

C V E

Collaboration of Veterinary Education

between Japan and Thailand

for Sound Evolution of Asia

Hokkaido University

Hokkaido University

dvanced Seminar in Veterinary Clinics : Small Animals
Companion Animal Medicine Clinic I 1
Companion Animal Medicine Clinic II 1
Companion Animal Surgery I 1
Companion Animal Surgery II 1
Companion Animal Oncology 1
dvanced Seminar in Veterinary Clinics : Large Animals and Clinical Pathology
Large Animals 2
Clinical Pathology 2
dvanced Seminar in Research Laboratory Rotation 2

Hokkaido University

Course	Title Advanced Sem	inar in Veterinary Clinics :	Small Ar	nimals	
Туре	Exercise, Elective	Number of credits	2	Hours	-

Course Title	Com	panion Animal Medicine Clinic I
Course Instructor		Mitsuyoshi TAKIGUCHI, Kensuke NAKAMURA, Noboru HIGASHI,
		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:

- 1. To be able to conduct a medical interview with an owner
- 2. To be able to design a diagnostic scheme
- 3. To be able to make a differential diagnosis based on examination findings
- 4. To be able to design a treatment plan and evaluate therapeutic effectiveness

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 commur	ication with owners and clinical activities at the Veterinary Teaching Hospital,
students cultivate	problem-solving abilities required for caring for companion animals especially with
abdominal disease	9S.
Course Goals:	
1. To be able t	o conduct a medical interview with an owner
2. To be able t	o design a diagnostic scheme
3. To be able t	o make a differential diagnosis based on examination findings
4. To be able t	o design a treatment plan and evaluate therapeutic effectiveness
For internal diseas	ses of companion animals with especially abdominal lesions, Students learn high
knowledge and s	kills in making diagnostic schemes, treatment plans, and evaluating therapeutic
effectiveness through	ugh at least one week clinical activities.

Remarks:

Maximum of 5 students

Course Title	Com	panion Animal Surgery I		
Course Instructor		Masahiro OKUMURA, Ryosuke ECHIGO, Takaharu ITAMI,		
		Tomohito ISHIZUKA		

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 orthopedic and neurological diseases.

Course Goals:

- 1. To be able to conduct a medical interview with an owner
- 2. To be able to make a differential diagnosis based on examination findings
- 3. To be able to design a treatment plan and evaluate therapeutic effectiveness
- 4. To be able to make decision to choose appropriate surgical procedures to respective pathological conditions and to estimate possible prognostic situations
- 5. To be able to plan entire course of pain management and peri-operational anesthesia for surgical interventions for respective cases

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.

Remarks:

Maximum of 5 students

Course Title	Companion Animal Surgery II
Course Instructor	Kenji HOSOYA, Satoshi TAKAGI, Yuki HOSHINO, Takaharu ITAMI,
	Tomohito ISHIZUKA
Course Overview:	
Through commur	ication 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.
Course Goals:	
1. To be able t	o conduct a medical interview with an owner
2. To be able t	o make a differential diagnosis based on examination findings
3. To be able t	o design a treatment plan and evaluate therapeutic effectiveness
4. To be able	to make decision to choose appropriate surgical procedures to respective
pathological	conditions and to estimate possible prognostic situations
5. To be able	to plan entire course of pain management and peri-operational anesthesia for
surgical inte	rventions for respective cases
,	
For companion a	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.

Remarks:

Maximum of 5 students

Course Title	<u> </u>	magnian Animal Openlagy				
	CO					
Course Instruc	tor	Kenji HOSOYA, Satoshi TAKAGI, Yuki HOSHINO, Takaharu ITAMI, Tomohito				
	ISHIZUKA					
Course Overvie	ew:					
Through comr	nuni	cation with owners and clinical activities at the Veterinary Teaching Hospital,				
students cultiva	ate p	roblem-solving abilities required for caring for companion animals especially with				
tumorous disea	ases					
Course Goals:						
1. To be ab	le to	conduct a medical interview with an owner				
2. To be ab	le to	make a differential diagnosis based on examination findings				
3. To be ab	le to	design a treatment plan and evaluate therapeutic effectiveness				
4. To be a	able	to make decision to choose appropriate surgical procedures to respective				
pathologi	ical c	conditions and to estimate possible prognostic situations				
5 To be a	hla t	o plan entire course of pain management and peri-operational apesthesia for				
	nton	o plan entire course of pain management and pen-operational anestnesia for				
surgical i	nter					
For companior	n anii	mals with pathologies in oncology, students learn highly sophisticated knowledge				
and skills in ma	akino	diagnostic schemes, treatment plans including chemotherapy, radiotherapy and				
surgical resea	tion	including pain management and anesthesia and evaluating therapeutic				
effectiveness th	arouv	the at least one week clinical activities				
ellectivelless ti	nouų	in at least one week climical activities.				
Remarks:						
Maximum of	5 st	udents				

Hokkaido University

Course Title Advanced Seminar in Research Laboratory Rotation

Туре	E	Exercise, E	lective	Number of credits	2	Hours	-		
Course	Instruc	ctor	-						
Course	Course Overview:								
Student basic/ac in the di rotation researcl	Students experience laboratory practices, research seminars, lectures, and other activities, to learn basic/advanced skills/methodology in the research on microbiology and infectious diseases, and also in the different fields of veterinary science, through the rotation of research laboratories. Through the rotation of research laboratories, students also acquire basic and professional knowledge on research activities in the field of veterinary medicine.								
Course	Goals:	:							
1. To dis 2. To 3. To	learn eases learn l unders	basic skil basic skills stand the o	ls/techniqu :/technique details of re	es/methodology in the r s/methodology in each of esearch projects/themes i	esearch of the reseann each of	on microbiolo arch laborator the research	ogy and infectious ries laboratories		
Course	Sched	lule:							
1. S 2. <u>P</u> Ir 3. <u>P</u> e 3. <u>P</u> 6. S 7. C e Cour	 Students will spend 10 days (2 weeks) for research laboratory rotation (Parts I and II). Part I: student will choose one of the 5 laboratories (Laboratories of Microbiology, Parasitology, Infectious Diseases, Public Health, and Veterinary Hygiene; 2 students for each of the laboratories), and do modern laboratory practices, including lectures, experiments, and research seminars/discussion, <i>etc</i>, in the research on microbiology and infectious diseases. Part II: student will choose one of the 3 courses (Courses A, B, C); maximum of 4 students for each of the courses), and do modern laboratory practices, including lectures, experiments, and research seminars/discussion, <i>etc</i> (see Table below). This course also includes a seminar in advanced immunology (all students). Students can not transfer to other courses during the rotation. Spoken language of the courses is English. Courses are open twice (5-6th and 11-12th weeks) each academic year, and students take either one of the two. 								
		C	ourse A	Course B		Cour	se C		
		(Maximur	m of 4 stude	ents) (Maximum of 4 stu	udents)	(Maximum o	f 4 students)		
L	ab 1	Anatomy		Physiology		Pharmacolog	3Y		
L	ab 2	Biochemi	stry	Comparative Patho	logy	Laboratory A Science and	nimal Medicine		
L	ab 3	Toxicolog	У	Radiation Biology		Wildlife Biolo Medicine	gy and		
Remark	Remarks:								

