



Promoting and Advancing Anesthesia
& Analgesia Care Animals Deserve



**2018/19 VETERINARY TECHNICIAN CERTIFICATE COURSE
IN PRINCIPLE TECHNIQUES OF SMALL ANIMAL ANESTHESIA, PERIOPERATIVE
ANALGESIA & CRITICAL PATIENT CARE**



Number of attendees: 15 (Minimum) - 40 (Maximum)

Prerequisites: Certified Veterinary Nurse or Animal Health Care Technician, respectively - preferentially with 2-3 years of veterinary practice experience

Course Director: Dr. B. Driessen, Dipl. ACVAA, Dipl. ECVPT, University of Pennsylvania & Narkovet Consulting LLC.

Organization: NARKOVET CONSULTING, LLC. & ETHOS VETERINARY HEALTH /VETBLOOM

Location: Basilian Spirituality Conference Center at Manor College, 710 Fox Chase Road, Fox Chase Manor, PA 19046 & University of Wisconsin–Madison, College of Veterinary Medicine, Madison, WI & Cornell University, College of Veterinary Medicine, Simulation Center, Ithaca, NY 14853

RACE Continued Education Credits: TBD Endorsement: American College of Veterinary Anesthesia & Analgesia (ACVAA) and Academy of Veterinary Technicians in Anesthesia & Analgesia (AVTAA)

ACVAA-/ACVECC-Lecturers: S. Allweiler, S. D. Brunson, L. Campoy, A. Caniglia, L. Chiavaccini, B. Driessen, D. Fletcher, G. Gianotti, R. Goggs, B. Johnson. Looney, G. Truchetti; VTS-Anesthesia & Analgesia/VTS-Lab-Animal: S. Cital, K. Cooley; CVT: N. Albridge

Module I: Course days 1-3 (Oct 11 - 13, 2018) at Basilian Spirituality Conference Center at Manor College

Module II: Course days 4-6 (Nov 30 - Dec 02, 2018) at University of Wisconsin-Madison, College of Veterinary Medicine

Module III: Course days 7-9 (April 25-27, 2019) at Cornell University

Module IV: Course days 10-13 (May 29 - June 01, 2019) at Basilian Spirituality Conference Center at Manor College plus one additional day (course day 14; September 14, 2019) for 4th part of the MCQ-based certificate exam.

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Module	Day	Date	Time	Location	Course hour (50 min)	Instructor	Subject	Topics covered during lecture		
I	1	11-Oct-18	8:30 AM	Basilian Spirituality Conference Center	0	Driessen	Welcome	Welcome and introduction into the course (structure of the course and topics covered in the course; teaching goals; MCQ testing, inter-module work and webinars).		
			9:00 AM		1	Driessen	Introduction	Building a Successful Anesthesia Service Team (Functioning of an anesthesia team within the framework of legal rules, anesthesia guidelines, RVT - DVM communication requirements, and appropriate tasks of RVTs within the team)		
			10:00 AM		2	Driessen	Preanesthetic period	Preanesthetic animal evaluation, physical status and risk assessment; animal preparation		
			11:00 AM		3	Driessen	Preanesthetic period	Applied Pharmacodynamics for the Anesthetist (Principles of Drug Interactions with the Organism; Drug Efficacy; Drug Safety)		
			12:30 -1:30 PM	Lunch break						
			1:30 PM	Basilian Spirituality Conference Center	4	Driessen	Injectable anesthetics	Applied Pharmacokinetics for the Anesthetist - Part I (Delivery, distribution & elimination of injectable agents used in anesthesia)		
			2:30 PM		5	Driessen	Preanesthetic period	Pharmacology of premedication drugs (α_2 -Agonists; Phenothiazines - Part I)		
			3:30 PM		6	Driessen	Preanesthetic period	Pharmacology of premedication drugs (α_2 -Agonists; Phenothiazines - Part II)		

