

ACVR Residency Training Program Application Form:**Cornell University**

<http://www.vet.cornell.edu/hospital/imaging/residency.cfm>

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:

To provide training in diagnostic radiography, ultrasonography, scintigraphy, computed tomography and magnetic resonance imaging sufficient to allow graduates of the program to perform successfully in either an academic or specialty practice.

III. Training period:

What is the total length of the training program in months? **36**

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 3rd year (September), please state the reason. **N/A**

What is the total duration of supervised clinical training in the program?

30-to-32 months on-clinics

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

4-to-6 months off-clinics

- Study time for qualifying examination (6 weeks)
- Vacation (2 weeks per year for 3 years)
- Cardiology externship (2 weeks)
- Library study, research project, externships, conferences (2-to-10 weeks)

IV. Direction and Supervision:**Program Director:**

Who is the Director of Residency training? **Peter V. Scrivani, DVM, Dipl. ACVR**

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

Faculty:

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

Roentgen diagnosis:

Faculty: Margret Thompson, DVM, Dipl. ACVR
Percentage clinical service: 67%

Diagnostic ultrasound:

Faculty: Amy E. Yeager, DVM, Dipl. ACVR
Percentage clinical service: 100%

Computed Tomography

Faculty: Peter V. Scrivani, DVM, Dipl. ACVR
Percentage clinical service: 50%

Magnetic Resonance Imaging:

Faculty: Peter V. Scrivani, DVM, Dipl. ACVR
Percentage clinical service: 50%

Nuclear Medicine:

Faculty: Nathan L. Dykes, DVM, Dipl. ACVR
Percentage clinical service: 75%

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

Richard E. Goldstein, DVM, Dipl. ACVIM
Thomas J. Divers, DVM, Dipl. ACVIM and ACVECC

ACVS

Jay H. Harvey, DVM, Dipl. ACVS
Norm G. Ducharme, DVM, MSc, Dipl. ACVS

ACVP

Sean P. McDonough, DVM, Dipl. ACVP
Donald H. Schlafer, DVM, MS, PhD, 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. **N/A**

VI. Facilities:

Briefly describe how the program meets the facility requirements.

Computed Radiography: Companion Animal Hospital

- Pausch 650 with overhead tube
- Summit Specialist
- Dentex Image 70
- Dental – Sirona (2 units)
- Kodak CR 500 (2 units)

Computed Radiography: Equine & Farm Animal Hospital

- Pausch overhead tube/ 80kw generator
- MinX-ray HF 80 – portable unit
- Siemens Mobilet Plus - portable unit
- SmartGen – portable unit
- Kramex - portable unit
- Fluoroscan Premier – portable unit
- Siemens Mobilet – portable unit
- MinXray TR80 – portable unit
- Kodak CR 500 (1 unit)

Fluoroscopy

- Philips Easy Diagnost – Radiology/Fluoro with Digital spot films & vascular software

Ultrasonography

- Philips IU22
- ATL 5000
- ATL 3000

Computed Tomography

- 16-Slice Toshiba Aquilion LB
- Universal Medical Large Animal Table

Magnetic Resonance Imaging

- 1.5 T Toshiba Vantage Atlas

Nuclear Medicine

- Technicare Nucam camera
- Technicare 438
- Nuquest Nuclear Medicine computer

Information Technology

- Kodak DirectView PACS with Web Software/Accessories
- UVIS
- PACS Teaching File (over 6000 cases)
- Veterinary Imaging Reports Program

VII. Clinical resources: (data for January 1, 2010 to December 31, 2010)

Indicate the approximate number of patients seen annually by the home institution? 20,900 patients
What is the annual imaging caseload? 9025 reports

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

Small animals (canine, feline)	Total, 16800 patients; Imaging, 7450 reports
Large animals (equine and food animals)	Total, 2800 patients; Imaging, 1275 reports
Exotic animals	Total, 1300 patients; Imaging, 300 reports

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

Small Animal Radiology:	4400 reports
Large Animal Radiology:	1000 reports
Abdominal Ultrasound:	2500 reports
Computed Tomography:	600 reports
Nuclear Medicine:	150 reports
Magnetic Resonance Imaging:	250 reports
Other (specify):	100 reports (Fluoroscopy) 50 reports (Radioiodine therapy—cats)

VIII. Training content:

What percentage of imaging reports are typically available within 48 hours after the examination is conducted in typewritten or electronic form? 50%
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. Residents essentially write preliminary reports for all imaging examinations and all preliminary reports are reviewed and finalized by faculty. In 2010, 53% of cases were finalized within 2 days. The average time to create preliminary reports was 0.98 days for the 3rd-year resident; 1.9 days for a 2nd-year resident; 2.87 days for a 2nd-year resident and 4.99 days for the first-year resident. Faculty generally takes several days to finalize the reports. We are working on solutions to streamline this process.

