

ACVR Residency Training Program Application Form:

Institution Name University of Missouri
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This document is to act as a guide for institutions desiring ACVR accreditation of their residency training program. It should be used in concert with the requirements set out in the ACVR Essentials of Residency Training document and it follows the headings of that document. It is intended to streamline the application process and help define what information the RSEC needs to evaluate the program. All terms used in this application have same definitions as defined in the Essentials.

II. Objectives:

Succinctly state the objectives of the training program. The objective of this residency program is to train graduate veterinarians in diagnostic imaging. This training is intended to qualify the individual successfully completing the program to practice the specialty of veterinary radiology in a private practice or academic setting and to sit for and pass the American College of Veterinary Radiology certifying examination. Secondly the program is intended to introduce the resident to academic veterinary medicine and clinically based research.

III. Training period:

What is the total length of the training program in months?	48
If this is a 4 year program, during what year will the resident be eligible to take the ACVR Preliminary Exam? If the resident is not eligible to take the exam during the beginning of the 3 rd year (September), please state the reason. 3 rd year only with approval of the residency program committee. All require formal course work related to radiology must be completed by this time, otherwise the candidate will be allowed to take the preliminary examination at the beginning of the 4 th year.	
What is the total duration of supervised clinical training in the program?	42
What are the responsibilities of the resident in the remaining non-clinical portion of the program? Performance of required research projects and writing of papers and thesis under faculty guidance, vacations, independent study and opportunity to visit other training centers and preparation for board examination.	

IV. Direction and Supervision:

Program Director:

Who is the Director of Residency training?

Jimmy C. Lattimer DVM, MS, DACVR, DACVRO

What percentage of this individual's time is committed to clinical service and teaching of residents? 60-65%

Faculty:

Please list the faculty member of the program accepting PRIMARY responsibility for training in each of the following core areas:

Roentgen diagnosis:

Faculty: Jimmy C. Lattimer DVM, MS, DACVR, DACVRO

Percentage clinical service: 60-65%

Diagnostic ultrasound:

Faculty: Stephanie C. Essman DVM, MS, DACVR

Percentage clinical service: 75%

Computed Tomography

Faculty: Stephanie C. Essman DVM, MS, DACVR

Percentage clinical service:

Magnetic Resonance Imaging:

Faculty: Lisa G. Britt DVM, MS, DACVR

Percentage clinical service: 65%

Nuclear Medicine:

Faculty: Jimmy C. Lattimer DVM, MS, DACVR, DACVRO

Percentage clinical service: 60-65%

List the names and percentage clinical commitment of additional imaging faculty in the program, and their area(s) of instructional responsibility. For each imaging faculty in the program please provide a one page CV documenting their expertise in the area(s) of assigned responsibility.

Jesse K. Nagy DVM

Clinical Instructor

40% Clinical Appointment

As a non-boarded, post residency veterinary radiologist, Dr Nagy has supervisory and secondary responsibility for all aspects of training in clinical radiology and imaging. Currently his major area of commitment is in diagnostic radiology.

Michael R. Lewis, Ph.D Assistant Professor 80% Research Appointment

Dr. Lewis is a member of the radiology faculty without any clinical appointment, developing diagnostic and therapeutic radiopharmaceuticals. As such he serves as a significant resource for residents in the area of nuclear medicine and as a mentor for research projects and advanced degree pursuit in the field of nuclear pharmacy.

Greg Keller, DVM, MS Diplomate ACVR (radiology)
Adjunct Assistant Professor 0% Clinical Appointment

Dr. Keller is the director of the OFA and has committed to providing lectures and experience in evaluation and diagnosis of genetic musculoskeletal disorders in dogs and cats.