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Module	Day	Date	Time	Location	Course hour (50 min)	Instructor	Subject	Topics covered during lecture		
I	2	12-Oct-18	8:30 AM	Basilian Spirituality Conference Center	7	Driessen	Preanesthetic period	Pharmacology of premedication drugs (Opioids)		
			9:30 AM		8	Driessen	Preanesthetic period	Pharmacology of premedication drugs (Benzodiazepines, Anticholinergics)		
			10:30 AM		9	Gianotti	Preanesthetic period	Purpose of premedication and selection criteria for various premedication protocols using case examples		
			11:30 AM		10	Driessen	Injectable anesthetics	Pharmacology of injectable anesthetics ([Thiopental], Propofol, Alfaxalone, Etomidate)		
			12:30 -1:30 PM	Lunch break						
			1:30 PM	Basilian Spirituality Conference Center	11	Driessen	Injectable anesthetics	Pharmacology of injectable anesthetics (Ketamine, Tiletamine-Zolazepam; [Opioids])		
			2:30 PM		12	Gianotti	Induction of anesthesia with injectable anesthetics	Drug protocols used for induction of anesthesia in small animals & selection criteria		
			3:30 PM		13	Gianotti	Maintenance of anesthesia with injectable anesthetics	Total (TIVA) & partial intravenous anesthesia (PIVA) for maintenance of anesthesia - Part I		

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Module	Day	Date	Time	Location	Course hour (50 min)	Instructor	Subject	Topics covered during lecture		
I	3	13-Oct-18	8:30 AM	Basilian Spirituality Conference Center	14	Gianotti	Maintenance of anesthesia with injectable anesthetics	Total (TIVA) & partial intravenous anesthesia (PIVA) for maintenance of anesthesia - Part II		
			9:30 AM		15	Driessen	Inhalant anesthetics	Pharmacology of inhalant anesthetics (Isoflurane, sevoflurane, [desflurane]; N ₂ O) Part I		
			10:30 AM		16	Driessen	Inhalant anesthetics	Pharmacology of inhalant anesthetics (Isoflurane, sevoflurane, [desflurane]; N ₂ O) Part II		
			11:30 AM		17	Driessen	Inhalant anesthetics	Applied Pharmacokinetics for the Anesthetist - Part II (Uptake, distribution & elimination of inhalant anesthetics using computer simulations)		
			12:30 -1:30 PM	Lunch break						
			1:30 PM	Basilian Spirituality Conference Center	18	Driessen	Inhalant anesthetics	Principles of low and high flow anesthesia with inhalant anesthetics		
			2:30 PM		19	Gianotti	Case presentations to apply information acquired in previous lectures	Course hours 9-18		
			3:30 PM		20	Gianotti	Case presentations to apply information acquired in previous lectures	Course hours 9-18		
Self-study inbetween modules I & II				Ethos/Vet Bloom (Looney)	VetBloom Webinar 1 supplementing lecture # 2: <i>Anesthesia risk assessment and risk assignment: how to determine this for each patient</i>					
					VetBloom Webinar 2 supplementing lectures # 5-8: <i>Premedication agents</i>					
					VetBloom Webinar 3 supplementing lecture # 9: <i>Basics of supportive care during sedation and general anesthesia</i>					
					VetBloom Webinar 4 supplementing lectures # 10 & 11: <i>Induction agents</i>					
					VetBloom Webinar 5 supplementing lecture # 12 : <i>Anesthesia risk assessment and risk assignment: How does risk affect drug selection?</i>					
					VetBloom Webinar 6 supplementing lectures # 15-18: <i>Inhalant agents and maintenance of gas anesthesia</i>					
				Driessen	6 Quizzes with 8-12 MCQ and exercises, respectively to help course attendees to stay focused when reviewing module 1 course handouts and supplemental reading material in preparation of certificate exam 1.					