Part II: Maximum of 4 students for each of the courses

The University of Tokyo

The University of Tokyo

Practice of Pathology (Diagnostic Pathology)	25
Practice of Virology and Immunology	26
Practice of Veterinary Public Health	27
Practice of Food Hygiene	28
Rotated Practice of Small Animal Surgery	29
Rotated Practice of Small Animal Internal Medicine	30

Course	Title	Practice of Pat	hology (Diagnostic Pathology	ogy)		
Type		Exercise	Number of credits	2	Hours	

(3.2)**Course Instructor** Hiroyuki NAKAYAMA, Kazuyuki UCHIDA, James K. CHAMBERS, Masaya TSUBOI Course Overview: The practice course deals with diagnostic pathology in small animals, especially with neoplastic diseases. Skills for conducting necropsy, histopathology and cytology examinations as well as clinicopathological and morphological natures of tumors of neoplastic diseases are provided. Course Goals: 1. To understand morphological characteristics of tumors in small animals 2. To understand principal protocols of necropsy, histopathology and cytology examinations Course Schedule: 1. Principal techniques for necropsy, histopathology and cytology - Day 1 2. Description methods for necropsy, histopathology and cytology findings - Day 1 3. Learning through clinical cases - I - Day 2 4. Learning through clinical cases II - Day 3 Preparations and discussion for case report - Day 4 5. 6. Special stainings and immunohistochemistry - Day 4 7. Case report presentation and discussion - Day 5

The University of Tokyo

Course Title	Practice of Virology and Immunology
Course Litle	Practice of Virology and Immunology

Туре	Exerci	se	Number of credits	1 (1.6)	Hours	-		
Course Ins	structor	Taisuke H	HORIMOTO, Shin MURAI	KAMI				
Course Ov In this pracessory of the serological serolo	Course Overview: In this practice, students can learn basic procedures for virus isolation from infected animals, and for serological, antigenic, and genetic diagnosis for viral infections.							
Course Go	oals:							
1. Тои 2. Тои	inderstand the inderstand the	e basic kno e clinical di	wledge of viral infectious agnosis for viral infectious	diseases diseases				
Course So	hedule:							
 Vir Se Se Se Se Se Ge Ge 	 To understand the clinical diagnosis for viral infectious diseases Course Schedule: Virus isolation from infected animals Serological method -1 (Virus-neutralization test) Serological method -2 (Hemagglutination-inhibition test) Serological method -3 (ELISA) Antigenic diagnostic method (Immuno-chromatography test) Genetic diagnostic method -1 (PCR) Genetic diagnostic method -2 (LAMP) 							
Remarks:								

Course Title	Practice of Veterinary Public Health

Type	Exerc	isa	Number of credits	0.5	Hours	_	
		Kotouoki		(0.8)	1 Iouro		
Course Overview:							
In this co surveillanc actual or n	ourse, studer æ data and r nock data.	nts learn isk assess	basic and applied epide sment for animal health a	emiologica and food	al techniques safety. Stude	s for analysis of ents exercise with	
Course Go	oals:						
1. Tou 2. Tole 3. Tore	Inderstand ba earn how to us un epidemiolo	sic epidem se software ogical exere	niological procedures to ar e for statistics cise with actual or mock da	alyze data ata	a		
Course Sc	hedule:						
1. Lei 2. An 3. Pre	cture and exe alysis of actua esentation and	rcise for sta al or mock d discussio	atistic software data with statistic software in of analyzed data	9			
Remarks:							

Course Title	Practice of Food Hygiene
--------------	--------------------------

Туре	Exerci	se	Number of credits	1	Hours	_	
Course In			/ADA Kazubiro HIRAYAN	(1.6) 14			
Course O	verview:	7440 1744		<i></i>			
In this co Japan. Str office at s situation ir exercise a	urse, students udents visit im slaughterhouse n food poisonir nd simulation.	e learn ba aportant si e. Student ng cases a	sic knowledge and proce te(s) for food safety assu ts also learn and practic and to deal and proceed v	edures to rance suc e method eterinary	assure food ch as meat h ls to presum public health	safety, mainly in hygiene inspection the cause and problems through	
Course Go	oals:						
 To u To u To u food To le vete 	Inderstand prir Inderstand Jap Inderstand and I hygiene earn how to di erinary public h	nciple and banese an d practice scuss, cor health and	measures to assure food d Thai systems for food hy basic procedures to solve nclude and communicate t food poisoning cases	safety /giene and problems he results	d veterinary p in veterinary of analysis o	oublic health public health and on the problems in	
Course So	hedule:						
 tood hygiene 4. To learn how to discuss, conclude and communicate the results of analysis on the problems in veterinary public health and food poisoning cases Course Schedule: Visit important site(s) to assure food hygiene and safety such as meat hygiene inspection office at slaughterhouse Discuss the differences in food hygiene and food safety measures between Thailand and Japan Lecture for methods to solve basic food safety and veterinary public health problems Simulation on the procedure for countermeasures against health hazard cases Practice for communication with related sections about health hazard cases Exercise on a case of food-borne health hazard to presume cause and situation Practice for the skill to discuss, conclude and present the results 							
Remarks:							

