

ACVR Diagnostic Imaging Residency Training Program Application

This application is required for institutions desiring ACVR accreditation of a new residency training program and for institutions requesting re-accreditation of an existing program.

Before beginning the application process, all applicants should review the most recent version of the [ACVR Residency Program Essential Training Standards and Requirements](#) (RPE) document (accessed from the Essentials Homepage) in detail. Use the RPE as a reference when completing the application form, as the contents you provide herein will be evaluated by the Residency Standards and Evaluation Committee (RSEC) against the published RPE standards. This application form follows the headings of the RPE. All terms used in this application have same definitions as those in the RPE, and no information provided in the application form itself will supersede that published in the RPE. During the application review process, the Chair or Assistant Chair of the RSEC may contact the applicant for additional information or clarification.

**Note: If you wish to save your submission and complete it later, click the save button located at the bottom of the pages. You will be emailed a link to complete your form at a later date.*

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Program Summary

The Residency Director of the program is expected to be the primary applicant and contact person for this application. The Residency Director must be located at the primary training institution.

Institution Name	Animages
Residency Program Director Name	Mylène Auger
Residency Program Director Email	mauger@animages.ca

Program Type

What type of residency program is being requested?

Alternative Residency Program

If this is an alternative residency program, please name the specific individual for whom the residency program has been designed.

Claude Stanciu

If approved, what is the proposed start date of this residency program?

Monday, July 18, 2022

Objectives

Succinctly state the objectives of the training program.

To provide specialized clinical training in the field of veterinary diagnostic imaging, including small and large animal radiology, ultrasound, computed tomography, magnetic resonance imaging and nuclear medicine, with the ultimate goal of preparing the resident for successful completion of the ACVR

board examination.

Training Period

What is the total length of the training program? 36

What is the anticipated length of supervised clinical training a resident will experience during this program? 30

Will the resident(s) in this program be eligible to take the ACVR Preliminary Exam in September of their third year?

What are the responsibilities of the resident(s) during non-clinical portions of the program?

The majority of the off-clinics time will be dedicated to study-time in preparation for the ACVR Board examination. The resident will also be expected to develop and conduct a research project under the guidance of one or more radiologists, with the goal of submitting an abstract to present at the ACVR Scientific Meeting and writing a manuscript for submission in a peer-reviewed veterinary journal. The 3rd year resident will also be given the option of a 3-week out-rotation in large animal diagnostic imaging.

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Direction and Supervision

When calculating time commitment in this section, you may consider a 100% (full time) duty schedule to consist of 48 weeks per year with 8 hours per day or 40 hours per week.

Residency Director

Please review the Residency Director requirements and responsibilities in the [ACVR Residency Program Essential Training Standards and Requirements](#) (RPE) document. Note that the Residency Director will be required to provide at least 24 weeks of clinical duty per year in primary support of residents in this program and to meet all other qualifications of a Supervising Diplomate.

Is the applicant Residency Director for this program prepared to meet these requirements?

What percentage of the Residency Director's time is committed to clinical service at the primary training institution? 50

How many weeks per year will the Residency Director be on clinical service and teaching residents at the primary training institution? 48

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Additional Training Diplomates

Please review the definitions and responsibilities of [Supervising Diplomate and Supporting Diplomate](#) in the RPE document. Note that Supervising Diplomates will be required to provide at least 10 weeks of clinical duty in primary support of residents in this program, and are expected to participate in all facets of residency training. Supporting Diplomates aid in residency training, but provide support that is limited, as by modality (e.g. only works in ultrasound), time commitment (e.g. clinical duty < 10 weeks per year), or other constraints that prevent them from qualifying as a Supervising Diplomate.

Provide a copy of affiliation agreements with any diplomates that are located at an external institution (see Affiliation Agreement item at the end of this section).