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Module	Day	Date	Time	Location	Course hour (50 min)	Instructor	Subject	Topics covered during lecture		
II	4	30-Nov-18	8:30 AM	University of Wisconsin – College of Veterinary Medicine	E1	Driessen	Multiple Choice Test (30 case-based MC questions) covering course hours 1-20.			
			9:30 AM		21	Chiavaccini	General anesthesia: Inhalant anesthetic equipment & techniques	Anesthesia machine, anesthesia circuits, vaporizers & related equipment; Part I		
			10:30 AM		22	Chiavaccini	General anesthesia: Inhalant anesthetic equipment & techniques	Anesthesia machine, anesthesia circuits, vaporizers & related equipment; Part II		
			11:30 AM		23	Driessen	General anesthesia: Inhalant anesthetic techniques of high flow versus low flow anesthesia	Workshop: High flow/low flow anesthesia demonstrations using computer simulations		
			12:30 AM		24	Driessen	Anesthetic depth monitoring	Signs of anesthesia, assessment of anesthetic depth and record keeping using anesthesia records		
			01:30 -2:30 PM	Lunch break						
			2:30 PM	University of Wisconsin – College of Veterinary Medicine	25	Driessen, Chiavaccini, Johnson, Cooley, Albridge	General anesthesia: Inhalant anesthetic equipment & techniques	Workshop in small groups: Assembly of anesthesia machines and rebreathing circuits, leak check & function testing, common machine failures; demonstration of endotracheal intubation techniques & related equipment		
			3:30 PM		26					
			4:30 PM		27		Anesthetic monitoring equipment	Workshop in small groups: Familiarizing with anesthetic monitoring equipment		

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Module	Day	Date	Time	Location	Course hour (50 min)	Instructor	Subject	Topics covered during lecture		
II	5	1-Dec-18	8:30 AM	University of Wisconsin – College of Veterinary Medicine	28	Driessen	Principles of cardiovascular system functioning & hemodynamic monitoring	Physiology of the cardiovascular system & common cardiovascular monitoring techniques		
			9:30 AM		29	Cooley	Cardiovascular system functioning during anesthesia	Causes and recognition of hemodynamic impairments during anesthesia		
			10:30 AM		30	Driessen	Cardiovascular system functioning during anesthesia	Monitoring and treatment of hemodynamic impairments		
			11:30 AM		31	Driessen	Respiratory function monitoring	Respiratory function monitoring techniques with focus on capnometry/-graphy		
			12:30 -1:30 PM	Lunch break						
			1:30 PM	University of Wisconsin– College of Veterinary Medicine	32	Driessen, Chiavaccini, Johnson, Cooley, Albridge	General anesthesia: Inhalant anesthesia: techniques & patient monitoring (live spay labs)	Workshop In small groups: Practice of inhalant anesthesia from premedication to recovery from general anesthesia including assisted intubation techniques, high flow/low flow anesthesia, perianesthetic monitoring, analgesia care, and assistance during recovery.		
			2:30 PM		33					
			3:30 PM		34					
			4:30 PM		35					

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Module	Day	Date	Time	Location	Course hour (50 min)	Instructor	Subject	Topics covered during lecture
II	6	2-Dec-18	8:00 AM	University of Wisconsin– College of Veterinary Medicine	36	Brunson	Cardiovascular system functioning during anesthesia	Principles of ECG recording and reading - Recognition of cardiac arrhythmias
			9:00 AM		37	Brunson	Cardiovascular system functioning during anesthesia	Causes and treatment of most common cardiac rhythm disturbances
			10:00 AM		38	Brunson	Cardiovascular system functioning during anesthesia	Simulator-Workshop: cardiac arrhythmias
			11:00 AM		39	Brunson, Driessen, Chiavaccini, Cooley	Cardiovascular system functioning during anesthesia	Workshop in small groups: Recognition of cardiac arrhythmias - Part I
			11:45 AM		40		Cardiovascular system functioning during anesthesia	Workshop in small groups: Recognition of cardiac arrhythmias - Part II
			12:30 -1:30 PM		Lunch break & dismissal			
Self-study inbetween modules II & III				Ethos/Vet Bloom (Looney)	VetBloom Webinar 7 supplementing lectures # 21, 22, 24, 25: <i>Anesthesia machine and equipment</i>			
					VetBloom Webinar 8 supplementing lectures # 23 & 33: <i>The induction process, intubation and airway management</i>			
					VetBloom Webinar 9 supplementing lecture # 26: <i>Anesthesia monitoring basics and general anesthesia depth</i>			
					VetBloom Webinar 10 supplementing lectures # 10,11, 15,16, 34, 50: <i>Physiology for the anesthetist - Part I: receptors and neurophysiology; Part II: Cardiovascular and respiratory physiology.</i>			
					VetBloom Webinar 11 supplementing lectures # 35 & 36: <i>Optimizing patients preoperatively; operative blood pressure, hypotension prevention, diagnosing and treating abnormal hemodynamic situations (with treatment algorithms)</i>			
					VetBloom Webinar 12 supplementing lectures # 37-40: <i>Perioperative arrhythmias: differentials, simple supportive care solutions, and emergent treatments (with treatment algorithms)</i>			
				Cornell Team (Fletcher & Rozanski)	Five online Basic (BLS) and three online Advanced (ALS) Life Support modules developed by the Cornell University College of Veterinary Medicine and peer reviewed and certified by the American College of Veterinary Emergency and Critical Care (ACVECC). After completing both courses, participants will have an understanding of the complete CPR algorithm in preparation of the CPR simulation workshop in module 3.			
Driessen	6 Quizzes with 8-12 MCQ and exercises, respectively to help course attendees to stay focused when reviewing module 2 course handouts and supplemental reading material in preparation of certificate exam 2.							