For each of the specialty colleges listed below please list at least two Diplomates of these colleges who can be expected to regularly interact with radiology residents:

ACVIM

Carolyn J. Henry DVM, MS, Dipl. ACVIM (Oncology)
Leah Cohn DVM, PhD, Dipl. ACVIM(Internal Medicine)

ACVS

James L. Cook DVM, Ph.D. Dipl. ACVS
Tony Mann DVM, MS, Dipl. ACVS, Dipl. ACVECC

ACVP

Gayle C. Johnson DVM, MS, Ph.D. Dipl. ACVP
Linda M. Berent DVM, Ph.D., Dipl. ACVP

V. Affiliation agreement:

If all of the training will not be accomplished on-site, please attach a copy of the affiliations agreement(s). Include the scope of the training and amount of time the resident will be away from the home institution.

VI. Facilities:

Briefly describe how the program meets the facility requirements.

Facilities include the following:

Two general purpose x-ray rooms in small animal radiology,

Room one is a 640 mA, 150 kVp high frequency floor mounted x-ray machine with indirect (CCD) digital image capture.

Room two is a 200 mA 125 kVp high frequency machine w/ floor mounted tube stand with indirect (CCD) digital image capture.

Ultrasound room with GE Logiq 9 and GE Logiq E ultrasound machines

Both machines have 5 probes up to 14 MHz & multiple scanning modes

Special Procedures/Catheterization Lab

GE Hyline DX LU with High resolution digital fluoroscopy and film changer.

Two general purpose x-ray rooms in large animal radiology

Room one is a 400 mA 123 kVp machine w/ suspended tube

Used for extremity radiography, interfaced to direct capture digital radiographic imaging system

Room two is a 400mA 125 kVp machine w/ suspended tube and bucky system

Used for thoracic, spinal and skull radiography and special procedures

Picker PQ 6000 single slice spiral CT scanner with large animal table & workstation

Equistand II Gamma Camera with SPECT. w/ isotope lab

GE Signa Horizon LX 9.1, 1.5 Tesla MRI scanner w/ head, knee, body, spine, wrist, and extremity coils.

Siemens 7440 8 MV Linac w/ electrons

CMS XIO true 3D computerized planning system

Four (4) portable high frequency MinXray radiographic units and portable, direct digital image capture system.

Empiric Systems ("Encompass) RIS/PACS & UVIS electronic medical records systems

Film processing, laser imagers, screens, cassettes and QC equipment to support all equipment.

Film and electronic teaching files covering nearly all conditions encountered in our practice which require imaging.

VII. Clinical resources:

Indicate the approximate number of patients seen annually by the home institution?		
What is the annual imaging caseload? studies	?	Approximately 10,500

Indicate the approximate breakdown of the patient population according to species.

Small animals (canine, feline)	11,000
Large animals (equine and food animals)	3,000
Exotic animals	200 mostly birds and camelids

What is the approximate annual imaging caseload of the program in:

Small Animal Radiology:	8,000 – 8,500
Large Animal Radiology:	300
Abdominal Ultrasound:	1300-1400
Computed Tomography:	550
Nuclear Medicine:	100
Magnetic Resonance Imaging:	300
Other (specify):	100 mostly birds

VIII. Training content:

What percentage of imaging reports are typically available within 48 hours after the examination is conducted in typewritten or electronic form? >85%
If your answer is less than 75% please explain how reports are generated and how long it takes for the report to be available for review in typewritten form. N/A
Of the preliminary reports generated from the imaging caseload what percentage are initially produced by the resident? Approximately 70% (2 residents)
What percentage of resident reports are reviewed by the imaging faculty prior to

finalization of the report? 100% (residents do not have finalization authority)
When preliminary resident reports are reviewed and edited by the imaging faculty responsible for training, what percentage of the time are two or more faculty present? Approximately 75%

Please complete the table below

	Approximate number of cases in the 42 months clinical experience
Small Animal Radiology:	9600*
Large Animal Radiology:	400*
Abdominal Ultrasound:	1700*
Computed Tomography:	700*
Nuclear Medicine:	120*
Magnetic Resonance Imaging:	450*
Elective (any of above)	
Required elective (specify):	
Total	12,970