Of the preliminary reports generated from the imaging caseload what percentage are initially produced by the resident? **Greater than 95%**

What percentage of resident reports are reviewed by the imaging faculty prior to finalization of the report? **Greater than 95% (essentially all preliminary reports by faculty; third-year residents may be allowed to finalize their own reports during the last 6 months of the program).**

We also have an in-house computer program ("Veterinary Imaging Reports Program") that archives the resident's preliminary report and displays the preliminary report side-by-side with the faculty's final report. Residents are expected to review the final report and acknowledge all changes that were made by the faculty. Residents acknowledge they have reviewed the report by clicking a button, which the date/time is recorded by the program.

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? **Individual written reports are reviewed by individual faculty. Imaging examination are reviewed by all faculty and residents during daily rounds—all faculty and residents attend daily rounds (even when off clinics) to review the previous day's cases as a group. Daily rounds happen on Tuesday-to-Friday (Monday is for resident rounds: journal club or KCC). Through this process, approximately 80-to-100% cases are reviewed by more than 1 faculty and all the residents. Additionally, at least 2 faculty radiologists are on the floor at any given time to provide immediate oral reports or assist residents with procedures.**

Please complete the table below

	Approximate number of cases in the 30 months clinical experience
Small Animal Radiology:	11,000
Large Animal Radiology:	2,500
Abdominal Ultrasound:	6,250
Computed Tomography:	1,500
Nuclear Medicine:	375
Magnetic Resonance Imaging:	625
Elective (any of above)	---
Required elective (specify): Echocardiography	50
Total	22,300*

***This number is the approximate number of cases seen in 30 months at our hospital: the caseload is shared among all the residents enrolled in the program.**

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:	N/A	N/A
The Physics of:		
Diagnostic Radiology:	N/A	N/A
Nuclear Medicine:	N/A	N/A
Ultrasonography:	N/A	N/A
CT:	N/A	N/A
MRI:	N/A	N/A
<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>These educational objectives are met through self-teaching or self-directed learning by the resident. Residents are expected to spend a great deal of time in libraries or on educational websites. Residents often form study groups (which may include residents from other services), ask questions of the faculty or attend conferences such as the Nuclear Medicine short course at the University of Tennessee. Additionally, faculty members often ask pertinent questions during rounds or on the clinic floor to emphasize or illustrate particular learning objectives. Residents and faculty use the ACVR's list of objectives as an organizational tool.</p>		

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 IV above, are included as authors? 12 publications per year
What is the number of publications/submissions expected of a resident completing the program? At least 1 peer-reviewed publication
If this is an established program, what percentage of residents has made formal research presentations at the annual ACVR or equivalent national meeting? 60% (6 of 10 residents that completed the program)
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? A minimum of 3
--

XI. Evaluation:

During the program how often is resident performance evaluated in writing?

Once annually

XII. Teaching File:

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

We have an electronic database called "PACS Teaching File." Individuals may search for imaging examinations by:

- **Patient demographics** (ie, age, sex, breed, species, complaint)
- **Examination type** (ie, modality, body site, body system, date)
- **Other search flags** (ie, etiology, keyword)

When a search is performed, the user may click a button that will automatically open the images in our PACS. Currently we have over 6300 examinations cataloged.

This program replaced our previous electronic teaching file, "CUCVM Media Library," which is available but not maintained/updated.

How is it maintained/updated? **During daily rounds, faculty members enter new cases that are discussed, or they update files that have follow-up information.**

XIII. Conferences:

On average how many Known Case Conferences are conducted annually? **26**

XIV. Literature resources:

What is the geographic relationship between the nearest medical library and the training program? **The Flower-Sprecher Veterinary Library is in an attached, adjacent building.**

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 1 st time	1	1	1	2	1
Passed prelim exam 2 nd time	0	0	0	0	0
Passed prelim after 2 nd time	0	0	0	0	0
Passed certifying exam 1 st time	1	1	1	2	1
Passed certifying exam 2 nd time	0	0	0	0	0
Passed certifying exam after 2 nd time	0	0	0	0	0
Unsuccessful in all attempts	0	0	0	0	0

- (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.

Week	Companion Animal Hospital		Equine & Farm Animal Hospital		Ultrasonography		Emergency
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	
1	1 st year	1 st year	3 rd year	2 nd year	2 nd year	3 rd year	1 st year
2	2 nd year	3 rd year	1 st year	1 st year	3 rd year	2 nd year	2 nd year
3	1 st year	1 st year	3 rd year	2 nd year	2 nd year	3 rd year	3 rd year
4	2 nd year	3 rd year	1 st year	1 st year	3 rd year	2 nd year	1 st year

Each hospital service includes diagnostic radiography, scintigraphy, computed tomography and magnetic resonance imaging. The schedule repeats itself; off-clinic time is scheduled into this basic formula by making fair substitutions or by having faculty cover service responsibility. We do not schedule to the 1st-year resident for emergency during the first few months; the basic schedule is adjusted so that the 2nd-year resident is not on emergency for at least 4 weeks prior to taking the qualifying examination.

One faculty member is assigned to each of the three services. On rare occasion, one faculty member is chief for both services. An assigned faculty member is available for "back-up" support to residents on emergency.