

**ACVR Residency Training Program Application Form:**

University of Florida College of Veterinary Medicine

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:**

1. Advanced training in Diagnostic Imaging
  - a. Develop skills in diagnostic radiology to include special procedures such as myelography and angiography; ultrasound; CT; MRI; Nuclear Imaging.
  - b. Diagnostic ultrasound of large and small animals,
  - c. Alternate imaging modalities including CT, MRI, and nuclear medicine, Radiobiology, radiation physics, radiation protection, radiation dosimetry and radiation safety.
2. Training in Clinical Investigation
3. Training in Scientific Writing and Literature Evaluation
4. Training in Didactic Teaching and Scientific Presentations
5. Preparation for Certification examination by the American College of Veterinary Radiology.
6. Develop Skills for Communication with Clinicians and Referring Veterinarians

**III. Training period:**

What is the total length of the training program in months? 48 months
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 <sup>rd</sup> year (September), please state the reason. The resident will be eligible for the Preliminary Examination in September of the 3 <sup>rd</sup> year, and the Certification Examination in September of the 4 <sup>th</sup> year.
What is the total duration of supervised clinical training in the program? 38 months

What are the responsibilities of the resident in the remaining non-clinical portion of the program?

There is no off clinic time provided in the first year of the program. During the second year, off clinic time is used to develop and complete a research project and prepare for the written examination. In the third year, off clinic time is used to continue preparation for the oral examination, and work toward a second research project. In the fourth year, off clinic time is used to help the resident develop a research focus in preparation for a career in academia.

**IV. Direction and Supervision:**

**Program Director:**

Who is the Director of Residency training?

Matthew D. Winter, DVM, DACVR

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

50%

**Faculty:**

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

Roentgen diagnosis:

Faculty: Clifford R. Berry, DVM, DACVR

Percentage clinical service: 50%

Diagnostic ultrasound:

Faculty: Shona L. Reese, DVM, MS, DACVR

Percentage clinical service: 70%

Computed Tomography

Faculty: David J. Reese, DVM, DACVR

Percentage clinical service: 70%

Magnetic Resonance Imaging:

Faculty: Matthew D. Winter, DVM, DACVR

Percentage clinical service: 50%

Nuclear Medicine:

Faculty: Clifford R. Berry, DVM, DACVR

Percentage clinical service: 50%

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.

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

Kirsten Cooke, DVM, DACVIM (Internal Medicine)
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Andrew Specht, DVM, DACVIM (Internal Medicine)
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## ACVS

Daniel D. Lewis, DVM, DACVS
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Gary W. Ellison, DVM, DACVS
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## ACVP

A. Rick Alleman, DVM, PhD, DABVP, DACVP
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Mark D. Dunbar, DACVP
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**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.

N/A

**VI. Facilities:**

Briefly describe how the program meets the facility requirements.

The Diagnostic Imaging Service is digitally integrated with Amicas PACS with Halo Viewer (v. 6), Canon digital imaging plates, and Kodak DirectView Diagnostic Workstations. Empiric Systems™ Radiology Information System is utilized to order exams, generate and store reports and send billing information to the patients' medical record in the Hospital Information System.

Ultrasound

Philips iU22 for small animal abdominal, musculoskeletal and non-cardiac thoracic imaging equipped with 4 transducers (L15-7, L17-5, C8-5, C9-4).

Acuson Sequoia (PW, power and color Doppler) backup for small animal radiology

Esaote MyLab 30 for Equine Surgery

Computed tomography

Toshiba Aquilion 8 Multi-detector Row CT unit

Small animal radiography*Radiography one*

Sedecal ceiling mounted x-ray unit with floating table top and Canon digital imaging plate

Routine small animal radiography

*Radiography two*

Quantum Medical Imaging overhead tube, CPI generator (1000 mA ,150 kVp) with

Control X floating bucky table and wall bucky with Canon DR plate  
Routine small animal radiography

*Radiography three/Special procedures*

Philips radiographic/fluoroscopic system with overhead tube (1000 mA 125 kVp) and Canon digital imaging plate  
Table-tube fluoroscopy unit with 9 inch image intensifier  
Infimed PlatinumOne DSA imaging computer  
Medrad power injector  
Toshiba Infinix-i ceiling mounted single plane cath lab

*Radiography four*

Sedecal x-ray unit with floating table top, tube stand and Canon digital imaging plate

Large animal radiography

Radiography one

CPI Indico high frequency generator (1000 mA, 150kVp) all purpose machine with a custom slaved cassette holder system  
Routine large animal radiography and special procedures

Radiography two

GE general purpose machine (1000 mA, 120 kVp) with wall bucky  
Routine large animal radiography

Four portable high frequency machines are available for stall side radiography.

Kodak DirectView CR 850 System – computed radiography system

Kodak DryView 8900 Laser Printer

Magnetic Resonance Imaging

Toshiba Titan 1.5 Tesla, 16 channel, 33 mT/m gradient MRI unit on site.

There are 3T, 4.7T, and 11T units available for small animal imaging at the University of Florida McKnight Brain Institute

Nuclear Medicine

MiE overhead crane system equipped with a Siemens Gamma Camera (61 cm x 39 cm; 66 PMT, 9.5 mm crystal) and Scintron VI acquisition workstation.

