (Saturated and Unsaturated fatty acids), TAG and Mixed TAC, Physical and Chemical properties of Un saturated and Saturated fatty acids. Essential Fatty acids, Iodine number, Saponification and oxidation. Fat metabolism (α, β,γ)(Calculation of Net energy produced from oxidation of fatty acids.
8th week	**Lipid** Digestion of fats in Mono-gastric Animals. Digestion of fats in Ruminant Animals .
9th week	**Energy** Definition of energy, Some energy terms (Heat and Calories), Forms of Energy, GE Chart for Ruminant and Poultry. GE, DE, ME, CH4 and NE calculations.
10th week	**First Midterm Exam**
11st week	**Energy** DE, TME, Methane loss in Herbivores. Factors effecting ME, RQ Quatient, BMR, and Factors affecting BMR , TDN.
12nd week	**Minerals** General information about Minerals, Definitions, Sources, Classification, functions, and deficiency Symptom. The biological Active form of minerals and Treatments of Macro Elements.
13rd week	**Minerals** General information about Trace Minerals, Definitions, Sources, Classification, functions and deficiency Symptom. The biological Active form of minerals and. Treatments of Micro Elements.
14th week	**Vitamins**

	Definitions, history of Vitamin inventions classifications (ADEK) Fat soluble vitamins, functions, Chemical nature, metabolism, Deficiency, Clinical signs of deficiency and the active forms of vitamins.
15th week	**Water Soluble Vitamins** General Vitamin B complex and vitamin C. Functions, Chemical nature, metabolism, Deficiency, Clinical signs of deficiency and the active forms of vitamins.
16th week	**Nutrient classes**. (Classification of feeds), Characteristic of common feedstuffs, Urea Gossypol, Mycotoxicoses, Aflatoxins Classification of Aflatoxins. Susceptibility of Poultry to Aflatoxins.
17th week	**Feed Additives** (Nutritive and Non-Nutritive Hormones as feed additives, Female Sex Hormones, MGA (Melengestrol Acetate), MAP (Medroxy progestrone Acetate), Synovex (an implant pellet), probiotic and Prebiotic.
18th week	**Evaluation of feedstuff** Approximate analysis Feeding trails: ***In vivo*** digestibility conducted on animal. ***In vitro*** digestibility preformed in laboratory. ***In Sacco*** digestibility degradability. Total digestible Nutrients (TDN).
19th week	**Feed Intake** Introduction about Feed intake. Factors effecting Intake and Short-term regulation.
20th week	**Second Midterm Exam**
21st week	**Feed Intake** Long term regulation and calculations of Intake at different stages and animals Indoors and outdoors
22nd week	**Ration Formulation** Ration formulation using Pershing Square and NRC tables for sheep and dairy Cattle. Calculation of the True and Apparent Digestibility. At maintenance and production levels balancing diets and premixes feeding standers.
23rd week	**Ration Formulation** Using person Square and NRC tables for dairy Cattle. Calculation of the True and Apparent Digestibility. Maintenance and production levels balancing diets and premixes feeding standers.
24th week	**Dairy Cattle Feeding.** Requirements, feeding of calves with Colostrum, Feeding of Heifers and feeding adult dairy cattle and feeding of bulls. Management, type of feeding for dairy cows at different stages of live.
25th week	**Sheep Feeding Program** Water, CHO, Protein, Fats and vitamin and mineral requirements at maintenance and growth levels. Rearing Lambs on Milk Replacer, weaning, Feeding Lambs, Creep area, Creep ration, Feeding Mature Breeding Rams, feeding of ewes, Sheep Mating,

	feeding ewes during pregnancy, feeding lactated ewes and Feeding sheep in a dry season
26th week	**Creep Feeding** Creep area, Creep ration, Feeding Mature Breeding Rams, feeding of ewes, Sheep Mating, feeding ewes during pregnancy, feeding lactated ewes and Feeding sheep in a dry season.
27th week	**Metabolic Disorders** Common nutrient malfunctioning diseases and disorder metabolism such as bloat, acidosis, lactate state, Milk Fever, Hypomagnesaemia…ect.
28th week	**Poultry Feeding Program** Daily Requirements at different stages Management, Type of feeding for poultry at different stages of growth and egg Production.
29th week	**Horse Feeding** Requirement, Management and type of feeding programs according of horse activities.
30th week	**Dogs and Cats Feeding** Requirement, management, type of feeding.
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
General skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Change and modification in the course	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Veterinary Biochemistry

1	**Course name**	Veterinary Biochemistry
2	**Course Code**	BIC103
3	**Course type: /general/specialty/optional**	specialist
4	**Accredited units**	5 credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non

7	**Program offered the course**	Bachelor of Veterinary Medical Sciences
8	**Instruction Language**	English Language
9	**Date of course approval**	2022

Brief description of the course	Biochemistry is study of the chemical constituents, such as proteins, carbohydrates, lipids and nucleic acids, of living cells with the chemical reactions and processes that they undergo at the molecular level. By learning that, students will be in strong position to understand the maintenance of health and how it reflects the harmonious balance of biochemical reactions occurring in the animal body; and to understand the effective diagnosis and treatment of diseases and how they reflect abnormalities in biomolecules, biochemical reactions or biochemical processes occurring in the body.
Prescribed books	**Books:** •Lippincott's Illustrated Reviews: Biochemistry.ISBN-13: 978-1496344496 ISBN-10: 1496344499. • Harper's Illustrated Biochemistry.ISBN-13: 978-1259837937. ISBN-10: 1259837939. • Leininger Principles of Biochemistry. ISBN-13: 978-1429234146. ISBN-10: 1429234148. • Textbook of Medical Biochemistry. ISBN-13: 978-9350254844. ISBN-10: 9350254840. • Clinical Chemistry Techniques, Principles, Correlations. ISBN-13: 978-1496335586. ISBN-10: 9781496335586.
Course duration	One academic year.
Teaching method	❖ Lectures. ❖ group interaction and discussion. ❖ self-directed activities. ❖ active participation. ❖ laboratory experiments.
Objectives and target of the course	• The course aims to provide students with a basic understanding of: • The chemical nature of carbohydrate, lipid, protein, nucleotide and vitamin biomolecules; and the principles of bioenergetics and enzyme catalysis. • The metabolism and the metabolic control of dietary and endogenous carbohydrate, lipid, protein and nucleotides; and how the DNA in a genome is organized, replicated, and repaired and how the genetic information in the DNA is selectively expressed as functional proteins and RNA and how this expression is regulated. • The tools used in molecular biology, and their potential applications to medical and veterinary science.

	• The commonly used measurements in clinical biochemistry and how these measurements can contribute to assessment of the health status of individuals.			
Assessment examination method	**Time of Assessment**	**method of Assessment**	**hrs.**	**Marks**
	1sth assessment exam at 10th week	1sth midterm exam	1hrs	10
	2nd assessment exam at 20th Week	2nd midterm exam	1hrs	10
	3rd assessment➔ Final exam by the end of the year	Written exam	3hrs	50
		Pract exam	1hr	20
		Oral exam	1hr	10
Course contents				
1st week	➢ **Introduction to biochemistry and cell chemistry** -Definition, basic aspects, significance, aim and principles of biochemistry. -Biomolecules and structure of elements. -Functional groups: Alcohols, amines, esters, aldehydes, ketones, carboxyl and sulfhydryl groups. -Biochemical reactions, covalent and non-covalent bonds. -Water: Structure, properties, hydrogen bonds, polarity, hydrophilic and hydrophobic molecules, ionic dissociation, pH and buffers. -Monomers and polymers: Carbohydrates, proteins, lipid, nucleic acids, formation and hydrolysis of polymers. -Organelles: Prokaryotes and eukaryotes, biochemical characteristics of cellular organelles. ❖ **Introduction to laboratory safety**			
2nd week	➢ **Chemistry of carbohydrates** -Introduction, definition and biomedical importance. -Classification of carbohydrates: Monosaccharides, disaccharides, oligosaccharides, polysaccharides. -Classification of monosaccharides: According to the number of carbon atoms (Trioses, tetroses, pentoses and hexoses) and the type of the functional group (aldoses and ketoses). -Monosaccharides representation: Fischer and Haworth projections. -Importance of monosaccharides. -Isomerism: Enantiomers, optical activity, epimers, alpha and beta anomers, pyranose and furanose ring structures, aldose and ketose isomerism. ❖ **Preparation of chemical solutions**			

3rd week	➢ **Chemistry of carbohydrates** -Sugar derivatives of biomedical importance: Deoxy sugars, amino sugars, amino sugar acids and glycosides. -Disaccharides: Maltose, lactose and sucrose. -Oligosaccharides. -Polysaccharides: Homo and heteropolysaccharides, starch, amylase and amylopectin, glycogen, inulin, cellulose, dextrin, agar, glycoaminoglycans and glycoproteins. ❖ **Chromatography**
4th week	➢ **Chemistry of amino acids and proteins** -Biomedical importance of proteins. -Structure of proteins and amino acids -Classification of amino acids: According to the properties of the side chain, the polarity of the side chain, the nutritional importance and the metabolic products. - Functions of amino acids. -Properties of amino acids: Optical activity of amino acids, amphoteric nature of amino acids, peptides formation and disulfide bonds. - Biologically important peptides. ❖ **Spectrophotometry**
5th week	➢ **Chemistry of amino acids and proteins** -Structural organization of proteins: Primary, secondary, tertiary and quaternary structures, protein folding and stability and chaperones. -Proteins misfolding and proteins denaturation. -General properties of protein: Taste and odor, molecular weight, viscosity, heat coagulation, amphoteric nature and precipitation of proteins ❖ **Electrophoresis**
6th week	➢ **Chemistry of amino acids and proteins** -Classification of proteins: According to the shape and size (fibrous and globular proteins and their relationship to the protein function), according to the biological functions and according to the composition, solubility and physical properties (simple, conjugated and derived proteins). ➢ **Chemistry of nucleotides and nucleic acids** - Structure, types and function of purines and pyrimidines nucleotides and nucleic acids ❖ **Blotting Techniques**
7th week	➢ **Chemistry of nucleotides and nucleic acids** -Deoxyribonucleic acids (DNA): Structure (primary and secondary structure), organization, linear and circular DNA and denaturation of DNA. -Ribonucleic acid (RNA): Structure (primary, secondary and tertiary structure), types (m-RNA, t-RNA and r-RNA) and small RNAs. -Nucleotides and nucleosides of biological importance: Adenosine nucleotides, guanosine nucleotides, uridine

	nucleotides, cytidine nucleotides and miscellaneous nucleotides. ❖ **Immunochemical Techniques**
8th week	➢ **Plasma proteins and immunoglobulins** -Functions of plasma proteins. -Positive and negative acute phase proteins. -Classification of plasma proteins. -Immunoglobulins: Structure, types, polyclonal and monoclonal antibodies. ➢ **Enzymes** -Definition, nomenclature and classification. -Properties: Active site, specificity, catalytical efficiency, cofactors and regulation of enzyme activity. ❖ **Amplification of DNA (PCR)**
9th week	Enzymes -Mechanism of enzyme action: The lock & key hypothesis, the induced fit hypothesis. -Factors affecting enzyme action: Substrate concentration (Michaelis-Menten equation), temperature and pH. -Inhibition of enzyme activity: Competitive and non-competitive inhibition. -Regulation of enzyme activity: Regulation of allosteric enzymes, regulation by covalent modification, induction and repression of enzyme synthesis. -Clinical significance of enzymes. Identification of PCR products using gel electrophoresis
10th week	**First Midterm Exam**
11st week	**Chemistry of fatty acids and lipids** -Biomedical importance of lipids. -Classification of lipids. -Simple lipids: Structure and classification. -Fatty acids: Nomenclature, structure, classification (saturated and unsaturated fatty acids), conformation and physical properties. -Triglycerols and waxes. -Complex lipids: Structure and classification, (Glycerophospholipids, sphingophospholipids and glycolipids). Identification of DNA sequences
12nd week	➢ **Chemistry of fatty acids and lipids** -Derived lipids: Fatty acids, steroids, alcohols (glycerol and sphingosin), fat soluble vitamins (vit A, D, E and K Carotenoids (vit E precursor) and cholesterol derivatives. ➢ **Cell membrane and signal transduction** -Structure of plasma membrane. -Amphipathic lipid orientation at oil: water interface. -Importance and function of membrane proteins, lipids and carbohydrates. -Characters of plasma membranes.

	-Lipid peroxidation (initiation, propagation, termination). ➢ **Cloning of DNA**
13rd week	➢ **Cell membrane and signal transduction** -Cell signaling and signal transduction. -Definition and types of signals: Cell communication (secret chemical signal, contact-depend on signal, gap junction signal) and signal transduction. -Classification of cell signalling according to the chemical characteristics (Hydrophobic messengers, hydrophilic messengers and gaseous signals), signal location (Extracellular and intracellular) and cell receptors (membrane receptors and nucleolus receptors). - Second messenger systems: Adenylyl cyclase system and the calcium/phosphatidyl inositol system. ➢ **Biochemistry of hormones** -Biomedical importance and functions. -Classification according to the chemical nature (steroid hormones, amino acid derivatives hormones and peptide/protein hormones and according to the mechanism of action. -Intracellular receptors of hormones and cell membrane receptors of hormones. -Regulation of hormones levels. ❖ **Real-time PCR**
14th week	➢ **Biochemistry of vitamins and minerals** -Fat soluble vitamins: Definition, structure, active forms, function, classification, sources, transport, deficiency, and toxicity. ❖ **Organismal cloning**
15th week	➢ **Biochemistry of vitamins and minerals** -Water soluble vitamins: Definition, structure, active forms, function, classification, sources, transport, deficiency, and toxicity. -Minerals: Classification, sources, deficiency and toxicity. **Gene therapy**
16th week	➢ **Introduction of metabolism and energy** -Definition, catabolic and anabolic reactions. -Regulation of metabolism. -ATP ➢ **Metabolism of carbohydrates** -Digestion and absorption of carbohydrates. -Fate of absorbed monosaccharides. -Clinical aspects of carbohydrates digestion and absorption -Glycolysis: Biomedical importance, definition, site, steps and reactions, energy yield, regulation and inhibition.

	❖ **Introduction to clinical biochemistry**
17th week	➢ **Metabolism of carbohydrates** -Fate of pyruvic acid: Conversion to lactic acid, conversion to acetyl CoA (oxidative decarboxylation) and conversion to ethanol. -Citric acid cycle: Biomedical importance, definition, site, steps and reactions, energy yield, regulation, amphibolic nature and inhibition. -Electron transport chain: Biomedical importance, definition, site, steps and reactions, energy yield, oxidative phosphorylation and inhibition. -Energy yield of complete oxidation of glucose to CO_2 and H_2O. **Fluid and electrolyte balance**
18th week	➢ **Metabolism of carbohydrates** -Hexose monophosphate pathway: Biomedical importance, definition, site, steps, reactions and significance. -Uses of NADPH: Reductive biosynthesis, reduction ofH_2O_2, substrate hydroxylation, phagocytosis and synthesis of NO. -Glucose 6-phosphate dehydrogenase (G6PD) deficiency: Role of G6PD in RBC and precipitating factors. -Uronic acid pathway: Biomedical importance, definition, site, steps and reactions and clinical importance. -Gluconeogenesis: Biomedical importance, definition, site, substrates, steps and reactions and regulation **Fluid and electrolyte balance**
19th week	➢ **Metabolism of carbohydrates** -Glycogen metabolism (Glycogenesis &Glycogenolysis): Biomedical importance, definition, site, steps and reactions, regulation and glycogen storage disease. -Metabolism of galactose: Biomedical importance, definition, site, steps and reactions, regulation and galacosaemia. -Metabolism of fructose: Biomedical importance, definition, site, steps and reactions, regulation and disorders of fructose metabolism. ❖ **Glucose metabolism and diabetes (measurement of blood glucose and glycated hemoglobin (HbA1c))**
20th week	**2ndMIDTERM EXAM**
21st week	➢ **Metabolism of proteins and amino acids** -Digestion and absorption of proteins. -Catabolism of amino acids (phase 1): Transamination and oxidative deamination of amino acids; and clinical value of plasma aminotransferases.

	-Urea cycle: Biomedical importance, definition, site, steps and reactions, fate and regulation. -Catabolism of amino acids phase 2: Catabolism of the carbon skeleton of amino acids, glucogenic amino acids, ketogenic amino acids, glucogenic &ketogenic amino acids.
22nd week	❖ **Plasma enzymes of clinical significance** Metabolism of proteins and amino acids -Biosynthesis of non-essential amino acids. -Metabolic defects in amino acids metabolism: Phenylketonuria, Alkaptonuria, Albinism, Homocystinuria, Maple syrup urine disease. -Conversion of amino acids to specialized products: Synthesis and degradation of porphyrins, heme, catecholamines, serotonin, creatine, histamine and melanin. **Liver function tests**
23rd week	➢ **Metabolism of proteins and amino acids** -Protein turnover. -Protein's degradation: Ubiquitin-proteasome system, lysosomes system. -Protein's synthesis (translation): Definition, requirements, the genetic code, steps, co-translational and post-translational modification of polypeptide chains. **Kidney function tests**
24th week	➢ **Metabolism of purine and pyrimidine nucleotides** -Biomedical importance. -Purine metabolism: De novosynthesis of purine nucleotides (steps and reactions), salvage pathway of purines (steps and reactions),synthetic inhibitors of purine synthesis, synthesis of Deoxyribonucleotides, degradation of purine nucleotides, disorders of purine metabolism (Gout,Lesch-Nyhan syndrome, Adenosine deaminase (ADA) deficiency and Purine Nucleoside Phosphorylase (PNP) deficiency). -Pyrimidine metabolism: De novosynthesis of pyrimidine nucleotides (steps and reactions), salvage pathway of pyrimidines and degradation of pyrimidine nucleotides. **Lipid profile**
25th week	➢ **Metabolism of purine and pyrimidine nucleotides** - DNA replication: Enzymes, steps (initiation, elongation and termination), inhibitors of DNA replication in prokaryotes and eukaryotes, proofreading and reverse transcriptases. -DNA repair: Repair of methyl-directed mismatch, UV light damage, base alteration excision repair and double strand breaks

	-DNA transcription: Enzymes, steps (initiation, elongation and termination), inhibitors of DNA transcription in prokaryotes and eukaryotes, posttranscriptional modification of RNA. **Gastric function test**
26th week	➢ **Regulation of gene expression** -Biomedical importance, positive and negative regulation, constitutive and inducible genes. -Regulatory sequences and molecules. -Regulation of prokaryotic gene expression: Operons, the lactose operon, the tryptophan operon,coordination of transcription and translation in prokaryotes (stringent response and regulatory ribosomal proteins). **Cerebrospinal fluid tests**
27th week	➢ **Regulation of gene expression** -Regulation of eukaryotic gene expression: Trans-acting molecules andCis-acting regulatory elements,regulatory signals mediated by intracellular receptors, regulatory signals mediated by cell-surface receptors, regulation by co- and posttranscriptional processing of mRNA (Splice-site choice,mRNA editing,mRNA stability,RNA interference (RNAi),RNAi therapy,translation of mRNA) and regulation through modifications to DNA (Access to DNA, amount of DNA, arrangement of DNA, mobile DNA elements). ➢ **Metabolism of lipids and fatty acids** -Digestion and absorption of lipids, control of lipids digestion and fate of the absorbed lipids. **Vitamins and trace elements measurements**
28th week	➢ **Metabolism of lipids and fatty acids** -De novosynthesis of fatty acids: Biomedical importance, site, requirements, steps and reactions and regulation. -Biosynthesis of triacylglycerols: Biomedical importance, site, requirements, steps and reactions. -Fatty acids oxidation: Biomedical importance, site, steps, reactions and energetic. -Metabolism of ketone bodies (ketogenesis): Biomedical importance, site, requirements, steps and reactions. -Metabolism of ketone bodies (ketolysis): Biomedical importance, site, steps, reactions and ketosis. **Hormones measurements**
29th week	➢ **Metabolism of lipids and fatty acids** -Metabolism of cholesterol: Biosynthesis of cholesterol (Biomedical importance, site, requirements, steps and reactions, regulation), degradation of cholesterol, hypercholesterolemia, bile acids and bile salts (Synthesis &degradation, cholelithiasis). -Metabolism of lipoproteins: Biomedical importance, structure of lipoproteins, types of lipoproteins, metabolism

	of chylomicrons, metabolism of VLDL&LDL, metabolism of HDL. -Metabolism of phospholipids: Biomedical importance, synthesis of glycerophospholipids and sphingophospholipids (site, steps & reactions) and degradation of phospholipids. ➢ **Integration of metabolism** -Integration of metabolism (Metabolic effects of insulin and glucagon) -Insulin and glucagon hormones: Structure, synthesis, regulation of secretion, metabolic effects, mechanism of action and time course - Hypoglycemia **Tumour markers**
30th week	➢ **Integration of metabolism** -Integration of metabolism (The feed and fast cycle): - Metabolic patterns of liver: fate of carbohydrates, amino acids and lipids - Metabolic patterns of adipose tissues -Metabolic patterns of muscles - Metabolic patterns of brain - Metabolic patterns of blood ➢ **Xenobiotics** -Definition, classification (Exogenous and endogenous xenobiotics) and effects on the body. -Metabolism of Xenobiotics: -Phase 1 of xenobiotics metabolism: Hydroxylation. deamination, dehalogenation, desulfuration, epoxidation, preoxygenation or reduction. -Phase 2 of xenobiotics metabolism: Conjugation with glucuronic acid, sulfate, acetate, glutathione, acetylation or methylation. -Detoxification reactions. **Pregnancy tests**
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
General skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Change and modification in the course	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Biostatistics

1	**Course name**	Biostatistics
2	**Course Code**	STA205
3	**Course type: /general/specialty/optional**	general
4	**Accredited units**	2 Credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences
8	**Instruction Language**	English
9	**Date of course approval**	2022

Brief Description	This course covers the basic principles, knowledge, understanding of biostatistics, and different type of statistical distributions with gaining the required skills to compare between different statistical tests applying the most suitable statistical test related to the problem under study.
Textbooks	**Books:** • Introduction to Biostatistics.
Course Duration	One academic year.
Teaching Method	• Lectures. • group interaction and discussion. • self-directed activities. • active participation. • Tutorials: biweekly questions.
Course Objectives	• To develop basic statistical analysis skills required in sciences research. • Acquiring the basic knowledge and understanding biostatistics and different type of statistical distribution. • Gaining the required skills to compare between different statistical tests and applying the most suitable statistical test related to the problem under study.

	Time of Assessment	**method of Assessment**	**hours**	**Marks**
Assessment examination method	1th assessment exam at 10th week	1sth midterm exam	1hrs	25
	2nd assessment exam at 20th week	2nd midterm exam	1hrs	25
	3rdassessment ➔ Final exam by the end of the year	Written exam	3hrs	50
		Practice exam	3hr	-
		Oral exam	1hr	-

Course Contents	
1st week	INTRODUCTION Introduction Of The course and Basic Concepts
2nd week	NUMERICAL METHODS Measure for Describing the Location Measures of Dispersion
3rd week	NUMERICAL METHODS Measure for Describing the Location Measures of Dispersion
4th week	NUMERICAL METHODS Measure for Describing the Location Measures of Dispersion
5th week	Introduction of probability
6th week	Probability Rules Conditional probability and examples
7th week	Multiplication Rules and bays Theorem
8th week	Discrete Probability distributions
9th week	Binomial Distribution
10th week	**First Midterm Exam**
11st week	Poisson Distribution
12nd week	Normal Distribution
13rd week	Student –T Distribution
14th week	Application on Normal Distribution and t – Distribution
15th week	Sampling Sampling Distributions and the Central Limit Theorem Distribution of sample mean
16th week	Distribution of sample mean
17th week	Distribution of two sample means
18th week	Distribution of sample proportion and the difference between two sample proportions.
19th week	Examples and Exercises for Sampling distribution
20th week	**Second Midterm Exam**
21st week	Estimation Confidence interval for population mean, confidence interval for a population proportion
22nd week	Estimation Confidence interval for population mean, Confidence interval for a population proportion
23rd week	Estimation confidence interval for the difference between both two population means and proportions.