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Module	Day	Date	Time	Location	Course hour (50 min)	Instructor	Subject	Topics covered during lecture		
III	7	Cornell University April 25, 2019	8:30 AM	Lecture Hall 3	E2	Driessen	Multiple Choice Test (30 case-based MC questions) covering course hours 21-40.			
			9:30 AM	Lecture Hall 3	41	Driessen	Supportive care during anesthesia: Blood volume & blood component status	Recognition of abnormal perianesthetic hydration and blood volume/blood component status and common techniques of perianesthetic fluid therapy (crystalloids, colloids, blood products)		
			10:30 AM	Lecture Hall 3	42	Chiavaccini	Neuromuscular blocking (NMB) agents	Pharmacology of peripheral muscle relaxants (incl. [Cis-]Atracurium, Mevacurium, Rocuronium)		
			11:30 AM	The Tetlow and Roy Park Innovation Lab Workshop	43	Fletcher & Goggs	Basic Life Support and Advanced Life Support during cardiopulmonary arrest	CPR - Simulation lab - Part I		
			12:30 -1:30 PM	Lunch break						
			1:30 PM	The Tetlow and Roy Park Innovation Lab Workshop	44	Fletcher & Goggs	Basic Life Support and Advanced Life Support during cardiopulmonary arrest	CPR - Simulation lab - Part II		
			2:30 PM		45	Fletcher & Goggs	Basic Life Support and Advanced Life Support during cardiopulmonary arrest	CPR - Simulation lab - Part III		
			3:30 PM		46	Fletcher & Goggs	Basic Life Support and Advanced Life Support during cardiopulmonary arrest	CPR - Simulation lab - Part IV		
			4:30 PM		47	Fletcher & Goggs	Basic Life Support and Advanced Life Support during cardiopulmonary arrest	CPR - Simulation lab - Part V		

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Module	Day	Date	Time	Location	Course hour (50 min)	Instructor	Subject	Topics covered during lecture		
III	8	Cornell University April 26, 2019	8:30 AM	Lecture Hall 3	48	Chiavaccini	Neuromuscular blocking (NMB) agents	Monitoring and reversal of a peripheral neuromuscular blockade		
			9:30 AM		49	Chiavaccini	Supportive care during anesthesia: Acid-base balance	Diagnosis and treatment of abnormal perianesthetic acid-base status - Part I		
			10:30 AM		50	Chiavaccini	Supportive care during anesthesia: Acid-base balance	Diagnosis and treatment of abnormal perianesthetic acid-base status - Part II		
			11:30 AM		51	Driessen	Principles of respiratory system functioning	Anatomy, physiology & pathophysiology of the respiratory system as they relate to anesthetic case management		
			12:30 -1:30 PM	Lunch break						
			1:30 PM	Lecture Hall 3	52	Driessen	Respiratory function monitoring	Respiratory function monitoring techniques with focus on blood gas analysis		
			2:30 PM		53	Driessen	Respiratory function support during anesthesia	Indications and effects of mechanical ventilation on the anesthetized animal		
			3:30 PM		54	Driessen	Respiratory function support during anesthesia	Types of mechanical ventilators, modes of mechanical ventilation, and ventilator settings		