Excluding the Residency Director, please list all training diplomates who will act as Supervising Diplomates of this residency program. Indicate the approximate number of hours per year each supervisor will be scheduled on clinical duty with primary support of residents and, if applicable, any specific areas of instructional responsibility (e.g. trains mostly in small animal, trains mostly in MRI, etc). If a 'Supervising Diplomate' position will be comprised of multiple radiologists, please list the cohort as a single entity or institution for this question (e.g. "teleradiologists" or private institution name)

Name: Marc-André d'Anjou

Hours/Year: 1920

Specific Areas and/or Limitations of Instructional Responsibility: Will provide supervision in all modalities

Institution: Animages/Centre Vétérinaire Rive-Sud

Name: Eric Norman Carmel

Hours/Year: 1920

Specific Areas and/or Limitations of Instructional Responsibility: Will provide supervision in all modalities

Institution: Animages/Centre Vétérinaire Laval/Centre Vétérinaire Rive-Sud

Name: Pascal Fontaine

Hours/Year: 1920

Specific Areas and/or Limitations of Instructional Responsibility: Will provide supervision in all modalities

Institution: Animages/Centre Vétérinaire Laval/Centre Vétérinaire Rive-Sud

Name: Julie de Lasalle

Hours/Year: 1920

Specific Areas and/or Limitations of Instructional Responsibility: Will provide supervision in all modalities

Institution: Animages/Centre Vétérinaire Rive-Sud

Please list all training diplomates who will act as Supporting Diplomates of this residency program. Indicate how many hours per year each Supporting Diplomate will be scheduled on clinical duty with primary support of residents and any specific areas of instructional responsibility and/or limitations in the scope of this support (e.g. only trains residents in ultrasound, does not participate in large animal training, does not finalize imaging reports, etc).

Name: Cyrielle Finck

Hours/Year: 120

Specific Areas of Instructional Responsibility: Large Animal Radiology

Institution: CHUV de l'Université de Montréal

Name: Isabelle Masseur

Hours/Year: 120

Specific Areas of Instructional Responsibility: Large Animal Radiology

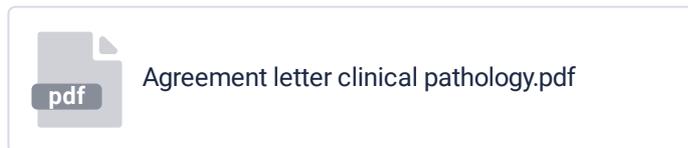
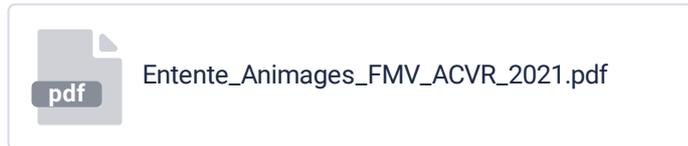
Institution: CHUV de l'Université de Montréal

In addition to ACVR/ECVDDI Diplomates, the program must arrange for the resident(s) to have direct access to specialists in other areas. Please identify one member in each of the specialty colleges listed below that has agreed to support this program through clinical activity that allows regular interactions between the specialist and the diagnostic imaging residents (e.g. discussion of diagnostic work up, imaging findings, or patient outcomes, and/or participation in interdisciplinary rounds, etc). Indicate whether the specialist is located on-site at the primary institution at an external institution. Provide a copy of affiliation agreements with any non-ACVR/ECVDDI diplomates that are located at an external institution (see Affiliation Agreement section at the end of this application). Upon completion of this application, the below individuals will receive an email requesting

acknowledgement of their support of your residency program.

ACVIM Member Name	Magali Decome
ACVIM Member Institution	Centre Vétérinaire Laval
ACVIM Member Email	mdecome@gmail.com
ACVS Member Name	Rebecca De Arburn Parent
ACVS Member Institution	Centre Vétérinaire Laval
ACVS Member Email	rebecca.dearburn.parent@hotmail.com
ACVP Member Name	Sylvie Beaudin
ACVP Member Institution	Idexx Laboratories
ACVP Member Email	Sylvie-Beaudin@idexx.com

Upload any affiliation agreement(s) with Supervising Diplomates, Supporting Diplomates, or Diplomates in other specialties that are located at external institutions. (see Affiliation Agreement section at the end of this application.) Refer to the RPE document for an explanation of what information should be included in such agreements.