24th week	**Examples and Exercises for** Confidence interval for population mean, confidence interval for a population proportion and confidence interval for the difference between both two population means and proportions.
25th week	**Hypothesis testing of:** Single population mean and the difference between two population means
26th week	**Hypothesis testing of:** Single population Proportion and the difference between two population Proportions
27th week	**Examples and Exercises for** **Hypothesis testing of:** Single population mean and the difference between two population means, Single population Proportion and the difference between two population proportions.
28th week	Correlation and regression
29th week	Correlation and regression
30th week	**Examples and Exercises for** Correlation and regression
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

English Languish

1	**Course name**	English Languish
2	**Course Code**	ENG101
3	**Course type: /general/specialty/optional**	general
4	**Accredited units**	2 Credits

5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences
8	**Instruction Language**	English
9	**Date of course approval**	2022

Brief Description	The English language course aim to acquire a general knowledge about veterinary medicine and improve student overall use of the language and their ability to communicate in English. The course is designed to cover the basic knowledge of different topics such as, terminology of veterinary medicine, how to write medical report. Also, the course aims to introduce the use important affixes in veterinary practice.			
Textbooks	**Books:** Ethel Tiersky & Martin Tiersky by Prentice Hall Regents Prentice Hall Inc.			
Course Duration	One academic year / First year			
Teaching Method	❖ Lectures. ❖ group interaction and discussion. ❖ self-directed activities. ❖ active participation. ❖ laboratory experiments.			
Course Objectives	To acquire a general knowledge about veterinary lexicon. To give students an introduction to the English terminology of medicine. To improve students overall use of the language. To master specific vocabulary and idioms. To improve their ability to communicate in English. To be introduced to the different topics such as, Veterinary anatomy, surgery, medicine, and first aid that the students will study comprehensively the next years. To ease the English learning environment process. To be introduced to a vast number of affixes concerning term of veterinary.			
Assessment examination method	**Time of Assessment**	**method of Assessment**	**hours**	**Marks**
	1sth assessment exam at 10th week	1sth midterm exam	1hrs	25
	2nd assessmentexam at 20th Week	2nd midterm exam	1hrs	25
		Written exam	3hrs	50

	One assessment Final exam by the end of the year			
Course Contents				
1st week	Highlights from the History of Medicine			
2nd week	Exercises of unit 1			
3rd week	Animal Anatomy			
4th week	Exercises of unit 2			
5th week	Disease: Its Symptoms and Treatments			
6th week	Exercises of unit 3			
7th week	Common Disease and Ailments			
8th week	Exercises of unit 4			
9th week	Physician and Medical Specialties			
10th week	**First Midterm Exam**			
11st week	Exercises of unit 5			
12nd week	Review Exercises: Chapters 1 - 5			
13rd week	Surgery			
14th week	Exercises of unit 6			
15th week	Careers in Health Care			
16th week	Exercises of unit 7			
17th week	First Aid in Medical Emergencies			
18th week	Exercises of unit 8			
19th week	High-Tech Medicine and Its Consequences			
20th week	**Second Midterm Exam**			
21st week	Exercises of unit 9			
22nd week	Review Exercises Chapters 6 - 9			
23rd week	Veterinary Terminology & definitions			
24th week	Veterinary Terminology & definitions			
25th week	Veterinary Terminology & definitions			
26th week	Veterinary Terminology & definitions			
27th week	Veterinary Terminology & definitions			
28th week	Veterinary Terminology & definitions			
29th week	Veterinary Terminology & definitions			
30th week	Veterinary Terminology & definitions			

Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Fish Disease

1	Course name	Fish Diseases
2	Course code	FIS506
3	**Course type: /general/specialty/optional**	specialty
4	**Accredited units**	3 credits
5	**Educational hours**	.....
6	Pre-required requirements	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences (BVMSc)
8	**Instruction Language**	English Language
9	**Date of course approval**	2022
Brief description of the course	This course covers everything related to fish diseases, as it includes infectious and non- infectious diseases that affect fish from fish farms and seawater fish. In addition to that, infect seawater fish, and therefore it is necessary to teach the student the types of bacterial, fungal, parasitic and viral diseases in addition to non-infectious diseases, the causes of their occurrence, the causative agent and the predisposing, the clinical symptoms that can occur, as well as the tissue changes that It can result from infection, its life cycle and how to treat and prevent it.	
Prescribed books	• Fish Medicine, ISBN: 0-7216-2629-7. • Australian Fish Farmer a Practical Guide to Aquaculture, ISBN: 9780643068650. • Fish Diseases and Medicine, ISBN 9781498727860. • Fish Disease: Diagnosis and Treatment, ISBN-13: 978-0813806976, ISBN-10: 0813806976	
Course duration	One academic year	

Teaching method	❖ Lectures. ❖ group interaction and discussion. ❖ self-directed activities. ❖ active participation. ❖ laboratory experiments. ❖ Scientific field visits.				
Objectives and target of the course	1. The student acquires the necessary knowledge of the basics of fish aquaculture methods and their feeding and how to protect them from diseases. 2. Knowledge of the types of fish diseases (Bacterial, Mycotic, Viral, Parasites and Nutritional deficiency). 3. Building the student's ability to differentiation between types of fish diseases.				
Evaluation method	**Time of Assessment**	**method of Assessment**		**hrs**	**Marks**
	1sth evaluation exam	1sth midterm exam		1hrs	35
	2nd evaluation exam	2nd midterm exam		1hrs	35
	3rd evaluation Final exam →	Paper exam		3hrs	100
		Pract exam		1hr	100
		Oral exam		15min	100
Course contents					
1th week	**Aquaculture:** **Aim of fish culture.** How we can establish successful fish culture. Classified of aquaculture according to density of fish per cubic meter (m3). Extensive system (advantage and disadvantage). Semi-intensive system (advantage and disadvantage). Intensive system (advantage and disadvantage).				
2nd week	Classified of aquaculture according to number of culture species. Classified of aquaculture according to water salinity. Classified of aquaculture according to water movement. Classified of aquaculture according to farming enclosures.				
3th week	Introduction of Stress cycle.				
4th week	Bacterial Fish Diseases Classification. - Septicemic Diseases. - Motile Aeromonas Septicemia: Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control.				
5th week	Furunculosis. Vibriosis (Salt Water Furunculosis): Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control.				
6th week	Pseudomonas Septicemia:				

	Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control.
7th week	Yersiniosis (ERM). Enteric Septicemia of Catfish (ESC): Emphysematous Putrefactive Disease of Catfish (EPDC): Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control.
8th week	Phobacteriosis: Streptococcosis: Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control.
9th week	Bacterial Gill Disease, Columnaris, Bacterial Gill Disease, Coldwater Diseases: Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control.
10th week	**1thMIDTERM EXAM**
11st week	Chronic granulomatous Diseases, Bacterial Kidney Disease, Mycobacteriosis, Nocardiosis: Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment, and control.
12nd week	Mycotic Diseases, Saprolegniosis Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
13rd week	Branchiomycosis, Icthyophonosis, Phaecomycosis: Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
14th week	Spring Viremia of Carp, Viral Hemorrhagic Septicemia: Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
15th week	Viral Hemorrhagic Septicemia, Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
16th week	Infectious Hematopoietic Necrosis: Infectious Salmon Anemia Influenza, Viral Nervous Necrosis. Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
17th week	Taura Syndrome Virus, White Spot Syndrome Virus: Large Mouth Bass Virus.

	Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
18th week	Lymphocystis Disease Virus, Carp Pox, Red Seabream Iridovirus. Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment, and control.
19th week	Parasitic Diseases: Introduction- Classification -External Protozoal Diseases: Ciliated & protozoa: 1- White spot disease (freshwater & marine). Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control.
20th week	**2nd MIDTERM EXAM**
21st week	2-Trichodinosis, Chilodinellosis, Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control.
22nd week	3-Epistylis. Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control.
23rd week	Flagellated Protozoal Diseases: 1.External flagellated protozoa: Oodinum, Amyloodinum, Icthyobodo infections, cryptobiosis Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control.
24th week	2.Internal Flagellated protozoa: A. Hemoflagellates: Trypanosomiasis&Trypanoplasmosis Intestinal flagellates: Hexamitiosis Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control.
25thweek	1.Tissue sporulated protozoa: A. Muscle tissue: Microsporidia. B. Cartilagenous tissue: Myxosporidia. Myxosomacerebralis (Whirling Disease) Miscellaneous tissues: Myxobolustilapiae Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control.
26th week	Helminthes infestations: 1.Trematodes: classification a.Monogeneans: i. Dactylogyrus

	ii. Cichlidogyrus iii. Gyrodactyllus Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control. b.Digeneans: c.Diplostomatidae: 1) Black spot disease. 2) Parasitic cataract. Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control. i. Clinostomatidae : Yellow grub disease. Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control. Sanguinicola: Fish blood flukes. Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control.
27th week	1.Nematodes: i.Ambliceacum & Contracecum (heart worms). Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control. ii. Nephrocephala. Anisakis. Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control.
28th week	Parasitic crustaceans: 1. Barnchiura: Argulus (Fish lice). 2. Copepoda: i. Ergasillus (Gill maggot). Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control. ii. Lernea (Anchor worm). Introduction, Etiology (brief description of bacteria classification), Epidemiology, Clinical signs and lesions, Diagnosis, Treatment and Control.
29th week	classification 1.Chemical noninfectious diseases a. Nitrite toxicity (Brown blood disease). b. Ammonia toxicity (Environmental gill disease). c. Environmenta lhypoxia.
30th week	2.Physical noninfectious diseases a. Gas Bubble Disease.

	b. Thermal shock. c. High water current
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
General skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Change and modification in the course	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Clinical Pathology

1	**Course name**	Clinical Pathology
2	**Course code**	CLP401
3	**Course type: /general/specialty/optional**	Specialist
4	**Accredited units**	3 Credit
5	**Educational hours**	.....
6	**Pre-required requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences
8	**Instruction Language**	English
9	**Date of course approval**	2022

<table>
<tr><td>Brief description of the course</td><td colspan="4">It is a medical science that deals with the diagnosis of disease based on the laboratory examination of body fluids, such as blood and urine using the tools of hematology, microbiology, parasitology, clinical chemistry, and molecular pathology.</td></tr>
<tr><td>Prescribed books</td><td colspan="4">Books:
•Schalm's Veterinary Hematology. ISBN-13: 978-0813817989 ISBN-10: 0813817986.
• Veterinary Clinical Pathology. ISBN-13: 978-1482225877. ISBN-10: 1482225875.
• Animal Clinical Chemistry. ISBN 9781420080117.
• Clinical Parasitology. eBook ISBN: 9781455709632
• Diagnostic Microbiology.ISBN-13: 978-0323681056. ISBN-10: 0323681050</td></tr>
<tr><td>Course duration</td><td colspan="4">One academic year.</td></tr>
<tr><td>Teaching method</td><td colspan="4">❖ Lectures.
❖ group interaction and discussion.
❖ self-directed activities.
❖ active participation.
❖ laboratory experiments.
❖ Farms and Food and feed plant visits.</td></tr>
<tr><td>Objectives and target of the course</td><td colspan="4">• Introducing the student to the metallurgical methods of establishing and managing a laboratory that responds to the requirement of diagnosis and treatment of animal diseases and how to link the information that studies in the preclinical stages with the clinical stages.
• Familiarizing students with the best methods for collecting samples and using in laboratory analyzes.
• Conducting the necessary analyzes to know the prognosis of the disease during and after treatment and the fate of the animal in term of benefit from treatment or death.
• Familiarizing student with scientific methods for writing the result of the analyzes by providing the veterinarian in diagnosis and treating diseases of animals and birds.</td></tr>
<tr><td rowspan="5">Assessment examination method</td><td>Time of Assessment</td><td>method of Assessment</td><td>hrs.</td><td>Marks</td></tr>
<tr><td>1st assessment exam at 10th week</td><td>1st midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td>2nd assessment exam at 20th Week</td><td>2nd midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td rowspan="3">3rd assessment → Final exam by the end of the year</td><td>Written exam</td><td>3hrs</td><td>50</td></tr>
<tr><td>Pract exam</td><td>1hr</td><td>20</td></tr>
<tr><td>Oral exam</td><td>1hr</td><td>10</td></tr>
<tr><td colspan="5">Course contents</td></tr>
<tr><td>1st week</td><td colspan="4">Introduction, Meaning, Branches and Importance of Clinical Pathology.
1. Clinical hematology: Functions of Blood and Hematopoiesis (hemopoiesis): Cell of Hematopoiesis, Regulation of Hematopoiesis.
Erythropoiesis: Erythrocyte maturation sequence and Erythrocyte (Red blood cells).</td></tr>
<tr><td>2nd week</td><td colspan="4">The Myeloid Granulocytic Series: Granulocytes (Leukopoiesis) and A granulocytes Erythron: meaning, Hemoglobin, Types of Hemoglobin, Reactions (forms) of Hb, Fate of old RBCs, RBCs normal and abnormal morphology of animal species and Laboratory evaluation of Erythron.</td></tr>
</table>

3rd week	The Myeloid Granulocytic Series: Granulocytes (Leukopoiesis) and A granulocytes Erythron: meaning, Hemoglobin, Types of Hemoglobin, Reactions (forms) of Hb, Fate of old RBCs, RBCs normal and abnormal morphology of animal species and Laboratory evaluation of Erythron.
4th week	Bone Marrow Examination: Bone Marrow Structure, functions, Types, Indications for Bone Marrow aspiration, Collection of samples, and Technique for bone marrow aspiration, Preparation of the smear and Examination of the stained slide and Interpretation
5th week	Hemostasis and coagulation of blood: Factors involved in hemostasis, laboratory tests for coagulation defects – general techniques, testes for measuring intrinsic system factors and laboratory finding in hemorrhagic disorder
6th week	RBCs disorders: Anemia, Polycythemia, Causes and Classification of Anemia, Importance of RBCs Indices, diagnosis and treatment and clinical cases.
7th week	RBCs disorders: Anemia, Polycythemia, Causes and Classification of Anemia, Importance of RBCs Indices, diagnosis and treatment and clinical cases.
8th week	RBCs disorders: Anemia, Polycythemia, Causes and Classification of Anemia, Importance of RBCs Indices, diagnosis and treatment and clinical cases.
9th week	Hemiparasites (Blood Parasites): Babesia, Theileria, Ana plasma and Trypanosomiasis.
10th week	**1st MIDTERM EXAM**
11st week	White blood cells (Leukocytes): Types of blood cells, Blood Cells Production, Granulocyte Maturation and Maturation and Morphology of Immature Granulocytes.
12nd week	Diseases of leukocytes (non-neoplastic). Neoplasia of hematopoietic tissues.
13rd week	Diseases of leukocytes (non-neoplastic). Neoplasia of hematopoietic tissues.
14th week	Avian clinical pathology: Avian hematology. Avian chemistries and examination of avian droppings.
15th week	2. Clinical parasitology: A. Internal parasites: Diagnosis of G.I. parasites, clinical signs, Fecal sample, collection, preservation, Macroscopical examination of Feces and Microscopical examination. Hem-parasites, Clinical signs, Sampling and clinical cases
16th week	B. External parasites, Laboratory diagnosis of mange:Sampling, processing, differentiation.
17th week	3. Clinical Biochemistry: a. Kidney and Kidney function test: Introduction, pathophysiology, Important diseases, Tests for glomerular function, Tests for tubular function, Urinalysis and clinical cases.

18th week	3. Clinical Biochemistry: a. Kidney and Kidney function test: Introduction, pathophysiology, Important diseases, Tests for glomerular function, Tests for tubular function, Urinalysis and clinical cases.
19th week	b. Acid base balance – water and electrolytes. Introduction, meaning, disorders (imbalance) and Clinical cases.
20th week	**2nd MIDTERM EXAM**
21st week	**c. Liver and liver function tests:** Introduction: structure & physiology of the liver,
22nd week	Important liver diseases, Clinical signs, laboratory tests, Serum enzymes, Biochemical test and clinical cases.
23rd week	d. Plasma proteins: Fractionation, Measurement, Total plasma proteins, Albumin – globulin ratio, Types, functions, changes, clinical interpretation and clinical cases.
24th week	d. Plasma proteins: Fractionation, Measurement, Total plasma proteins, Albumin – globulin ratio, Types, functions, changes, clinical interpretation and clinical cases.
25th week	e. Carbohydrate metabolism and function of the Pancreas and digestive tract: Introduction: carbohydrate metabolism, Physiology & histology of pancreas, Diseases of exocrine pancreas, Clinical signs and lab, tests/ Examination of feces, Blood biochemistry, Hematological changes, clinical cases and digestive diseases. f. Adrenal and pituitary function: Anterior pituitary (Adenohypophysis), Posterior pituitary (Neurohypophysis), adrenal cortex and adrenal medulla.
26th week	e. Carbohydrate metabolism and function of the Pancreas and digestive tract: Introduction: carbohydrate metabolism, Physiology & histology of pancreas, Diseases of exocrine pancreas, Clinical signs and lab, tests/ Examination of feces, Blood biochemistry, Hematological changes, clinical cases and digestive diseases. Thyroid function: Diseases of the thyroid and thyroid function test.
27th week	Mineral balance and parathyroid function: Calcium and phosphorus metabolism, Calcium and phosphorus in blood, diseases of parathyroid, other causes of mineral imbalance and magnesium balance. g. Diagnostic cytology, synovial fluid, genital fluids and cerebrospinal fluid: Indications, techniques, laboratory examination of fluids and alteration of fluid in diseases.
28th week	4. Clinical Microbiology: Introduction, Sampling, preparation of direct smears, Direct rapid lab, Bacterial culture methods, identification and Diagnosis of certain important infectious Diseases: a- Diseases causing sudden death. b- Granulomatous diseases. c- Diseases causing abortion. d- Diseases causing diarrhea. Field and laboratory diagnosis of mastitis.
29th week	Cases study
30th week	Cases study

Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
General skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Change and modification in the course	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Genetics and Animal Breeding

1	**Course name**	Genetics and Animal Breeding
2	**Course code**	GAB204
3	**Course type: /general/specialty/optional**	**specialty**
4	**Accredited units**	3 Credit
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences (BVMSc)
8	**Instruction Language**	English
9	**Date of course approval**	2022
Brief description of the course	• The course aimed to introduce the principles of molecular biology, genetics and population genetics as well as animal breeding. • This course designed to use these principles in livestock improvement. • The course will also introduce to the student types of genetic syndromes and mutations and some genetic tests used to identify the genetic defects. • This course will present students to the principles and concepts of types of basic statistical analysis used to describe and evaluate animal populations. • This course then discusses selection principles for short- and long-term responses on herd improvement. • This course focuses on interpretation of performance records and estimated genetic values. • The course also aimed to explain heritability in different classes of livestock and develop a set of aims for a breeding program. • This course will introduce traditional and modern techniques that can assist them in the scientific and research field.	
Prescribed books	**Books:** •Understanding Animal Breeding -ISBN 9781292052069.	

<table>
<tr><td></td><td colspan="4">• Introduction to veterinary genetics -ISBN 978-1-405-16832-8.
• Principles of genetics -ISBN 978-0-683-30618-7.
• Genetics of livestock improvement -ISBN 978-0023539008.
• Molecular Biology Made Simple and Fun -ISBN 1889899070.
• Color atlas of genetics ISBN 9783132414419.</td></tr>
<tr><td>Course duration</td><td colspan="4">One academic year.</td></tr>
<tr><td>Teaching method</td><td colspan="4">❖ Lectures.
❖ group interaction and discussion.
❖ self-directed activities.
❖ active participation.
❖ laboratory experiments.
❖ the interne office hours for the teaching staff member.</td></tr>
<tr><td>Objectives and target of the course</td><td colspan="4">• The course aimed to introduce the principles of molecular biology, genetics, and population genetics as well as animal breeding.
• This course designed to use these principles in livestock improvement.
• The course will also introduce to the student types of genetic syndromes and mutations and some genetic tests used to identify the genetic defects.
• This course will present students to the principles and concepts of types of basic statistical analysis used to describe and evaluate animal populations.
• This course then discusses selection principles for short- and long-term responses on herd improvement.
• This course focuses on interpretation of performance records and estimated genetic values.
• The course also aimed to explain heritability in different classes of livestock and develop a set of aims for a breeding program.
• This course will introduce traditional and modern techniques that can assist them in the scientific and research field.</td></tr>
<tr><td rowspan="5">Assessment examination method</td><td>Time of Assessment</td><td>method of Assessment</td><td>hrs</td><td>Marks</td></tr>
<tr><td>1sth assessment exam at 10th week</td><td>1sth midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td>2nd assessment exam at 20th Week</td><td>2nd midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td rowspan="3">3rd assessment ➔Final exam by the end of the year</td><td>Written exam</td><td>3hrs</td><td>50</td></tr>
<tr><td>Pract exam</td><td>1hr</td><td>20</td></tr>
<tr><td>Oral exam</td><td>1hr</td><td>10</td></tr>
<tr><td colspan="5">Course contents</td></tr>
<tr><td>1st week</td><td colspan="4">INTRODUCTION:
• An overview
• Brief history
• Basic concepts of genetics.</td></tr>
<tr><td>2nd week</td><td colspan="4">CYTOGENETIC:
• Chromosomes
• Sex chromosomes
• Gametogenesis
• Sex determination
• Dosage compensation
• Twins and genetics</td></tr>
</table>

	• Karyotype.
3rd week	***CYTOGENETIC:*** • Chromosomes • Sex chromosomes • Gametogenesis • Sex determination • Dosage compensation • Twins and genetics • Karyotype.
4th week	***MOLECULAR GENETICS:*** • Nucleic acids • Nucleoproteins • Nucleosome • DNA packaging • Types of DNA • Gene and Genetic code • DNA replication • DNA repair • Mitochondrial DNA • Flow of genetic information • Gene regulation • DNA & RNA extraction. • Sequencing • Sequencing analysis • Recombinant DNA (Restriction enzymes/ Gene Transfer/ Gene Knockout/knockdown). • DNA libraries /Cloning
5th week	***MOLECULAR GENETICS:*** • Nucleic acids • Nucleoproteins • Nucleosome • DNA packaging • Types of DNA • Gene and Genetic code • DNA replication • DNA repair • Mitochondrial DNA • Flow of genetic information • Gene regulation • DNA & RNA extraction. • Sequencing • Sequencing analysis • Recombinant DNA (Restriction enzymes/ Gene Transfer/ Gene Knockout/knockdown). • DNA libraries /Cloning
6th week	***INTRODUCTION TO MENDELIAN GENETICS:*** • Basic terminology • Mendel's laws • Monohybrid cross

	• Polyhybrid crosses
7th week	***INTRODUCTION TO MENDELIAN GENETICS:*** • Basic terminology • Mendel's laws • Monohybrid cross • Polyhybrid crosses
8th week	***GENETIC MUTATIONS:*** • Mutagens • Mutagenesis. • Chromosomal mutations
9th week	***GENETIC MUTATIONS:*** • Mutagens • Mutagenesis. • Chromosomal mutations
10th week	**1stMIDTERM EXAM**
11st week	***GENETIC MUTATIONS:*** • Mutagens • Mutagenesis. • Chromosomal mutations
12nd week	***GENETIC MUTATIONS:*** • Chromosomal mutations • Gene mutations. ***GENETIC DISEASES:*** • Syndromes • Mitochondrial diseases. • Genetic resistance to diseases.
13rd week	***GENETIC MUTATIONS:*** • Chromosomal mutations • Gene mutations. ***GENETIC DISEASES:*** • Syndromes • Mitochondrial diseases. • Genetic resistance to diseases.
14th week	***INTERACTION OF GENES:*** • Phenotypic expression of genes. • Modifications of inheritance ratios. • Additive genetic patterns. • Non additive genetic patterns. • Cause of variations in gene expression.
15th week	***INTERACTION OF GENES:*** • Phenotypic expression of genes. • Modifications of inheritance ratios. • Additive genetic patterns. • Non additive genetic patterns. • Cause of variations in gene expression.
16th week	***CAUSES OF VARIATION IN PHENOTYPIC RATIOS:*** • Linkage of genes: Types of linkage • Types of Sex-linked inheritance

	• Sex-linked inheritance (X-linked genes/ X-Y linked genes & X-Y linked genes) • Sex-influenced inheritance. • Sex-limited inheritance.
17th week	***CAUSES OF VARIATION IN PHENOTYPIC RATIOS:*** • Linkage of genes: Types of linkage • Types of Sex-linked inheritance • Sex-linked inheritance (X-linked genes/ X-Y linked genes & X-Y linked genes) • Sex-influenced inheritance. • Sex-limited inheritance.
18th week	***SEGREGATION AND RECOMBINATION OF GENES:*** • Probability • Segregation of genes in the gametes • Recombination of genes in the zygotes • Linkage, recombination and crossing-over • Gene mapping. • Genetic distance between gene loci and recombination frequency.
19th week	***SEGREGATION AND RECOMBINATION OF GENES:*** • Probability • Segregation of genes in the gametes • Recombination of genes in the zygotes • Linkage, recombination and crossing-over • Gene mapping. • Genetic distance between gene loci and recombination frequency.
20th week	**2nd MIDTERM EXAM**
21st week	***EVOLUTIONARY GENETICS:*** • Genetic variation in natural populations • Genetic Markers • Segregation analysis with genetic markers. • Molecular and evolution.
22nd week	***EVOLUTIONARY GENETICS:*** • Genetic variation in natural populations • Genetic Markers • Segregation analysis with genetic markers. • Molecular and evolution.
23rd week	***EVOLUTIONARY GENETICS:*** • Genetic variation in natural populations • Genetic Markers • Segregation analysis with genetic markers. • Molecular and evolution.
24th week	***INTRODUCTION: An overview.*** • Overview of the livestock industry • History of Animal Breeding. • Animal breed characterization/ **MENDELIAN INHERITANCE:** • Patterns of Gene Inheritance • Non-Mendelian Inheritance

	• The Genetic Model
25th week	***Population Genetics applied to Animal Breeding:*** • Introduction to Population Genetics • Population Structure and Gene Flow • Gene and genotypic frequencies • Forces changing gene frequencies in populations • Hardy-Weinberg principle • ABO system
26th week	***GENETIC AND PHENOTYPIC VARIATION:*** • Basic statistics for animal breeding • Mean, Variance and standard deviation • Probability distributions • Variance and covariance components • Correlation and regression • Analysis of variance(ANOVA) • Genetic parameters • Hypothesis testing for a parameter of a population • Estimation of genetic parameters; • Breeding value (Computation and uses) • Heritability • Repeatability. • Genetic correlation, phenotypic correlation and environmental correlation • Production and management- • Heredity and environment. • Inheritance of quantitative traits-Inheritance of qualitative traits
27th week	***PRINCIPLES OF SELECTION:*** • Selection and its effects • Genotypic and phenotypic effects of selection • Basic concept; selection differential, intensity of selection. • Response to selection and generation Interval/Annual genetic gain • Multiple trait selection methods (Tandem selection/ Independent culling levels/ Selection Index) • Application of genomic selection • Introduction to marker-assisted selection.
28th week	***PROGRAMS FOR GENETIC EVALUATION:*** • Introduction to performance programs • Adjustments of records • On-farm testing • Across-herd evaluation (Central test stations • Reference sire concept • EBVs, EPDs and accuracy). • Breeding value and genetic prediction • Nucleus breeding schemes; Reference sire schemes- • Progeny testing- • Repeated records, Repeatability, and Estimated- • Producing Ability

29th week	• Mating systems for simply inherited traits, Random and assortative mating- • Mating Strategies Based on Animal Performance • Mating Strategies Based on Pedigree- • Inbreeding and relationship • Computing level of inbreeding and relationship • Effects of inbreeding • Linebreeding. • Methods of estimating inbreeding coefficient • Breeding value, estimation of breeding value • Outbreeding • Crossbreeding • Developing crossbreeding systems. • Hybrid vigor, Types of hybrid vigor. • Quick genetic change
30th week	***MODERN TECHNOLOGIES FOR ANIMAL BREEDING*:** • Animal Breeding programmers for rural development Impact of A.I and E.T/ Embryo manipulation, Sex control • Testing for genetic abnormalities • Gene mapping and Quantitative Trait Loci (QTL) • Mapping and its application in animal breeding • Selection for disease resistance and development. • Mapping of disease resistance genes in livestock
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Histology and Embryology

1	**Course name**	Histology and Embryology
2	**Course code**	HIE102
3	**Course type: /general/specialty/optional**	specialty
4	**Accredited units**	5 Credit
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non

7	**Program offered the course**	Bachelor of Veterinary Medical Sciences (BVMSc)
8	**Instruction Language**	English
9	**Date of course approval**	2022

Brief description of the course	Veterinary histology is the science that focuses on the detailed morphology of domestic animals and correlates specific structures with function and is the basis for understanding abnormal microscopic lesions (histopathology), immunology, clinical pathology, and several other disciplines in veterinary medicine. Veterinary embryology is to understand of the origin, development, structure, final form and relationships of tissues and organs in the embryo and foetus.
Prescribed books	**Books:** •Dellmann's Textbooks of veterinary histology-ISBN 978-0-7817-4148-4 • Textbook of applied veterinary histology-ISBN 0-8016-6610-4. • Colour Atlas of veterinary histology -ISBN 978-0-683-30618-7 • Veterinary Embryology-ISBN 978-1-4051-1147-8 • Patten`s foundations of embryology-ISBN 0-07-009875. • Textbook of veterinary histology ISBN 978-0-7216-8174-0 • Comparative Veterinary Histology with Clinical Correlates-ISBN 0-8138-2874-0 • Junqueira's Basic Histology: Text and Atlas -ISBN 978-1260288414.
Course duration	One academic year.
Teaching method	❖ Lectures. ❖ Group interaction and discussion. ❖ Self-directed activities. ❖ Active participation. ❖ Laboratory experiments. ❖ The interne office hours for the teaching staff member.
Objectives and target of the course	• To acquire a basic background in histology and comparative histology in different species and to understand the properties of cells and their interactions with one another as components of tissues and organs. • To understand how structure and function correlate at the microscopic level and be able to describe the normal structure and function of various cell types, tissues, and organs, and to differentiate their histological structures from each other through examination as well as in different species. • To acquire a basic background of embryology and understanding of the embryonic and fetal stages of developing organisms to its full term of development To discuss the various developmental abnormalities, occur during the stages of development.

