ACVR Residency Training Program
Application

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.

Institution Name:
Va-Md College of Veterinary Medicine

Email
moonm@vt.edu

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Objectives:

Succinctly state the objectives of the training program.

1. Train residents in the basics of radiobiology, radiation physics, radiation safety
2. Help residents develop clinical skills in diagnostic radiology in both large and small animal patients, utilizing both routine radiographic examinations and special procedures.
3. Train residents in principles and clinical applications for ultrasound, computed tomography, magnetic resonance imaging, and
nuclear medicine.
4. Help residents develop skills in design, data collection, data analysis, and publication of a research project

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Training Period:

What is the total length of the training program?
3 years (starting in July 2020)

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Direction and Supervision:

Program Director:

Who is the Director of Residency training?
Martha Larson

What percentage of this individual’s time is
committed to clinical service and teaching of residents?
90%

Faculty:

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

**Roentgen diagnosis**
Greg Daniel 80%

**Diagnostic ultrasound**
Martha Larson 90%

**Computed Tomography**
Martha Larson 80%

**Magnetic Resonance Imaging**
Martha Larson 80%

**Nuclear Medicine**
Greg Daniel 80%

List the names and percentage clinical commitment of additional imaging faculty in the program, and their area(s) of instructional responsibility.

Dr. Greg Daniel will start as full time Radiology Faculty in July, 2020

Using the button below, please provide a one page CV documenting their expertise in the area(s) of assigned responsibility for each imaging faculty in the program.

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

**ACVIM**

David Panciera
Affiliation Agreement:

Using the button below, provide a copy of the affiliation agreement(s) in place if all of the training will not be accomplished on-site. Include the scope of the training and amount of time the resident will be away from the home institution.

Facilities:

Briefly describe how the program meets the facility requirements.

All radiographic imaging systems are digital, using the Eklin DR System with Canon plates

Radiology: SA
Siemens Multix-Pro Polydoros SX 65

Philips Combi Diag R/F
BV Endura,C-Arm
Radiology: LA
Electromed SMI EDEC
Minxray HF 100/300
GE AMX 4 Plus mobile X-ray unit

Ultrasound:
2 Philips IU-22 units

Computed Tomography:
Toshiba Aquilion16 slice CT System

MRI
1.5T Philips Intera MRI.

Nuclear Medicine
Nucam II Gamma Camera with Mirage Imaging
Computer and NucLear MAC
Imaging Software

All imaging systems connected to Sound/Antech
PACS system (moving to Asteris PACS in 2020)

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Clinical Resources:

Indicate the approximate number of patients seen annually by the home institution?
16,100 (excluding field services)

What is the annual imaging caseload?
7000

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

Type a question
Small Animals (canine, feline): 96  
Large Animals (equine and food animals): 4  
Exotic Animals: 0.1

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

**Type a question**

Small Animal Radiology: 6700  
Large Animal Radiology: 175  
Abdominal Ultrasound: 2705  
Computed Tomography: 945  
Nuclear Medicine: 70  
Magnetic Resonance Imaging: 405  
Other (specify): 490

Please check which of the following types of imaging cases the residents will have exposure to during the residency:

Small Animal Echocardiography

Nonabdominal Small Animal Ultrasound (i.e. cervical, musculoskeletal)

Food Animal

Teleradiology/Referral Imaging

If the residents do NOT have exposure to any of the above types of imaging cases at your institution, please explain if/how they get the experience during the residency.

The residents do not perform primary LA US procedures, but do observe LA US performed by LA clinicians, and also attend the Large Animal Imaging Course in Irving, TX. Our exotic caseload is very low, but is supplemented by cases from other institutions, with cases used in KCC
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Training Content:

What percentage of imaging reports are typically available within 48 hours after the examination is conducted in typewritten or electronic form?

100%

Of the preliminary reports generated from the imaging caseload what percentage are initially produced by the resident?

