



Hokkaido University

# Hokkaido University

Syllabus 2017

Advanced Seminar in Veterinary Clinics [Small Animals I]

Advanced Seminar in Veterinary Clinics [Small Animals II]

Advanced Seminar in Veterinary Clinics [Large Animals and Clinical Pathology I]

Advanced Seminar in Veterinary Clinics [Large Animals and Clinical Pathology II]

Advanced Seminar in Research Laboratory Rotation I

Advanced Seminar in Research Laboratory Rotation II

Course Title    Advanced Seminar in Veterinary Clinics    [Small Animals I]					
Type	Exercise, Elective	Number of credits	1	Hours	-

Course Title	Companion Animal Medicine Clinic I				
Course Instructor	Mitsuyoshi TAKIGUCHI, Kensuke NAKAMURA, Noboru SASAKI, Kiwamu HANAZONO				
Course Overview: Through communication with owners and clinical activities at the Veterinary Teaching Hospital, students cultivate problem-solving abilities required for caring for companion animals especially with neck and thoracic diseases.					
Course Goals: <ol style="list-style-type: none"> <li>1. To be able to conduct a medical interview with an owner</li> <li>2. To be able to design a diagnostic scheme</li> <li>3. To be able to make a differential diagnosis based on examination findings</li> <li>4. To be able to design a treatment plan and evaluate therapeutic effectiveness</li> </ol>					
For internal diseases of companion animals with especially neck and thoracic lesions, Students learn high knowledge and skills in making diagnostic schemes, treatment plans, and evaluating therapeutic effectiveness through at least one week clinical activities.					
Remarks: Maximum of 5 students					

Course Title	Companion Animal Medicine Clinic II				
Course Instructor	Mitsuyoshi TAKIGUCHI, Hiroshi OHTA, Keitaro MORISHITA				
Course Overview: Through communication with owners and clinical activities at the Veterinary Teaching Hospital, students cultivate problem-solving abilities required for caring for companion animals especially with abdominal diseases.					
Course Goals: <ol style="list-style-type: none"> <li>1. To be able to conduct a medical interview with an owner</li> <li>2. To be able to design a diagnostic scheme</li> <li>3. To be able to make a differential diagnosis based on examination findings</li> <li>4. To be able to design a treatment plan and evaluate therapeutic effectiveness</li> </ol>					
For internal diseases of companion animals with especially abdominal lesions, Students learn high knowledge and skills in making diagnostic schemes, treatment plans, and evaluating therapeutic effectiveness through at least one week clinical activities.					
Remarks: Maximum of 5 students					

Course Title    Advanced Seminar in Veterinary Clinics    [Small Animals II]					
Type	Exercise, Elective	Number of credits	1	Hours	-

Course Title	Companion Animal Surgery I
Course Instructor	Masahiro OKUMURA, Ryosuke ECHIGO, Takaharu ITAMI, Tomohito ISHIZUKA
<p>Course Overview:</p> <p>Through communication with owners and clinical activities at the Veterinary Teaching Hospital, students cultivate problem-solving abilities required for caring for companion animals especially with orthopedic and neurological diseases.</p>	
<p>Course Goals:</p> <ol style="list-style-type: none"> <li>1. To be able to conduct a medical interview with an owner</li> <li>2. To be able to make a differential diagnosis based on examination findings</li> <li>3. To be able to design a treatment plan and evaluate therapeutic effectiveness</li> <li>4. To be able to make decision to choose appropriate surgical procedures to respective pathological conditions and to estimate possible prognostic situations</li> <li>5. To be able to plan entire course of pain management and peri-operational anesthesia for surgical interventions for respective cases</li> </ol>	
<p>For companion animals with orthopedic and neurological disorders, students learn highly sophisticated knowledge and skills in making diagnostic schemes, treatment plans including surgical or non-surgical interventions and anesthesia, and evaluating therapeutic effectiveness through at least one week clinical activities.</p>	
<p>Remarks:</p> <p>Maximum of 5 students</p>	

Course Title	Companion Animal Surgery II
Course Instructor	Kenji HOSOYA, Satoshi TAKAGI, Yuki HOSHINO, Takaharu ITAMI, Tomohito ISHIZUKA
<p>Course Overview:</p> <p>Through communication with owners and clinical activities at the Veterinary Teaching Hospital, students cultivate problem-solving abilities required for caring for companion animals especially with surgical disorders in soft tissues.</p>	
<p>Course Goals:</p> <ol style="list-style-type: none"> <li>1. To be able to conduct a medical interview with an owner</li> <li>2. To be able to make a differential diagnosis based on examination findings</li> <li>3. To be able to design a treatment plan and evaluate therapeutic effectiveness</li> <li>4. To be able to make decision to choose appropriate surgical procedures to respective pathological conditions and to estimate possible prognostic situations</li> <li>5. To be able to plan entire course of pain management and peri-operational anesthesia for surgical interventions for respective cases</li> </ol>	
<p>For companion animals with pathologies in soft tissues, students learn highly sophisticated knowledge and skills in making diagnostic schemes, treatment plans including surgical or non-surgical interventions and anesthesia, and evaluating therapeutic effectiveness through at least one week clinical activities.</p>	
<p>Remarks:</p> <p>Maximum of 5 students</p>	