	Time of Assessment	**method of Assessment**	**hrs**	**Marks**

Assessment examination method	1sth assessment exam at 10th week	1sth midterm exam	1hrs	10
	2nd assessment exam at 20th Week	2nd midterm exam	1hrs	10
	3rd assessment ➔ Final exam by the end of the year	Written exam	3hrs	50
		Pract exam	1hr	20
		Oral exam	1hr	10
Course contents				
1st week	Cytology and Molecular cell biology			
2nd week	Cytology and Epithelial tissue			
3rd week	Epithelial tissue			
4th week	Connective Tissue: Different types of connective tissue			
5th week	Connective Tissue: Bone and cartilage			
6th week	Connective Tissue: Blood			
7th week	Muscular tissue and Nervous tissue			
8th week	Nervous tissue and System			
9th week	Cardiovascular System			
10th week	**1st Midterm Exam**			
11st week	Immune System			
12nd week	Digestive System			
13rd week	Digestive System			
14th week	Digestive System			
15th week	Urinary System and Male Genital System			
16th week	Male Genital System			
17th week	Male Genital System and Female Genital System			
18th week	Female Genital System			
19th week	Respiratory System and Endocrine System			
20th week	**2ndMIDTERM EXAM**			
21st week	Endocrine System and Integumentary System			
22nd week	Integumentary System and Special senses			
23rd week	Introduction and gametogenesis			
24th week	Fertilization, cleavage, implantation and placentation			
25th week	Fetal membranes, gastrulation, mesoderm and notochord formation			
26th week	Neurulation and eye development			
27th week	Development of urogenital organs			
28th week	Development of digestive system			
29th week	Development of cardiovascular system			

30th week	Development of respiratory system and limbs
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Milk Hygiene

1	**Course name**	Milk Hygiene
2	**Course Code**	MIH403
3	**Course type: /general/specialty/optional**	Specialist
4	**Accredited units**	3 credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences
8	**Instruction Language**	English Language
9	**Date of course approval**	2022
Brief description of the course	This course covers the physical and chemical properties of milk,heat treatments of milk, factors affecting the quality of milk, sources of contamination of milk. Diseases transmitted, food poisoning, indicator organisms, cleaning and disinfecting of milk plants,mastitis, residues of antibiotics and pesticides,HACCP,and how to protect consumers from fraud and compliance with Libyan Standard Specifications.	
Prescribed books	**Books:** •Dairy Microbiology Handbook. ISBN:9780471723950. • Modern Food microbiology. 978-0-387-23413-7. • Dairy Processing Handbook. ISBN-10 : 9163134276. ISBN-13 : 978-9163134272.	
Course duration	One academic year .	
Teaching method	❖ Lectures.	

	❖ group interaction and discussion. ❖ self-directed activities. ❖ active participation. ❖ laboratory experiments.			
Objectives and target of the course	• Knowing the composition and properties of natural and chemical milk and the factors affecting it and knowing the healthy methods of milk production and its sources of pollution. • Knowing the methods of producing pasteurized milk and long-life milk and the factors affecting their validity and knowing the fermentation of natural and unnatural milk. • Knowledge of diseases transmitted through milk of animal and human origin. • Understand the role of microorganisms and their relationship to dairy products and identify pathogenic microorganisms and microorganisms that cause dairy product spoilage and how to control them. • Assessing the importance of applying microbiological standards with reference to public health systems in the dairy industry to produce safe milk.			
Assessment examination method	**Time of Assessment**	**method of Assessment**	**hours**	**Marks**
	1sth assessment exam at 10th week	1sth midterm exam	1hrs	10
	2nd assessment exam at 20th Week	2nd midterm exam	1hrs	10
	3rd assessment → Final exam by the end of the year	Written exam	3hrs	50
		Practice exam	3hr	20
		Oral exam	1hr	10
Fourth Year				
Course contents				
1st week	Introduction of Milk Hygiene.			
2nd week	Physical Properties of Milk			
3rd week	Physical Properties of Milk			
4th week	Chemical Composition of Milk			
5th week	Chemical Composition of Milk			
6th week	Sources of Milk Contamination			
7th week	Factors Affecting The Microbial Growth in Foods			
8th week	Normal Fermentation of Milk			
9th week	Abnormal Fermentation of Milk			
10th week	**1st MIDTERM EXAM**			
11st week	Heat Treatment of Milk			

12nd week	Heat Treatment of Milk
13rd week	Milk-borne Diseases
14th week	Milk-borne Diseases
15th week	Food poisoning
16th week	Cleaning and Sanitizing Dairy Utensils and Equipment
17th week	Cleaning and Sanitizing Dairy Utensils and Equipment
18th week	Laboratory Diagnostic Methods for Detection of Sub-clinical mastitis
19th week	Laboratory Diagnostic Methods for Detection of Sub-clinical mastitis
20th week	**2ndMIDTERM EXAM**
21st week	Dairy Products: 1- Cream: 2- Butter and Ghee:
22nd week	Fermented Dairy Products
23rd week	Microbiology of therapeutic milks
24th week	Dried Milk Products
25th week	Concentrated Milk:
26th week	Ice cream
27th week	Cheese
28th week	Cheese
29th week	Edible Eggs and Egg Products
30th week	Edible Eggs and Egg Products
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Veterinary Parasitology

1	**Course name**	Veterinary Parasitology
2	**Course Code**	PAR302
3	**Course type: /general/specialty/optional**	**specialty**
4	**Accredited units**	7 credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences
8	**Instruction Language**	English Language
9	**Date of course approval**	2022

Brief description of the course	• Study the morphology, life cycle, transmission, pathogenesis, diagnosis, control of most important nematodes, cestodes and trematodes parasites affecting mammals, birds and fish. • Study the morphology, life cycle, transmission, pathogenesis, diagnosis, control of most important protozoan parasites affecting mammals, birds and fish. Study the morphology, life cycle, veterinary importance and control of most important arthropods affecting mammals and birds.
Prescribed books	**Books:** • •Helminths, Arthropods and Protozoa of Domesticated Animals.ISBN-10: 817671089X. ISBN-13 : 978-8176710893
Course duration	One academic year.
Teaching method	❖ Lectures. ❖ Group interaction and discussion. ❖ Self-directed activities. ❖ Active participation. ❖ Laboratory experiments.
Objectives and target of the course	• Classify the list of nematodes, cestodes and trematodes, protozoa, and arthropods of veterinary importance. • Illustrate the morphological characters, life cycle, transmission, disease and clinical signs of important nematodes, cestodes and trematodes, protozoa and arthropods. • Mention the veterinary importance of nematodes, cestodes and trematodes, protozoa, and arthropods and methods for diagnosis. • Choose an appropriate method for diagnosis. Choose an appropriate method for control.

Assessment examination method	**Time of Assessment**	**method of Assessment**	**hrs**	**Marks**
	1sth assessment exam at 10th week	1sth midterm exam	1hrs	10

	2nd assessment exam at 20th Week	2nd midterm exam	1hrs	10
	3rd assessment → Final exam by the end of the year	Written exam	3hrs	50
		Pract exam	1hr	20
		Oral exam	1hr	10
Course contents				
1st week	• Introduction: Definition, Structure, Locomotion, Nutrition and respiration • Introduction: reproduction and Classification of protozoa • Trypanosomatidae (Developmental stages of trypanosomatidae, Genus Trypanosoma, groups of genus Trypanosoma, species of salivarian Trypanosomes, morphology, transmission.			
2nd week	• Life cycle of salivarian trypanosomes, pathogenesis diagnosis and control. • Species of stercorarian Trypanosomes, morphology, transmission, Life cycle of stercorarian trypanosomes), pathogenesis, diagnosis and control. • Genus Leishmania (General morphology of Leishmania, Life cycle of Leishmania)			
3rd week	• Genus Leishmania (Species of Leishmania, Pathogenesis, Diagnosis and control. • Trichomonadidae (Tritrichomonas foetus, Trichomonas gallinae and T. gallinarum) Morphology, Life cycle, Pathogenesis, Diagnosis and control. • Monocercomonadidae (Histomonas meleagridis) Morphology, Transmission, reproduction, Pathogenesis, Diagnosis and control.			
4th week	• Entamoebidae (Entamoeba histolytica, Entamoeba coli Endolimax nana, Iodamoeba buetschlii and Dientamoeba fragilis), Morphology, Life cycle, Transmission, Pathogenesis, Diagnosis and control. • Eimeriidae (Eimeria) Morphology, Life cycle, Transmission, Diagnosis and control • Isospora, Wenyonella and Tyzzeria) Morphology, Life cycle, Transmission, Diagnosis and control.			
5th week	• Sarcocystidae (Toxoplasma) Morphology, Life cycle, Transmission, Pathogenesis, Diagnosis and control. • Sarcocystidae (Sarcocystis) Morphology, Life cycle, Transmission, Pathogenesis, Diagnosis and control. • Sarcocystidae (Besnoitia and Neospora), Morphology, Life cycle, Transmission, Pathogenesis, Diagnosis and control.			

6th week	• Plasmodiidae (Plasmodium), Morphology, Life cycle, Transmission, Pathogenesis, Diagnosis and control. • Plasmodiidae (Haemoproteus and Leukocytozoon), Morphology, Life cycle, Transmission, Pathogenesis, Diagnosis and control. • Babesiidae (Babesia species), Morphology, Transmission.
7th week	• Babesiidae (Babesia species), Life cycle, Pathogenesis, Diagnosis and control. • Theileriidae (Theileria species) Morphology, Transmission, Life cycle, Pathogenesis, Diagnosis and control. • Theileriidae (Theileria species) Life cycle, Pathogenesis, Diagnosis and control.
8th week	• Rickettstials (Anaplasma) Morphology, Life cycle, Transmission, Pathogenesis, Diagnosis, and control. • Balantiididae (Balantidium coli) Morphology, Life cycle, Transmission, Pathogenesis, Diagnosis, and control. • Introduction to general Entomology History, classification, and economic importance.
9th week	• Distribution, life cycle, seasonal pattern, pathogenesis, economic significance of arthropods belonging to the Siphonaptera Distribution, life cycle, seasonal pattern, pathogenesis, economic significance of arthropods belonging to the Mallophaga (Bitting lice) • Distribution, life cycle, seasonal pattern, pathogenesis, economic significance of arthropods belonging to the Siphunculata (Sucking lice)
10th week	**1stMIDTERM EXAM**
11st week	• Distribution, life cycle, seasonal pattern, pathogenesis, economic significance of arthropods belonging to the family: Psycodidae. • Distribution, life cycle, seasonal pattern, pathogenesis, economic significance of arthropods belonging to the families: Cimicidae and Ceratopogonidae • Distribution, life cycle, seasonal pattern, pathogenesis, economic significance of arthropods belonging to the families: Tabanidae and Glossinidae
12nd week	• Distribution, life cycle, seasonal pattern, pathogenesis, economic significance of arthropods belonging to the families: Simulidae and Hippobocidae Muscidae. • Myiasis (definition and classification). • Myiasis producing flies (Calliphoridae, Sarcophagidae).

13rd week	• Myiasis producing flies (Oestridae, Gasterophilidae, Hypodermatidae). • Distribution, life cycle, seasonal pattern, pathogenesis, economic significance of arthropods belonging to the family: Ixodidae. • Distribution, life cycle, seasonal pattern, pathogenesis, economic significance of arthropods belonging to the family: Argasidae.
14th week	• Distribution, life cycle, seasonal pattern, pathogenesis, economic significance of arthropods belonging to the family: Psoroptidae • Distribution, life cycle, seasonal pattern, pathogenesis, economic significance of arthropods belonging to the family: Sarcoptidae • Distribution, life cycle, seasonal pattern, pathogenesis, economic significance of arthropods belonging to the families: Dermanyssidae and Demodicidae
15th week	• Introduction, types of association, Types of Parasites and Host, Mode of infection and fate of parasites in foreign host. • The effect of parasitism on hosts and parasites, Pathogenicity and mode of infection • Hosts reaction, immunity, protection, Economic importance
16th week	• Methods of Diagnosis, Scientific nomenclature. • Introduction to general nematodes, General morphology and life cycles. • Basic taxonomy. Methods of different Helminthic examination).
17th week	• Ascarididae (Ascaris and Parascaris). • Ascarididae (Toxocara and Toxascaris). • Anisakidae (Anisakis, Porrocaecum and contracaecum).
18th week	• Oxyuridae (*Oxyuris,* and *Entrobius*) • Oxyuridae (*Skrjabinema* and *Passalurus*) • Heterakidae (*Heterakis*)
19th week	• Ascaridiidae(*Ascaridia*)Subuluridae (*Subulura*) • Strongyloididae (*Strongyloides*) • Strongylidae (*Strongylus*)
20th week	**2nd Midterm exam**
21th week	• Strongylidae (*Oesophagostomum*) • Strongylidae (*Triodontophorus*) • Strongylidae (*Trichonema*)

22nd week	• *Chabertiidae (Chabertia)* • *Syngamidae (Syngamus)* • *Ancylostomatidae (Ancylostoma and Bunostomum)*
23rd week	• Trichostrongylidae: (Trichostrongylus and Oestertagia) • Trichostrongylidae: (Cooperia, and Nematodirus) • Trichostrongylidae (Haemonchus)
24th week	• Trichostrongylidae (*Marshallagia, Camelosrtongylus* and *Mecistocirrus)* • Dictyocaulidae (*Dictyocaulus*) Protostrongylidae (*Protostrongylus*) • Spiruridae (*Draschia* and *Habronema*)
25th week	• Theleziidae (*Thelazia, Spirocerca* and *Gongylonema*). • Filariidae (*Dirofilaria*) • Setariidae (*Setaria*) and Onchocercidae (*Onchocerca*)
26th week	• Trichinellidae (*Trichinella*) • Trichuridae (*Trichuris*) and Capillariidae (*Capillaria*) • Introduction to general cestodes, General morphology and life cycles
27th week	• Development of cestode and the common forms of metacestodes. • Basic taxonomy (Methods for examinations). • Anoplocephalidae (*Anoplocephala, Paranoplocephala,* and *Moniezia).*
28th week	• Thysanosomidae (*Avitellina, Stilesia,* and *Thysaniezia*). • Davainidae (*Davainea and Raillietina*). • Dipylidiidae (*Dipyllidium*) and Hymenolepididae (*Hymenolepis*).
29th week	• Taeniidae (*Taenia*). • Taeniidae (*Echinococcus*). • Mesocestoididae (*Mesocestoides*).
30th week	• *Diphyllobothriidae (Diphyllobothrium)* • *Introduction to general Trematodes, General morphology and life cycles and basic taxonomy* • *Dicrocoeliidae (Dicrocoelium)* • Heterophyidae (Heterophyes) • Opisthorchiidae (Opisthorchis and Chlonorchis) • Fasciolidae (Fasciola) • Echinostomatidae (Echinostoma) and Paragonimidae (Paragonimus) • Paramiphistomatidae (Paramphistomum) • Schistosomatidae (Schistosoma)
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.

General skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Change and modification in the course	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Veterinary Pathology

1	**Course name**	Veterinary Pathology
2	**Course code**	PAT303
3	**Course type: general/specialty/optional**	Specialty
4	**Accredited units**	7 Credits
5	**Educational hours**	.....
6	**Pre-required requirements**	Anatomy, Biochemistry, Histology, Genetics and Physiology
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences
8	**Instruction Language**	English Language
9	**Date of course approval**	2022

Brief description of the course	The course of Veterinary Pathology is designed to cover the basic knowledge of general and systemic pathological changes of the domestic animal diseases. It provides the student with the causes, pathogenesis and effect of diseases at the macroscopic and microscopic levels. This course is designed to provide students the procedure that should be taken to collect samples from the field up to laboratory methods to ensure the differential diagnosis of the disease.
Prescribed Books	Pathological basis of veterinary pathology 2. Pathology of domestic animals 3. Robbins and Cotran Pathologic Basis of Disease
Course duration	One academic year.
Teaching method	❖ Theoretical lectures by using data show projector ❖ Practical sessions by using data show projector, dissected specimen, postmortem examination and histological slides. ❖ Handout of lectures and practices ❖ Library

<table>
<tr><td></td><td colspan="4">❖ Student presentations and workshops</td></tr>
<tr><td>Objectives and target of the course</td><td colspan="4">• Provide the students with the basic concept of pathology.
• Recognize the diagnostic methods in describing the pathological changes.
• It is aimed to the study the time sequence of pathological changes and the mechanism of disease occurrence.
• Identify the interpretation of histological changes in order to reach the final diagnosis using the diagnostic methods.</td></tr>
<tr><td rowspan="6">Assessment examination method</td><td>Time of Assessment</td><td>method of Assessment</td><td>hours</td><td>Marks</td></tr>
<tr><td>1st assessment exam at 10th week</td><td>1sth midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td>2nd assessment exam at 20th Week</td><td>2nd midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td rowspan="3">3rd assessment → Final exam by the end of the year</td><td>Written exam</td><td>3hrs</td><td>50</td></tr>
<tr><td>Practice exam</td><td>2hr</td><td>20</td></tr>
<tr><td>Oral exam</td><td>1hr</td><td>10</td></tr>
<tr><td colspan="5">Course contents</td></tr>
<tr><td rowspan="2">1st week</td><td colspan="4">• Introduction to pathology, terminology
Definitions, basic terminology, branches of pathology.</td></tr>
<tr><td colspan="4">• Etiology of cell Injury and death
Causes of diseases (congenital and acquired).</td></tr>
<tr><td rowspan="2">2nd week</td><td colspan="4">• Cell injury and death: Causes of cell injury.</td></tr>
<tr><td colspan="4">• Mechanisms of cell injury.
• Mechanism of reversible cell injury.
• Mechanism of irreversible cell injury.</td></tr>
<tr><td>3rd week</td><td colspan="4">Types of cell injury:
• Acute cellular swelling
• Fatty change.
• Obesity.
• Hyaline degeneration.
• Mucoid degeneration.
Amyloid.</td></tr>
<tr><td>4th week</td><td colspan="4">Mineral deposition:
• Pathological calcification.
• Gout.
Pseudogout.</td></tr>
<tr><td>5th week</td><td colspan="4">Exogenous pigmentation.
Exogenous pigmentation:</td></tr>
<tr><td>6th week</td><td colspan="4">Endogenous pigmentation and haemoglobin derivatives.</td></tr>
</table>

7th week	**Disturbances in circulation** • Hyperemia and Congestion. • Edema.
8th week	**Disturbances in circulation** • Haemorrhage. • Thrombosis, Embolism, and shock.
9th week	**Inflammation:** • Acute inflammation.
10th week	**First Midterm Exam**
11st week	Chronic inflammation
12nd week	Healing& repair.
13rd week	**Disturbances in growth:** • Abnormal deficient growth. • Abnormal excessive growth. • Abnormal pattern of growth.
14th week	**Neoplasia:** • Definition and fundamentals of neoplasms. • Types. • Atiology and terminology. • Biological feature and spreading. • Tumor grading and staging.
15th week	**Diseases of Immunity:** • Disorders of the Immune System. • Immune reaction and hypersensitivity reactions. • Cytokine-Related Diseases. • Autoimmune Disease.
16th week	**Pathology of cardiovascular system:** • Congenital Cardiovascular Anomalies. • Pericardial Diseases. • Disease of Myocardium. • Endocarditis. • Blood vessels disease. • Neoplasm.
17th week	**Pathology of cardiovascular system:** • Congenital Cardiovascular Anomalies. • Pericardial Diseases. • Disease of Myocardium. • Endocarditis.

	• Blood vessels disease. • Neoplasm.
18th week	**Pathology of Respiratory system:** • Diseases of the Upper Respiratory Tract. • The Lung. • Pneumonia. • Pneumoconiosis. Pleuritis, Pleuro-pneumonia and neoplasm.
19th week	**Pathology of Respiratory system:** • Diseases of the Upper Respiratory Tract. • The Lung. • Pneumonia. • Pneumoconiosis. Pleuritis, Pleuro-pneumonia and neoplasm.
20th week	**Second Midterm Exam**
21st week	**Pathology of digestive system:** • Diseases of oral cavity. • Diseases of oesophagus. • Disease of forestomach.
22nd week	• Disease of abomasum and stomach. • Disease of intestine. • Disease of peritoneum.
23rd week	**Ppathology of Liver and Biliary System and Pancreas:** • Diseases of liver. • Disease of pancreas.
24th week	**Pathology of renal system:** • Congenital abnormalities. • Circulatory disturbances. • Glomerular disease. • Cystitis.
25th week	**Pathology of renal system:** • Congenital abnormalities. • Circulatory disturbances. • Glomerular disease. • Cystitis.
26th week	**Pathology of male system:** • Developmental anomalies of testis and circulatory disturbances.

	• Orchitis and testicular neoplasm. • Disease of epididymis, accessory glands and neoplasm.
27th week	**Pathology of female genital system and memory gland:** • Developmental anomalies. • Oophoritis, ovarian tumors and salpingitis. • Pathology of the uterus. Mastitis.
28th week	**Pathology of female genital system and memory gland:** • Developmental anomalies. • Oophoritis, ovarian tumors and salpingitis. • Pathology of the uterus. Mastitis.
29th week	**Pathology of nervous system:** • Nervous malformation. • Circulatory disturbances. • Spongiform encephalomyelitis. • Inflammation of the nervous tissue. • Selected bacterial, viral, fungal and parasitic diseases. Nervous neoplasia.
30th week	Pathology of skin and sense organs (eye and ear)
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Change and modification in the course	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Veterinary Pharmacology

1	**Course name**	Veterinary Pharmacology
2	**Course code**	PHA304
3	**Course type: /general/specialty/optional**	**specialty**
4	**Accredited units**	5 Credits

5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences (BVMSc)
8	**Instruction Language**	English
9	**Date of course approval**	2022

Brief description of the course	In Pharmacology student will study the basic principles and the mode of action of drugs which use in veterinary treatment, their pharmacokinetics, duration of effect, toxicity on animals, methods of decomposition, in addition to methods of administering drugs and appropriate doses with the study of drugs in the treatment of diseases, cardiovascular drugs and channel drugs alimentary; The study of medicines in the treatment of infectious diseases, gastrointestinal diseases, psychology and the treatment of chemotherapy treatment.
Prescribed books	**Books:** 1- Veterinary Pharmacology and Therapeutics 10th ed ISBN: 978-1-118-85588-1 2- Veterinary drug hand book 9th ed ISBN: 978-1119346494 3- Pharmacology 1th ed ISBN: 978-0683000856 4- Clinical Pharmacology 11th ed ISBN: 978-0702040849 5- Color atlas of Pharmacology 5th ed ISBN: 978-3132410657
Course duration	3lectures + 4hrs practicals/ one academic week .
Teaching method	❖ Lectures. ❖ group interaction and discussion. ❖ self-directed activities. ❖ active participation. ❖ laboratory experiments.
Objectives and target of the course	By studying the course, the student will have reliably demonstrated the ability to: • This course aims to introduce students to the mechanism and the effect of the body on the drug and the therapeutic effect of the drug on the body. • Introducing the student to the types of drugs and their ways of working on the different organs and cells of the body • The student's understanding of some of the factors that interfere with the methods of drug administration. • Students' awareness of the ways drugs work on the central and peripheral nervous systems • Identifying the different effects of the body on the drug, the different aspects of the drug's effect on the body, and the methods of detecting the active substance in different sources. • Building students' ability to remember and synthesize information • Writing laboratory reports and prescriptions for medicines

<table>
<tr><td></td><td colspan="4">• Develop the ability to link between the methods of drug administration and therapeutic uses to reach the desired treatment
• Implementation of students' survey of information and drawing conclusions.</td></tr>
<tr><td rowspan="6">Assessment examination method</td><td>Time of Assessment</td><td>method of Assessment</td><td>hrs</td><td>Marks</td></tr>
<tr><td>1sth assessment exam at 10th week</td><td>1sth midterm exam</td><td>1hrs</td><td>10</td></tr>
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<tr><td>Oral exam</td><td>1hr</td><td>10</td></tr>
<tr><td colspan="5">Course contents</td></tr>
<tr><td>1st week</td><td colspan="4">Welcome & Introduction:
- Drug and active principle.
- Plants as sources of effective medicines.
- Drug development.
- Congeneric drugs and name.
- Diversity
Routes of drug administration:
- Oral dosage forms.
- Drug administration.
- Drugs agents.
- Agents as vehicles.
- From application to distribution in the body.</td></tr>
<tr><td>2nd week</td><td colspan="4">• Pharmacodynamics (part 1):
- Cellular sites of action.
- Potential targets of drug action.
- Body barrier protection.
- Distribution in the body.
- External barriers of the body.
- Membrane permeation.
- Possible modes of drug distribution.
Pharmacodynamics (part 2):
- Binding to plasma proteins.
- Drug elimination.
- The liver as an excretory organ.
- Biotransformation of drugs.
- Drug metabolism by cytochrome P450.
- The kidney as an excretory organ.
- Presystemic elimination.</td></tr>
<tr><td>3rd week</td><td colspan="4">• Pharmacokinetics:
- Drug concentration in the body as a function of time-first Order (exponential) rate processes.</td></tr>
</table>

	- Time course of drug concentration in Plasma. - Accumulation: dose, dose interval, and plasma level fluctuation change in elimination characteristics during drug therapy. **Drugs acting on autonomic nervous system (part 1):** - Agonists-Antagonists. - Models of the molecular mechanism of agonist/antagonist action. - Other forms of antagonism. - Receptor types. - Mode of operation of G-protein coupled.
4th week	• **Drugs acting on autonomic nervous system (part 2):** • - Sympathetic nervous system. • - Structure of the sympathetic. • - Activity relationships of sympathomimetics. • - Indirect sympathomimetics. • - Parasympathetic nervous system. • - Parasympathomimetics. • **Drugs acting on autonomic nervous system (part 3):** • -Para sympatholytics. • -Ganglionic stimulants & depressants. • - Mechanisms and pathways.
5th week	**Skeletal muscle relaxants & stimulants** - Drugs affecting motor function. - Muscle relaxants. **Skeletal muscle relaxants & stimulants** - Non depolarizing muscle relaxants. - Depolarizing muscle relaxants. - CNS neurotransmitters and their antagonists.
6th week	**CNS stimulants:** - Cerebral stimulants, medullary stimulants. - Spinal cord stimulants. - Psychomimetics. - Hallucinogens. - Methylxanthines. **CNS inhibitory:** - Sedatives. - Hypnotics. - Anticonvulsants. - Tranquilizers.
7th week	**Analgesics (narcotic)** **Analgesics (NSAIDs)** • Antipyretic analgesics vs. NSAIDs. • Nonsteroidal anti- inflammatory drugs (NSAIDs). • Cyclooxygenase (COX) inhibitors.