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Resident:Supervising Diplomate Ratio

The number of residents in the program cannot exceed twice the number of Supervising Diplomates *on-site*. Remote Supervising Diplomates will not count when calculating the maximum residents allowed in a given program.

What is the maximum number of imaging interns you will have enrolled in this training program at any given time? 1

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Facilities

Review the Facility Requirements listed in the RPE document. Note also that residents should have opportunities to be involved with image acquisition and protocol set-up.

Does this residency training program provide on-site access to modern equipment for the following modalities?

Digital or Computed Radiography	<input type="button" value="Yes"/>
Fluoroscopy	<input type="button" value="Yes"/>
Ultrasound with Doppler Capability	<input type="button" value="Yes"/>
MRI	<input type="button" value="Yes"/>
Fan-beam CT	<input type="button" value="Yes"/>
Nuclear scintigraphy	<input type="button" value="No"/>

Briefly describe how this program meets the facility requirements, including the specific type of CT and MRI units available. Explain how your program will train residents in modalities for which equipment is not located on site, providing affiliation agreements if applicable. (see Affiliation Agreement item at the end of this section)

The resident will be spending at least 50% of their time at CVL and most of the remaining 50% of their time at CVRS (with some days of the remaining 50% spent on the Animages mobile ultrasound service under direct supervision of one of the Animages radiologists). Both specialty hospitals are affiliated and are fully equipped with all required imaging modalities with the exception of the MRI, which is located at CVRS (however the MRI caseload is shared between the radiologists at CVL and CVRS).

CVL:

Ultrasound:

1) GE Logiq E10 R2 with 5 transducers (micronvex, convex and linear transducers) with frequency up to 18 MHz.

2) GE Logiq e R9 (echocardiography).

Radiography: Toshiba 150 kv tube; Cuattro 17X17' Cesium detector; 40 KW generator

Computed Tomography: Toshiba (Canon) Aquilion 16 slice CT scanner

MRI: Offsite (at CVRS-see below): Siemens Magnetom 1.5 T

Fluoroscopy: In-house homemade system

CVRS:

Ultrasound:

1)GE Logiq E10 R2 with 5 transducers (micronvex, convex and linear transducers) with frequency up to 18 MHz.

2) GE Logiq E R7 (echocardiography)

Radiography: Nora-Med PX1312CS X-ray tube, CPI Indico High frequency 100RF 40 kW generator, RALCO R108 Collimator, Sound Elkin interface, Smart DR

Computed Tomography: Canon Aquilion 64 Slice CT Scanner

MRI: Siemens Magnetom 1.5 T

Fluoroscopy: Thomson tube electronics TH 9432

C-Arm: GE Healthcare OEC 9900 Elite, Tri-Mode 9" Image Intensifier

Mobile Ultrasound:

GE Versana with microconvex and linear transducers (up to 18 MHz)

Esaote Omega with microconvex (3-11 MHz and 2-5 MHz) and linear (4-15 MHz) transducers.

Affiliation Agreement, if applicable



Please describe how residents will gain experience in image acquisition and protocol set-up for each of these modalities (excluding nuclear medicine).

Radiography: The resident will spend the first 2 weeks on radiology participating in image acquisition in order to optimize radiographic technique and proper positioning. The resident will also be expected to help with image acquisition when requesting specific views or when correcting inappropriate positioning or technique.

Fluoroscopy: The resident will be directly involved in performing all fluoroscopic examinations when on radiology rotation

CT and MRI: The resident will be involved in image acquisition and protocol setup with the designated technician for all studies when on CT and MRI rotations.

Ultrasound: The resident will perform all ultrasound examinations and image acquisition when on ultrasound rotations (under radiologist supervision).

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Clinical Resources and Training Content

Review the clinical resource and training content requirements listed in the RPE document

What is the average annual caseload at the primary institution over the past 3 years? This number will include all patient visits whether or not they contribute to the annual imaging caseload. 25000

What is the average annual imaging caseload at the primary institution over the past 3 years? Each body region imaged for a given patient (e.g. thorax, abdomen, spine, etc) will count as a single study. 20914

What is the average annual imaging caseload at the primary institution over the past 3 years in the following categories?