Course Title	Companion Animal Oncology
Course Instructor	Kenji HOSOYA, Satoshi TAKAGI, Yuki HOSHINO, Takaharu ITAMI, Tomohito ISHIZUKA
<p>Course Overview:</p> <p>Through communication with owners and clinical activities at the Veterinary Teaching Hospital, students cultivate problem-solving abilities required for caring for companion animals especially with tumorous diseases.</p>	
<p>Course Goals:</p> <ol style="list-style-type: none"> <li>1. To be able to conduct a medical interview with an owner</li> <li>2. To be able to make a differential diagnosis based on examination findings</li> <li>3. To be able to design a treatment plan and evaluate therapeutic effectiveness</li> <li>4. To be able to make decision to choose appropriate surgical procedures to respective pathological conditions and to estimate possible prognostic situations</li> <li>5. To be able to plan entire course of pain management and peri-operational anesthesia for surgical interventions for respective cases</li> </ol>	
<p>For companion animals with pathologies in oncology, students learn highly sophisticated knowledge and skills in making diagnostic schemes, treatment plans including chemotherapy, radiotherapy and surgical resection, including pain management and anesthesia, and evaluating therapeutic effectiveness through at least one week clinical activities.</p>	
<p>Remarks:</p> <p>Maximum of 5 students</p>	

Course Title    Advanced Seminar in Veterinary Clinics [Large Animals and Clinical Pathology I]					
Type	Exercise, Elective	Number of credits	1	Hours	90

Course Title	Large Animals
Course Instructor	Seiji KATAGIRI, Masashi NAGANO, Yojiro YANAGAWA,
<p>Course Overview:</p> <p>Through the practices, students understand and become able to treat daily cattle from estrus to parturition, and also understand the points of in vitro production of embryos. Students learn biology, ecology and infectious diseases in Hokkaido wildlife, and also experience a small trip for fieldwork and zoological garden to study environment and zoo sciences.</p>	
<p>Course Goals:</p> <ol style="list-style-type: none"> <li>1. To be able to monitor the estrous cycle and detect the estrus</li> <li>2. To be able to perform the artificial insemination and also can explain the reproductive physiology lying on the basis</li> <li>3. To be able to explain fetal development and processes of parturition, and to perform the appropriate assist for parturition</li> <li>4. To be able to produce bovine embryo in vitro</li> </ol>	
<p>For managing dairy cattle, several practices in the experimental farm of Hokkaido University will be performed.</p> <ol style="list-style-type: none"> <li>1. Examination of genital organ by rectal palpation and ultrasonography</li> <li>2. Monitoring estrous cycle and estrus detection</li> <li>3. Artificial insemination</li> <li>4. Pregnancy diagnosis</li> <li>5. Management of peripartum period</li> </ol> <p>For producing bovine embryos in vitro, laboratory works will be also performed</p> <ol style="list-style-type: none"> <li>1. In vitro maturation of oocytes</li> <li>2. In vitro fertilization of oocytes</li> <li>3. In vitro developmental culture of presumptive zygotes</li> <li>4. Semen handling for in vitro insemination</li> </ol>	
<p>Remarks:</p> <p>Maximum of 5 students</p>	

Course Title		Advanced Seminar in Veterinary Clinics [Large Animals and Clinical PathologyI]			
Type	Exercise, Elective	Number of credits	1	Hours	90