Course Title	Rotated Practice of Small Animal Surgery

Туре	Exerc	ise	Number of credits	4 (6.4)	Hours	-
Course In:	structor	Ryohei N Naomi Fl	IISHIMURA, Manabu MO LIITA	CHIZUKI,	Takayuki NA	Kayama,
Course O	verview:	Haomin				
Small anii records ca surgical ai	mal surgical r ase histories, p nd anesthetic	otations un performs pl procedures	tilize the case method ap hysical or orthopedic exar s, and learns basic case a	oproach. ninations nd client r	Under super as well as dia nanagement	vision the student agnostic and basic
Course G	oals:					
1. То 2. То	obtain basic s obtain basic t	skill of out p echniques	patient clinic of surgery and anesthesia	a/analgesi	а	
Course So	chedule:					
1. Pro 2. So 3. Or 4. So 5. Or 6. Ca	eliminary prac ft tissue surge thopedics & N ft tissue surge thopedics & N ise presentatio	tice (out p ery, out pati leurosurge ery, surgery leurosurge on for one o	patient service, surgery, an ient clinic for two days ry, out patient clinic for two v and anesthesia/analgesia ry, surgery and anesthesia day	esthesia) o days a for two c a/analgesi	for three dat	ys
Remarks: The stude medical ac	nt who doesn ctivity even un	't belong to der his/her	o School of Veterinary Me supervisor's surveillance	edicine in s by law.	Japan is not	allowed to do any

Туре	Exerci	se	Number of credits	4 (6.4)	Hours	-
Course Instructor Hajime TSUJIMOTO, Naoaki MATSUKI, Koichi OHNO, Tomohiro YONEZAWA						
Course Ov	verview:					
The studer of doctors. and client i	nt records cas The student a management	e histories also learns through di	s, performs physical exami s diagnostic, basic medica scussion with members.	nations of I procedur	patients und res, basic trea	ler the supervision atments, and case
Course Go	oals:					
1. To 2. To 3. To	design a diagi make a differe design a treat	nostic sch ential diagi ment plan	eme. nosis based on examinatic and evaluate therapeutic	on findings effectiven	s ess	
Course Sc	hedule:					
- Guidance - Clinical ro - Writing a The studer	e for clinical rot otations (arour report and giv nt should have	tations in t nd 8 week ve a prese e knowledo	the Veterinary Medical Cer s) ntation of one specific cas ge of the following:	nter e		
1. Sig 2. Diff 3. Bas 4. Prii 5. Pre	ins and sympto erential diagn sic pathophysi mary work up esentation tech	oms of the osis - wha iology and treatn nniques	e condition It conditions may present i nent	n a similai	r fashion	
Remarks: The studen medical ac	nt who doesn'	't belong to	o School of Veterinary Me	dicine in .	Japan is not	allowed to do any

Rotated Practice of Small Animal Internal Medicine

Course Title



Rakuno Gakuen University

Clinical Rotation (Livestock Animals)	33
Veterinary Hospital Training Course	36

Course Title	Clinical Rotation (Livestock Animals)								
Туре	Pra	actice	Numb	er of credits	6	Hours	270		
Course Instruc	urse Instructor Motoshi Tajima, Masateru Koiwa, Satoshi Kawamoto, Kiyoshi Tagi						Taguchi,		
		Kazuyuki S	Suzuki, Ma	saharu Moriyos	hi, Hiromichi (Ohtsuka			
Course Overview: Through a combination of clinical seminars, training for basic clinical skills and practice at the Veterinary Teaching Hospital, students gain clinical skills and problem-solving abilities required for practitioners of production animals.									
Course Goals:									
 To be able t owner, with 	o gath o desig o mak o desig o expla the ob	er information gn a diagnos e a differentia gn a treatmen ain an overvin jective of pre	n from an c tic scheme al diagnosis nt plan and ew of feedi venting ma	wner via medica and explain it to based on exam explain it to the ng management ajor diseases.	I interview the owner ination finding owner and reproduct	s ion management t	to the		
1. Clinical seminar	6								
Students participa organizations, and in seminars outside	ate in c learn c e the V	linical semin case studies, eterinary Tea	ars and wo the latest t ching Hos	orkshops sponso heories, and pra bital, the submiss	red by the divi ctical skills. In sion of a report	sion or other spor the case of partici will be requested	nsored pation		
2. Practice at teach Students are alloc	ning ho ated to	spital o either 2 of f	ollowing 4	stations (1 week	each)				
1) Production anim Along with livestoc that form the basic as medication adm	al inte k hand s of di inistrat	rnal medicine lling methods agnosis, and tion from the	e I , technique methods f treatment s	es for vital observor analyzing the side.	vation and clin se, students g	ical pathology exa rasp basic technic	minations jues such		
2) Production animal internal medicine II Through house-call examinations and treatments, students learn the techniques of medical interview, examination, diagnosis, and treatment required for primary medical care of production animals. Further, students learn examination methods and therapeutic techniques for differential diagnosis through the examination and treatment of hospitalized livestock (secondary medical care).									
3) Production animal surgery Along with learning the correct diagnosis, treatment and techniques, and hospitalization management methods for surgical diseases of production animals, students learn about the causes of the diseases and methods to prevent them. Students will visit farms as necessary and perform hands-on learning of diagnostic and disease-prevention methods for cattle herds.						ement seases ning of			
4) Theriogenology Along with learning techniques for making diagnostic schemes and treatment plans and evaluating therapeutic effectiveness for reproductive disorders of production animals, students learn the examination techniques, data collection, and analysis methods necessary for reproduction management.									
Remarks:									