Small animal radiology 14042

Large animal radiology 0

Abdominal ultrasound 6072

Non-abdominal ultrasound 104

Computed tomography	257
Magnetic Resonance Imaging	180
Nuclear scintigraphy	0
Other (Specify)	Fluoroscopy-25; exotic animal radiographs-50

Indicate the approximate species breakdown of the imaging caseload at the primary institution in the following categories:

- Small animals (canine, feline): 95
- Large animals (equine, bovine, porcine, etc.): 0
- Avian, Exotic, and Wildlife animals: 10

Which of the following types of imaging cases will the resident(s) have direct, on-site exposure to at the primary institution during the residency program?

- Echocardiography**
- Large animal ultrasound**
- Nonabdominal small animal ultrasound (i.e. cervical, musculoskeletal)**
- Food/fiber animal imaging**
- Exotics imaging**
- Teleradiology/Referral imaging**

Explain how the resident(s) in this program will gain experience in any of the above types of imaging cases that are NOT available at the primary institution. Provide affiliation agreements, if applicable. (see Affiliation Agreement item at the end of this section).

The resident will spend time at the University of Montreal, a total of 1 day per month (36 days total) spread over 3 years for large animal imaging and 3 weeks total (1 week in year 2 and 2 weeks in year 3) for cardiology (agreement letters provided in attachments). The resident will also register for the LADIS large animal imaging course and be given the opportunity to attend an optional out-rotation dedicated to large animal imaging in year 3 prior to the ACVR Certifying Examination.

The resident will attend the Nuclear Medicine Short Course, either in person or virtually, depending on how it is given at the time, ideally in the first two years of the residency.

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What percentage of the total imaging caseload at the primary institution results in a written imaging report being generated by either the residents or the training radiologist diplomates in this program? 99

What percentage of the preliminary reports generated from the imaging caseload are initially produced by the resident(s) in this program? 60

Does this institution concurrently support the training of diagnostic imaging interns? No

What percentage of resident-generated reports are reviewed by training diplomates prior to finalization of the report? 100

What is the average turnaround time for resident-generated preliminary reports to be finalized by training diplomates?

The majority of resident-generated preliminary reports will be finalized within 24 hours.

What percentage of all imaging reports (resident and diplomate generated) is finalized and available to requesting clinicians within 48 hours after the exam is submitted for radiologist consult? 99

Please describe how after-hours/weekend/holiday cases are handled at the primary institution. How does this affect resident-reported imaging caseload?

After-hours/weekend/holiday radiographic cases are read on Mondays by the radiologist(s) assigned to the radiology service. If the resident is scheduled for a radiology week starting that Monday, she will be responsible for writing the majority of the in-house (CVL and CVRS) cases and will contribute as much as possible to the teleradiology caseload (in conjunction with the radiologist assigned to that service). No afterhours/weekend/holiday ultrasounds, CTs or MRIs occur at the primary (and secondary) institutions; these cases are scheduled for the next available weekday. The resident will be on-call every third weekend from Friday 6 pm until Monday 8 AM, where she will be available to be called for emergency radiographic interpretation, emergency ultrasounds or emergency CTs (primarily back dogs) for both hospitals (CVL and CVRS).

For each category below, calculate the approximate number of cases that a single resident will interpret at the primary institution with radiologist feedback during the course of the entire residency program. These numbers should be calculated using the annual imaging caseload adjusted to include only those with written reports generated by the residents. In general, this number should then be divided by the total number of residents in a program during a given year.

If external rotations for the resident(s) are employed to increase the resident caseload in any given category, please be sure to upload affiliate agreements that include the expected number of reports that residents can expect to generate (with radiologist feedback) for cases in those categories.