8th week	**General anaesthetics (part 1):** - Definitions - Classification - Stages, Mechanisms of action - Volatile ana., Non-volatile ana. **General anaesthetics (part 2):** - Anesthetic drugs. - Inhalational anesthetics. - Injectable anesthetics.
9th week	**Local anaesthetics (part 1):** - Definitions. - Classification, Stages. - Mechanisms of action. **Local anaesthetics (part 2):** - types of local ana., individual local ana. drugs. - Sialagogues, antisialagogues & stomachics.
10th week	**1st MIDTERM EXAM**
11st week	**Drugs acting on digestive system (part 1):** - Emetics & antemetics. - Antacids. -Astringents & antidaiarheals. **Drugs acting on digestive system (part 2):** -Laxatives & purgatives. 1. Bulk laxatives. 2. Irritant laxatives. 2a. Small-bowel irritant purgative. 2b. Large-bowel irritant purgatives.
12nd week	**Drugs acting on digestive system (part 3):** 3. Lubricant laxatives. -Carminatives, cholagogues & choleretics. **Diuretics (part 1):** - Diuretics-an overview. - NaCl reabsorption in the kidney. - Osmotic diuretics. - Diuretics of the sulfonamide Type.
13rd week	**Diuretics (part 2):** - Potassium-sparing diuretics and vasopressin. - Potassium-sparing diuretics. - Vasopressin and derivatives. **Antidiuretics, uricosurics & urinary antiseptics:** -Gonadotropins & gonadotropin RFs. - Estrogens & antiestrogens; androgens & antiandrogens; progestogens & antiprogestogens.

14th week	**Drug affecting cardiac system (part 1):** - Cardiac stimulants, tonics, depressants & antiarrhythmics. -Vasoconstrictors, dilators, hypertensives & antihypertensives. **Drug affecting cardiac system (part 1):** - Antanaemics, coagulants & anticoagulants. - Anticholinergic Drug. - Neuroleptics, Chlorpromazine. -5HT3 Antagonist.
15th week	**- Cervical dilators, aphrodisiacs & anaphrodisiacs** **- Drugs affecting skin**
16th week	**Biogenic Amines:** - histamine, 5-HT, angiotensin, kinins. - prostaglandins & their antagonists Drugs affecting respiratory system (par 1): - Respiratory stimulants & depressants.
17th week	**Biogenic Amines:** - histamine, 5-HT, angiotensin, kinins. - prostaglandins & their antagonists Drugs affecting respiratory system (par 1): - Respiratory stimulants & depressants.
18th week	**Drugs affecting respiratory system (par 2):** - Expectorants, anti-tussives & mucolytics. **Drugs affecting respiratory system (par 3):** -Bronchodilators & membrane shrinkers.
19th week	**Endocrine Pharmacology (part 1):** - Endocrine pharmacology - Hypothalamic and hypophyseal hormones. - Thyroid Hormone therapy. - Hyperthyroidism and antithyroid drugs. - Glucocorticoid therapy. - I. Replacement therapy. - II. Pharmacodynamic therapy with. - Glucocorticoids. - Androgens, anabolic steroids, antiandrogens. **Endocrine Pharmacology (part 2):** - Follicular growth and ovulation, estrogen and progestin production . - Oral contraceptives. - Antiestrogen and antiprogestin active principles. - Insulin formulations . - Variations in dosage form. - Variation in amino acid sequence.
20th week	**2nd MIDTERM EXAM**

21st week	**Endocrine Pharmacology (part 3):** - Treatment of insulin-dependent diabetes mellitus. - Undesirable effects. - Treatment of maturity-onset (Type II) diabetes mellitus. - Oral antidiabetics. **Drugs affecting water & electrolyte balance:** - Drugs for maintaining calcium homeostasis.
22nd week	**Drugs affecting metabolism** **Growth promoting agents**
23rd week	**Introduction to chemotherapy (part 3):** - Inhibitors of cell wall synthesis. - Inhibitors of tetrahydrofolate. **Introduction to chemotherapy (part 4):** - Synthesis. - Inhibitors of DNA function.
24th week	**Introduction to chemotherapy (part 5):** - Inhibitors of protein synthesis. - Drugs for treating mycobacterial. **Introduction to chemotherapy (part 6):** - Infections. - Antitubercular drugs. - Antileprotic drugs.
25th week	**Insecticides:** - Type of activity. - Biological pesticides. - Synthetic insecticide. **Antiseptics & disinfectants** - Alcohols. - Chlorhexidine gluconate - Hydrogen peroxide - Iodine - Disinfectants Types - Air disinfectants - Aldehydes - Oxidizing agents - Phenolics
26th week	**Antiviral drugs (part 2)** **- Transcriptase-nucleoside agents** - Nonnucleoside inhibitors II.HIV protease inhibitors III. Fusion inhibitors **Antiprotozoal drugs (part 1):** • Drugs for treating endoparasitic and ectoparasitic infestations **Drug toxicity:** - Cutaneous reactions

	- Drug toxicity in pregnancy and lactation - Drug interactions: - Pharmacodynamic interactions - - Pharmacokinetic interactions
27th week	**Antiprotozoal drugs (part 2):** - Antimalarials - Other tropical diseases **Anthelmintics (part 1):** - Benzimidazoles: - Albendazole - Mebendazole - Thiabendazole - Fenbendazole - Triclabendazole - Flubendazole
28th week	**Anthelmintics (part 2):** - Abamectin - Diethylcarbamazine - Ivermectin - Suramin - Pyrantel pamoate - Levamisole - Salicylanilides **Anthelmintics (part 3):** - Niclosamide - Nitazoxanide - Oxyclozanide - Praziquantel - Octadepsipeptides - Spiroindoles - Pelletierine sulphate
29th week	Insecticides: - Type of activity. - Biological pesticides. - Synthetic insecticide. Antiseptics & disinfectants - Alcohols. - Chlorhexidine gluconate - Hydrogen peroxide - Iodine - Disinfectant Types - Air disinfectants - Aldehydes - Oxidizing agents - Phenolics.
30th week	Drug toxicity: - Cutaneous reactions

	- Drug toxicity in pregnancy and lactation Drug interactions: - Pharmacodynamic interactions - Pharmacokinetic interactions
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Veterinary Physiology I

1	**Course name**	Veterinary Physiology I
2	**Course Code**	PHY104
3	**Course type: /general/specialty/optional**	Specialty
4	**Accredited units**	3 Credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences
8	**Instruction Language**	English
9	**Date of course approval**	2022

Brief Description	Acquire an appropriate functional background of cells, tissues, organs & system and follow the rapidly changing and inflating details about molecular biology & genetics. Explore in detail the functions of different systems and organs as well as their integration to achieve homeostasis. Describe clearly the altered development, growth, structure and function of the body that occur as a result of disease Integrate physiological data and mechanisms with the ongoing basic sciences and their clinical application.
Textbooks	**Books:**

	Dukes' Physiology of Domestic Animals (ISBN: 978-1-118-50139-9 - Wiley-Blackwell). Text book of Veterinary physiology by Cunningham (4th edition, 2007). Saunders **Physiology of Domestic animals** **Pathways to pregnancy and parturition**
Course Duration	One academic week.
Teaching Method	• Lectures. • group interaction and discussion. • self-directed activities. • active participation. • laboratory experiments.
Course Objectives	The primary objective of this course is to understand the physiological processes mediated by the different tissues and organ systems, the intrinsic and extrinsic mechanisms and factors that control their function and the changes that occur in specific measurable parameters when these systems are compromised. In order to understand the changes in function that underlie disease, one must understand normal function and how it is reflected in certain biochemical tests. During this course, frequent reference will be made to disorders and disease states, the biochemical basis behind such disorders, how they affect normal physiology and how they are assessed.

Assessment examination method	**Time of Assessment**	**method of Assessment**	**hours**	**Marks**
	1sth assessment exam at 10th week	1sth midterm exam	1hrs	10
	2nd assessment exam at 20th Week	2nd midterm exam	1hrs	10
	3rd assessment → Final exam by the end of the year	Written exam	3hrs	50
		Practice exam	2hr	20
		Oral exam	1hr	10

Course Contents	
1st week	Functional organization of the Body? • Homeostasis. • Control systems in the body.
2nd week	• Physiology of cell. Transport through cell membrane.
3rd week	**Physiology of Nerve** • The neuron-structure & functions. • Properties of nerve Fibres. Physiology of action potential and graded potential
4th week	Conduction of nerve impulse in myelinated and unmyelinated nerve fibres) . Phases of action potential and local potential Postsynaptic potential (Excitation and inhibition). Classification of Neuron according to shape and function
5th week	Physiology of muscle • Structure of the muscle. • Skeletal muscle contraction.

6Th week	• Isometric and isotonic contraction. • Smooth muscle contraction. • Neuromuscular transmission. • Excitation-contraction coupling. • Neuromuscular blockers.
7th week	**Autonomic nervous system (ANS):** • Structure of the ANS(sympathetic and parasympathetic division neurotransmitters, and receptors).
8th week	Functions of the ANS on various organs Accommodation of vision
9th week	• **Central Nervous system (CNS)** The concept of central control, revises mechanisms of neural transmission, describes the idea of neural circuits and outlines the component parts of the CNS.
10th week	**First Mid-term Examination**
11th week	**Sensory input to the CNS**: • General description of principals of sensory systems including receptive fields, adaption and lateral inhibition and the different modalities. Skin senses (including temperature sensation) and olfactory and taste senses
12th week	• Description of proprioception including details of the vestibular apparatus, muscle spindles and Golgi tendon organs. • physiological, psychological and philosophical aspects of pain perception
13th week	**Motor control**: • Spinal reflexes, the descending pyramidal and extra-pyramidal systems, the hierarchy of motor control and the consequences of lesions in the descending pathways. • Locomotion and movement
14th week	• Posture and the role of the muscle spindles, vestibular apparatus, visual system and pressure receptors in maintaining posture.
15th week	• These concentrate on the structure and function of the cerebellum and basal ganglia in initiating and coordinating movement.
16th week	**Special senses:** • Structure and function of the component parts of the eye
17th week	• Central visual pathways and information processing by the visual cortex.. • Colour vision.
18th week	**The auditory senses:** • The nature of sound and fourier analysis is explained. The structure and function of the different component parts of the inner ear and the generation of neural signals by the cochlea . Central pathways and responses of the auditory cortex are described.
19th week	**Fourier analysis of sound by cochlea**

20th week	Second Midterm Exam
21th week	**Blood and Immunity** • Composition and function of blood. • Blood cell types and function. • Blood cell disorders (anemia and polycythaemia) , white blood cells disorders
22th week	White blood cells types and function Blood platelets Plasma
23th week	• Blood groups: - ABO system - Rh factor • blood transfusion and complication
24th week	• Hemostasis (blood coagulation): - Definition - Phase of blood coagulation - Pathways of hemostasis (Extrinsic and intrinsic pathways)
25th week	• Disorders of hemostasis (thrombocytopenia and haemophilia) • Immunity and allergy.
26h week	**Acid base balance:** • The mechanisms that control pH of the body. • Buffer Mechanism
27th week	• Respiratory mechanism of pH control • Urinary mechanism of pH control
28th week	**Renal physiology:** • Overview of the urinary system • Structure of urinary system Function of the kidney (function of nephron) .
29th week	• Process of urine formation (GFR and factors affecting it). • Concentration and dilution of urine **Autoregulation**
30th week	• Tubular reabsorption • Micturition
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Veterinary Physiology II

1	**Course name**	**Veterinary Physiology II**
2	**Course Code**	**PHY201**
3	**Course type: /general/specialty/optional**	**Specialty**
4	**Accredited units**	**4 Credits**
5	**Educational hours**	**------**
6	**Pre-requisite requirements**	**Non**
7	**Program offered the course**	**Bachelor of Veterinary Medical Sciences**
8	**Instruction Language**	**English**
9	**Date of course approval**	**2022**

Brief Description	Acquire an appropriate functional background of cells, tissues, organs & system and follow the rapidly changing and inflating details about molecular biology & genetics. Explore in detail the functions of different systems and organs as well as their integration to achieve homeostasis. Describe clearly the altered development, growth, structure and function of the body that occur as a result of disease Integrate physiological data and mechanisms with the ongoing basic sciences and their clinical application.
Text books	**Books:** Dukes' Physiology of Domestic Animals (ISBN: 978-1-118-50139-9 - Wiley-Blackwell). Text book of Veterinary physiology by Cunningham (4th edition, 2007). Saunders **Physiology of Domestic animals** **Pathways to pregnancy and parturition**
Course Duration	One academic year.
Teaching Method	• Lectures. • group interaction and discussion. • self-directed activities. • active participation. • laboratory experiments.
Course Objectives	The primary objective of this course is to understand the physiological processes mediated by the different tissues and organ systems, the intrinsic and extrinsic mechanisms and factors that control their function and the changes that occur in specific measurable parameters when these systems are compromised. In order to understand the changes in function that underlie disease, one

<table>
<tr><td></td><td colspan="4">must understand normal function and how it is reflected in certain biochemical tests. During this course, frequent reference will be made to disorders and disease states, the biochemical basis behind such disorders, how they affect normal physiology and how they are assessed.</td></tr>
<tr><td rowspan="6">Assessment examination method</td><td>Time of Assessment</td><td>method of Assessment</td><td>hours</td><td>Marks</td></tr>
<tr><td>1sth assessment exam at 10th week</td><td>1sth midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td>2nd assessment exam at 20th Week</td><td>2nd midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td rowspan="3">3rd assessment ➔Final exam by the end of the year</td><td>Written exam</td><td>3hrs</td><td>50</td></tr>
<tr><td>Practice exam</td><td>2hr</td><td>20</td></tr>
<tr><td>Oral exam</td><td>1hr</td><td>10</td></tr>
<tr><td>Course Contents</td><td colspan="4"></td></tr>
<tr><td>1st week</td><td colspan="4">Respiratory system:
• Organization / functions of respiratory tract.
• Functions of lungs (respiratory & non respiratory).
• Mechanics of breathing.
• Protective reflexes.</td></tr>
<tr><td>2nd week</td><td colspan="4">• Lung volumes and capacities.</td></tr>
<tr><td>3rd week</td><td colspan="4">• Diffusion of gases (composition).
• Ventilation and perfusion.
• Transport of CO2 in blood.
• Regulation of respiration (Nervous and Chemical).</td></tr>
<tr><td>4th week</td><td colspan="4">• Hypoxia-types and cause</td></tr>
<tr><td>5th week</td><td colspan="4">Cardio Vascular system:
• Introduction to heart & circulation.
• Physiology of cardiac muscle.</td></tr>
<tr><td>6Th week</td><td colspan="4">• Action potential in atrial & ventricular myositis.
• Muscle and pacemaker potential.</td></tr>
<tr><td>6Th week</td><td colspan="4">• Regulation of cardiac functions.
• Cardiac impulse-origin & propagation.
• Cardiac cycle- various events.</td></tr>
<tr><td>7th week</td><td colspan="4">• Cardiac out-put (regulation/measurement).
• ECG-Recording & interpretation.
• Functional types of blood vessels.
• Local control of blood flow.</td></tr>
<tr><td>8th week</td><td colspan="4">• Systemic circulation, characteristics and control.
• Regulation of peripheral resistance.
• Blood pressure
• Heart sound/murmurs.
• Venous return & its regulation.
• Coronary circulation.</td></tr>
</table>

9th week	**Gastrointestinal Tract** • Structures of digestive system • Primary function of digestive system Neural control of GIT
10th week	**First Mid-term Examination**
11th week	• Digestion of Food in the in the Oral Cavity Salivary gland (function of saliva), composition, control of saliva secretion, and deficiency of saliva (Xerostomia)in monogastric animals
12th week	**Digestion in the stomach of monogastric animals :** Function of stomach; structure of stomach and control of gastric juice secretion Cells of stomach Regulation of gastric Secretion, Motility and Emptying Vomiting (causes and mechanism of vomiting) Side effect of prolonged and excessive vomiting
13th week	• **Small Intestine** • Structure of small intestine • Types of motilities Digestion of nutrient (carbohydrate, proteins and fats).
14th week	**Ruminant digestion**
15th week	**Quine digestion**
16th week	**Comparative avian digestion**
17th week	• **Endocrinology** • General principles (classification, mechanism of action, feedback control). Biosynthesis, transport, metabolism, actions and control of secretion of Hormones.
18th week	Pituitary gland (Hypophysis) hormones. Releasing hormones (RH) Classification of hormone • **Function of growth hormone** • Regulation of hormone secretion Disorder of GH secretion
19th week	• **Thyroid gland** • Function of thyroxin and disorders of thyroid hormones • **The Parathyroid Gland(PTH , function and disorders)** Hormones regulate calcium metabolism (Vit.D , Calcitonin and PTH
20th week	**Second Midterm Exam**
21th week	**The adrenal gland** Structure of Adrenal gland Hormones of adrenal gland **renin-angiotensin-Aldosterone mechanism** Function of Cortisol and its clinical application

	Disorders of adrenal cortical hormones (**Addison disease** , Cushing syndrome (Hypercoticism) and Adrenogenital syndrome
22th week	**THE PANCREAS** Islets of Langerhans cells (Insulin and glucagon) **The action of insulin** Disorders of insulin (DM , types of DM and control of DM) Complication of DM
23th week	**Physiology of Reproductive system** **1. Female R.S.** • Function of female reproductive system • Female reproductive cycles • Control of reproductive cycles.
24th week	• Female reproductive cycles and its Control of reproductive cycles.
25th week	**Pregnancy:** Fertilization, Embryo development, Fetal development, stages of pregnancy, control of pregnancy (hormonal and other factors)
26th week	Parturition: Hormonal changes during parturition , stages of parturition , and retained placenta
27th week	Male Reproductive system Structure and function of male reproductive system
28th week	**Spermatogenesis**
29th week	**Thermoregulation (introduction)**
30th week	Mechanisms of heat exchange to maintain homeostasis: conduction, convection, radiation, and evaporation.
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Poultry Diseases

1	**Course name**	Poultry Diseases
2	**Course code**	POU505

3	**Course type: General / specialization / elective**	specialty
4	**Accredited units**	4 credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences (BVMSc)
8	**Instruction Language**	English Language
9	**Date of course approval**	2022

Brief description of the course	This course covers the breeding methods, production cycles, and understanding the mechanism of the immune system in poultry, in addition to the need to know the diseases that affect poultry, the mechanism of infection and symptoms caused, as well as methods of diagnosis, treatment and methods of control.
Prescribed books	**Books:** •Diseases of Poultry, ISBN10 0813807182, ISBN13 9780813807188.
Course duration	One academic year.
Teaching method	❖ Lectures. ❖ group interaction and discussion. ❖ self-directed activities. ❖ active participation. ❖ laboratory experiments.
Objectives and target of the course	• Acquires the necessary information about breeding methods, production cycles and an understanding of the mechanism of action of the immune system in poultry. • Ability to make a tentative and final diagnosis of poultry diseases • Able to create control programs of diseases in poultry farms. • Recognize how to create field investigation of poultry disease. • Describe the different diseases that affect poultry (viral, bacterial, fungal, parasitic and nutritional disorder) with Define the tentative and final diagnosis and differential diagnosis of poultry disease.

Assessment examination method	**Time of Assessment**	**method of Assessment**	**hrs.**	**Marks**
	1sth assessment exam at 10th week	1sth midterm exam	1hrs	10
	2nd assessment exam at 20th Week	2nd midterm exam	1hrs	10
	3rd assessment ➔ Final exam by the end of the year	Written exam	3hrs	50
		Pract exam	1hr	20

		Oral exam	1hr	10
Course contents				
1st week	**Poultry production (Broilers and Layers):** Brief description of the chicken breeds, housing systems, production chain, animal welfare, and the role of the management in birds' health. **Avian immunology:** Brief description of the organs of the immune system, cells of the immune system and avian immunoglobulin.			
2nd week	**Avian influenza**: Introduction (definition, public health significance, and economic impact), Etiology (brief description of virus classification, structure, replication, antigenic variation, and susceptibility to chemical and physical agents), Epidemiology (incidence and distribution, natural hosts, sources and transmission and pathogenesis), Clinical signs and lesions, Diagnosis, Differential diagnosis, Treatment and Control. enclosures.			
3rd week	**Paramyxovirdae: Newcastle Disease (ND) and Pneumovirus (TRT):** Introduction (definition, public health significance, and economic impact), Etiology (brief description of virus classification, structure, replication, antigenic variation, and susceptibility to chemical and physical agents), Epidemiology (incidence and distribution, natural hosts, sources and transmission), Clinical signs and lesions, Diagnosis, Differential diagnosis, Treatment and Control.			
4th week	**Adenovirus infections and Egg drop syndrome:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control. **Infectious bronchitis (IB):** Introduction, Etiology (strain classification, serotypes and variants), Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.			
5th week	**Infectious laryngotracheitis (ILT):** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control. **Infectious Bursal Diseases (IBD):** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment, and control.			
6th week	**Fowl pox:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment, and control. **Chicken Anemia Virus (CAV):** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment, and control. **Avian Encephalomyelitis:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment, and control.			

7th week	**Viral Enteric Infections (Rotavirus infection & Astrovirus Infection):** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment, and control. **Reovirus infection (Viral arthritis):** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment, and control. **Duck Hepatitis and Duck Virus Enteritis:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment, and control. **Viral Enteric Infections (Turkey Coronavirus Enteritis & Turkey Torovirus Infection):** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment, and control. **Turkey Viral Hepatitis & Avian Hepatitis E Virus Infections:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment, and control.
8th week	**Marek's disease:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment, and control. **Lymphoproliferative & Reticulo-endotheliosis:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment, and control
9th week	**Leucosis sarcoma group (1):** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment, and control. **Leucosis sarcoma group (2):** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment, and control. **Other viral infections:** Avian nephritis, transmissible viral proventriculitis, Proventriculuar dilatation disease, Psittacine beak and feather disease
10th week	**1st MIDTERM EXAM**
11st week	**Nutritional and Metabolic Disorders (1) & (2):** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
12nd week	**Nutritional and Metabolic Disorders (3) & (4):** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
13rd week	**Salmonellosis:** Introduction, Etiology and epidemiology, Diseases caused by Salmonella in poultry (Pullorum disease, fowl typhoid, fowl paratyphoid) including Clinical signs and lesions, Diagnosis and differential

14th week	**Colibacillosis:** Diseases caused by E. coli. The course will cover, Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and
15th week	**Mycoplasmosis:** Diseases caused by Mycoplasma in chicken and turkey. The lecture will cover, Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
16th week	**Fowl cholera:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control. **Infectious coryza:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control. **Ornithobacterium rhinotracheale:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
17th week	**Avian chlamydiosis:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control. **Clostrifdial diseases**: diseases caused by clostridia including (Necrotic enteritis, Ulcerative enteritis, Gangrenous dermatitis and Botulism). The lecture will cover Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
18th week	**Staphylococcosis:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control. **Streptococcosis:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
19th week	**Erysipelas in poultry:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
20th week	**2ndMIDTERM EXAM**
21st week	***Riemerella anatipestifer:*** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
22nd week	**Tuberculosis:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
23rd week	**Fungal diseases: (brooder pneumonia)** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control

24th week	**Other Fungal diseases:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control
25th week	**External parasites:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
26th week	**Helminthic diseases:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
27th week	**Cryptococcus and Histomonas:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
28th week	**Internal parasite:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control.
29th week	**Coccidiosis:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control. (1)
30th week	**Coccidiosis:** Introduction, Etiology and Epidemiology, Clinical signs and lesions, Diagnosis and differential diagnosis, Treatment and control. (2)
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
General skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Change and modification in the course	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Preventive Medicine

1	**Course name**	Preventive Medicine
2	**Course Code**	PRM504
3	**Course type: /general/specialty/optional**	General
4	**Accredited units**	7 Credits

5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences
8	**Instruction Language**	English
9	**Date of course approval**	2022

Brief description of the course	• Provide students with basic knowledge of a wide range of preventive medicine principles and details of animal hygiene, epidemiological and Zoonosis concepts • Describe the different measures of prevention and control of infectious and zoonotic diseases, and general measures for dealing with notifiable diseases • Discuss and assesses (apply) the preventive medicine measures (Epidemiology, animal hygiene and zoonoses) and laboratory methods of investigation, and assessment of surveillance program for prevention, control on animal human interface (One health approach) • Learn the different type of epidemiological study
Prescribed books	**Books:** Blackwell Science Ltd. ISBN 9781118280249. Iowa State University Press, Ames IA. 9780813818566. Pana America. 92 75 11991 0.
Course duration	One academic year.
Teaching method	❖ Lectures. ❖ group interaction and discussion. ❖ self-directed activities. ❖ active participation. ❖ laboratory experiments. ❖ Scientific field visits.
Objectives and target of the course	• The student will be able to define the basic principles of preventive medicine deals with animal hygiene, epidemiological and Zoonosis concepts. • The student will be able to know and understand the different measures of prevention, control and eradication of epidemic diseases. • The student will be able to learn the basic principles related to epidemic outbreak investigation and importance of field hygienic measures to provide safe and comfortable environment. • The student will be able to understand strategies for combating pandemic, epidemic and endemic (study design, survey, active surveillance, monitoring). • Be familiar with the traditional and new methods of controlling and preventing. • The student will be to explain and discuss suitable method for diagnostic tools. • Appropriate intervention measures during pandemic outbreaks.

	• Be able to analyze, discuss and deal with emerging and re-emerging infectious disease. • The student should be able to conduct study design for monitoring and surveillance program. • Describe the appropriate use of diagnostic tests and their roles in both quantitative and subjective clinical assessment. • The student should be able to assess and evaluate animal health situation. • To be able to use the specific tool for diagnose of disease. • The student should be active member in team running large scale and farms. • The student will be able to use the computer and internet to search for information. • The student will be able to self-learning, communicate and convey the right knowledge in the community.