Course Title	Adva	nced Hygien	e and Env	vironm	ental Scine	ce I					
Туре	Practice	, Elective	Num	nber of	credits		1	ŀ	Hours		15
Course Instr	uctor	Katsuro Ha	agiwara,	Shin	Oikawa,	Yutaka	Tamu	a, K	en Nak	ada,	Hajime
		Nagahata, I Masaru Lisi	Hidetoshi ii Miteubi	Higua iko Asr	chi, Yasuka akawa Hidu	zu Mu	ramatsu	, Jun	Noda, M	Cohei	Makita,
Course Overvie	w.	iviasalu Usu		IKU AS	akawa, niut		WallO				
Through a comb	ination of	laboratory tra	ining for l	basic/a	advanced dia	agnosti	c skills a	and se	eminars c	n 'on	e health'
issues, students	understan	d technology a	and admir	nistratio	on related to	safety	and sust	tainab	le food de	elivery	<i>.</i>
Course Goals:											
\cdot To learn a	advanced	procedures for	r the diagr	nosis o	f diseases a	and risk	of health	n prob	lems		
• To learn a	advanced	procedures for	r the diagr	nosis o lo from	f food and e	nvironn	nental sa	afety	n hoth oo	aaata	
on techno	blogy and a	administration		IS HOLL	i dillerent so	urces	sguaran	leed li	n both as	Jecis	
1. Laboratory Ro Students will b	tation e allocated	d to laboratorie	es for 2 we	eeks.							
 Laboratory o Laboratory o 	f Food Mic f Veterina	robiology and ry Herd Healt	l Food Sa th	fety							
3) Laboratory o	f Animal H	lealth									
 Laboratory o Laboratory o 	f Zoonotic f Environn	Diseases	Science								
6) Laboratory o	f Veterina	ry Epidemiolo	ogy								
7) Laboratory	of Veterina	ary Virology									
 B) Laboratory (B) Laboratory (of Veterina of Veterina	ary Parasitolo ary Biochemis	ogy strv								
				_							
2. Seminar for I delivery	nternation	al Veterinary	Teaching	Progra	am (2015):	Farm t	o Table-	Safe	e and Sus	staina	ble food
Summary: More imported from As come from Thail program, Japane deepen their und	than 60% ia account and. Food ese and T erstanding	6 of Japanes ts for approxin I safety is an hai students I g and discuss	e food pr nately 25% important learn cond the issues	roducts % of the conce cepts i s relate	s depend or e imports; in ept in food ir n the follow ed to safe an	n the fe particu mport a ring sev ind susta	oreign c lar, man ind expo ven them inable fo	ountrie y impo ort bet nes, th ood de	es. Lives orted lives ween cou nrough w elivery.	tock p stock p untries hich t	products products a. In this hey can
1) Food safety ris	sk assessr	nent									
Associate Profes	sor Kohei	Makita DVM,	Ph.D.	.		L '-	Diala an			4:C	ما ما م
of food poisoning	is a part of or food-b	orne zoonotic	diseases	due to	ssion risk ar food consu	naiysis. Imption	RISK as: . It can a	sessm Iso pr	esent the	mag	ne risks
effects of the rele	evant facto	ors at each st	ep of the	food c	hain and fo	od proc	essing.	In this	s talk, risk	asse	ssment,
which is a great t	ooi in impi	oving food sa	tety, will d	e aisci	ussed using	examp	les from	Africa	l .		
2) Animal Quara	ntine Servi	ce in Japan									
A quarantine sys	o Hagiwar tem is imp	a, DVM, Ph.D	ldwide to	prever	nt the incursi	ion of a	nimal dis	seases	s. Japan (condu	cts both
import and expo	rt inspectio	ons for livesto	ck and ot	her an	imals, as w	ell as p	oroducts	and g	goods ma	nufac	tured or
Students from the	se animal Ipan and T	s. This progra Thailand can o	am is inte bserve the	nded t e anim	o help stude al quarantin	ents sti e inspe	udy the o ction svs	quarai stem a	ntine syst at work thi	em ir ouah	a visit.
							,			0	
3) Food safety pr	ogram in .	Japan-public h	nealth issu	le and	inspection c	ontrol					
Professor Yasuka	azu Muran	natsu DVM, P	h.D.		_		_				
Milk is a superior	r food item / people e	i containing a very day. Mea	well-balaı mwhile m	nced v	ariety of nut I dairy produ	rients. <i>I</i> icts are	Apart fro	m mill arowtl	k, various h sources	dairy	r products
microorganisms.	This clas	s aims to pro	ovide kno	wledge	e on hygien	ie conti	rol for e	nsurin	ng safety	in for	od supply
through visits to	sites of da	iry manufactu	ring. Furth	ner, thi	s class will e	employ	previous	case	s to enco	urage	e students

to think and learn of the kind of measures required for the prevention of food poisoning caused by dairy products.

4) Antimicrobial resistance in bacteria as a risk factor in food

Professor Yutaka Tamura, DVM, Ph.D

Lecturer Masaru Usui, DVM, Ph.D.

A global concern in the food industry is that drug-resistant bacteria are selected by the use of antimicrobial agents for treating or promoting the growth of edible animals. These bacteria influence human health through the food chain. In this lecture, the definition of drug-resistant bacteria, mechanisms through which drug-resistant bacteria become prevalent, and measures for drug-resistant bacteria will be discussed. Testing of drug resistance and detection of resistance genes will be practiced.

5) Basic skills for dairy herd health management

Veterinary Herd Health

Professor Shin Oikawa DVM, Ph.D

Professor Ken Nakata DVM, Ph.D

This program aims to provide the fundamental concept of herd health and the basic skills required to enhance the clinical practice of dairy cattle herd health.

6) Bovine mastitis and milk quality control on dairy production

Professor Hajime Nagahata DVM, Ph.D.

Professor Hidetoshi Higuchi DVM, Ph.D.

Controlling mastitis and producing high-quality and safe raw milk are important issues in the dairy industry. This lecture aims to provide students with relevant knowledge and training in techniques required for the production of high-quality and safe raw milk through the control of mastitis. The HACCP will be explored as well.

7) Sustainable Farm management with Environmental conscious approach

Associate Professor Jun Noda Ph.D.

In livestock farming, care for the control of livestock waste and drug use, geared toward reducing environmental burden, has become an increasingly important issue. This lecture will cover previous cases and related information to help students understand the importance of farming management that prioritizes the environment for the promotion of sustainable livestock businesses.

8) Team Based Learning (group discussion)

Coordinator: Professor Katsuro Hagiwara, DVM, Ph.D.

Team-based learning (TBL) is a structured form of small-group learning that emphasizes student preparation outside the class and application of knowledge in class. Students are organized strategically into diverse teams of five to seven students working together throughout the class. Before each course unit or module, students prepare by reading on the topics beforehand.

Course Title	Veterinary H	ospit	al Training Course					
Туре	e Exercise, Elective		Number of credits	1	Hours	45		
Course Instructor		or Seiya	Seiya Maehara, Tetsuya Nakade, Kazuto Yamashita, Tsuyoshi Kadosawa,					
		Tsuyo	Tsuyoshi Uchide, Hiroshi Ueno, Yoshifumi Endo, Kenjiro Miyoshi, Takashi					
		Tamar	Tamamoto, Tadashi Sano					

Course Overview:

Students gain the problem-solving abilities required for small animal practice through participation in the clinical activities at the Veterinary Teaching Hospital that include communications with owners.

Course Goals:

- To be able to conduct a medical interview with an owner
- To be able to design a diagnostic scheme
- To be able to make a differential diagnosis based on examination findings
- To be able to design a treatment plan

Students may choose either 1 of following 6 clinical departments at Small Animal Teaching Hospital (2weeks)

1) Ophthalmology (Maehara) : practice basic clinical skills that include interview with owners, diagnosis, treatment and evaluation of treatment outcomes with patients having eye problems

2) Small Animal Internal Medicine (Uchide, Tamamoto) : practice basic clinical skills that include interview with owners, diagnosis, treatment and evaluation of treatment outcomes using clinical cases of internal medicine

3) Small Animal Surgery (Ueno) : practice basic clinical skills that include interview with owners, diagnosis, treatment and evaluation of treatment outcomes using clinical cases of orthopaedic surgery
4) Oncology (Kadosawa, Endo) : practice basic clinical skills that include interview with owners, diagnosis, treatment and evaluation of treatment outcomes using clinical cases of tumors.