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Module	Day	Date	Time	Location	Course hour (50 min)	Instructor	Subject	Topics covered during lecture		
III	9	Cornell University April 27, 2019	8:30 AM	The Tetlow and Roy Park Innovation Lab Workshop	55	Fletcher & Goggs	Respiratory function support during anesthesia	Simulation lab: Techniques of volume versus pressure limited ventilation using the ASL-5000 pulmonary simulator (http://www.ingarmed.com/products/asl-5000/) for mechanical ventilation training.		
			9:30 AM		56	Fletcher & Goggs	Respiratory function support during anesthesia	Simulation lab: volume versus pressure limited ventilation using the ASL-5000 pulmonary simulator (http://www.ingarmed.com/products/asl-5000/) for mechanical ventilation training.		
			10:30 AM		57	Fletcher & Goggs	Respiratory function support during anesthesia	Simulation lab: Techniques of volume versus pressure limited ventilation using the ASL-5000 pulmonary simulator (http://www.ingarmed.com/products/asl-5000/) for mechanical ventilation training.		
			11:30 AM		58	Fletcher & Goggs	Respiratory function support during anesthesia	Simulation lab: volume versus pressure limited ventilation using the ASL-5000 pulmonary simulator (http://www.ingarmed.com/products/asl-5000/) for mechanical ventilation training.		
			12:30 -1:30 PM	Lunch break						
			1:30 PM	Lecture Hall 3	59	Chiavaccini	Recovery from anesthesia	Animal support during emergence from injectable and inhalant anesthesia		
			2:30 PM		60	Chiavaccini	Case presentations to apply information acquired in previous lectures	Course hours 21 - 49		
			3:30 PM		61	Chiavaccini	Case presentations to apply information acquired in previous lectures	Course hours 50 - 59		
Self-study inbetween modules III & IV			VetBloom Webinar 13 supplementing lecture # 50: <i>Respiratory rate issues and intraoperative wakening</i>							
			VetBloom Webinar 14 supplementing lecture # 51: <i>Pulse oximetry and capnography issues with differentials and treatments</i>							
			Ethos/Vet Bloom (Looney)	VetBloom Webinar 15 supplementing lectures # 34-36, 48, 49, 52: <i>Direct arterial blood pressure monitoring and blood gas troubleshooting</i>						
				VetBloom Webinar 16 supplementing lectures # 53-56: <i>Mechanical ventilation for anesthesia</i>						
				VetBloom Webinar 17 supplementing lectures # 57, 58: <i>Neuromuscular (NM) blocking agents and monitoring of NM blockade</i>						
				VetBloom Webinar 18 in preparation of lectures # 62, 63: <i>Physiology of pain, dorsal horn states, and classification of pain</i>						
			Driessen	6 Quizzes with 8-12 MCQ and exercises, respectively to help course attendees to stay focused when reviewing module 3 course handouts and supplemental reading material in preparation of certificate exam 3.						

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Module	Day	Date	Time	Location	Course hour (50 min)	Instructor	Subject	Topics covered during lecture		
IV	10	29-May-19	8:30 AM	University of Wisconsin-Madison College of Veterinary Medicine	E3	Driessen	Multiple Choice Test (30 case-based MC questions) covering course hours 41, 48-61.			
			9:30 AM		62	Driessen	Perioperative analgesia	Physiology and pathophysiology of perioperative pain		
			10:30 AM		63	Driessen	Perioperative analgesia	Signs of nociception & distress and pain assessment in small animals		
			11:30 AM		64	Driessen	Perioperative analgesia	Management of perioperative nociception - the concept of multimodal analgesia in small animals and the role of veterinary nurses in the pain management team		
			12:30 -1:30 PM	Lunch break						
			1:30 PM	Basilian Spirituality Conference Center	65	Driessen	Disease-specific aspects of anesthesia	Principle approach to emergency anesthesia		
			2:30 PM		66	Campoy	Perioperative analgesia	Pharmacology of drugs used in loco-regional anesthesia & analgesia techniques in small animals		
			3:30 PM		67	Campoy	Perioperative analgesia	Epidural anesthesia & analgesia & other common loco-regional anesthesia & analgesia techniques in small animals; Part I		
			4:30 PM		68	Campoy	Perioperative analgesia	Epidural anesthesia & analgesia & other common loco-regional anesthesia & analgesia techniques in small animals, Part II		