	Time of Assessment	method of Assessment	hrs.	Marks
Assessment examination method	1st assessment exam at 10th week	1st midterm exam	1hrs	10
	2nd assessment exam at 20th Week	2nd midterm exam	1hrs	10
	3rd assessment → Final exam by the end of the year	Written exam	3hrs	40
		Pract exam	1hr	30
		Oral exam	1hr	10

Course contents	
1st week	• The scope of epidemiology • Principles and concepts of animal hygiene • General Zoonoses
2nd week	• General epidemiologic concepts and principles • Environmental animal hygiene (air, soil, water) • Bacterial Zoonoses
3rd week	• Bacterial Zoonoses • General epidemiologic concepts and principles • Environmental animal hygiene (air, soil and water)
4th week	• Bacterial Zoonoses • General epidemiologic concepts and principles • Environmental animal hygiene (air, soil and water)
5th week	• Measures of disease frequency and production • Animal housing and animal hygiene • Chlamydial and Rickettsial Zoonoses
6th week	• Measures of disease frequency and production • Animal housing and animal hygiene • Chlamydial and Rickettsial Zoonoses

7th week	• Sampling design • Midterm Exam • Viral Zoonoses
8th week	• Sampling design • Midterm Exam • Viral Zoonoses
9th week	• Surveys • Biosecurity measures for disease control • Mycotic Zoonoses
10th week	**1st MIDTERM EXAM**
11st week	• Surveys • Biosecurity measures for disease control • Mycotic Zoonoses
12nd week	• Surveys • Biosecurity measures for disease control • Mycotic Zoonoses
13rd week	• Analytical study designs • Disease control and prevention and eradication • Methods of human exposure to parasitic zoonoses
14th week	• Analytical study designs • disease control and prevention and eradication • Methods of human exposure to parasitic zoonoses
15th week	• Measures of association and disease causation • Principles of animal hygiene management • Protozoonoses
16th week	• Measures of association and disease causation • Principles of animal hygiene management • Protozoonoses
17th week	• Clinical epidemiology (sero-epidemiology) • Disinfection in veterinary practice • Zoonoses caused by Cestodes
18th week	• Clinical epidemiology (sero-epidemiology) • Disinfection in veterinary practice • Zoonoses caused by Cestodes
19th week	• Clinical epidemiology (sero-epidemiology) • Disinfection in veterinary practice • Zoonoses caused by Cestodes
20th week	**2nd MIDTERM EXAM**
21st week	• Field investigation (outbreak investigation). • Small ruminant animal hygiene (sheep and goats). • Zoonoses caused by Nematodes
22nd week	• Surveillance and monitoring of disease in population. • Animal transportation. • Zoonoses caused by Arthropods

23rd week	• Surveillance and monitoring of disease in population. • Animal transportation. Zoonoses caused by Arthropods
24th week	•Surveillance and monitoring of disease in population •Animal transportation •Zoonoses caused by Arthropods
25th week	•Surveillance and monitoring of disease in population •Animal transportation •Zoonoses caused by Arthropods
26th week	•Surveillance and monitoring of disease in population •Animal transportation •Zoonoses caused by Arthropods
27th week	• strategies and concepts of animal disease control, prevention and eradication •Disposal of animal wastes, biological veterinary materials •Emerging and re-emerging zoonotic diseases
28th week	• strategies and concepts of animal disease control, prevention and eradication •Disposal of animal wastes, biological veterinary materials •Emerging and re-emerging zoonotic diseases
29th week	• strategies and concepts of animal disease control, prevention and eradication •Disposal of animal wastes, biological veterinary materials •Emerging and re-emerging zoonotic diseases
30th week	• strategies and concepts of animal disease control, prevention and eradication • Disposal of animal wastes, biological veterinary materials • Emerging and re-emerging zoonotic diseases
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Theriogenology I

1	**Date of course approval**	Theriogenology I

2	**Date of course approval**	THE407
3	**Course type: /general/specialty/optional**	specialist
4	**Accredited units**	3 credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences
8	**Instruction Language**	English Language
9	**Date of course approval**	2022

Brief description of the course	Theriogenology is a specialty of veterinary medicine, taught during the fourth and fifth years of study at the college, in the form of theoretical and practical lessons, concerned with animal reproduction. Our aim is to provide the student with the necessary knowledge and skills for the field of reproduction, fertility and artificial insemination; in addition to training him in the necessary skills in diagnosing and treating reproductive diseases, diagnosing pregnancy in many animals, and diagnosing and treating infertility diseases and weak sexual desire in males of different animals. Also, the clinical practices of veterinary obstetrics and the science of assisted reproductive technology.
Prescribed books	**Books:** •Veterinary Reproduction and Obstetrics. 10th Edition (ISBN 978-0-7020-7233-8). • Current Therapy in Large Animal Theriogenology Vol. 2. ISBN-13: 978-0721693231. ISBN-10: 0721693237 • Reproduction in Farm Animals.ISBN:9780683305777.
Course duration	One academic year.
Teaching method	❖ Lectures. ❖ group interaction and discussion. ❖ self-directed activities. ❖ active participation. ❖ laboratory experiments.
Objectives and target of the course	• By studying the course, the student will be able to: • To familiarize with the natural and functional structure of the male and female reproductive system in the different farm animals. • The student memorizes the information, terms and dates related to reproduction for each studied animal. • The student recognizes the normal reproductive status and be able to identify various pathological conditions of the male and female reproductive system in the animals. • Differential diagnoses between cases, and how to deal, then how to treat. • Building and developing practical skills through practical lessons and field visits.

	• The student should be able to explain the different pathological conditions he faces.			
Assessment examination method	**Time of Assessment**	**method of Assessment**	**hrs.**	**Marks**
	1sth assessment exam at 10th week	1sth midterm exam	1hrs	10
	2nd assessment exam at 20th Week	2nd midterm exam	1hrs	10
	3rd assessment➔ Final exam by the end of the year	Written exam	3hrs	40
		Pract exam	1hr	30
		Oral exam	1hr	10
Fourth Year				
Course contents				
1st week	➢ **(Gynecology1)** Development of reproductive organs. The origin of sex.			
2nd week	• The postnatal development. Definitions and general information. Puberty in the female. tructure and functions of the female reproductive organs of different omestic animals.			
3rd week	• The postnatal development. Definitions and general information. Puberty in the female. Structure and functions of the female reproductive organs of different domestic animals.			
4th week	• The postnatal development. Definitions and general information. Puberty in the female. Structure and functions of the female reproductive organs of different domestic animals.			
5th week	• The control of reproduction The role of hormones.			
6th week	• The control of reproduction The role of hormones.			
7th week	• The control of reproduction The role of hormones.			
8th week	The roles of the nervous system Regulation of gonadotrophin secretion. Regulation of female reproductive function			
9th week	• The estrous cycle. • General introduction. Phases of the cycle.			
10th week	**1stMIDTERM EXAM**			
11st week	• Mechanisms governing the cycle.			

12nd week	• Factors effecting the cycle.
13rd week	• Physiology of fertilization.
14th week	• Physiology of fertilization.
15th week	• Physiology of fertilization.
16th week	(Gynecology2) Introduction to infertility Hereditary or congenital causes. Hormonal causes.
17th week	(**Gynecology2**) Introduction to infertility Hereditary or congenital causes. Hormonal causes.
18th week	Pathological causes.
19th week	Hereditary and pathological causes affecting.
20th week	**2ndMIDTERM EXAM**
21st week	Environment and infertility.
22nd week	Repeat breeder syndrome Reproduction performance and efficiency. Mare infertility.
23rd week	Repeat breeder syndrome Reproduction performance and efficiency. Mare infertility.
24th week	(**Andrology**) Introduction Anatomy and function of male reproduction The secondary sex organs (location, function, secretion).
25th week	Comparative anatomy of male reproductive system: Bull, stallion, camel, ram, dog, cat
26th week	Male sexual physiology. Puberty,
27th week	Libido, Mating, Spermatogenesis.
28th week	Reproductive abnormalities of male animals (male infertility).
29th week	Male selection. Semen collection, and Semen evaluation.
30th week	Artificial Insemination.
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.

Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Theriogenology II

1	**Date of course approval**	Theriogenology II
2	**Date of course approval**	THE502
3	**Course type: /general/specialty/optional**	specialist
4	**Accredited units**	3 credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences
8	**Instruction Language**	English Language
9	**Date of course approval**	2022

Brief description of the course	Theriogenology is a specialty of veterinary medicine, taught during the fourth and fifth years of study at the college, in the form of theoretical and practical lessons, concerned with animal reproduction. Our aim is to provide the student with the necessary knowledge and skills for the field of reproduction, fertility, and artificial insemination; in addition to training him in the necessary skills in diagnosing and treating reproductive diseases, diagnosing pregnancy in many animals, and diagnosing and treating infertility diseases and weak sexual desire in males of different animals. Also, the clinical practices of veterinary obstetrics and the science of assisted reproductive technology.
Prescribed books	**Books:** •Veterinary Reproduction and Obstetrics. 10th Edition (ISBN 978-0-7020-7233-8). • Current Therapy in Large Animal Theriogenology Vol. 2. ISBN-13: 978-0721693231. ISBN-10: 0721693237 Reproduction in Farm Animals.ISBN:9780683305777.
Course duration	One academic year.
Teaching method	❖ Lectures. ❖ group interaction and discussion. ❖ self-directed activities. ❖ active participation. ❖ laboratory experiments.

<table>
<tr><td>Objectives and target of the course</td><td colspan="4">• By studying the course, the student will be able to:
• To familiarize with the natural and functional structure of the male and female reproductive system in the different farm animals.
• The student memorizes the information, terms and dates related to reproduction for each studied animal.
• The student recognizes the normal reproductive status and be able to identify various pathological conditions of the male and female reproductive system in the animals.
• Differential diagnoses between cases, and how to deal, then how to treat.
• Building and developing practical skills through practical lessons and field visits.
• The student should be able to explain the different pathological conditions he faces.</td></tr>
<tr><td rowspan="6">Assessment examination method</td><td>Time of Assessment</td><td>method of Assessment</td><td>Hrs.</td><td>Marks</td></tr>
<tr><td>1sth assessment exam at 10th week</td><td>1sth midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td>2nd assessment exam at 20th Week</td><td>2nd midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td rowspan="3">3rd assessment → Final exam by the end of the year</td><td>Written exam</td><td>3hrs</td><td>40</td></tr>
<tr><td>Pract exam</td><td>1hr</td><td>30</td></tr>
<tr><td>Oral exam</td><td>1hr</td><td>10</td></tr>
<tr><td colspan="5">Course contents</td></tr>
<tr><td>1st week</td><td colspan="4">Introduction to Veterinary Obstetrics</td></tr>
<tr><td>2nd week</td><td colspan="4">The placenta.</td></tr>
<tr><td>3rd week</td><td colspan="4">Fetal fluid</td></tr>
<tr><td>4th week</td><td colspan="4">Position of fetus in the uterus.
Position of uterus during gestation.
Middle uterine artery.
Bacterial flora of pregnant uterus</td></tr>
<tr><td>5th week</td><td colspan="4">Gestation period.
Factor effecting gestation period</td></tr>
<tr><td>6th week</td><td colspan="4">Endocrine control of pregnancy in the domestic animals</td></tr>
<tr><td>7th week</td><td colspan="4">• Disturbances arising from Reproductive Organs:
- Pseudo pregnancy / phantom pregnancy.
- Oestrus symptoms during gestation.
- Bleeding during gestation.
- Cervical & Vaginal discharges during gestation.</td></tr>
</table>

8th week	* *Disturbances arising from General Health Disturbance of the dam:* A) *Hernia.* B) *Paraplegia:* 1. Malnutrition. 2. Ketosis (Acetonemia). 3. Paresis / Milk fever (Hypocalcaemia). 4. Grass Tetany.
9th week	5. Eclampsia. 6. Dropsy of Fetal Membranes & Fetus. 7. Injuries of Joints & Tendons. 8. Fractures of Hind Legs & Vertebrae.
10th week	**1ST MIDTERM EXAM**
11st week	• Septic or Infectious Diseases associated with advanced pregnancy due to *Paresis* • Another cases may cause Paraplegia or Paresis affecting pregnant females
12nd week	Introduction to parturition
13rd week	Preparturient changes in farm animals
14th week	The Natural control of Parturition
15th week	Stages of Parturition
16th week	Presentation, Position and Posture
17th week	Care of Parturient mothers Care of Newborns Care of Postpartum dam
18th week	Pregnancy diagnosis in cows
19th week	Normal puerperium
20th week	**2ND MIDTERM EXAM**
21st week	Lochia Histological and microbial changes during Puerperium Factors influencing Puerperium Ovarian Function / Cyclical Activity
22nd week	Pathology of puerperium • Postpartum Haemorrhage. • Contusions and Lacerations of Birth canal. • Rupture of Uterus, Cervix, Vagina and Perineum.
23rd week	• Gluteal Paralysis. • Obturator Paralysis. • Puerperal Laminitis. • Puerperal Tetanus.

	• Retention of Placenta. • Uterine Prolapse.
24th week	Dystocia Factors affecting Incidence of Dystocia Causes of dystocia
25th week	Immediate causes of Dystocia Basic causes of Dystocia
26th week	Symptoms and diagnosis of Dystocia
27th week	Obstetrical Maneuvers
28th week	Obstetrical Operations 1) Episiotomy. 2) Caesarean Section (Hysterotomy).
29th week	Obstetrical Operations 1) Fetotomy.
30th week	Embryo transfer in cows
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

General Veterinary Surgery

1	**Course name**	General Veterinary Surgery
2	**Course Code**	GVS406
3	**Course type: general/specialty/optional**	Specialty
4	**Accredited units**	3 credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non

7	**Program offered the course**	Bachelor of Veterinary Medical Sciences
8	**Instruction Language**	English Language
9	**Date of course approval**	2022

Brief description of the course	The curriculum of veterinary surgery is aimed to enable the student to know about the principle of general surgery including technique of sterilization, pre operative preparation, different types of anesthesia to control animals during examination or during minor or major surgical procedures as well as handling and transportation and to learn about diagnostic tools and imaging, as well as, implanting knowledge and practicing the various surgical problems of the body systems including digestive, respiratory, cardiovascular, urogenital and abdominal wall. Moreover, to accustomed students how to pick the principles up to recognize case appraisal, etiology, clinical signs, diagnosis and differential diagnosis, prognosis and different traits of treatment.
Prescribed books	**Books:** •Small animal surgery. ISBN: 9780323443432. • Large animal surgery. ISBN 10: 0721613470. ISBN 13: 9780721613475. • Textbook of Veterinary Anaesthesia .ISBN:9789386453129. • Textbook of Veterinary Diagnostic Radiology.ISBN. 978-0-323-48247-9.
Course duration	One academic year.
Teaching method	❖ Lectures. ❖ group interaction and discussion. ❖ self-directed activities. ❖ active participation. ❖ laboratory experiments.
Objectives and target of the course	• Provide students with basic information regarding the Veterinary Surgery, Anesthesia and Radiology. • Teach student how to perform basic preparation for surgery, operative techniques, and post- operative care. • Teach students the most commonly used surgical instruments • Teach the different drugs used for pre-anesthetic medication, local anesthesia, and general anesthesia. • Teach students with basic principle of diagnostic imaging and their clinical applications.

	Time of Assessment	**method of Assessment**	**Hrs.**	**Marks**
Assessment examination method	1^{sth} assessment exam at 10th week	1^{sth} midterm exam	1hrs	10
	2nd assessment exam at ^{20}th Week	2nd midterm exam	1hrs	10
		Written exam	3hrs	40

	3rd assessment → Final exam by the end of the year	Pract. exam	1hr	30
		Oral exam	1hr	10
Fourth Year				
Course contents				
1st week	*-INTRODUCTION* (Objective- Mission & Vision of Surgery) - INFLAMMATION: Definition- Classification- Causes- Phenomena of inflammation-			
2nd week	• INFLAMMATION: Cardinal signs of inflammation- Principle lines of treatment of (ACUTE & CHRONIC) inflammation- Fate of inflammation. • MUSCLE DISORDER			
3rd week	• JOINT DISORDER • TENDON & LIGAMENT SURGERY			
4th week	SURGICAL SWELLINGS: Abscesses- Bursitis- Haematoma- Hernia - Neoplasm- Cysts- Phlegmone			
5th week	SURGICAL SWELLINGS: Abscesses- Bursitis- Haematoma- Hernia - Neoplasm- Cysts- Phlegmone			
6th week	WOUNDS & BURNS			
7th week	WOUNDS & BURNS			
8th week	• WOUNDS & BURNS • HAEMORRHAGE & HEMSTASIS			
9th week	NECROSIS & GANGRENE			
10th week	**1st MIDTERM EXAM**			
11st week	SINUSES & FISTULAE and ULCER			
12nd week	SHOCK			
13rd week	FLUID THERAPY & BLOOD TRANSFUSION			
14th week	FRACTURE AND DISLOCATION			
15th week	FRACTURE AND DISLOCATION			
16th week	• DEFINITION & CLASSIFICATION OF ANAESTHESIA. • PREMEDICATION (PREANAESTHETIC)			
17th week	PREMEDICATION (PREANAESTHETIC)			
18th week	LOCAL ANALGESIA			
19th week	• LOCAL ANALGESIA • REGIONAL ANALGESIA			
20th week	**2nd MIDTERM EXAM**			
21st week	REGIONAL ANALGESIA			
22nd week	REGIONAL ANALGESIA			
23rd week	REGIONAL ANALGESIA			
24th week	GENERAL ANAESTHESIA			

25th week	GENERAL ANAESTHESIA
26th week	GENERAL ANAESTHESIA
27th week	RADIOGRAPHY (Roentgenology)
28th week	RADIOGRAPHY (Roentgenology)
29th week	ULTRASONOGRAPHY
30th week	REGIONAL ANALGESIA
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
General skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Change and modification in the course	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Special Veterinary Surgery

1	**Course name**	Special Veterinary Surgery
2	**Course Code**	SVS501
3	**Course type: general/specialty/optional**	Specialty
4	**Accredited units**	4credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences
8	**Instruction Language**	English Language
9	**Date of course approval**	2022

<table>
<tr><td>Brief description of the course</td><td>The curriculum of veterinary surgery is aimed to enable the student to know about the principle of general surgery including technique of sterilization, pre operative preparation, different types of anesthesia to control animals during examination or during minor or major surgical procedures as well as handling and transportation and to learn about diagnostic tools and imaging, as well as, implanting knowledge and practicing the various surgical problems of the body systems including digestive, respiratory, cardiovascular, urogenital and abdominal wall. Moreover, to accustomed students how to pick the principles up to recognize case appraisal, etiology, clinical signs, diagnosis and differential diagnosis, prognosis and different traits of treatment.</td></tr>
<tr><td>Prescribed books</td><td>Books:
•Small animal surgery. ISBN: 9780323443432.
• Large animal surgery. ISBN 13: 9780721613475.
• Adams and Stashak's lameness in horses. 6th ed. ISBN 978-0-8138-1549-7
• EQUINE SURGERY, 4th Edition ISBN: 978-1-4377-0867-7</td></tr>
<tr><td>Course duration</td><td>One academic year.</td></tr>
<tr><td>Teaching method</td><td>❖ Lectures.
❖ group interaction and discussion.
❖ self-directed activities.
❖ active participation.
❖ laboratory experiments.</td></tr>
<tr><td>Objectives and target of the course</td><td>• Is to provide students with:
A general knowledge of the surgical treatments of soft tissue, orthopedic, and neurologic disorders in large and small animals needed in the veterinary practice and field.
• Also aimed to learn student Special skills that can be used in conjunction with the clinical signs and symptoms to diagnose the different surgical affections in various organs, as well as, implanting knowledge and practicing the various surgical problems of the body systems with possible prognosis of surgical operations.
• How to classify, evaluate & master the methods of diagnosis of lameness.
• Recognize the various trials of lameness treatment.</td></tr>
</table>

<table>
<tr><td rowspan="5">Assessment examination method</td><td>Time of Assessment</td><td>method of Assessment</td><td>hrs</td><td>Marks</td></tr>
<tr><td>1sth assessment exam at 10th week</td><td>1sth midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td>2nd assessment exam at 20th Week</td><td>2nd midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td rowspan="3">3rd assessment➔ Final exam by the end of the year</td><td>Written exam</td><td>3hrs</td><td>40</td></tr>
<tr><td>Pract. exam</td><td>1hr</td><td>30</td></tr>
<tr><td>Oral exam</td><td>1hr</td><td>10</td></tr>
</table>

Course contents	
1st week	• **HORN SURGERY**: Separation-Fracture-Disbudding-Dehorning • **EYE SURGERY**: Examination & anatomy-Congenital anomalies. Affections of eyelids & eyelashes: Blepharoptosis-Ectropion-Entropion-Trichiasis-Distichiasis-Tumors-Traumatic injuries.
2nd week	**EYE SURGERY**: • Affection of conjunctiva: Conjunctivitis. • Affection of Nictating membrane. • Affection of Cornea:Dermoid-anophthalmia-Enucleation & Extirpation of eye ball. • **EAR** SURGERY:Othematoms-Otitis(Externa,Media,Interna)-Guttural pouch disorder. • **NASAL CAVITY** AFFECTIONS:Epistaxis-Atheroma-Fracture-Neoplasms. •
3rd week	• **PARANASAL CAVITY AFFECTIONS**: Empyema - Neoplasms - Trephyning. **ORALL AFFECTIONS** • **TONGUE AFFECTION**: -Traumatic injuries -Glossitis-Glossplagia
4th week	**ORALL AFFECTIONS** • **TONGUE AFFECTION**: -Strangulation -Playing with Tongue -Partial Glossectomy
5th week	**SALIVARY GLANDS AFFECTIONS:** • Salivary Fistula- Ranula- Salivary Calculi.
6th week	**DENTISTRY**: -Congenital & Acquired Anomalies -Periodntitis -Dental Fistula-Sharp Teeth.
7th week	**SURGERY OF NECK**: -Atlantal Bursitis(Poll Evil) -Tracheostomy -Oesophegeal Obstruction(Choke) -Laryngeal hemiplegia(Roaring) -Supraspinous Bursitis(Fistulous Withers) -Jugular Vein Fistula.
8th week	**SURGERY OF NECK**: -Supraspinous Bursitis(Fistulous Withers) -Jugular Vein Fistula. **SURGERY OF THE CHEST**: Wounds-Rib fracture. **SURGERY OF THE ABDOMEN**: Abdominal wounds-Laparotomy.
9th week	**SURGERY OF THE ABDOMEN**: -Traumatic reticuloperitonitis -Rumenotomy -Abomasum displacement -Abomasum Impaction.

10th week	**1st MIDTERM EXAM**
11st week	• Affections of umbilical region
12nd week	• Hernias
13rd week	• Hernias • Equine Colic
14th week	**Simple Stomach**: Foreign body in small animal-Gastrotomy
15th week	**Affection of Intestinal:** Intestinal obstruction
16th week	**Affections of the rectum & anus**: -Rectal Prolapse-Atrasia Ani -Atrasia Recti -Ratained Meconium -Inflammation of peri-anal glands in dogs.
17th week	**SURGERY OF THE UROGENITAL SYSTEM** • Urinary system: -Urolithiasis - Cystotomy -Rupture of the Urinary Bladder
18th week	**Male genital system**: • Affection of Penis & Prepuce (Phemosis-Paraphemosis-Postitis-Balanopostitis-Penal hematoma & Amputation of penis). • Affection of testes scrotum -Creptochidism -Castration
19th week	**Female genital system**: - Ovariectomy - Hysterectomy - Cesarean Section - Perineal laceration
20th week	**2nd Midterm Exam**
21st week	**MAMMARY GLAND FFECTIONS**: • **General Examination** (Inspection-Palpation-Exam. of gland secretion). • **Surgery of Teat:** -Amputation of Supernumerary -Amputation of normal teat -Contracted sphincter (Hard Milker) -Enlarged teat orifice -Calculus of the teat canal - membranous Obstruction of teat -Laceration of teat & udder -Teat Fistula Amputation of the mammary gland
22nd week	**EQUINE LAMENES** Definition & Classification of lameness, Diagnosis, Sound & faulty conformation of the limbs. Procedures for Examination.
23rd week	**SURGERY OF THE FOR LIMBS**: Foot: Examination Sand crack (Toe, Quarter & Heel).

	Seedy Toe (White line disease) Corns & Bruised Sole. Thrush Canker Quittor Side Bones Punctured foot
24th week	**Affection of Bony Skeleton within the Hoof**: Fracture of Distal Phalanx Fracture of the Extensor Process Pyramidal Disease (Buttress foot). Pedal ostitis. Infectious ostitis of the distal phalanx. Nail bind Nail prick Laminitis Navicular Disease
25th week	**Pastern**: Ring Bone Fracture of the Middle Phalanx. **Fetlock:** -Sasamoiditis- Trumatic arthritis of themetacarophalangeal joint (Ossselets). - Rupture of the Suspensory Apparatus. -Chip fracture of the Proximal Phalanx - Fracture of the proximal SesamoidBones. -Luxation of fetlock joint.
26th week	**Metacarpus and Metatarsus:** Sore Shins Splints Rupture of the common Digital Extensor Tendon. Contracted Flexor Tendons **Carpal joint:** Hygroma of the Carpus -Fracture of Accessory Carpal Bone
27th week	**Fore-arm:** Sprain of the Accessory Ligament (Check Lig.). **Elbow:** Capped Elbow. **Humerus:** Paralysis of Radial Nerve **Shoulder:** -Sweeny (Paralysis of Suprscapular (Nerve). -Arthritis of shoulder joint.
28th week	**Tarsus:** Spavin (Bog, Blood & Occult). Capped Hock Rupture of Achilles Tendon Rupture of Gastronemius Tendon Stringhalt
29th week	**Stifle Joint:** Gonitis Upward Fixation of Patella **Affection of pelvis:** -Hip Dislocation - Fracture
30th week	***BOVINE LAMENESS*** **Surgery of claw:** Traumatic injury of sole Solar Ulcer White Line Disease **Surgery of the interdigital skin:**

	-Foot Rot -Digital Dermatitis
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
General skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Change and modification in the course	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Infectious Diseases I

1	**Course name**	Infectious Diseases
2	**Course code**	INF408
3	**Course type: /general/specialty/optional**	Specialty
4	**Accredited units**	3 credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences
8	**Instruction Language**	English Language
9	**Date of course approval**	2022
Brief description of the course		Infectious Disease is considered as a main core subjectfor any successful veterinarian. It provides the students with the required knowledge & information regarding important diseases caused by infectious agents (Bacteria, Virus, Perion, Parasitic, Fungal & Protozoa) affecting farm animals health and production as Ruminant (Cattle, Sheep, Goat and Camels), Equines Spp. and Pet Animals (Dogs & Cats). Firstly, the students know the definition of infectious diseases and their importance in terms of economic importance and morbidity and case fatality rate, with general diagnosis and control and their responsibility towards animals and animal owners. Then the student undergoes an intensive knowledge on specific diseases caused by infectious microorganisms (mentioned above), on disease

	definition, etiology, epidemiology, pathogenesis, clinical signs, deferential diagnosis, diagnosis, treatment and control.
Prescribed books	• TEXTBOOK OF THE DISEASES OF CATTLE, HORSES, SHEEP, PIGS, AND GOATS, Constable PD; et al, 11TH EDITION • THE MERCK VETERINARY MANUAL, **Aiello SE & Moses MA** 11TH EDITION Textbook of Veterinary Internal Medicine, S Ettinger & E Feldman, 6th Edition
Course duration	One academic year
Teaching method	❖ Theoretical lectures by using data show projector. ❖ Practical sessions by using data show projector, dissected specimen and alive animal. ❖ Handout of lectures and practices. ❖ Library. ❖ Student presentations and workshops.
Objectives and target of the course	✓ Provide the students with the necessary knowledge and information regarding diseases caused by infectious agents, affecting mainly domestic food-producing animals (cattle, sheep, goats and camels) and other animal including equine spp. and pets, to provide animal health and production ✓ It is aimed to acquire knowledge about infectious diseases of different systems of these animal species and ability to make differential diagnosis according to laboratory findings ✓ Teaching appropriate and effective treatment, prophylaxis methods and preventive medication.