Course Title	Clinical Pathology
Course Instructor	Mutsumi INABA, Kensuke TAKADA, Jumpei YAMAZAKI, Takashi KIMURA, Atsushi KOBAYASHI, Keisuke AOSHIMA, Teita ISHIZAKI
<p>Course Overview:</p> <p>Students learn and experience several advanced procedures for the pathological diagnosis and the diagnosis of hereditary and neoplastic diseases in animals.</p>	
<p>Course Goals:</p> <ol style="list-style-type: none"> <li>1. To learn several advanced tests in diagnostic laboratories required for the diagnoses of some metabolic, genetic and neoplastic diseases.</li> <li>2. To be able to plan the differential diagnosis using the clinical laboratory tests learned for some typical diseases.</li> <li>3. To learn the actual procedure of histopathological examination.</li> </ol>	
<p>Course Schedule:</p> <ol style="list-style-type: none"> <li>1. Advanced clinical diagnostic tests for metabolic, genetic and neoplastic diseases</li> <li>2. Cytology for neoplastic diseases (2 periods)</li> <li>3. Laboratory tests for anemia/hemostasis (2 periods)</li> <li>4. Laboratory tests for inherited diseases</li> <li>5. Preparation of histological slides from formalin-fixed tissues.</li> <li>6. Hematoxylin-Eosin staining and Immunohistochemistry</li> <li>7. Microscopic examination and diagnosis of histological slides prepared from diseased animals</li> </ol>	
<p>Remarks:</p> <p>Maximum of 5 students for an academic year</p>	

Course Title    Advanced Seminar in Research Laboratory Rotation I					
Type	Exercise, Elective	Number of credits	1	Hours	-
Course Instructor		-			
Course Overview:					
<p>Students experience laboratory practices, research seminars, lectures, and other activities, to learn basic/advanced skills/methodology in the research on microbiology and infectious diseases. Through the training at research laboratories, students also acquire basic and professional knowledge on research activities in the field of veterinary medicine.</p>					
Course Goals:					
<ol style="list-style-type: none"> <li>1. To learn basic skills/techniques/methodology in the research on microbiology and infectious diseases</li> <li>2. To learn basic skills/techniques/methodology in the research laboratories</li> <li>3. To understand the details of research projects/themes in the research laboratories</li> </ol>					
Course Schedule:					
<ol style="list-style-type: none"> <li>1. Students will spend 5 days for the training at the research laboratory.</li> <li>2. Student will choose one of the 5 laboratories (Laboratories of Microbiology, Parasitology, Infectious Diseases, Public Health, and Veterinary Hygiene, 2 students for each laboratory), and do modern laboratory practices, including lectures, experiments, and research seminars/discussion, <i>etc</i>, in the research on microbiology and infectious diseases.</li> <li>3. Students cannot transfer to other laboratories during the rotation.</li> <li>4. Spoken language of the courses is English.</li> <li>5. Courses are open twice each academic year, and students take either one of the two.</li> <li>6. For a credit, students are required to submit a report (in the combination with Research Laboratory Rotation 2) (Details will be announced during the rotation).</li> </ol>					
Remarks:					
The maximum of 2 students will be allocated for each of the laboratories					

Course Title    Advanced Seminar in Research Laboratory Rotation II					
Type	Exercise, Elective	Number of credits	1	Hours	-
Course Instructor		-			
Course Overview:					
<p>Students experience laboratory practices, research seminars, lectures, and other activities, to learn basic/advanced skills/methodology in the research on biomedical science, environmental and applied veterinary science and other fields in the veterinary medicine. Through the training at research laboratories, students also acquire basic and professional knowledge on research activities in the field of veterinary medicine.</p>					
Course Goals:					
<ol style="list-style-type: none"> <li>1. To learn basic skills/techniques/methodology in the research on either biomedical science, environmental and applied veterinary science, or other fields in the veterinary medicine</li> <li>2. To learn basic skills/techniques/methodology in the research laboratories</li> <li>3. To understand the details of research projects/themes in the research laboratories</li> </ol>					
Course Schedule:					
<ol style="list-style-type: none"> <li>1. Students will spend 3 days for the training at the research laboratory.</li> <li>2. Student will choose one of the laboratories listed below (either from Group 1 or 2, the maximum of 4 students for each laboratory), and do modern laboratory practices, including lectures, experiments, and research seminars/discussion, <i>etc.</i> in the research on the veterinary medicine.</li> <li>3. Students cannot transfer to other laboratories during the rotation.</li> <li>4. Spoken language of the courses is English.</li> <li>5. Courses are open twice each academic year, and students take either one of the two.</li> <li>6. For a credit, students are required to submit a report (in the combination with Research Laboratory Rotation 1) (Details will be announced during the rotation).</li> </ol>					
Group 1 (opened at September to October)		<ul style="list-style-type: none"> <li>• Laboratory of Anatomy</li> <li>• Laboratory of Physiology</li> <li>• Laboratory of Laboratory Animal Medicine</li> <li>• Laboratory of Radiation Biology</li> </ul>			
Group 2 (opened at October to November)		<ul style="list-style-type: none"> <li>• Laboratory of Biochemistry</li> <li>• Laboratory of Pharmacology</li> <li>• Laboratory of Toxicology</li> </ul>			
*The groups of laboratories may change depending on the academic year.					
Remarks:					
The maximum of 3 students will be allocated for each of the laboratories					