5) Diagnostic Imaging (Nakade, Miyoshi) : practice designing diagnosis, interpretation of images and preparation of reports to practitioners using clinical cases taken X-ray, ultrasonography, endoscopy, CT and MRI.

6) Anesthesia and Analgesia (Yamashita, Sano) : practice basic clinical skills in anesthetic management, perioperative pain management and perioperative nutrition administration using clinical anesthesia cases.

Remarks:

Students are allocated to 1 of abovementioned 6 clinics for 2 weeks.



Kasetsart University

Clinical Practice in Farm Animals	39
Clinical Practice in Farm Animals 2	40
Clinical Practice in Microbiology II	41
Clinical Practice in Epidemiology	42
Clinical Practice in Large Animals	43
Clinical Practice in Ruminants and Wildlife	44
Special Clinical Practice in Small Animal	45

Course Title	Clinical Practice in Farm Animals
--------------	-----------------------------------

Type Exercise, Cl	inical Practices	Number of credits	6	Hours	180			
Course Instructor Pariwat POOLPERM, Nattavut RATTANAVANIJROTE, Pichai JIRAWATTANAPONG, Narin UPRAGARIN, Kriangkrai WITOONSATHIEN, Visanu BOONYAWIWAT, Natthana THITICHAYAPONG								
Course Overview:								
Practice in farm visiting, preventive medicine in fa	production and h rm animals, emph	ealth monitoring, clinic asizing on swine, poul	cal exami try and ac	nation, diagno Juatic animals.	osis, treatment and			
Course Goals:								
 To be able to gath To be able to plan To be able to do n To be able to do n To be able to in explain to the own To be able to explain sense of prevention 	ner information fr n a diagnostic scl necropsy and ma terpret laborator ner lain an overview ng diseases in th	om history taking from heme and further inve ake differential diagno y results and make of management and the he future	n farm ov estigation sis based a conclu medical s	wners s d on lesions sion of the o suggestions to	clinical cases and o the owner, in the			
Course Schedule:								
Week #: 1: Introduction t 2-5: Clinical practic 6-9: Clinical practic diagnosis 10-11: Clinical practic 12-13: Clinical practic diagnosis 14-15: Practice Discu 15: Examination	o Clinical Practic e in pigs: basic fai e in poultry: basic e in fishes: basic f e in shrimp: basic ussion and Preser	e in Farm Animals m and health manage farm and health manage farm and health manage farm and health manage tation	ment, farr gement, f gement, fa	n visit, necrop arm visit, necr arm visit, necr farm visit, nec	sy and diagnosis opsy and opsy and diagnosis ropsy and			

Course Title Clinical Practice in Farm Animals 2										
Type	Exercise Cl	inicalPractices	Number of credits	2	Hours	60				
Course In	Course Instructor Pariwat POOLPERM, Nattavut RATTANAVANIJROTE, Pichai JIRAWATTANAPONG, Narin UPRAGARIN, Kriangkrai WITOONSATHIEN, Visanu BOONYAWIWAT, Natthana THITICHAYAPONG									
Course O	verview:									
Bractico in	form viciting p	roduction and ha	alth manitaring aliniaa	lovomino	tion diagnosis	treatment and				
preventive	medicine in far	m animals, empl	nasizing on swine, pou	Itry and a	quatic animals.					
Course G	oals:									
1. To I 2. To I 3. To I 4. To exp 5. To I sen	 To be able to gather information from history taking from farm owners To be able to plan a diagnostic scheme and further investigations To be able to do necropsy and make differential diagnosis based on lesions To be able to interpret laboratory results and make a conclusion of the clinical cases and explain to the owner To be able to explain an overview of management and medical suggestions to the owner, in the 									
Course S	chedule:									
Week #:	Introduction t	n Clinical Practi	ce in Farm Animals							
2-5:	Clinical pract diagnosis	ice in pigs: bas	sic farm and health	manager	ment, farm vi	sit, necropsy and				
6-9:	Clinical practi diagnosis	ice in poultry: ba	asic farm and health r	nanagen	nent, farm visi	t, necropsy and				
10-11:	Clinical practi diagnosis	ce in fishes: bas	sic farm and health m	nanagemo	ent, farm visit,	necropsy and				
12-13:	Clinical pract diagnosis	ice in shrimp: ba	asic farm and health i	managen	nent, farm visi	t, necropsy and				
14-15:	Practice Disc	ussion and Pres	sentation							
15:	Examination									

Course Title	Clinical Practice in Microbiology II
--------------	--------------------------------------

				-					
Туре	Exercise, Cli	nical Practices	Number of credits	1	Hours	-			
Course	Un SURACHETPONG								
Key wor	Key words:								
Sample interpret	collection and ation, human ar	d handling, dia nd animal health.	gnostic virology ar	nd serolo	ogy, laborato	ory analysis and			
Course	Overview:								
Clinical	practice in Mic	robiology. Knov	vledge integration c	of sample	e collection,	sample handling,			
diagnos	tic virology, sero	logy and molecu	ılar biology, laboratoı	y analysi	s and interpre	etation for disease			
investiga	ation. Using prot	olem-based learr	ning.						
Course	Goals:								
1. U	nderstand princi	ple of diagnostic	virology and seroloc	IV					
2. U	nderstand how t	o apply virology	and immunology to i	dentify ca	ause(s) of dise	ease outbreaks			
3. In	tegrate previous	and current kno	owledge to set a diag	nostic p	lan for a dise	ease investigation			
4. C	onclude and inte	erpret laboratory	diagnostic data and	results					
Course	Schedule:								
Each gr	oup of student w	ill receive at leas	st two problems. The	instructo	rs will advise	the students to go			
through	the following ste	eps to solve each	n problem.						
1. In se	structor outlining	g steps of the st	udy using problem-t	based lea	rning and pro	oviding a problem			
2. O	pening the prob	lem, setting ob	jectives of learning a	nd definir	ng terminolog	У			
3. G	roup meeting ar	nd self-study to s	et the diagnostic pla	n All					
4. S ⁻ th	tudent presentat e diagnostic pla	tion: the tentative n including samp	e/differential diagnosi ble collection and har	is of the c ndling, po	lisease in the ssible diagno	e problem, present ostic methods			
5. La ur	aboratory practinderstand the ca	ce, self-study i ausative pathoge	regarding the princ en(s), immune respo	iple of th onse to in	ne diagnosti fection, patho	c method(s) and ogenesis, disease			
pi 6 S	evention and co	ntrol	of the diagnostic m	othod(c)	and understa	and the causative			
0. 3 pa	6. Student presentation: principle of the diagnostic method(s) and understand the causative pathogen(s), immune response to infection, pathogenesis, disease prevention and control								
/. IN	STRUCTOR CONCIUS	ions and propier	าเมืองการ						
Remark	s:								