Assessment examination method	**Time of Assessment**	**method of Assessment**	**hrs**	**Marks**
	1sthassessment exam at 10thweek	1sth midterm exam	1hrs	10
	2ndassessment exam at 20th Week	2nd midterm exam	1hrs	10
	3rdassessmentFinal exam by the end of the year	Written exam	3hrs	40
		Pract exam	1hr	30
		Oral exam	15min	10

Course contents	
1st week	**Introduction To Infectious Diseases** **Mastitis** - Bovine mastitis - Ewes and goat doe mastitis - Horse Mastitis - Camel Mastitis - Dog & Cat Mastitis
2nd week	**Introduction To Infectious Diseases** **Mastitis** - Bovine mastitis - Ewes and goat doe mastitis - Horse Mastitis - Camel Mastitis

	- Dog & Cat Mastitis
3rd week	**Introduction To Infectious Diseases** **Mastitis** - Bovine mastitis - Ewes and goat doe mastitis - Horse Mastitis - Camel Mastitis - Dog & Cat Mastitis
4th week	**Introduction To Infectious Diseases** **Mastitis** - Bovine mastitis - Ewes and goat doe mastitis - Horse Mastitis - Camel Mastitis - Dog & Cat Mastitis
5th week	**BACTERIAL DISEASES** **A. Diseases Caused By *Escherichia Coli & Salmonella Spp.*** - Acute Undifferentiated Diarrhea Of Newborn - Colibacillosis Of Newborn Calves, Lambs & Foals - Salmonellosis (Paratyphoid) - Bovine Salmonellosis - Ovine And Caprine Salmonellosis - Equine Salmonellosis
6th week	**BACTERIAL DISEASES** **A. Diseases Caused By *Escherichia Coli & Salmonella Spp.*** - Acute Undifferentiated Diarrhea Of Newborn - Colibacillosis Of Newborn Calves, Lambs & Foals - Salmonellosis (Paratyphoid) - Bovine Salmonellosis - Ovine And Caprine Salmonellosis - Equine Salmonellosis
7th week	**BACTERIAL DISEASES** **A. Diseases Caused By *Escherichia Coli & Salmonella Spp.*** - Acute Undifferentiated Diarrhea Of Newborn - Colibacillosis Of Newborn Calves, Lambs & Foals - Salmonellosis (Paratyphoid) - Bovine Salmonellosis - Ovine And Caprine Salmonellosis - Equine Salmonellosis
8th week	**B. Diseases Caused By *Clostridium Spp.*** - Tetanus - Botulism - Black Leg - Black Disease (Infectious Necrotic Hepatitis) - Malignant Edema - Bacillary Hemoglobinuria - Braxy - Enterotoxaemia & Lamb Dysentery - Pulpy Kidney

9th week	**B. Diseases Caused By *Clostridium Spp.*** - Tetanus - Botulism - Black Leg - Black Disease (Infectious Necrotic Hepatitis) - Malignant Edema - Bacillary Hemoglobinuria - Braxy - Enterotoxaemia & Lamb Dysentery - Pulpy Kidney Horse
10th week	**1stMIDTERM EXAM**
11st week	**B. Diseases Caused by *Clostridium Spp.*** - Tetanus - Botulism - Black Leg - Black Disease (Infectious Necrotic Hepatitis) - Malignant Edema - Bacillary Hemoglobinuria - Braxy - Enterotoxaemia & Lamb Dysentery - Pulpy Kidney
12nd week	**C. Diseases Caused By *Bacillus Spp.*** - Anthrax **D. Diseases Of Caused By *Fungi*** - Dermatomycosis (Ring Worm) - Sporthricosis
13rd week	**C. Diseases Caused By *Bacillus Spp.*** - Anthrax **D. Diseases Of Caused By *Fungi*** - Dermatomycosis (Ring Worm) - Sporthricosis
14th week	**E. Diseases Caused By *Mycoplasma Spp.*** - Contagious Bovine Pleuropneumonia (Cbpp) - Contagious Caprine Pleuropneumonia (Ccpp) - Contagious Agalactia Of Goat And Sheep
15th week	**E. Diseases Caused By *Mycoplasma Spp.*** - Contagious Bovine Pleuropneumonia (Cbpp) - Contagious Caprine Pleuropneumonia (Ccpp) - Contagious Agalactia Of Goat And Sheep
16thweek	**Diseases Caused by Pasteurella Spp.** - Septicemic Pasteurellosis (Hemorrhagic Septicemia) - Pneumonic Pasteurellosis Of Cattle (Shipping Fever) - Pasteurellosis Of Sheep And Goat
17th week	**Diseases Caused By Pasteurella Spp.** - Septicemic Pasteurellosis (Hemorrhagic Septicemia) - Pneumonic Pasteurellosis Of Cattle (Shipping Fever) - Pasteurellosis Of Sheep And Goat
18th week	**Diseases Caused By Mycobacterium Spp.** - Tuberculosis (M Bovis) - Skin TB - Para TB

19th week	**Diseases Caused By Mycobacterium Spp.** - Tuberculosis (M Bovis) - Skin TB - Para TB
20th week	**2nd MIDTERM EXAM**
21st week	**Diseases Caused By Actinomyces Spp., Actinobacillus Spp. & Nocardia Spp.** - Actinomycosis (Lumpy Jaw) - Actinobacillosis (Wooden Tongue) - Glander
22nd week	**Diseases Caused By Actinomyces Spp., Actinobacillus Spp. & Nocardia Spp.** - Actinomycosis (Lumpy Jaw) - Actinobacillosis (Wooden Tongue) - Glander
23rd week	**VIRAL AND CHLAMYDIAL DISEASES** **Viral Diseases Characterized by Respiratory Signs** - Equine Viral Rhinopneumonitis (EVR) - Equine Influenza - Equine Viral Arteritis (EVA) - Viral Pneumonia In Older Calves, Yearling And Adult Cattle (Acute Interstitial Pneumonia) - Infections Bovine Rhino-Tracheitis(IBR) - Ovine Progressive Pneumonia(Media-Visna)
24th week	**VIRAL AND CHLAMYDIAL DISEASES** **Viral Diseases Characterized By Respiratory Signs** - Equine Viral Rhinopneumonitis (EVR) - Equine Influenza - Equine Viral Arteritis (EVA) - Viral Pneumonia In Older Calves, Yearling And Adult Cattle (Acute Interstitial Pneumonia) - Infections Bovine Rhino-Tracheitis (IBR) - Ovine Progressive Pneumonia (Media-Visna)
25th week	**VIRAL AND CHLAMYDIAL DISEASES** **Viral Diseases Characterized By Respiratory Signs** - Equine Viral Rhinopneumonitis (EVR) - Equine Influenza - Equine Viral Arteritis (EVA) - Viral Pneumonia In Older Calves, Yearling And Adult Cattle (Acute Interstitial Pneumonia) - Infections Bovine Rhino-Tracheitis (IBR) - Ovine Progressive Pneumonia (Media-Visna)
26th week	**DISEASES CAUSED BY HELMINTHES PARASITES** - Hepatic Fascioliasis (Liver Fluke Disease) - Lung Worm Infestation in Cattle (Verminous Pneumonia & Verminous Bronchitis) - Parasitic Gastro-Enteritis - Cutaneous Stephanfilarosis
27th week	**DISEASES CAUSED BY HELMINTHES PARASITES** - Hepatic Fascioliasis (Liver Fluke Disease)

	- Lung Worm Infestation In Cattle (Verminous Pneumonia & Verminous Bronchitis) - Parasitic Gastro-Enteritis - Cutaneous Stephanfilarosis
28th week	**DISEASES OF PET ANIMALS** - Canine Distemper - Canine Infectious Hepatitis - Parvo Virus Infection - Feline Panleukopenia
29th week	**DISEASES OF PET ANIMALS** - Canine Distemper - Canine Infectious Hepatitis - Parvo Virus Infection - Feline Panleukopenia
30th week	**DISEASES OF PET ANIMALS** - Canine Distemper - Canine Infectious Hepatitis - Parvo Virus Infection - Feline Panleukopenia
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Infectious Diseases II

1	**Course name**	Infectious Diseases II
2	**Course code**	INF503
3	**Course type: /general/specialty/optional**	Specialty
4	**Accredited units**	3 credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences

8	**Instruction Language**	English Language
9	**Date of course approval**	2022

Brief description of the course	Infectious Disease is considered as a main core subjectfor any successful veterinarian. It provides the students with the required knowledge & information regarding important diseases caused by infectious agents (Bacteria, Virus, Perion, Parasitic, Fungal & Protozoa) affecting farm animals health and production as Ruminant (Cattle, Sheep, Goat and Camels), Equines Spp. and Pet Animals (Dogs & Cats). Firstly, the students know the definition of infectious diseases and their importance in terms of economic importance and morbidity and case fatality rate, with general diagnosis and control and their responsibility towards animals and animal owners. Then the student undergoes an intensive knowledge on specific diseases caused by infectious microorganisms (mentioned above), on disease definition, etiology, epidemiology, pathogenesis, clinical signs, deferential diagnosis, diagnosis, treatment and control.
Prescribed books	• Textbook Of the Diseases Of Cattle, Horses, Sheep, Pigs, And Goats, Constable PD; et al, 11TH EDITION • The Merck Veterinary Manual, **Aiello Se & Moses Ma** 11th Edition • Textbook Of Veterinary Internal Medicine, S Ettinger & E Feldman, 6th Edition
Course duration	One academic year
Teaching method	❖ Theoretical lectures by using data show projector. ❖ Practical sessions by using data show projector, dissected specimen and alive animal. ❖ Handout of lectures and practices. ❖ Library. ❖ Student presentations and workshops.
Objectives and target of the course	✓ Provide the students with the necessary knowledge and information regarding diseases caused by infectious agents, affecting mainly domestic food-producing animals (cattle, sheep, goats and camels) and other animal including equine spp. and pets, to provide animal health and production ✓ It is aimed to acquire knowledge about infectious diseases of different systems of these animal species and ability to make differential diagnosis according to laboratory findings ✓ Teaching appropriate and effective treatment, prophylaxis methods and preventive medication.

Assessment examination method	**Time of Assessment**	**method of Assessment**	**hrs**	**Marks**
	1sthassessment exam at 10thweek	1sth midterm exam	1hrs	10

	2nd assessment exam at 20th Week	2nd midterm exam	1hrs	10
	3rd assessment Final exam by the end of the year	Written exam	3hrs	40
		Pract exam	1hr	30
		Oral exam	15min	10
Course contents				
1st week	Diseases Caused by Corynebacterium *Spp.* - Caseous Lymphadenitis Of Sheep And Goats - Ulcerative Lymphangitis Of Horse And Cattle - Rhodococcus Equi Pneumonia Of Horses And Cattle Diseases Caused by *Streptococcus Spp.* - Strangles Of Horses - Neonatal Streptococcal Infection			
2nd week	Diseases Caused by Corynebacterium *Spp.* - Caseous Lymphadenitis Of Sheep And Goats - Ulcerative Lymphangitis Of Horse And Cattle - Rhodococcus Equi Pneumonia of Horses And Cattle Diseases Caused by *Streptococcus Spp.* - Strangles Of Horses - Neonatal Streptococcal Infection			
3rd week	Diseases Caused By *Fusobacterium* And *Bacteriodes Spp.* - Bovine Interdigital Necrobacillosis (Foot Rot) - Oral And Laryngeal Necrobacillosis - Necrobacillosis Of the Liver - Infectious Footrot of Sheep			
4th week	Diseases Caused by *Fusobacterium* and *Bacteriodes Spp.* - Bovine Interdigital Necrobacillosis (Foot Rot) - Oral And Laryngeal Necrobacillosis - Necrobacillosis Of the Liver - Infectious Footrot of Sheep			
5th week	Diseases Caused by *Brucella Spp* - Brucellosis Caused by Brucella Abortus - Brucellosis Caused by Brucella Ovis - Brucellosis Caused by Brucella Melitensis			
6th week	Diseases Caused By *Brucella Spp* - Brucellosis Caused by Brucella Abortus - Brucellosis Caused by Brucella Ovis - Brucellosis Caused by Brucella Melitensis			
7th week	Diseases Caused by *Leptospira Spp.* - Leptospirosis Diseases Caused By Listeria *Spp.* - Listeriosis			
8th week	B Diseases Caused by *Leptospira Spp.* - Leptospirosis Diseases Caused by Listeria *Spp.* - Listeriosis			
9th week	Diseases caused by Heamophilus and Morexella *spp.*			
10th week	1st MIDTERM EXAM			

11st week	Diseases Caused by Trypanosoma - Trypanosomiasis
12nd week	Viral Diseases of The Alimentary Tract - Foot And Mouth Disease (FMD) - Rinder Pest (Cattle Plague) - Peste Des Petits Ruminants (PPR) - Bovine Malignant Catarrh - Bovine Virus Diarrhea And Mucosal Disease - Blue Tongue
13rd week	Viral Diseases of The Alimentary Tract - Foot And Mouth Disease (FMD) - Rinder Pest (Cattle Plague) - Peste Des Petits Ruminants (PPR) - Bovine Malignant Catarrh - Bovine Virus Diarrhea And Mucosal Disease - Blue Tongue
14th week	Viral Diseases of The Alimentary Tract - Foot And Mouth Disease (FMD) - Rinder Pest (Cattle Plague) - Peste Des Petits Ruminants (PPR) - Bovine Malignant Catarrh - Bovine Virus Diarrhea And Mucosal Disease - Blue Tongue
15th week	EViral Diseases Of The Alimentary Tract - Foot And Mouth Disease (FMD) - Rinder Pest (Cattle Plague) - Peste Des Petits Ruminants (PPR) - Bovine Malignant Catarrh - Bovine Virus Diarrhea And Mucosal Disease - Blue Tongue
16thweek	Viral Diseases Characterized By Nervous Signs - Rabies - Scrapie - Bovine Spongiform Encephalopathy (BSE) - Caprine Arthritis Encephalitis(CAE) - Ovine Encephalomyelitis(Loping Ill) Diseases Caused By Rikettsia -Ovine And Caprine Contagious Ophthalmia -Anaplasmosis - Q Fever
17th week	Viral Diseases Characterized By Nervous Signs - Rabies - Scrapie - Bovine Spongiform Encephalopathy (BSE) - Caprine Arthritis Encephalitis(CAE) - Ovine Encephalomyelitis(Loping Ill) Diseases Caused By Rikettsia -Ovine And Caprine Contagious Ophthalmia -Anaplasmosis

	- Q Fever
18th week	Viral Diseases Characterized By Nervous Signs - Rabies - Scrapie - Bovine Spongiform Encephalopathy (BSE) - Caprine Arthritis Encephalitis(CAE) - Ovine Encephalomyelitis(Loping Ill) Diseases Caused By Rikettsia -Ovine And Caprine Contagious Ophthalmia -Anaplasmosis - Q Fever
19th week	Viral Diseases Characterized By Nervous Signs - Rabies - Scrapie - Bovine Spongiform Encephalopathy (BSE) - Caprine Arthritis Encephalitis(CAE) - Ovine Encephalomyelitis(Loping Ill) Diseases Caused By Rikettsia -Ovine And Caprine Contagious Ophthalmia -Anaplasmosis - Q Fever
20th week	2ndMIDTERM EXAM
21st week	Viral Diseases Characterized By Nervous Signs - Rabies - Scrapie - Bovine Spongiform Encephalopathy (BSE) - Caprine Arthritis Encephalitis(CAE) - Ovine Encephalomyelitis(Loping Ill) Diseases Caused By Rikettsia -Ovine And Caprine Contagious Ophthalmia -Anaplasmosis - Q Fever
22nd week	Viral Diseases Attributed To The Body As A Whole - Equine Infectious Anemia - African Horse Sickness - Bovine Ephemeral Fever (Three Days Sickness) - Rift Valley Fever - Akaban Virus Disease Of Cattle - Enzootic Bovine Leukosis (Bovine Lymphosarcoma)
23rd week	Viral Diseases Attributed To The Body As A Whole - Equine Infectious Anemia - African Horse Sickness - Bovine Ephemeral Fever (Three Days Sickness) - Rift Valley Fever - Akaban Virus Disease Of Cattle - Enzootic Bovine Leukosis (Bovine Lymphosarcoma)

24th week	Viral Diseases Characterized By Skin Lesion - Contagious Ecthyma (Orf) - Papillomatosis - Lumpy Skin Disease - Pox Disease In Different Farm Animals - Sarcoid
25th week	Viral Diseases Characterized By Skin Lesion - Contagious Ecthyma (Orf) - Papillomatosis - Lumpy Skin Disease - Pox Disease In Different Farm Animals - Sarcoid
26th week	Diseases Caused By Protozoa - Babesiosis - Coccidiosis - Theiloriosis (Tropical Theileriosis, East Coast Fever, Mediterranean Fever) - Toxoplasmosis - Cryptosporiosis - Trichomoniasis Diseases Caused By Trypanosoma - Trypanosomiasis
27th week	Diseases Caused By Protozoa - Babesiosis - Coccidiosis - Theiloriosis (Tropical Theileriosis, East Coast Fever, Mediterranean Fever) - Toxoplasmosis - Cryptosporiosis - Trichomoniasis Diseases Caused By Trypanosoma - Trypanosomiasis
28th week	Diseases Caused By Protozoa - Babesiosis - Coccidiosis - Theiloriosis (Tropical Theileriosis, East Coast Fever, Mediterranean Fever) - Toxoplasmosis - Cryptosporiosis - Trichomoniasis Diseases Caused By Trypanosoma - Trypanosomiasis
29th week	Diseases Caused by Arthropod Parasites - Sarcoptic Mange, Psoroptic Mange, Chorioptic Mange & Demodectic Mange - Gastrophilus Spp Infestation (Bot Fly) - Hypoderma Spp. Infestation (Warble Fly) - Screw Worm Infestation (Myiasis)
30th week	Diseases Caused By Arthropod Parasites

	- Sarcoptic Mange, Psoroptic Mange, Chorioptic Mange & Demodectic Mange - Gastrophilus Spp Infestation (Bot Fly) - Hypoderma Spp. Infestation (Warble Fly) - Screw Worm Infestation (Myiasis)
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Meat Hygiene

1	**Course name**	Meat Hygiene
2	**Course Code**	MEH 402
3	**Course type: /general/specialty/optional**	Specialty
4	**Accredited units**	4 Credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences
8	**Instruction Language**	English
9	**Date of course approval**	2022

Brief Description	This course covers the identification of the basic principles for maintaining healthy meat free of contaminants and pathogens to be suitable for human consumption, by knowing the correct and appropriate designs and constructions for slaughter slaughterhouses. This course also deals with teaching how to treat the different type of live animals before slaughter and how to prepare and slaughter carcasses in ways that ensure the availability of high-quality meat.

	Furthermore, this course covers the zoonotic diseases that may transported from animals to human and how to inspection onmeat for the consumer has food free from disease.
Textbooks	**Books:** • Meat Hygiene. ISBN:9781118650028. • Integrated Food Safety and Veterinary Public Health. ISBN-10: 9780851999081. ISBN-13: 978-0851999081. • Ovine Meat Inspection. ISBN-13: 978-1907284762. ISBN-10: 1907284761. • Bovine Meat Inspection. ISBN-10: 1899043551. ISBN-13: 978-1899043552 • Lawrie`s Meat Science. ISBN: 9780081006979.
Course Duration	One academic week.
Teaching Method	❖ Lectures. ❖ group interaction and discussion. ❖ self-directed activities. ❖ active participation. ❖ laboratory experiments.
Course Objectives	• Identifying the basic designs and constructions of old and modern slags and the difference between them. • Learn about the methods of treating live animals before slaughter, methods of slaughtering and preparing different carcasses, and their importance in the production of high-quality meat. • Getting to know the different ways of detecting the different carcasses and how to evaluate the quality of the carcasses. • Identifying the physiological changes and the most important diseases (their causes, symptoms, and judgment) that are transmitted and non-transmitted between humans and animals and how to distinguish them. • Learn how to detect these diseases before and after slaughter, judge them and their suitability for human consumption. • Identifying the basic components of poultry and rabbit skins, methods of slaughter and processing, and the diseases that affect them, as well as judging those carcasses. • Identifying the nutritional value and seafood and the factors affecting the changes that occur to fish after they are caught, how to preserve fish, knowing the diseases that affect fish and which are transmitted to humans, and judging them and their suitability for human consumption. • Learn about the different methods of preserving meat and meat products, the basics of the HACCP system, and the methods of its application in slaughterhouses and meat products factories.

	• Identifying ways to dispose of slaughtering waste and benefit from it as an important economic resource for the state.			
Assessment examination method	**Time of Assessment**	**method of Assessment**	**hours**	**Marks**
	1sth assessment exam at 10th week	1sth midterm exam	1hrs	10
	2nd assessment exam at 20th Week	2nd midterm exam	1hrs	10
	3rd assessment ➔ Final exam by the end of the year	Written exam	3hrs	40
		Practice exam	3hr	30
		Oral exam	1hr	10
Course Contents				
1st week	Introduction to Meat Hygiene and Slaughterhouse.			
2nd week	Construction of abattoirs			
3rd week	Transportation of Animals to the Slaughterhouse			
4th week	Ante-mortem Care of the Food Animals and Animal Slaughter			
5th week	Lymphatic System			
6th week	Chemical Composition of the Meat and Meat Cuts			
7th week	Conversion of Muscle to Meat			
8th week	Abnormal Conditions, Diseases, and its judgments			
9th week	Abnormal Conditions within Physiological Limits and its judgment			
10th week	**First Midterm Exam**			
11st week	Abnormal Conditions within Physiological Limits and its judgment			
12nd week	C. Generalized Conditions and its judgment D. Constitutional disorders and blood diseases and its judgment			
13rd week	E. Specific Diseases Bacterial Diseases (*causative agent, antemortem and postmortem findings and Judgment*)			
14th week	E. Specific Diseases 2. Viral and Prion Diseases (*causative agent, antemortem and postmortem findings and Judgment*)			
15th week	Foot and mouth disease			
16th week	E. Specific Diseases (cont.) E. Specific Diseases (cont.)			
17th week	3. Parasitic Diseases (*causative agent, antemortem and postmortem findings and Judgment*)			
18th week	Parasites transmitted to human			

19th week	Parasites not transmitted to human
20th week	**Second Midterm Exam**
21st week	Meat Preservation
22nd week	Meat Preservation
23rd week	Meat Microbiology and Food Poisoning
24th week	Meat Microbiology
25th week	Food Poisoning
26th week	Chemical Residues in Meat
27th week	Poultry Hygiene and Inspection
28th week	Fish Hygiene and Inspection Fish zoonotic diseases
29th week	Fish poisoning Fish parasites
30th week	HACCP
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Veterinary Medicine I

1	**Course name**	Veterinary Medicine I
2	**Course code**	MED405
3	**Course type: /general/specialty/optional**	Specialty
4	**Accredited units**	3 credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences

8	**Instruction Language**	English Language
9	**Date of course approval**	2022

Brief description of the course	Veterinary internal medicine subject is a fundamental for any field veterinarian's and practitioners. It provides the students with an up-to date knowledge and information on diseases caused by non-infectious agents that affect farm animals' health and productivity (cattle, sheep, goats, camels, equine, pets). Firstly, the students understand meanings of medicine diseases and its importance as a General Systemic State, which contribute to the effects of many diseases. Then, the students undergo an up-to date knowledge about body system diseases emphasizing on principle body systems dysfunction, manifestations of dysfunction and special examination and principle of treatment. Furthermore, the subject provides more information and knowledge on specific diseases associated with body systems.
Prescribed books	**Books:** • Department Handout, by Teaching Stuff Member • TEXTBOOK OF THE DISEASES OF CATTLE, HORSES, SHEEP, PIGS, AND GOATS, Constable PD; et al, 11TH EDITION • THE MERCK VETERINARY MANUAL, **Aiello SE & Moses MA** 11TH EDITION • Text Book of Veterinary Internal Medicine, S Ettinger & E Feldman, 6th Edition
Course duration	One academic year
Teaching method	❖ Theoretical lectures by using data show projector. ❖ Practical sessions by using data show projector, dissected specimen and alive animal. ❖ Handout of lectures and practices. ❖ Library. ❖ Student presentations and workshops.
Objectives and target of the course	❖ Provide the students with the necessary knowledge and information regarding diseases caused by non-infectious agents, affecting mainly domestic food-producing animals (cattle, sheep, goats and camels) and other animal including equine spp. and pets, to provide animal health and production ❖ It is aimed to acquire knowledge about non-infectious diseases of different systems of these animal species and ability to make differential diagnosis according to laboratory findings ❖ Teaching appropriate and effective treatment, prophylaxis methods and preventive medication

Assessment examination method	**Time of Assessment**	**method of Assessment**	**hrs**	**Marks**
	1sthassessment exam at 10thweek	1sth midterm exam	1hrs	10
	2ndassessment exam at 20th Week	2nd midterm exam	1hrs	10

	3rd assessment Final exam by the end of the year →	Written exam	3hrs	40
		Pract exam	1hr	30
		Oral exam	15min	10
Course contents				
1st week	Introduction to Internal Medicine			
2nd week	General systemic state: Hypothermia, hyperthermia, fever, Septicemia/viremia,			
3rd week	Toxemia and endotoxemia			
4th week	Hypovolemic, hemorrhagic, maldistributed and obstructive shock.			
5th week	Allergy and anaphylaxis.			
6th week	Edema.			
7th week	Disturbances of free water, electrolytes and acid-base balance.			
8th week	(Hyponatremia, hypokalemia, hypochloremia, acidemia, alkalemia and principals of fluid therapy).			
9th week	General medicine: pain, weight loss or failure to gain weight (ill -thrift), sudden or unexpected death.			
10th week	**1st MIDTERM EXAM**			
11st week	Disease of Cardiovascular system: Principles of circulatory failure, Manifestations of circulatory failure,			
12nd week	Special examination of the cardiovascular system, Arrhythmias			
13rd week	Diseases of the heart.			
14th week	Diseases of the blood vessels.			
15th week	**Digestive System I** Principles Of Alimentary Tract Dysfunction, Manifestations and Principles of Treatment in Alimentary Tract Diseases, Diseases Of the Buccal Cavity and Salivary Glands.			
16thweek	Disease Of Pharynx and Esophagus. Chock.			
17th week	Esophagitis. Pharyngitis.			
18th week	Dental Diseases.			
19th week	Equine Colic.			
20th week	**2nd MIDTERM EXAM**			
21st week	Diseases of the respiratory system (Ruminant) Principles of respiratory insufficiency Principal manifestations of respiratory insufficiency			
22nd week	Principles of treatment and control of respiratory tract disease.			
23rd week	Diseases of the upper respiratory tract.			