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Module	Day	Date	Time	Location	Course hour (50 min)	Instructor	Subject	Topics covered during lecture		
IV	11	30-May-19	8:00 AM	Manor College Anatomy Lab	69	Campoy, Driessen, Allweiler, Truchetti	Perioperative analgesia	Workshop in small groups: Loco-regional anesthesia including dental nerve blocks, intercostal nerve blocks, epidural anesthesia and plexus brachialis blocks		
			9:00 AM		70					
			10:00 AM		71					
			11:00 AM		72	Truchetti	Organizing daily routine in anesthesia services		How to save time and be more efficient by employing checklists, team organization, communication & systematic approach to anesthesia cases	
			12:00PM - 1:00 PM	Lunch break						
			1:00 PM	Basilian Spirituality Conference Center	73	Caniglia	Perioperative analgesia	Clinical practice of perioperative multimodal analgesia in small animals		
			2:00 PM		74	Caniglia	Disease-specific aspects of anesthesia	Anesthesia for the patient with eye disease and eye lacerations		
			3:00 PM		75	Caniglia	Age-specific aspects of anesthesia	Basic concepts in neonatal and geriatric animal anesthesia		
			4:00 PM		76	Truchetti	Disease-specific aspects of anesthesia	Principle approach to anesthesia for the patient with neurological disease		
			5:00 PM		77	Truchetti	Disease-specific aspects of anesthesia	Anesthesia for the patient with gastro-intestinal disease (GDV, intestinal ileus, intestinal obstipation, etc.)		

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Module	Day	Date	Time	Location	Course hour (50 min)	Instructor	Subject	Topics covered during lecture		
IV	12	31-May-19	8:30 AM	Basilian Spirituality Conference Center	78	Truchetti	Disease-specific aspects of anesthesia	Anesthesia for the patient with cardiac disease; Part I		
			9:30 AM		79	Truchetti	Disease-specific aspects of anesthesia	Anesthesia for the patient with cardiac disease; Part II		
			10:30 AM		80	Driessen	Disease-specific aspects of anesthesia	Principle approach to anesthesia for the trauma/polytrauma patient		
			11:30 AM		80	Driessen	Disease-specific aspects of anesthesia	Anesthesia for the patient with liver disease		
			12:30 -1:30 PM	Lunch break						
			1:30 PM	Basilian Spirituality Conference Center	82	Allweiler	Disease-specific aspects of anesthesia	Safe anesthesia in animals undergoing tracheo-, broncho-, thoraco- or laparoscopy		
			2:30 PM		83	Allweiler	Disease-specific aspects of anesthesia	Anesthesia for the animal undergoing dental or maxillary surgery		
			3:30 PM		84	Truchetti	Disease-specific aspects of anesthesia	Basic concepts for the anesthetic management of brachycephalic animals		
			4:30 PM		85	Truchetti	Disease-specific aspects of anesthesia	Anesthesia for the bitch with dystocia		