***As the primary reader of the studies. Since all studies are reviewed in rounds which residents are required to attend and interpretation is finalized in rounds each resident will see and have the opportunity to discuss and participate in the interpretation of nearly all cases performed during their program. This translates to an additional 1400 CT studies, 240 Nuclear Medicine studies and 900 MRI studies. As well as an additional 20,000 radiographic studies.**

Please indicate the course number and unit assignment residents are required to take to meet the educational objectives for formal instruction as outlined in the Essentials in the following:

Topic	Course number	Units
Radiobiology:	NSEI 7328	3

The Physics of:

Diagnostic Radiology:	VMS 8489	1
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Nuclear Medicine:	VMS 8487	2
Ultrasonography:	VMS 8439	2
CT:	VMS 8489	1
MRI:	VMS 8489	1
<p>If your program does not offer formal courses in any or all of these topics please indicate how these educational objectives for each are met. Use attached sheets if necessary.</p> <p>In addition to the formal courses indicated above these topics are also reviewed in weekly book review sessions and other informal seminars.</p>		

IX. Research Environment:

<p>Over the last 5 years, what is the average number of peer reviewed publications, on which the IMAGING faculty listed under Direction and Supervision in IV above, are included as authors?</p> <p>An average of 8 per faculty member listed with PUBMED.</p>
<p>What is the number of publications/submissions expected of a resident completing the program? 2</p>
<p>If this is an established program, what percentage of residents have made formal research presentations at the annual ACVR or equivalent national meeting? >80%</p>
<p>Is an advanced degree a requirement of the training program?</p> <p>An MS is required IF a candidate is interested there is also precedent for continuing on to a Ph.D. which would require and additional 1 to 2 years beyond the residency program.</p>

X. Educational Environment:

<p>How many lectures or scientific presentations are expected of each resident during the course of their training? A minimum of 4.</p>
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XI. Evaluation:

<p>During the program how often is resident performance evaluated in writing?</p> <p>Every six months</p>
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XII. Teaching File:

What is the nature and scope of the teaching file available to residents?

The teaching file consists of both film and electronically preserved images and comprises approximately 2000 cases. The file is continuously updated and added to. Studies are filed by anatomic area, modality and diagnosis. Full case files are available on all studies except a small number (<1%) which are the result of referral cases.

How is it maintained/updated? All film studies are filed in the radiology section as outlined above. Links to the electronic files are maintained in a separate folder on the redundant college servers which are password and login protected. Updating or adding to the electronic file is a simple matter of exporting the files from the PACs server and is done during rounds when a case is considered to be of teaching interest and quality. Knowing the case number allows access to the complete medical record in the online database including the physical findings, clinicopathologic findings, radiographic interpretation and pathological diagnosis.

XIII. Conferences:

On average how many Known Case Conferences are conducted annually? **48**

XIV. Literature resources:

What is the geographic relationship between the nearest medical library and the training program?

The Veterinary Medical Library is located in the adjacent building and the J. Otto Lotts Medical Library is located in the Health Sciences Center Complex approximately ½ mile away on the University of Missouri campus.

XV. Appendix:

- (a) Provide the pass rate for first time, second time, etc for both the preliminary and certifying exams for your residents for the past 5 years. For example, for all residents finishing your program 5 years ago (Year 5), check the appropriate box. Complete the table for residents finishing 4 years ago (Year 4), 3 years ago (Year 3), etc.

	Year 5	Year 4	Year 3	Year 2	Year 1
Passed preliminary exam 1st time					XX
Passed prelim exam 2 nd time			X		
Passed prelim after 2 nd time					
Passed					

Institution Name

Date

certifying exam 1 st time					
Passed certifying exam 2 nd time			X		XX
Passed certifying exam after 2 nd time					
Unsuccessful in all attempts					

(b) Provide a clinical schedule for your resident(s). This schedule should provide a weekly or monthly outline of the resident's clinical responsibilities. This may be in the form of a master schedule or duty roster for your entire radiology section if desired.