24th week	Diseases of the lungs.
25th week	Diseases of the pleura and diaphragm.
26th week	Diseases of the respiratory system (horse). 1. Recurrent airway obstruction. 2. Inflammatory airway diseases. 3. Exercise induced pulmonary hemorrhage. 4. Guttural pouch diseases (tympany, empyema. 5. and mycosis. 6. Ethmoid Hematoma.
27th week	Diseases of urinary system Clinical Manifestations of Urinary Tract Diseases.
28th week	Principles of Treatment of Urinary Tract Diseases. Nephrosis and Renal Ischemia.
29th week	Glomerulonephritis.
30th week	Embolic Nephritis. Pyelonephritis. Cystitis.
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Veterinary Medicine II

1	**Course name**	Veterinary Medicine II
2	**Course code**	MED500
3	**Course type: /general/specialty/optional**	Specialty
4	**Accredited units**	3 credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medical Sciences

8	**Instruction Language**	English Language
9	**Date of course approval**	2022

Brief description of the course	Veterinary internal medicine subject is a fundamental for any field veterinarian's and practitioners. It provides the students with an up-to date knowledge and information on diseases caused by non-infectious agents that affect farm animals' health and productivity (cattle, sheep, goats, camels, equine, pets). Firstly, the students understand meanings of medicine diseases and its importance as a General Systemic State, which contribute to the effects of many diseases. Then, the students undergo an up-to date knowledge about body system diseases emphasizing on principle body systems dysfunction, manifestations of dysfunction and special examination and principle of treatment. Furthermore, the subject provides more information and knowledge on specific diseases associated with body systems.
Prescribed books	**Books:** • TEXTBOOK OF THE DISEASES OF CATTLE, HORSES, SHEEP, PIGS, AND GOATS, Constable PD; et al, 11TH EDITION • THE MERCK VETERINARY MANUAL, **Aiello SE & Moses MA** 11TH EDITION Textbook of Veterinary Internal Medicine, S Ettinger & E Feldman, 6th Edition
Course duration	One academic year
Teaching method	❖ Theoretical lectures by using data show projector. ❖ Practical sessions by using data show projector, dissected specimen and alive animal. ❖ Handout of lectures and practices. ❖ Library. ❖ Student presentations and workshops.
Objectives and target of the course	❖ Provide the students with the necessary knowledge and information regarding diseases caused by non-infectious agents, affecting mainly domestic food-producing animals (cattle, sheep, goats and camels) and other animal including equine spp. and pets, to provide animal health and production ❖ It is aimed to acquire knowledge about non-infectious diseases of different systems of these animal species and ability to make differential diagnosis according to laboratory findings ❖ Teaching appropriate and effective treatment, prophylaxis methods and preventive medication

Assessment examination method	**Time of Assessment**	**method of Assessment**	**hrs**	**Marks**
	1sthassessment exam at 10thweek	1sth midterm exam	1hrs	10

	2nd assessment exam at 20th Week	2nd midterm exam	1hrs	10
	3rd assessment Final exam by the end of the year	Written exam	3hrs	40
		Pract exam	1hr	30
		Oral exam	15min	10
Course contents				
1st week	Digestive System II **Disease of Rumen, Reticulum and Omasum.** **Disease of Abomasum.**			
2nd week	**Disease of Intestine** Diseases of Stomach.			
3rd week	Gastric Ulceration Gastric Impaction/ Dilatation or Rupture			
4th week	Gastric Neoplasia Gastric Parasites			
5th week	Diseases Of the Liver and Pancreas Clinical Manifestations, Diagnostic Tests & Treatment of Liver Diseases			
6th week	Hepatitis In Ruminants.			
7th week	Liver Abscesses in Cattle			
8th week	Jaundice			
9th week	Liver Diseases of Horse			
10th week	**1stMIDTERM EXAM**			
11st week	Hepatitis			
12nd week	Diseases Of Musculoskeletal and Metabolic Disorders Rhabdomyolysis Of Horses Equine Pars Intermedia Dysfunction (Equine Cushing's Disease)			
13rd week	Lactation Tetany of Mares (Eclampsia) Transit Tetany Laminitis			
14th week	Diseases of nutritional deficiencies Deficiencies Of Protein Cobalt Deficiency Copper Deficiency Iodine Deficiency			
15th week	Iron Deficiency Sodium Chloride Deficiency Magnesium Deficiency Manganese Deficiency			
16th week	Zinc Deficiency (Parakeratosis) Potassium Deficiency Selenium/Or Vitamin E Deficiency			

	Rickets
17th week	Osteomalacia Osteodystrophia Fibrosa Vitamin A Deficiency (Hypovitaminosis-A) Vitamin K Deficiency
18th week	Thiamine Deficiency (Hypothiaminosis) Riboflavin Deficiency (Hyporiboflavinosis) Nicotinic Acid Deficiency (Hyponiacinosis) Pyridoxine (Vitamin B6) Deficiency
19th week	Biotin (Vita Min H) Deficiency (Hypobiotinosis) Folic Acid Deficiency (Hypofolicosis) Choline Deficiency (Hypocholinosis) Vitamin B12 Deficiency (Hypocyanocobalaminosis)
20th week	**2nd MIDTERM EXAM**
21st week	Metabolic and production Diseases(ruminants) Compton Metabolic Profile Test Parturient Paresis (Milk Fever) Downer Cow Syndrome (Non-Ambulatory Cows with Non-Progressive Neurological Findings) Transit Recumbency of Ruminants
22nd week	Hypomagnesemic Tetany (Lactation Tetany, Grass Tetany, Grass Staggers, Wheat Pasture Poisoning) Hypomagnesemic Tetany of Calves Ketosis, Subclinical Ketosis, Acetonemia
23rd week	Pregnancy Toxemia in Sheep Fatty Liver in Cattle (Fat Cow Syndrome, Hepatic Lipidosis, Pregnancy Toxemia in Cattle) Postparturient Haemoglobinuria In Cattle
24th week	Diseases of nervous system (general) Principles of nervous dysfunction Clinical Manifestations of Disease of The Nervous System Principles Of Treatment of Diseases of The Nervous System
25th week	Diseases Of the Brain Diseases Of the Meninges Toxic And Metabolic Encephalomyelopathies Diseases Of the Peripheral Nervous System
26th week	Diseases of nervous system horses Otitis Media Cerebellar Abiotrophy and Degeneration Equine Protozoal Myeloencephalitis Equine Grass Sickness (Dysautonomia) Head Shaking
27th week	Diseases Of the Skin and Eye (Ruminant +Horses) Principles Of Treatment of Diseases of The Skin Diseases Of the Epidermis and Dermis Insect Hypersensitivity

28th week	Atopy Photosensitization Seborrhea Eosinophilic Granuloma Urticaria
29th week	Greasy Heal and Scratches (Pastern Dermatitis) Keratitis
30th week	Uveitis Cataract
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Veterinary Microbiology

1	**Course name**	Veterinary Microbiology
2	**Course code**	MIC301
3	**Course type: /general/specialty/optional**	Specialty
4	**Accredited units**	7 credits
5	**Educational hours**	.....
6	**Pre-requisite requirements**	/
7	**Program offered the course**	Bachelor of Veterinary Medicine Sciences (BVMSc)
8	**Instruction Language**	English Language
9	**Date of course approval**	2022
	Brief description of the course	This course covers all the major aspects of veterinary microbiology and aims to give comprehensive model and descriptive information about bacteria and fungi, the basic characteristics of bacteria and their description, and an extensive discussion of the main genera of

	pathogenic bacteria. It also includes the study of general aspects of virology such as the characteristics of viruses, their structure, methods of reproduction and classification, and the most important viral families. In addition to, introducing the principles and basics of immunology such as types of immunity, the immune system, antibodies, antigens, complement and hypersensitivity.
Prescribed books	**Books:** •Veterinary Microbiology and Microbial Disease, 2nd Edition. ISBN: 978-1-405-15823-7. • Fenner's Veterinary Virology, 5th Edition. eBook ISBN: 9780128011706. • Veterinary Immunology, 10th Edition. eBook ISBN: 9780323523486.
Course duration	One academic year.
Teaching method	❖ Lectures. ❖ group interaction and discussion. ❖ self-directed activities. ❖ active participation. ❖ laboratory experiments.
Objectives and target of the course	• Provide a compelling and relevant Microbiology curriculum that will train students at a high standard of scientific literacy and impart appropriate skill sets • Students will be able to develop a comprehensive understanding and appreciation for the diversity and significance of different microbes (Bacteria, Viruses and Fungi) as well as all basics regarding immunity to infections. • Students will be able to plan laboratory investigations and develop the technical laboratory skills that are needed for applied Microbiology. • Have developed a very good understanding of the characteristics of different types of microorganisms, methods to organize • Able to explain the useful and harmful activities of the microorganisms • Able to perform basic experiments to grow and study microorganisms in the laboratory • Able to differentiate between the characteristics of different types of microorganisms • To understand fundamental differences between each virus families • Understanding of the immune system including organs, cells and receptors • Learn the importance of immunology in developing serological diagnostic tests

Assessment examination method	**Time of Assessment**	**method of Assessment**	**hrs.**	**Marks**
	1sth assessment exam at 10th week	1sth midterm exam	1hrs	10

	2nd assessment exam at 20th Week	2nd midterm exam	1hrs	10
	3rd assessment ➔ Final exam by the end of the year	Written exam	3hrs	50
		Pract exam	1hr	20
		Oral exam	1hr	10
Course contents				
1st week	• Introduction and History of Microbiology • Introduction of Virology • Introduction History of Immunology			
2nd week	• Microscopy • General Characteristics of viruses • Non-specific (Innate) Immunity			
3rd week	• Staining of Bacteria • Structure of Viruses • Non-specific (Innate) Immunity			
4th week	• Function and structure of the bacterial cell • Taxonomy of viruses • General features of the immune responses			
5th week	• Bacterial Nutrition • Cultivation and Characterization of viruses • General features of the immune responses			
6th week	• Bacterial Growth • Viral Replication of DNA viruses • Antigens and antigenicity			
7th week	• Bacterial metabolism • Viral Replication of RNA viruses • Antigens and antigenicity			
8th week	• Bacterial Genetics • Viral Genetics • Pattern recognition receptors (PRRs)			
9th week	• Identification of Bacteria • Virus-Cell Interactions • Destruction of foreign material-The myeloid system			
10th week	**1st Midterm Exam**			
11st week	• Biochemical Tests • Viral Pathogenesis • Destruction of foreign material-The myeloid system			

12nd week	• Control of Microorganisms • Host Defenses to Viruses • Mononuclear-phagocytic system
13rd week	• Drug Resistance • Prevention of Viral Diseases • Mononuclear-phagocytic system
14th week	• Pathogenesis of Infectious Bacterial Diseases • Viral Vaccines • Dendritic cells and antigen processing
15th week	• Classification of Bacteria • Anti-Viral Drugs • The major histocompatibilty complex
16th week	• *Staphylococcus* and *Streptococcus* • Circoviridae and Parvoviridae • The tissues of the immune system
17th week	• *Brucella* and *Corynebacterium* • Poxviridae • Lymphocytes
18th week	• *Bacillus* and *Clostridium* • Herpesviridae • Lymphocytes
19th week	• *Mycobacterium*, *Rickettsia* and *Chlamydia* • Papillomaviridae and Adenoviridae • Antibodies
20th week	**Second Midterm Exam**
21th week	• *Treponema*, *Borrela* and *Leptospira* • Retroviridae • Antibodies
22th week	• *Mycoplasma* and *Neisseria* • Reoviridae and Birnaviridae • Antibodies
23th week	• *Haemophilus*, *Bordetella* and *Yersinia* • Paramyxoviridae • Antibodies
24th week	• *Francisella* and *Pasteurella* • Orthomyxoviridae • Hypersensitivity
25th week	• *Actinomyces* and *Nocardia* • Rhabdoviridae • Hypersensitivity

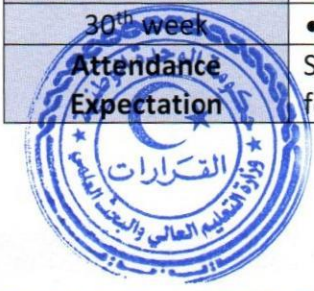
26th week	• *E .coli*, *Proteus* and *Klebsiella* • Phenuiviridae • Hypersensitivity
27th week	• *Salmonella*, *Shigella* and *Seratia* • Picornaviridae and Caliciviridae • Hypersensitivity
28th week	• *Cambylopacter*, *Helicobacter* and *Vibrio* • Coronaviridae • Vaccination
29th week	• Pseudomonas, Bacteroids and Erysipelothrix • Viral Families with Viruses of Minor Veterinary Significance • Vaccination
30th week	• *Yersinia* and *Moraxella* • Prions and Transmissible Spongiform Encephalopathies • Vaccination
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.
General skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Change and modification in the course	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

Toxicology and Forensic Medicine

1	**Course name**	Toxicology and Forensic Medicine
2	**Course code**	TFM404
3	**Course type: /general/specialty/optional**	specialty
4	**Accredited units**	Credit / 28 academic week
5	**Educational hours**	.....
6	**Pre-requisite requirements**	Non
7	**Program offered the course**	Bachelor of Veterinary Medicine Sciences (BVMSc)
8	**Instruction Language**	English
9	**Date of course approval**	2022
Brief description of the course	This course covers knowledge of pollutants, mineral substances, acids and alkalis, organic acids, pesticides, radioactive substances and animal	

<table>
<tr><td></td><td>toxins, mycotoxins and food in addition, to the various poisonous plants as well as their source and how to calculate toxic doses, also how to treat them. This course also deals with the teaching of forensic medicine with a detailed explanation of the laws and the relationship between them.</td></tr>
<tr><td>Prescribed books</td><td>Books:
•Veterinary Toxicology. 9780128114117.
• Clinical Veterinary Toxicology 13: 978-0323011259.
• introduction to Veterinary and comparative forensic medicine ISBN:9781405111010.</td></tr>
<tr><td>Course duration</td><td>One academic year.</td></tr>
<tr><td>Teaching method</td><td>❖ Lectures.
❖ group interaction and discussion.
❖ self-directed activities.
❖ active participation.
❖ laboratory experiments.</td></tr>
<tr><td>Objectives and target of the course</td><td>• In this course, a comprehensive study is made of the fields and activities of toxicology, pollutants and their types, types of poisoning, calculation of toxic doses, sources and types of toxic substances, the metabolism and mechanism of action of toxic substances, methods of diagnosis and treatment of poisoning cases. Mineral substances, acids, alkalis, and various organic acids and their sources are studied, and ways animals and humans are exposed to these substances, in addition to diagnosing treatment and prevention.
• Pesticides, radioactive substances, animal toxins, mycotoxins and food poisoning are also studied, as well as the definition of poisonous plants, as well as the study of forensic medicine with an extensive explanation of the laws and the relationship between them, as well as clarification of death and its types, methods and detection of the cause that led to death and the changes that occur after death and how to link them and determine the time of death as well as linking the resulting damage Of the natural causes (heat, cold, starvation, neglect) and the factors of change due to the change in electricity and drowning and the study of suffocation (and its types)</td></tr>
<tr><td>Assessment examination method</td><td>
<table>
<tr><th>Time of Assessment</th><th>method of Assessment</th><th>hrs</th><th>Marks</th></tr>
<tr><td>1sth assessment exam at 10th week</td><td>1sth midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td>2nd assessment exam at 20th Week</td><td>2nd midterm exam</td><td>1hrs</td><td>10</td></tr>
<tr><td rowspan="3">3rd assessment➔ Final exam by the end of the year</td><td>Written exam</td><td>3hrs</td><td>50</td></tr>
<tr><td>Pract exam</td><td>1hr</td><td>20</td></tr>
<tr><td>Oral exam</td><td>1hr</td><td>10</td></tr>
</table>
</td></tr>
<tr><td colspan="2">Course contents</td></tr>
</table>

1st week	• Introduction to toxicology science • Toxicology concepts & terminology.
2nd week	• Toxicodynamic of poisons
3rd week	• Toxicokinetic of poisons
4th week	• Factors influencing toxicity
5th week	• Safety testing & Common causes of poisoning
6th week	• Treatment, management of toxicosis & types of antidotes
7th week	• Metallic poisoning (Irritant toxic agent); Arsenic, Antimony, Fluoride.
8th week	• Mercury& Molybdenum
9th week	• Aluminum, Phosphorous, Zinc& Iodine.
10th week	**1st Midterm Exam**
11st week	• Insecticides.
12nd week	• Herbicides & Rodenticides.
13rd week	• Molluscicides & Fungicides.
14th week	• Acaricide& Feed related toxicosis.
15th week	• Toxic gases & vapors.
16th week	• Zootoxins & Water related toxicosis
17th week	• Mycotoxins
18th week	• Poisonous Plants.
19th week	• Radioactive materials.
20th week	**2ndMIDTERM EXAM**
21st week	• Introduction & the doctor of the law & Definition
22nd week	• Types of death and Unexpected & sudden death from natural causes
23rd week	• Clinical signs & causes of death
24th week	• Changes after death
25th week	• Injury due to hypo. and hyperthermia
26th week	• Wounds & explosive injuries
27th week	• Injury due to electricity.
28th week	• Lightening, neglect & starvation
29th week	• Asphyxia & Pressure on the neck & chest
30th week	• Drowning & immersion
Attendance Expectation	Students must attend all the course on time, truancy is only allowed for medical reasons and must be supported by a medical report.



Generic Skills	The College is committed to ensuring that students acquire the full knowledge and skills necessary to participate fully in all aspects of their lives, including skills that enable them to be lifelong learners. To ensure that graduates obtain this preparation, general skills such as computer, personal communication, and thinking skills will be included.
Course Change	The information in this course outline is correct at the time of publication. Course content is revised on an ongoing basis to ensure its relevance to the changing educational process and labor market needs. The course instructor will endeavor to provide notice of changes to students in a timely manner. The schedule can also be revised.

نبذة مختصرة عن مقررات الأقسام العلمية

Courses Brief Description

1 . Veterinary Anatomy - ANA101 - ANA206

يغطي هذا المقرر معرفة القواعد الأساسية للتشريح العام ومعرفة الفرق في التشريح بين الحيوانات الأليفة. يدرس الشكل والهيكل الطبيعي لجميع أعضاء وأنظمة الجسم المختلفة، مثل الجهاز الحركي، الجهاز الهضمي والجهاز العصبي، وما إلى ذلك. يعتبر المقرر الحالي لبنة أساسية في العلوم السريرية التي تمكن الطالب من التعرف على الأنسجة الطبيعية وتقارنها فيما بعد بما هو مريض أو غير صحي.

The course of Veterinary Anatomy is covered the basic knowledge of general and comparative anatomy of the domestic animals. It studies the normal shape and structure of all the different organs and systems of the body, such as locomotors, digestive and nervous systems, etc. The current course is considered a basic building block of clinical sciences, which enable the student to identify the normal tissues and organs comparing them later with what is diseased or unhealthy.

2 . Histology and Embryology - HIE102

علم الأنسجة البيطري هو العلم الذي يركز على التشكل المفصل للحيوانات الأليفة ويربط بين الهياكل المحددة والوظيفة، وهو الأساس لفهم الآفات المجهرية غير الطبيعية (علم الأنسجة) وعلم المناعة وعلم الأمراض السريري والعديد من التخصصات الأخرى في الطب البيطري. علم الأجنة البيطري هو فهم أصل وتطور وهيكل وشكل وعلاقات الأنسجة والأعضاء في الجنين والجنين.

veterinary histology is the science that focuses on the detailed morphology of domestic animals and correlates specific structures with function and is the basis for understanding abnormal microscopic lesions (histopathology), immunology, clinical pathology, and several other disciplines in veterinary medicine. veterinary embryology is to understand of the origin, development, structure, final form and relationships of tissues and organs in the embryo and fetus.

3 . Veterinary Biochemistry - BIC103

طلبة السنة الأولي في قسم وظائف الأعضاء، الكيمياء الحيوية وتغذية الحيوان يتوجب عليهم دراسة المكونات الكيميائية للخلايا الحية مثل، البروتينات، السكريات،الدهون والأحماض النووية، مع التفاعلات والعمليات الكيميائية التي تحدث عند المستوي الجزيئي. بتعلم ذلك، الطلبة سوف يكونون في موقع قوي لفهم دوام الصحة وما تعنيه من توازن كامل ومنسجم للتفاعلات الكيميائية التي تحدث في الجسم ولفهم التشخيص والعلاج الفعال للأمراض وما تعنيه من اختلال في تركيب المكونات، التفاعلات أو العمليات الكيميائية التي تحدث في الجسم

.Biochemistry is study of the chemical constituents, such as proteins, carbohydrates, lipids and nucleic acids, of living cells with the chemical reactions and processes that they undergo at the molecular level. By learning that, students will be in strong position to understand the maintenance of health and how it reflects the harmonious balance of biochemical reactions occurring in the animal body; and to understand the effective

diagnosis and treatment of diseases and how they reflect abnormalities in biomolecules, biochemical reactions or biochemical processes occurring in the body.

4 . Veterinary Physiology - PHY104 - PHY201

يتعامل علم وظائف الاعضاء مع دراسة اجهزة الحيوانات ووظائف وطريقة عمل هذه الاجهزة العضوية متضمناً العمليات الكيميائية والفيزيائية التي تحدث داخل هذه الأجهزة في مختلف الحيوانات، تشمل هذه العمليات فسيولوجيا الخلية، الدم والعضلات. يتم دراسة هذه الوظائف على مستويات مختلفة ابتداء من الخلية، الانسجة، الاعضاء حتى اجهزة الحيوان. تختلف وترتبط هذه الوظائف ارتباط وثيق بالتركيبة التشريحية لمختلف الحيوانات

Physiology is the study of the functions of animal systems and the mechanisms by which these organ systems work, as well as the chemical and physical processes that occur inside these systems in different animals. Cell physiology, blood, and muscles are examples of these processes. These functions are investigated at several levels, beginning with cells, tissues, organs, and finally animal systems. The functions of these organs vary depending on the anatomical structure of the animal.

5 . Genetic and Animal Breeding - GEB204

يقدم مقرر "علم الوراثة" المبادئ الأساسية لعلم الأحياء الجزيئي وعلم الوراثة وعلم وراثة العشائر. حيث يدرس في هذا المقرر تركيب ووظيفة الكروموسومات والجينات، الوراثة المندلية وأنواع التعبيرات الجينية. كما سيتم تعريف الطلاب بأنواع الطفرات والمتلازمات الوراثية وبعض الاختبارات الجينية المستخدمة لتحديد وتشخيص الطفرات والمتلازمات الوراثية. كما سيقدم المقرر للطلاب مبادئ ومفاهيم التحليلات الإحصائية الأساسية المستخدمة لوصف وتقييم المجموعات الحيوانية. المقرر الحالي يأخذ في الاعتبار التعرف على التقنيات التقليدية والحديثة التي يمكن أن تساعد في المجال العلمي والبحثي.

صمم مقرر "علم الأنسال" لإدخال المصطلحات والمبادئ الأساسية لعلم الانسال والتربية التقليدية، مثل التوريث المندلي. كما يكتسب الطالب المعرفة الأساسية حول علم وراثة العشائر; الذي يتضمن المبادئ الأساسية مثل تركيبة العشيرة والمسار الجيني، وتكرارات الجينية، والقوى المؤثرة على تغيير التكرار الجيني، وأساسيات هاردي واينبرغ (Hardy-Weinberg principles). هذا المقرر سيتعامل مع نظم التناسل، والتغيرات الوراثية والمظهرية، وأساسيات الانتخاب، وبرامج التسجيل والتقييم الوراثي. كما سيُأخذ بعين الاعتبار في المقرر الحالي الاكتشافات والتقنيات الأساسية والحديثة التي يمكن أن تساعد في برامج التحسين الوراثي للعشائر وتحسين أنسالها ونظم مكافحة الأمراض.

- Genetics course introduces the principles of molecular biology, genetics and population genetics. It studies the structure and function of chromosomes and genes, Mendelian genetics and types of gene expressions. The course will also

introduce to the student types of genetic syndromes and mutations and some genetic tests used to identify the genetic defects. The course will also present students to the principles and concepts of types of basic statistical analysis used to describe and evaluate animal populations. The current course is considers a certain knowledge of the traditional and modern techniques that can assist in the scientific and research field.

- Animal Breeding course designed to introduce breeding terminology and the basic principles of classical breeding, like Mendelian inheritance. The student will gain basic knowledge on population Genetics; includes basic principles like population structure, gene flow, gene and genotypic frequencies, forces changing gene frequency and Hardy-Weinberg principle. The course will deal with mating system, the genetic and phenotypic variation, principles of selection, and programs for recording and genetic evaluation. The current course will consider a certain knowledge of traditional and modern discoveries and technologies that can assist livestock improvement programs and disease control systems.