Small animal radiology	5400
Large animal radiology	300
Abdominal ultrasound	1500
Non-abdominal ultrasound	150
Computed tomography	350
Magnetic resonance Imaging	200
Nuclear scintigraphy	0
How many ultrasound exams will a single resident perform with radiologist supervision and feedback during the course of the entire program? Scans for which the resident writes a report but does not acquire images are excluded.	1500

Do residents in this program have ample hands-on training and practice opportunities to become proficient in the performance of ultrasound guided fine needle aspirates and biopsies?

Yes

Upload any affiliation agreement(s) that are in place to support the resident caseload in modality, case number, species, etc. Refer to the RPE document for an explanation of what information should be included in such agreements.



Total imaging caseload ACVR Residency.pdf

Please indicate whether this training program includes formal courses in any of the following topics:

Physics of Diagnostic Imaging

No

Radiobiology

No

Nuclear Medicine

No

Ultrasonography

No

Computed Tomography

No

Magnetic Resonance Imaging

No

Other

No

Briefly describe the formal courses that are available for the resident(s) in this program by indicating the institution, course title, course number, and credit hours as well as any other relevant information. For any topics for which formal course work is not provided for the resident(s), please explain how educational objectives in these topics will be met.

Formal courses are not provided, however the resident will have an assigned self-study schedule during the residency training, under supervision and guidance of one or more radiologists. The resident will follow the ACVR Study Guidelines/learning objectives and be given mock exams every 2 to 3 months to ensure the learning objectives have been met. The resident will also be encouraged to assist in the bi-monthly MRI rounds given by Dr. Silke Hecht of the University of Tennessee (for as long as these rounds continue to be offered virtually), which covers relevant MRI physics. The mock exam schedule is included in the attached schedule, but covers topics as follows:

Anatomy 1 (Radiographic) September 1st year
Physics December 1st year
Radiation Protection and Biology/Digital Imaging March 1st year
Special Procedures June 1st year
Pathophysiology September 2nd year
Ultrasound December 2nd year
Nuclear Medicine January 2nd year
MRI and CT March 2nd year
Anatomy 2 (Cross-sectional) June 2nd year

Do residents have access to a majority of the written pathology reports that are generated from patients included in this imaging caseload?

Yes

Will the resident(s) in this program attain an advanced degree (MS, PhD) at the conclusion of the program?

No

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Research Environment

Review the Research Requirements listed in the RPE document.

Over the last five years, what is the average number of peer reviewed publications on which the training diplomates (Supervising and Supporting diplomates) of this program are included as authors? (total number of publications in last 5 years among all training diplomates divided by the number of training diplomates)

6.3

How many peer-reviewed publications are 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? 0

Briefly describe if/how residents are encouraged to engage in investigative work and what mechanisms are in place for training diplomates to support this work.

The resident will also be expected to develop and conduct a research project under the guidance of one or more radiologists (based on radiologist and resident interests), with the goal of submitting an abstract to present at the ACVR Scientific Meeting and writing a manuscript for submission in a peer-reviewed veterinary journal.

Educational Environment

Review the Educational Environment expectations listed in the RPE document.

Please list and enumerate the formal presentations that are expected of each resident during the course of their training. In general, didactic lectures, departmental seminars, scientific presentations, Continuing Education presentations, and similar are considered "formal". Informal topic rounds, journal club, small group teaching (like student rounds), student labs, and similar events should not be included.

The resident will be required to give one scientific presentation (Grand Rounds) to the staff of both affiliated specialty hospitals (specialists, interns, residents, and emergency and general practice veterinarians), for a total of 3 presentations during the course of the residency.

The resident will also be expected to present the results of her scientific research as an abstract at the annual ACVR meeting.

The resident will also be given the opportunity to participate in CE lectures given by the Animages radiologists to the local veterinary community (in general, once per year).

Briefly describe the type and extent of teaching opportunities that are provided to the resident throughout the training program.

The resident will be expected to participate in the teaching of veterinary students that are on rotation in the radiology department of both specialty hospitals (CVL and CVRS) as well as in teaching of veterinary students while at the University of Montreal for clinical training in large animal imaging.