Course Title (Clinical Practice in Epidemiology
----------------	-----------------------------------

Туре	Exercise, Cli	nical Practices	Number of credits	2	Hours	60
Course In:	structor	Sirichai WONG Suporn THONG	SNAKPETCH, Suwic GYUAN, Chaithep P	ha KASE OOLKHE	MSUWAN, T	

Course Overview:

Practice in veterinary public health and epidemiology, survey and study design, statistical analysis, determination of risk and tabletop exercise.

Course Goals:

- 1. To better understand the study design in epidemiological context
- 2. To practice the data analysis in epidemiology
- 3. To better understand the control measurement of Thai authorities in veterinary practices

Course Schedule:

Day #:

- 1: Design and planning on epidemiological study
- 2: Statistical analysis for qualitative data
- 3: Statistical analysis for quantitative data
- 4: Sampling and sample size determination
- 5: Tabletop exercise
- 6: Risk determination
- 7: Measurement of association
- 8-10: Design, planning, data collection and interpretation of survey study

Course Title	Clinical Practice in Large Animals
--------------	------------------------------------

Туре	Exercise, Cli	nical Practices	Number of credits	6	Hours	180	
Course In:	structor	Pipat ARUNVIPAS, Somchai SAJAPITAK, Anawat SAENGMALEE,					
		Theera RUKWARMSUK, Adisorn YAWONGSA, Jaturong WONGSANIT,					
		Tanu PINYOPUMMINTR, Anuchai PINYOPUMMINTR,					
		Krittisak TANCHAROEN, Wandee TEINGTUM, Worakit CHEDCHOOTUM,					
		Aree LAIKUL, Kanitha PETUDOMSINSUK, Pornchai SANTITISAREE,					
		Nikorn THONGTIP					

Course Overview:

Combination of comprehensive lectures and clinical practices in medicine, surgery, theriogenology in ruminant, equine, and wildlife. Herd health management in ruminant species including dairy and beef cattle and small ruminants at veterinary teaching hospital and private farms. Wildlife ecology management practice in wildlife and exotic species practicing at veterinary teaching hospital and on wildlife national park.

Course Goals:

- 1. To be able to practice in physical and clinical examination, diagnosis, treatments, prevention and control disease related to medical, surgical, and theriogenological problems in ruminants at individual and herd level.
- 2. To be able to practice in physical and clinical examination, diagnosis, treatments, prevention and control disease related to medical, surgical, and theriogenological problems in horses.
- 3. To be able to practice in physical and clinical examination, diagnosis, treatments, prevention and control disease related to medical, surgical in wildlife and exotic pets.

Course Schedule:

Week #:

- 1: Introduction to Clinical Practice in Ruminants; infectious disease review, anesthesia review, hoof health and udder health review.
- 2-7: Clinical practice in ruminants; basic farm and health management, farm visit
- 8: Introduction to Clinical Practice in Equine; basic skill review (restraint and physical examination.
- 9-12: Clinical practice in equine; equine ward practice, farm visit, surgical cases.
 - 13: Wildlife conservation medicine, anesthesia, drat practice, exotic pet medicine, rabbit medicine, and raptor medicine.
 - 14: Post mortem technique and clinical related Rabbit model, radiographic interpretation, comparative medicine.
 - 15: Examination

Course Title Clinical Practice in Ruminants and Wildlife													
Туре	Exerci	se, Cli	nical Pr	actices	Num	ber of	f credit	ts	4	ŀ	Hours		120
Course Ir	nstructor		Pipat A Theera Tanu F Krittisa Nikorn	ARUNVI a RUKW PINYOP ak TANC THON(ipas, s Varms Vummii Charc Gtip	Somel SUK, / NTR, / DEN, \	nai SA. Adisorr Anuch Nande	JAP n YA ai P ee TE	ITAK, A WONG NYOP EINGTL	nawa SSA, UMM JM, F	at SAEN Jaturong IINTR, Pornchai	GMAI WON SANT	LEE, NGSANIT, TITISAREE,
Course C)verview:												
Combinat ruminant, small rum wildlife an	Combination of comprehensive lectures and clinical practices in medicine, surgery, theriogenology in ruminant, and wildlife. Herd health management in ruminant species including dairy and beef cattle and small ruminants at veterinary teaching hospital and private farms. Wildlife ecology management practice in wildlife and exotic species practicing at veterinary teaching hospital and on wildlife national park.												
Course G	Boals:												
1. To and indi 2. To and	be able control c vidual an be able control c	to prad lisease d herd to prad lisease	ctice in e related level. ctice in e related	physica d to mee physica d to mee	al and o dical, s al and o dical, s	clinica urgica clinica urgica	al exan al, and al exan al in wil	nina ther nina Idlife	tion, dia iogenol tion, dia and ex	agno: logica agno: kotic	sis, treat al proble sis, treat pets.	tments ms in tments	s, prevention ruminants at s, prevention
Course S	chedule:												
Week #:													
1:	Introduo review, I	ction to) Clinica ealth an	al Praction Ind udder	ce in R r health	umina n revie	ants; in ew.	fect	ous dis	sease	e review,	anest	hesia
2-11: 12:	Clinical Wildlife medicin	practio conse e, and	ce in rur rvation raptor r	minants medicir medicin	; basic ne, ane e.	farm sthes	and he ia, dari	ealth t pra	manaç ctice, e	geme exotic	ent, farm pet med	visit. dicine,	rabbit
13-14:	Post m compara	ortem ative n	techniq nedicine	ue and e.	clinical	relate	ed – Ra	abbi	t model	l, radi	iographi	c inter	pretation,
15:	Examir	ation											