6 . Animal Nutrition - ANT203

أساسيات تغذية حيوان وتشمل التعريف بمصطلحات علم التغذية وتطورها مع شرح مفصل للعناصر الغذائية الأساسية لتغذية الحيوان وأهميتها وتتمثل في الكربوهيدرات، البروتين، الدهون والطاقة، بحيث تشمل تصنيفاتها، هضمها، امتصاصها وأيضها في كل من حيوانات المعدة البسيطة والمجترات. دراسة الفيتامينات والمعادن مما يشمل مصادرها ووظيفتها وأعراض نقصها في الحيوان. كما ندرس التغذية التطبيقية وتشمل دراسة الأعلاف من حيث تعريفها وتقسيماتها والمضافات الغذائية بأنواعها مع تقييم الأعلاف وتطبيقها علي الحيوان وتشمل قياس كفاءة القدرة الهضمية للمواد الغذائية بمختلف التجارب التي تقوم علي الحيوان، وأيضا دراسة معدل الاستهلاك الطوعي للحيوان في المزرعة والأسطبل. كما تتم دراسة الأمراض التي تحدث للحيوان نتيجة عدم الاتزان الأيضي. إضافة إلي ذلك كيفية تكوين العليقة المتزنة للحيوان ومعرفة قياس الطاقة للعليقة لتغطية احتياج الحيوان منها.

Aware with the dietary nutrients needs for animals, primarily those in Agriculture and food and to ensure that students have good information about healthy food is a choice, before you can fully explore that choice, which it helps to have a bit an understanding about what food actually is and what it delivers to your body. students should have sufficient knowledge about essential nutrients, which can't make either for we or form animals in sufficient quantities to meet daily requirements. So we should added to the diet such as minerals, most vitamins, some amino acids and some fatty acids. Also, they should know about the non-essential nutrients that can be synthesized within the body, but insufficient amounts to meet the requirements or may also come from the diet. Providing with full information about sources, chemical composition, digestion, absorption, physiological mode of action, deficiency symptoms of all nutrients such as water, CHO, Protein, Lipids, energy and vitamins and minerals at different growth stages. Sufficient knowledge to use

laboratory facilities (apparatus) for determination the chemical compositions of different feed stuff to be used in the ratio formulation at maintenance and production levels for farm animal feedings. Provide them with the crucial information about classification of feeds, feed additive types, evaluation of feeds (***in-vivo, in-vitro in-sacoo***, **TDN** and in direct method using markers).

7 . Animal Husbandry - AHU202

استخدام المعرفة النظرية والعملية في الموضوعات المتعلقة بتربية الحيوانات. اكتساب وتطبيق المهارات الاجتماعية ومهارات الاتصال ومهارات التفكير ومهارات البحث ومهارات الإدارة الذاتية في جميع أنحاء البرنامج. يدرك مسؤولياته المهنية بالمعرفة والمهارات والقيم والكفاءات وينقل المعارف والمهارات الأساسية من خلال التواصل الكتابي والشفهي. تحليل الأحداث والظواهر المهنية باستخدام الأساليب والأساليب العلمية ، وتفسير النتائج وتقديم الحلول واكتساب القدرة على تطبيق طرق التزاوج والرعاية في تربية الماشية والأغنام والماعز. معرفة المبادئ والمفاهيم الأساسية في تربية الخيول والدواجن وتقييم الكفاءة من سلالات الحيوانات حسب محصولها. اكتساب القدرة على تطبيق التحديد لزيادة إنتاجية السباق. يعرف العلاقة بين البيئة والحيوان، ويفي بواجب الخدمة للمجتمع من خلال البحث ونقل التكنولوجيا بالإضافة إلى متابعة وتنفيذ التطورات في ممارسات الإدارة والتنظيم لمشاريع الثروة الحيوانية.

Use theoretical and practical knowledge in the subjects related to animal husbandry. Obtaining and applies social skills, communication skills, thinking skills, research skills, and self-management skills throughout the program. Is aware of his professional responsibilities with knowledge, skills, values and competencies and transfer basic knowledge and skills through written and verbal communication.

Analyzes professional events and phenomena by using scientific techniques and methods, interprets results and offers solutions and Gain the ability to apply mating methods and care in cattle, sheep and goat breeding Knows the basic principles and concepts in horse and poultry breeding and Evaluates the efficiency of animal breeds according to their yield. Gain the ability to apply selection to increase race yields.

Knows the relationship between environment and animal fulfills the service obligation for society through research and technology transfer in addition to Follow and implement the developments in management and organization practices of livestock enterprises.

8 . Veterinary Microbiology - MIC301

هذا المقرر يغطي جميع الجوانب الرئيسية لعلم الأحياء المجهرية البيطرية ويهدف إلى إعطاء معلومات نموذجية ووصفية شاملة عن البكتيريا والفطريات الخصائص الأساسية للبكتيريا ووصفها ومناقشة مستفيضة للأجناس الرئيسية من البكتيريا المسببة للأمراض. كما يشمل دراسة الجوانب العامة في علم الفيروسات مثل خصائص الفيروسات وتركيبها وطرق تكاثرها وتصنيفها وأهم العائلات الفيروسية.بالإضافة للتعريف بمبادئ وأساسيات علم المناعة مثل أنواع المناعة والجهاز المناعي والأجسام المضادة والمستضدات والمتممة وفرط التحسس.

This course covers all the major aspects of veterinary microbiology and aims to give comprehensive model and descriptive information about bacteria and fungi, the basic characteristics of bacteria and their description, and an extensive discussion of the main genera of pathogenic bacteria. It also includes the study of general aspects of virology such as the characteristics of viruses, their structure, methods of reproduction and classification, and the most important viral families. In addition to, introducing the principles and basics of immunology such as types of immunity, the immune system, antibodies, antigens, complement and hypersensitivity.

9 . Veterinary Parasitology - PAR302

يشمل هذا المقرر علم الحيوانات الأولية وعلم الديدان و يهدف إلى تدريس الطلاب بأساسيات علم الطفيليات وتقسيمه العلمي وتسمياته المختلفة, وصف أشكالها وطرق الحركة والتكاثر والأمراض التي تسببها وأنواع العلاقات بين الطفيليات والمضيف (الحيوان).كما يشمل أيضًا علم الحشرات الذي يهتم بوصف الحشرات البالغة المختلفة ومراحل نموها المختلفة ودورة حياتها ودورها في نقل الأمراض والمشاكل التي تسببها لحيوانات المزرعة والدواجن بسبب التطفل . كما يتناول المقرر طرق جمع العينات المختلفة وطرق التشخيص و الوقاية منها ومكافحتها لضمان الحفاظ على الثروة الحيوانية.

This course includes protozoology, helminthology and entomology, and aims to teach the students to the basics of parasitology, its scientific division, its different nomenclature, description of its forms, the methods of movement and reproduction, the diseases they cause, the types of relationships between the parasite and the host (animal).Also, includes entomology, which is concerned with describing of the different adult insects, their different stages of growth, their life cycle, their role in transmitting diseases and the problems they cause with farm animals and poultry due to parasitism. The course also deals with the various methods of collecting samples, methods of diagnosis, prevention and control to ensure the preservation of livestock.

10 . Veterinary Pathology - PAT303

مقرر مادة علم الأمراض صمم لتقديم المفاهيم المعرفية الخاصة بالتغيرات المرضية على مستوي الخلايا والأجهزة الحيوية في الامراض التي تصيب الحيوانات. المقرر يوضح للطلاب الأسباب المرضية والية حدوث الامراض، بالإضافة الي التغيرات المرضية العينية ة المجهرية،بالإضافة انه يزود الطلاب بالطرق التي يجب اتخاذها ابتداء من جمع العينات في الحقل الي الطرق المختبرية اللازمة للتوصل الي تشخيص دقيق للمرض.

The course of Veterinary Pathology is designed to cover the basic knowledge of general and systemic pathological changes of the domestic animal diseases. It provides the student with the causes, pathogenesis and effect of diseases at the macroscopic and microscopic levels. This course is designed to provide students the procedure that should be taken to collect samples from the field up to laboratory methods to ensure the differential diagnosis of the disease.

11 . Veterinary Pharmacology - PHA 304

هذه المادة تغطي دراسة شاملة عن المبادئ الأساسية وطريقة عمل الأدوية التي تستخدم في العلاج البيطري، الحركة الدوائية لها، مدة تأثيرها، سميتها على الحيوانات، طرق تحللها، بالإضافة إلى طرق إعطاء الأدوية والجرعات المناسبة مع دراسة الأدوية المستخدمة في علاج الأمراض العصبية وأدوية القلب والأوعية الدموية وأدوية القناة الهضمية وأمراض الجهاز الهضمي وأمراض الجهاز التنفسي, بالإضافة إلى أدوية الستيرويدات وغير الستيرويدات والأدوية المستخدمة في حالات الالتهابات والحساسية و دراسة الأدوية المستخدمة في علاج الأمراض المعدية الي جانب دراسة مستفيضة للمضادات الحيوية، مضادات الفيروسية، مضادات الديدان وأدوية علاج الأمراض السرطانية.

In Pharmacology student will study the basic principles and the mode of action of drugs which use in veterinary treatment, their pharmacokinetics, duration of effect, toxicity on animals, methods of decomposition, in addition to methods of administering drugs and appropriate doses with the study of drugs in the treatment of diseases, cardiovascular drugs and channel drugs alimentary; The study of medicines in the treatment of infectious diseases, gastrointestinal diseases, psychology and the treatment of chemotherapy treatment.

12 . Clinical Pathology - CLP401

هو علم طبي يتعامل مع تشخيص المرض بناءً على الفحص المخبري لسوائل الجسم، مثل الدم والبول باستخدام أدوات أمراض الدم وعلم الأحياء الدقيقة، علم الطفيليات، الكيمياء السريرية وعلم الأمراض الجزيئي.

It is a medical science that deals with the diagnosis of disease based on the laboratory examination of body fluids, such as blood and urine using the tools of hematology, microbiology, parasitology, clinical chemistry and molecular pathology.

13 . Milk Hygiene - MIH403

يعرض المنهج للصفات الطبيعية والكيميائية للألبان ومنتجاتها، المعاملات الحرارية للحليب، العوامل المؤثرة على كمية ونوعية اللبن، مصادر تلوث الحليب ومنتجاته، الأمراض التى تتناقل من خلال اللبن ومنتجاته، كيفية الوقاية من مسببات الأمراض، التسمم الغذائي، البادئات، الميكروبات الدالة، منظفات ومطهرات مصانع الأغذية، التهاب الضرع، بقايا المضادات الحيوية والمبيدات الحشريةفى الألبان ومنتجاتها وطرق الكشف، نظام الهاسب وطرق التطبيق فى مصانع الألبان، تصنيع منتجات الألبان وكيفية حماية المستهلك من الغش والمطابقة للمواصفات القياسية الليبية.

This course covers the physical and chemical properties of milk and its products, heat treatments of milk, factors affecting the quality of milk, sources of contamination of milk and its products, diseases transmitted through milk and its products, how to prevent pathogens, food poisoning, milk starters, indicator organisms, cleaning and disinfecting of milk plants. Mastitis, Residues of Antibiotics and Pesticides in Milk and Milk Products, Detection Methods, HACCP System, Dairy Products Manufacturing, and How to Protect Consumers from Fraud and Compliance with Libyan Standard Specifications.

14 . Meat Hygiene - MEH402

يغطي هذا المقرر تعريف المبادئ الأساسية للحفاظ على لحوم صحية خالية من الملوثات ومسببات الأمراض لتكون مناسبة للاستهلاك الآدمي، من خلال معرفة التصاميم والإنشاءات الصحيحة والمناسبة للمسالخ. يتناول هذا المقرر أيضًا تعليم كيفية التعامل مع الأنواع المختلفة من الحيوانات الحية قبل الذبح وكيفية تحضير وذبح الذبائح بطرق تضمن توافر لحوم عالية الجودة. علاوة على ذلك، يغطي هذا المقرر الأمراض التي تنتقل من الحيوان إلى الإنسان وكيفية التفتيش على اللحوم للمستهلكين ليكون لديهم طعام خالي من الأمراض.

This course covers the identification of the basics principles for maintaining healthy meat free of contaminants and pathogens to be suitable for human consumption, by knowing the correct and appropriate designs and constructions for slaughter slaughterhouses. This course also deals with teaching how to treat the different type of live animals before slaughter and how to prepare and slaughter carcasses in ways that ensure the availability of high-quality meat. Furthermore, this course covers the zoonotic diseases that may transported from animals to human and how to inspection on meat for the consumer has food free from disease.

15 . Toxicology &Forensic Medicine - TFM404

يغطي هذا المقرر الدراسي المعرفة بالملوثات والمواد المعدنية، الأحماض، القلويات، الأحماض العضوية، مبيدات الآفات، المواد المشعة، السموم الحيوانية، السموم الفطرية والأغذية. بالإضافة إلى النباتات السامة المختلفة وكذلك مصدرها وكيفية حساب الجرعات السامة، وكيفية حساب الجرعات السامة. لمعالجتهم. كما يتناول هذا المقرر تدريس الطب الشرعي مع شرح مفصل للقوانين والعلاقة بينهما.

This course covers knowledge of pollutants, mineral substances, acids and alkalis, organic acids, pesticides, radioactive substances and animal toxins, mycotoxins and food in addition, to the various poisonous plants as well as their source and how to calculate toxic doses, also how to treat them. This course also deals with the teaching of forensic medicine with a detailed explanation of the laws and the relationship between them.

16 . General & Special Veterinary Surgery GSU406 - SSU501

تقوم شعبة الجراحة والتخدير والأشعة بتدريس أساسيات علم الجراحة والتخدير الأشعة والتي تؤهل الطالب لفهم وتطبيق النظريات الخاصة بالجراحة العامة والخاصة وتهدف كذلك لتدريب الطلاب عملياً على طرق استعمال كافة أنواع المعدات الجراحية وانواع التخدير المختلفة التي تساعده على طرق تشخيص الامراض الجراحية وكيفية التعامل معها وذلك في كافة انواع الحيوانات وبكافة وسائل التشخيص الحديثة من اشعه سينيه، موجات فوق صوتيه والمناظير الجراحية حتى يكتسب الطالب

المهارات والخبرة العملية في التعاملمع الاصابات الجراحية المختلفة والتي تؤهله لأن يكون طبيباً ناجحاً في الحقل وذلك بإقحامه في الممارسة الحقلية خلال دراسته بالكلية.

The curriculum of veterinary surgery is aimed to enable the student to know about the principle of general surgery including technique of sterilization, pre operative preparation, different types of anesthesia to control animals during examination or during minor or major surgical procedures as well as handling and transportation and to learn about diagnostic tools and imaging, as well as, implanting knowledge and practicing the various surgical problems of the body systems including digestive, respiratory, cardiovascular, urogenital and abdominal wall. Moreover, to accustomed students how to pick the principles up to recognize case appraisal, etiology, clinical signs, diagnosis and differential diagnosis, prognosis and different traits of treatment.

17 .Theriogenology THE407- THE502

علم التناسليات هو أحد تخصصات الطب البيطري، يتم تدريس منهج التناسليات خلال السنوات الرابعة والخامسة من سنوات الدراسة بالكلية ويهتم بتزويد الطالب بالمعلومات اللازمة في مجال التناسل والخصوبة والتلقيح الاصطناعي بالإضافة الى تدريبه على المهارات اللازمة في تشخيص وعلاج الأمراض التناسلية وتشخيص الحمل في العديد من الحيوانات وتشخيص وعلاج امراض الذكورة وضعف الرغبة الجنسية في ذكور الحيوانات المختلفة.أيضا ما يخص الممارسات السريرية للتوليد البيطري وعلم التقنيات التناسلية المساعدة الحديث.

Theriogenology is a specialty of veterinary medicine, taught during the fourth and fifth years of study at the college, in the form of theoretical and practical lessons, concerned with animal reproduction. Our aim is to provide the student with the necessary knowledge and skills for the field of reproduction, fertility and artificial insemination; in addition to training him in the necessary skills in diagnosing and treating reproductive diseases, diagnosing pregnancy in many animals, and diagnosing and treating infertility diseases and weak sexual desire in males of different animals. Also, the clinical practices of veterinary obstetrics and the science of assisted reproductive technology.

18 . Veterinary Medicine MED405 - MED500

تعتبر مادة الأمراض الباطنية من المواد الأساسيَّة لأي طبيب بيطري أو ممارس ميداني. حيث يزود الطلاب بمعرفة ومعلومات حديثة عن الأمراض التي تسببها العوامل غير المعدية التي تؤثر على صحة وإنتاجية حيوانات المزرعة (الأبقار والأغنام والماعز والإبل والخيول والحيوانات الأليفة). فأولاً: يُقدم للطلاب معاني أمراض الباطنة وأهميتها مثل التي تساهم في آثار العديد من الأمراض. بعد ذلك، يخضع الطلاب لمعرفة حديثة حول أمراض أجهزة الجسم المختلفة، مع التركيز على الخلل الأساسي في أنظمة الجسم ومظاهر الخلل الوظيفي والفحص الخاص ومبدأ العلاج. علاوة على ذلك،تُوفر هذه المادة مزيدًا من المعلومات والمعرفة حول أمراض معينة مرتبطة بأجهزة الجسم.

Veterinary internal medicine subject is a fundamental for any field veterinarian's and practitioners. It provides the students with an up-to date knowledge and information on diseases caused by non-infectious agents that affect farm animals' health and productivity (cattle, sheep, goats, camels, equine, pets). Firstly, the students understand meanings of medicine diseases and its importance as a General Systemic State, which contribute to the effects of many diseases. Then, the students undergo an up-to date knowledge about body system diseases emphasizing on principle body systems dysfunction, manifestations of dysfunction and special examination and principle of treatment. Furthermore, the subject provides more information and knowledge on specific diseases associated with body systems.

19 .Infectious Diseases -INF408- INF503

تعتبر الأمراض المعدية من المواد الجوهرية الهامة لأي طبيب بيطري ناجح. حيث يزود الطلاب بالمعرفة والمعلومات المطلوبة المحدثة الجديدة أولاً بأول فيما يتعلق بالأمراض الهامة التي تسببها المسببات الممرضة (البكتيريا والفيروسات والبريون والطفيليات والفطريات والبروتوزوا) التي تؤثر على صحة حيوانات المزرعة وإنتاجها مثل الحيوانات المجترة (الماشية والأغنام والماعز والجمال)،الفصيلة الخيلية. والحيوانات الأليفة (الكلاب والقطط). فأولاً، يُعرّف الطلاب بالأمراض المعدية وأهميتها من حيث الأهمية الاقتصادية ومعدل الإصابة بالأمراض ومعدل الوفيات، مع التشخيص العام والتحكم بالمرض ومسؤولية الأطباء البيطريين تجاه الحيوانات وأصحاب الحيوانات. ثم يخضع الطالب لمعرفة مكثفة عن الأمراض المعدية بالدولة والدول المجاورة والمُعلن عنها بالمنظمة العالمية للصحة الحيوانيةبما في ذلك الامراض العابرة للحدود التي تسببها الكائنات الحية الدقيقة المعدية (المذكورة أعلاه)،من ناحية التعريف بالمرض،المسبب المرضى، وبائية المرض،و الإمراضية، والعلامات السريرية، والتشخيص التفريقي،والتشخيص،والعلاج والتحكم والسيطرة.

Infectious Disease considered as a main core subject for any successful veterinarian. It provides the students with up-to-date required knowledge & information regarding important diseases caused by infectious agents (Bacteria, Virus, Perion, Parasitic, Fungal & Protozoa) affecting farm animals health and production as Ruminant (Cattle, Sheep, Goat and Camels), Equines Spp. and Pet Animals (Dogs & Cats). Firstly, the students know the definition of infectious diseases and their importance in terms of economic importance and morbidity and case fatality rate, with general diagnosis and control and the veterinarian's responsibility towards animals and animal owners. Then the students undergo an intensive knowledge on important infectious diseases in the country and neighboring states, notifiable diseases by OIE and TADs caused by infectious

microorganisms (mentioned above), on disease definition, Etiology, epidemiology, pathogenesis, clinical signs, deferential diagnosis, diagnosis, treatment and control.

20 . Preventive Medicine - PRM504

تهدف المكونات التدريسية الى تزويد الطالب بالمعرفة الواسعة بجملة من المفاهيم والتفاصيل المعمقة في علم الوبائيات والأمراض المشتركة (حيوانية المنشأ) المتناقلة بين الإنسان والحيوان، وكذلك الأمراض الطارئة والمستجدة التي لها تأثير مباشر على صحة الحيوان و الإنسان ولها تداعيات صحية مجتمعية ، واقتصادية والتي تمثل تهديد للصحة العامة والصحة البيطرية. تلك المعارف المكتسبة ذات أهمية حيوية في تطوير وتصميم البرامج الفعالة والناجعة لمجابهة الأمراض والأوبئة ووضع خطط واستراتيجيات السيطرة والتحكم.

ينفرد علم الوبائيات باهتمامه وتركيزه على دراسة الأمراض والجوائح التي تظهر بشكل وبائي والتي غالبا ما تسجل في مجاميع

الحيوانات أو السكان على السواء، أي تظهر بشكل "مجتمعي " بينما باقي المواد تهتم بالحالات الاكلينيكية والسريرية الفردية.

يكتسب الطالب مهارة حساب وعد تكرار الإصابات وتحديد وتوصيف عوامل الاختطار بالمرض وكيفية تصميم وتحديد نوعية الدراسات الوبائية المختلفة واختيار طرق الاعتيان وتحديد حجم العينة المطلوبة لدراسة الأمراض الوبائية و والظواهر الصحية. وبدراسة المقررات يتعلم الطالب أيضا كيفية اعداد وتجميع البيانات الوبائية و تحليلها واستخلاص المعلومات والنتائج النهائية التي من خلالها يتم التوصل للاستنتاجات والتوصيات. كما يدرس الطالب طرق الاستقصاء والتحري عن تفشي الأمراض الوبائية و كيفية وضع واثبات الفرضيات المحتملة لحدوث الأمراض ، مع وضع سيناريوات علمية شاملة لتلك الأحداث الصحية سواء" الأمراض والجوائح ذات الصفة الوبائية أو حتى الطارئة و المستجدة ، ومن ثم يتم وضع استراتيجيات لمواجهة تلك التحديات والمشاكل الصحية سواء أكان ذلك على مستوى مناطقي محلى أو مستوى وطني. وأخيرا يتعلم الطالب مهارة تحرير وكتابة النصوص العلمية وإعداد التقارير الوبائية وآليات التواصل وكيفية تقديمها الى الجهات الصحية التنفيذية و المسؤوله لوضعها موضع التنفيذ.

The goal of the courses are to provide the students with knowledge of a wide range of principles and details of some important concepts for epidemiology and zoonotic infectious communicable diseases between animals and humans, newly emerging and re-emerging diseases, addressing its impact on livestock animals, socio-economy and public health threat. These concepts are vital to the development and targeting of effective control and prevention measures. The approaches taken will be from the epidemiology, or public health viewpoint, rather from the clinical standpoint. Counting cases of disease in a population is the unique domain of epidemiology, it is the core component of preventive medicine. Gaining thestudents how can gathering the epidemiological data and how to analyze them. Also, students would learn how to select appropriate designing for epidemiological studies and how to use different types of

techniques of sampling. Students must learn how to perform investigation responsibly, and how to establish clear operational priorities for outbreak investigation study. How can epidemiology help to solve the problem? Also, students would learn Strategic application of control and eradication methods. Lastly, considering different scenarios, student will be asked to provide a written report and epidemiologic skills communication.

21 . Poultry Diseases - POU505

يغطي هذا المقرر طرق التربية ودورات الإنتاج وفهم آلية الجهاز المناعي في ، بالإضافة إلى ضرورة معرفة الأمراض التي تصيب الدواجن وآلية العدوى والأعراض التي تسببها، وكذلك طرق التشخيص والعلاج وطرق المكافحة.

This course covers the breeding methods, production cycles, and understanding the mechanism of the immune system in poultry, in addition to the need to know the diseases that affect poultry, the mechanism of infection and symptoms caused, as well as methods of diagnosis, treatment and methods of control.

22 . Fish Diseases- FIS506

يغطي هذا المقرر كل ما يتعلق بأمراض الأسماك، حيث يشمل الأمراض المعدية وغير المعدية التي تصيب أسماك المزارع السمكية وأسماك مياه البحر والأنهار وغيرها. بالإضافة إلى ذلك، وبالتالي من الضروري تعليم الطالب أنواع الأمراض البكتيرية، الفطرية، الطفيلية والفيروسية بالإضافة إلى الأمراض غير المعدية وأسباب حدوثها والعامل المسبب والمهيأ لها، الأعراض السريرية التي يمكن أن تحدث، وكذلك التغيرات في الأنسجة التي يمكن أن تنتج عن العدوى، ودورة حياتها وكيفية علاجها والوقاية منها.

This course covers everything related to fish diseases, including infectious and non-infectious diseases that affect aquaculture fish, seawater fish, rivers, and others. In addition, and therefore it is necessary to teach the student the types of bacterial, fungal, parasitic and viral diseases as well as non-communicable diseases and their causes and causative agent and predisposing them, clinical symptoms that can occur, as well as tissue changes that can result from infection, their life cycle and how Its treatment and prevention.

23 . Biostatistics - STA205

مقدمة في علم الإحصاء الحيوي و العرض البياني للبيانات و العرض البياني للبيانات و مقاييس التشتت و الاحتمالات و توزيع الاحتمالات و اختبار الفرضيات و لارتباط والانحدار و تحليلات التباين.

Introduction and importance of basic statistics, presentation of data, Measure of central tendency, Measure of central dispersion, Probability, probability distribution, Sampling and statistic estimation, one – sampling and statistical hypothesis testing Statistical inference for two samples, correlation and regression and Analyses of variance.

24 . Arabic Language - ARA100

يساعد هذا المقرر في تنمية الثروة اللغوية للطلاب في الألفاظ والمعاني والأساليب،وتمكينهم من محاكاة ما يدرسون من الأدب بطريقة لاشعورية نتيجة لتأثرهم به ، فيصبحون لديهم القدرة على التعبير الجيّد عن أفكارهم ومشاعرهم .كذلك يساعد تنمية ميل الطلاب إلى القراءة واستخدام الأدب فيشغل أوقات فراغهم وتوسيع ثقافتهم و صقل عقولهم. تزويد الطلاب بطرائق استخدام علامات الترقيم والوقف، مما من شأنه أن ينظم كتاباتهم، ويقرب معانيهم ويوصلها كما أراد.

25 . English Language - ENG101

The English language course aim to acquire a general knowledge about veterinary medicine and improve student overall use of the language and their ability to communicate in English. The course is designed to cover the basic knowledge of different topics such as, terminology of veterinary medicine, how to write medical report. Also, the course aims to introduced the use important affixes in veterinary practice.