90%

What percentage of the resident reports are reviewed by the imaging faculty prior to finalization of the report?

100% Chief resident does not have reports reviewed

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?

50%

For each category below, approximate the number of cases a single resident will be involved in the interpretation of during the course of the entire program.

Type a question

<table>
<thead>
<tr>
<th>Small Animal Radiology: 10,050</th>
<th>Large Animal Radiology: 264</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal Ultrasound: 4050</td>
<td>Computed Tomography: 1425</td>
</tr>
<tr>
<td>Nuclear Medicine: 105</td>
<td>Magnetic Resonance Imaging: 607</td>
</tr>
<tr>
<td>Elective (any of above):</td>
<td>Required elective (specify):</td>
</tr>
<tr>
<td></td>
<td>Total: 16,500</td>
</tr>
</tbody>
</table>

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:

Radiobiology

BMVS 6074 1
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 the button below to upload additional information as necessary.

BMVS 6074 is a formal course offered in the spring and fall semesters during years 1, 2, and 3, in which principles of radiobiology, physics of radiology, special contrast procedures and alternate imaging are covered, using the textbooks The Essential Physics of Medical Imaging (Bushberg), Radiological Science for the Technologist (Bushong), Textbook of Nuclear Medicine (Daniel/Berry) and Radiobiology for the Radiologist (Hall). Other references, such as journal articles are used as supplemental reading as needed. 1 credit hour per semester. These courses are graded (not P/F) with midterm and final exams given each semester.

BMVS 6064: Journal Club Weekly review of current and pertinent articles from the biomedical literature. 1 credit hour per semester.

Research Environment:

Over the last five years, what is the average number of peer reviewed publications, on which the IMAGING faculty listed under Direction and Supervision in IV, are included as authors?

3

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?

95% It would be 100% but last resident’s submission was not accepted as poster or oral presentation

Is an advanced degree a requirement of the training program?
Non-thesis Masters degree

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Educational Environment:

How many lectures or scientific presentations are expected of each resident during the course of their training?

3-4
Evaluation 'Evaluation of residents and protection mechanisms':

Did all of your current resident(s) adequately complete the last six months of training?

Yes

List the current members of the residents' review committee.

Kemba Clapp (through June 2020)
Martha Larson
Greg Daniel (starting July 2020)

List the internal mechanisms in place to protect your resident if conflicts arise.

Conflicts/concerns are initially addressed by the section chief (Larson), with consensus from other radiology faculty members. Section chief has the final responsibility, and any faculty members directly involved in any conflict are recused. If concerns are not adequately addressed, it is taken to the Department Head. Excellent counseling services are available in the VTH, and on main campus if necessary.

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Teaching File:

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

Lists of good cases are maintained electronically. In addition, individual faculty and residents have lists of good cases that are shared.
How is it maintained/updated?
Both faculty and residents add cases

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Conferences:
On average how many Known Case Conferences are conducted annually?
17 (every 3 weeks)

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Literature Resources:
What is the geographic relationship between the nearest medical library and the training program?
Veterinary Medical Library is located in the same building complex in which the Clinic is housed. Newman Library is the university library, and is located
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Appendix:

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): x number passed prelim 1st time, y number passed certifying exam 1st time, z number was unsuccessful.

<table>
<thead>
<tr>
<th>Event</th>
<th>Year 5</th>
<th>Year 4</th>
<th>Year 3</th>
<th>Year 2</th>
<th>Year 1</th>
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<tbody>
<tr>
<td>Passed preliminary exam 1st time</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Passed preliminary exam 2nd time</td>
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<td></td>
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<tr>
<td>Passed preliminary exam after 2nd time</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passed certifying exam 1st time</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passed certifying exam 2nd time</td>
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<td>X</td>
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<td></td>
<td></td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Unsuccessful in all attempts</td>
<td></td>
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</table>

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. Use the button below.

Rad Sched 2019-2020 v1.xlsx