Course Title	Special Clinical Practice in Small Animal	

Type	Exercise, Cl	inical Practices	Number of credits	3	Hours	90
Course Instructor Chalermpol LEKCHAROENSUK, Nirut SUWANNA, Jedee TEMWIC Amornrate SASTRAVAHA, Chayakirt SINTHUSINGHA, Jatuporn NOOSUD, Kanja KAEWMONGKOL, Tassanee JAROENS Panpicha SATTASATUCHANA, Sirikul SUNTARARAK, Sunee KUNAKORNSAWAT, Aree THAYANANUPHA, Monchanok VIJARNSORN, Naris THENGCHAISIRI, Sirirat NIYOM, Chaiyakorn THITIYANAPORN, Waraporn AUMARM,						
Course O	verview:					
Student g particularl	ains the clinica y on medicine	al skills in small a , surgery and the	nimal practice. The p priogenology in small	practice a animal.	ims to obtain	professional skills
Coruse G	oals:					
1. To a 2. To i 3. To i 4. To j	assimilate betw ncrease the el understand ho practice and le	ween the theory, ffectiveness of he w to work on the arn how to comr	application, and skill ealth evaluation, diag clinic in the real life nunicate with the clie	of medici inosis and with proble ents effect	ine and surge d treatment o lem oriented tively	≆ry f diseases approach
Course S	chedule:					
1. Hov 2. Hov 3. Hov -(4. Pla -(-(-(How to take history and do physical examination effectively How to think critically with problem oriented approach How to calculate the useful number Fluid therapy Continuing rate infusion Clinical nutrition (enteral and parenteral nutrient requirements) Plan the diagnosis and treatment, and interpret the results efficiently and effectively Complete blood count, blood chemistry, and urinalysis Cytology Imaging 					
5. Pla -/ -{	n the surgical Anesthesia Soft tissue and	procedure effecti l orthopedic sura	vely Instructor concluerv	usions an	d problem clo	osing
6. Clie	ent communica	ate skill and real l	life practitioner			
Remarks: Reading N - DiBa Saur - Foss - Feld Saur - Evan	Materials rtola, S.P. 201 iders um, T.W. 2007 man, E.C. 19 iders s, H.E. 1993. I	2. Fluid therapy 7. Small animal si 96. Canine and Miller's anatomy	in small animal pract urgery, 3rd ed. Misso feline endocrinolog of the dog. Philadelp	tice, 4th e ouri, Most y and re ohia, WB	ed. St. Louis, by-Elservier, I production. F Saunders Co	Missouri, Elsevier nc. Philadelphia, W.B. ompany

Chulalongkorn University

Chulalongkorn University

Swine Clinical Laboratory Practice	49
Swine Clinical Practice II	50
Equine Clinical Practice	51
Wildlife and Exotic Animal Health Management	52
Poultry Clinical Field Practice	53
Ruminant Clinical Field Practice	54

Course Title Swine Clinical Laboratory	Practice
--	----------

Type	Exercise, I	Elective	Number of credits	3	Hours	-	
Course Ir	structor	Prof. Dr. I Assoc. Pl Assoc. Pl Assoc. Pl Assoc. Pl Assoc. Pl Assoc. Pl Assist Pr Assist. Pr Assist. Pr Assist. Pr Instructor Instructor Instructor	Rungroje Thanawongnuwed rof. Dr. Kanisak Oraveeraku rof. Dr. Nopadol Pirarat rof. Dr. Padet Tummarak rof. Dr. Sanipa Suradhat rof. Dr. Sonthaya Tiawsirisu rof. Dr. Sonthaya Tiawsirisu rof. Dr. Wijit Bunlunara of Dr. Nuvee Prapasarakul rof. Dr. Komkrich Teankum rof. Dr. Komkrich Teankum rof. Dr. Sumitr Durongpongtl rof. Dr. Teerayut Kaewamata Dr. Pornchalit Assavachee Dr. Suphot Wattanaphansa Dr. Woraporn Sukhumavas Rachod Tantilertcharoen	ch I D D norn awong D N K Si	(Course o	coordinator)	
Course C Clinical la	verview: boratory practic	e in medici	ne, surgery, obstetrics, path	ology, and	l diagnostic te	chniques in swine.	
Course G 1. To le 2. To u 3. To u tech 4. To u on ir	 Course Goals: To learn and practice necropsy, sample collection and handling with emphasis in swine. To understand the pathological diagnosis and other techniques To understand the concept and interpretation with application of immunological and serological techniques in swine To understand the concepts of microbiological techniques used in disease diagnosis with emphasis on important infectious disease in swine for further treatment, control and prevention plan. 						
 Course Schedule: (3 weeks) 1. Necropsy technique Students learn the necropsy techniques, samples collection and handling, report writing and presentation. (The student will perform the necropsy under the supervision, collect samples for further analysis, write the report and present.) 2. Basic and Practical Immunology 3. Swine Parasitology Diagnosis 4. Virology practice and Microbiology practice 5. Swine gross pathology and Swine GI pathology 6. PCVAD diagnostic pathology and Slaughter check 7. Veterinary diagnostic laboratory 8. Pathology diagnostic methods 9. Serology interpretation: basic and application 10. Swine respiratory bacterial diseases 11. Principal of drug use in pigs farm 12. Application of laboratory data for swine health management 13. Swine reproductive disorders in female 5. Pathology of boar 16. Clinico-pathological case discussion 							
Remarks	:						

Chulalongkorn University

Course	Course Title Swine Clinical Practice II							
					_			
Туре	Exer	cise, E	lective	Number of credits		2	Hours	-
Course In	structor		Prof. Dr.	Monkol Techakumpu				
			Assoc. F	Prof. Dr. Wichai Tantasupa	ıruk			
			Instructo	r Dr. Pornchalit Assavach	eep			
			Instructo	r Dr. Suphot Wattanapha	nsak		(Cou	rse coordinator)
Course O	verview:							
Field prac	tice of v	eterin	ary skills	to control and prevent ir	fectio	us, n	oninfectious	and the epidemic
diseases	of swine	; probl	lem solvin	g by the knowledge in ep	idemi	iology	, preventive	medicine, disease
investigati	on, surv	eilland	e and era	adication; advanced train	ng an	nd pra	actice in swin	e farm and swine
clinic at liv	estock r	nospita	al.					
Course G	oals:							
1. To u	nderstar	nd the	concept	and the role of veterina	rian ir	n stai	ndard pig fa	rm to control and
preve	ent disea	ases						
Course So	chedule:	(2 we	eks)					
1. Gene	eral swin	e farm	manager	nent				
Basic	skill for	contro	ol and pre	vent infectious, noninfect	ious a	and th	ne epidemic o	diseases of swine;
learn	ing throu	igh co	mmercial	standard pig farm.				
2. Repr	oductive	mana	igement					
Trout		ing in i ing in i	boar stud,	Al lab and service facilitie	es			
Trouk		ing in i	anowing	ailt pool and purson (facil	ition			
Swin	o fortility	clinic:	service u	nder livestock bosnital	liles			
30011	erentinty	ciii iic.	Service u					
Remarks:								