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Module	Day	Date	Time	Location	Course hour (50 min)	Instructor	Subject	Topics covered during lecture		
IV	13	1-Jun-19	8:30 AM	Basilian Spirituality Conference Center	86	Driessen	Disease-specific aspects of anesthesia	Anesthesia for the patient with renal disease		
			9:15 AM		87	Allweiler	Disease-specific aspects of anesthesia	Principle approach to anesthesia for the patient with endocrinological disease		
			10:00 AM		88	Driessen	Anesthetic emergencies	Managing common perianesthetic complications		
			11:00 AM		89	Allweiler	Species-specific aspects of anesthesia	Introduction to anesthesia in birds		
			12:00 -1:00 PM	Lunch break						
			1:00 PM	Basilian Spirituality Conference Center	90	Allweiler	Species-specific aspects of anesthesia	Introduction to anesthesia in rabbits and pocket pets		
			1:45 PM		91	Cital	Species-specific aspects of analgesia	Avian and small exotic mammal pain management		
			2:45 PM		92	Allweiler	Species-specific aspects of anesthesia	Introduction to anesthesia in reptiles and amphibia		
			3:30 PM		93	Cital	Species-specific aspects of analgesia	Reptile and amphibian pain management		
			4:30 PM		94	Cital	Novel therapies	Medical cannabis treatment for pets: indications, dosing, effects		
Self-study after module IV				Ethos/Vet Bloom (Looney)	VetBloom Webinar 19 supplementing lectures # 64, 65: <i>Classic pharmacologic pain therapies</i>					
					VetBloom Webinar 20 supplementing lecture # 64,65: <i>NON-classic pharmacologic and NON-pharmacologic pain therapies</i>					
					VetBloom Webinar 21 supplementing lectures # 67-70: <i>Locoregional analgesia and epidurals</i>					
					VetBloom Webinar 22 supplementing lectures # 62-65: <i>Perioperative pain control</i>					
					VetBloom Webinar 23 supplementing lecture # 73: <i>Anesthesia for trauma and emergent care</i>					
					VetBloom Webinar 24 supplementing lecture # 79: <i>Ophthalmology anesthesia essentials</i>					
				VetBloom Webinar 25 supplementing lecture # 85: <i>Anesthesia for Patients with Comorbidities: Brachycephalics</i>						
				Driessen	6 Quizzes with 8-12 MCQ and exercises, respectively to help course attendees to stay focused when reviewing module 4 course handouts and supplemental reading material in preparation of certificate exam 4.					

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Module	Day	Date	Time	Location	Course hour (50 min)	Instructor	
IV	14	14-Sep-19	9:00 AM	Online	E4	Driessen	Multiple Choice Test (40 case-based MC questions) covering course hours 62-94
			10:00 AM				
Within 2 weeks following completion of part IV of the certificate MCQ exam.							Handing out of the exam results and eventually the <i>RVT Certificate in Principle Techniques of Small Animal Anesthesia, Perioperative Analgesia & Critical Patient Care</i> *

¹ THIS PROGRAM MAY BE SUBJECT TO CHANGES.

* **The *Principle Techniques of Small Animal Anesthesia, Perioperative Analgesia & Critical Patient Care* course certificate will be awarded to all participants who passed the cumulative MCQ tests with a total of at least 70 % of correct answers. Upon failure a one time retake exam is offered at an additional fee at a time to be determined but no earlier than 4 weeks and no later than 12 weeks after finishing the course. The MCQ tests may be given utilizing an internet platform. In addition, participants who successfully completed the online CPR course ***

The *RVT Certificate in Principle Techniques of Small Animal Anesthesia, Perioperative Analgesia & Critical Patient Care* will be awarded to all participants who passed the cumulative MCQ tests with a total of at least 70 % of correct answers. Upon failure a one time retake exam is offered at an additional fee at a time to be determined but no earlier than 4 weeks and no later than 12 weeks after finishing the course. The MCQ tests may be given utilizing an internet platform. Online Basic (BLS) and Advanced Life Support (ALS) modules developed by the Cornell University College of Veterinary Medicine and peer reviewed and certified by the American College of Veterinary Emergency and Critical Care (ACVECC) teach the evidence-based veterinary CPR guidelines on the basis of the Reassessment Campaign on Veterinary Resuscitation (RECOVER) Initiative. Participants, who successfully completed the online CPR course covering both Basic Life Support and Advanced Life Support BEFORE attending the simulation labs at Cornell will obtain the CPR certification from ACVECC.