Radiation Therapy

A facility for radio-iodine treatment of hyperthyroid cats is available.  
A linear accelerator is available at the College of Veterinary Medicine.  
External beam treatment using a stereotactic radiosurgical device is available at the University of Florida McKnight Brain Institute.

**VII. Clinical resources:**

Indicate the approximate number of patients seen annually by the home institution? 18,174
What is the annual imaging caseload? 8,628

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

Small animals (canine, feline)	15,641
Large animals (equine and food animals)	1,967
Exotic animals	566

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

Small Animal Radiology:	5,223
Large Animal Radiology:	685
Abdominal Ultrasound:	1693
Computed Tomography:	586
Nuclear Medicine:	58
Magnetic Resonance Imaging:	371
Other (specify):	

\*Note that the total of these does not equal the total annual imaging caseload. This is due to the elimination of non-abdominal US and equine US.

**VIII. Training content:**

What percentage of imaging reports are typically available within 48 hours after the examination is conducted in typewritten or electronic form? 99%
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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.
Of the preliminary reports generated from the imaging caseload what percentage are initially produced by the resident? 75%
What percentage of resident reports are reviewed by the imaging faculty prior to finalization of the report? 100%
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? 75%

**Please complete the table below**

	Approximate number of cases in the 30 months clinical experience
Small Animal Radiology:	3,917
Large Animal Radiology:	514
Abdominal Ultrasound:	1,270
Computed Tomography:	500
Nuclear Medicine:	50
Magnetic Resonance Imaging:	278
Elective (any of above)	
Required elective (specify):	
<b>Total</b>	<b>6,529</b>

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:

Diagnostic Radiological Physics given by Dr. Manuel Arreola, PhD at the UF&Shands Radiology Residency Program

There is no course number for this course.

Topics covered include:  
 Physics of Diagnostic Radiology  
 Radiation Protection  
 Ultrasound Physics  
 Nuclear Medicine  
 Physics of MRI  
 Physics of CT  
 Radiobiology

<b>Topic</b>	<b>Course number</b>	<b>Units</b>
Radiobiology:		

The Physics of:

Diagnostic Radiology:		
Nuclear Medicine:		
Ultrasonography:		
CT:		
MRI:		

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.

No formal didactic classes are given. Instead, the residents and radiologists meet weekly to discuss assigned board objective topics on the following schedule-  
 Fall first year-- alternative imaging including US, NM, CT, MRI  
 Spring first year-- pathophysiology  
 Fall second year-- special procedures  
 Spring second year-- radiobiology, radiation therapy, radiation safety  
 A written examination is given at the end of each topic which is subsequently reviewed by the faculty and the residents.

**IX. Research Environment:**

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 <b>IV</b> above, are included as authors? 10/year
What is the number of publications/submissions expected of a resident completing the program? 1
If this is an established program, what percentage of residents have made formal research presentations at the annual ACVR or equivalent national meeting? This is not an (as yet) established program. Our current second year resident should present during his third year.
Is an advanced degree a requirement of the training program? No

**X. Educational Environment:**

How many lectures or scientific presentations are expected of each resident during the course of their training? 1 per year
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**XI. Evaluation:**

During the program how often is resident performance evaluated in writing? 8 times over the course of the residency (every 6 months).
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**XII. Teaching File:**

What is the nature and scope of the teaching file available to residents?  A teaching file of interesting cases is maintained in the radiology office and online. This file is organized by organ system and diagnosis, and is also kept on computer as a data base in Excel. A student study file is also provided. This file consists of teaching cases with historical information on the front of the envelope and description and diagnoses on the back.  In addition, an imaging archive was begun in 2005 with digitized cases which are stored on PACS and catalogued in RIS.
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How is it maintained/updated?

As an interesting case is reviewed by the faculty, it is added to the teaching archive using the RIS by entering searchable keyword terms as well as checking a box that designates this as a teaching case. The RIS has a robust search function that allows searching via terms in the description, conclusion, or keywords, as well as searches by species, modality, and body part.

**XIII. Conferences:**

On average how many Known Case Conferences are conducted annually?

36 per year.

**XIV. Literature resources:**

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

A veterinary medical library is housed at the UF College of Veterinary Medicine. The UF&Shands Health Science Center library is located across the street from the College of Veterinary Medicine, less than one mile away.

**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.

Not applicable: We have no candidates who have completed our residency program as it currently exists and therefore none have sat for the qualifying or certifying examinations.

	Year 5	Year 4	Year 3	Year 2	Year 1
Passed preliminary exam 1st time					
Passed prelim exam 2 <sup>nd</sup> time					
Passed prelim after 2 <sup>nd</sup> time					
Passed certifying exam 1 <sup>st</sup> time					
Passed certifying exam 2 <sup>nd</sup> time					

*Institution Name*

*Date*

Passed certifying exam after 2 <sup>nd</sup> 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.

The following is an example of a typical month with each of our three residents scheduled on a particular service.

<b>Week</b>	<b>Resident 1</b>	<b>Resident 2</b>	<b>Resident 3</b>	<b>Call</b>
<b>Jan 3-9</b>	Rad	Rad	Rad	EP
<b>Jan 10-16</b>	Rad	US	Rad	RS
<b>Jan 17-23</b>	Off	Rad	US	DVH
<b>Jan 24-30</b>	US	Rad	Rad	EP

**Rad = Radiography (including special procedures), CT, MR and NM**