٦

Course Title	Course Title Equine Clinical Practice								
Type Ex	ercise, Elective Number of credits 1 Hours -								
Course Instructo	Course Instructor Assist. Prof. Dr. Voraphan na Songkhla (Course coordinator)								
	Assist. Prof. Dr. Theerawat Tharasanit								
Course Overvie	w:								
Clinical practice	in examination, diagnosis and treatment of equine medicine, surgery and obstetrics								
Course Goals:									
1. To learn an	d practice basic clinical examination in horse								
2. To learn an	d practice basic surgical and anesthetic methods in horse								
3. To learn, pi	actice and perform basic reproductive examination								
Course Sebedu									
1 Equipe obs									
Practice o	n reproductive examination in horse (per rectal examination) castration and/or								
spaving de	monstration								
Laboratory	techniques involved with equine reproductive practice								
2. Equine ger	eral medicine								
Practice or	basic clinical examination in horse including nasogastric tubing, blood collection and								
etc.									
Laboratory	techniques involved with hematological method, antitoxin production and etc.								
3. To practice	basic surgical and anesthetic methods in horse								
Practice an	d perform clinical examination in relation to surgical problems including lameness								
Practice or	basic local (and spinal nerve block) and general anesthesia in horse								
Remarks [.]									
i tomanto.									

Chulalongkorn University

Course Title Wildlife and Exotic Animal Health Management						
Type Exercise, Elective Number of credits 2 Hours -						
Course Instructor Assoc. Prof. Dr. Sarinee Kalandakanond-Thongsong (Course coordinator)						
Basic of biology of wild, zoo and exotic animals; principles of raising and managing these animals; common diseases and zoonotic diseases; related laws, regulations, ethics and animal welfare; preventive medicine and health management of wildlife animals, including conservation of wild animals in nature and new habitat.						
 Course Goals: 1. Understand the veterinary role in zoo and wildlife conservatory 2. Understand the difference between the treatment of exotic/ zoo animals and wild animals and able to apply the basic veterinarian techniques on exotic/ zoo animals and wild animals treatments and management 3. Learn and know how to diagnose and treat general diseases including bacterial infection, parasitic infection, wound and nutritional problems in exotic/ zoo animals and wild animals 						
 treatments and management Learn and know how to diagnose and treat general diseases including bacterial infection, parasitic infection, wound and nutritional problems in exotic/ zoo animals and wild animals Course Schedule: (2 weeks) General medicine Practice on basic clinical examination in exotic/ zoo animals or wild animals General zoo management Observe and practice in zoo or elephant conservatory 						
Remarks:						

٦

Course Title Poultry Clir	nical Field Practice								
Type Exercise, Elective	e Number of credits	2	Hours -						
Course Instructor Prof.	Course Instructor Prof. Dr. Jiroj Sasipreeyajan (Course coordinator)								
Course Overview:	Ita haalth managamaati hu	abaada k	vaiono diognopio trootm	vont					
control and prevention of dises	ary nealli manayemeni. nu	SDanury, T	iygiene, ulagnosis, ireain	ient,					
Course Goals:									
1. Understand the health r	nanagement: husbandry, hy	giene, diag	gnosis, treatment, control	and					
prevention of diseases in	standard commercial poultry	tarm							
Course Schedule: (2 weeks)									
1. General poultry farm man	agement								
2. General hatchery manage	ement								
Observe and practice in s	tandard commercial poultry fa	arm							
Remarks:									

Course Title	Ruminant Clinical Field Practice
--------------	----------------------------------

Typ	ре	Exercise, E	lective	Number of credits	2	Hours	-	
Type Exercise, Elective Number of credits 2 Hours - Course Instructor Prof. Somchai Chanpongsang Assoc. Prof. Dr. Kittisak Ajariyakhajorn Assist. Prof. Chatree Khatiworavage Assist. Prof. Dr. Chaidate Inchaisri Assist. Prof. Dr. Chaidate Inchaisri Course coordinato Instructor Dr. Nawapen Phutikanit Instructor Dr. Theerawat Swangchan-uthai Course coordinato							rse coordinator)	
			Instructo	r Piyanat Prasomsri				
Cour Clinic evalu	se Ov cal fie uation	verview: eld practice in of herd health	i diagnosi i status an	s, medical, surgical, and d diseases; report on dise	reproduce ase cases	ctive treatme s and farm vis	nts of ruminants; sit.	
Cour 1. 2. 3. 4. 5. 6. 7. 8.	 evaluation of herd health status and diseases; report on disease cases and farm visit. Course Goals: Understand and perform the basic clinical examination in dairy cattle for disease prevention and control Understand and perform the basic surgical methods in ruminant Understand the general health management in calve and heifer for dairy cow replacement plan Understand the dairy product management from milking process, milk production and standard quality control (on site) to reach standard quality and consumer health Understand the basic knowledge of milking system; in order to relate to possible health problem in cow and/or milk quality Understand the importance of lameness on cattle health and milk production; and know the process for problem evaluating for causes, treatment and prevention of leg and foot problem in herd Understand the importance of nutritional management in dairy farm, including feed evaluation, feed sampling for basic nutritional analysis 							
9.	Learn	and able to a	pplv the v	eterinarian knowledge in s	standard d	airv farm pra	ctice	
Cour	se Sc	hedule: (2 we	eks)	otormanan anomougo me				
1. 2.	Introc Calve	luction to Dairy	y farm ma gement, co	nagement: general produce of the second s	ction line a cement pl	ind general h an	ealth practice	
3.	Pract on sit	ice in milk proc e	duction an	alysis; diagnosis and treat	ment of m	astitis; and a	nalysis of raw milk	
4.	Practi data	ice on laborate	ory techni	ques for milk quality analy	/sis and b	e able to cor	rectly interpret the	
5. 6.	5. Perform the checking of milking system and milking process6. Perform, practice and evaluate the leg and hoof problems in herd including hoof dressing practice							
7. 8.	Evalu Pract	ate the nutritic	onal value Ictive exar	of food and feed additive nination and gestation eva	aluation			
9.	9. Perform evaluation on farm reproductive performance							
10.	Pract	ice and observ	ve a surgio	cal method for making bul	teaser			
11.	11. Practice as a team and brainstorming for effective dairy farm management							
12. Visit and practice in standard commercial dairy farm								
	orko		apor pres					
Rem	Remarks.							