The resident will also be expected to provide radiology teaching to the rotating interns of both specialty hospitals.

Briefly describe the nature and scope of the teaching file available to the resident(s) in this program and how it is maintained/updated.

The Animages PACS has a very extensive, easily searchable teaching log of classic and/or interesting cases, or of good examples of classic diseases, which all radiologists continue to add on to on a daily basis. These cases are tagged with a searchable description and by modality (or modalities). If cytology (or histopathology results) are available for these cases, they are added into the patient's file.

Furthermore, the University of Montreal Faculty of Veterinary Medicine radiology department has an

extensive teaching log for residents and for students, in large animal, small animal and exotic animal imaging, with all studies available in the PACS, which will be available when the resident is on-site at the University of Montreal.

How many Known Case Conferences are conducted annually? 24

Describe the nature and frequency of resident rounds ("other educational events") planned for this program. You may upload an example schedule with the general program schedule that is requested at the end of this application.

Journal club: Monthly, one Friday per month

Interesting case rounds: Rounds to discuss imaging findings of interesting or unusual cases as well as to discuss cytology/histopathology results of confirmed cases. These will occur once monthly, on Monday mornings. (See attached schedule)

Describe how the resident(s) in this program will attain direct and consistent medical library access and/or how they will access research tools and medical literature including the suggested references listed in the ACVR Preliminary Examination study guide.

The primary and secondary institutions for this residency (two affiliated specialty hospitals) are part of the VCA group of hospitals. A library of all relevant veterinary medical journals is available through VCA via the primary institution. Furthermore, when the resident is at the University of Montreal, he/she will have access to all relevant medical journals through the University Library.

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Evaluation and Protection of Residents

For existing programs, list the names, email contact information, and start/end dates of your current residents.

None. This is a new program.

Did all of your current residents adequately complete the last 6 months of training?

No current residents

List the current members of the resident review committee.

Mylène Auger, Marc-André d'Anjou, Éric Norman Carmel, Julie de Lasalle, Pascal Fontaine

Describe the internal mechanisms in place at your institution to protect the resident(s) if personal or organizational conflicts arise. Include the management hierarchy for residents and procedures by which residents would report workplace misconduct.

The residency director will meet with the resident every 3 months to ensure all is going well. If issues arise that cannot be handled by the residency director, the Animages president and/or human resources of the affiliated specialty hospitals may get involved.

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Appendix

Please provide the following information regarding preliminary and certifying board exam pass rates for residents in your program over the past five years.

Preliminary Board Exam Pass Rate

2020

Number Of Prelim Board Eligible Residents: 0

Number of Residents That Took Prelim Exam: 0

Number of Residents That Passed On 1st Attempt:
0

Number of Residents That Passed After Multiple
Attempts: 0

Number of Residents That Have Not Passed: 0

2019

Number Of Prelim Board Eligible Residents: 0

Number of Residents That Took Prelim Exam: 0

Number of Residents That Passed On 1st Attempt:
0

Number of Residents That Passed After Multiple
Attempts: 0

Number of Residents That Have Not Passed: 0

2018

Number Of Prelim Board Eligible Residents: 0

Number of Residents That Took Prelim Exam: 0

Number of Residents That Passed On 1st Attempt:
0

Number of Residents That Passed After Multiple
Attempts: 0

Number of Residents That Have Not Passed: 0

2017

Number Of Prelim Board Eligible Residents: 0

Number of Residents That Took Prelim Exam: 0

Number of Residents That Passed On 1st Attempt:
0

Number of Residents That Passed After Multiple
Attempts: 0

Number of Residents That Have Not Passed: 0

2016

Number Of Prelim Board Eligible Residents: 0

Number of Residents That Took Prelim Exam: 0

Number of Residents That Passed On 1st Attempt:
0

Number of Residents That Passed After Multiple
Attempts: 0

Number of Residents That Have Not Passed: 0

Certifying Board Exam Pass Rate

2020

Number of Certifying Board Eligible Residents: 0

Number of Residents That Took Certifying Exam: 0

Number of Residents That Passed On 1st Attempt:
0

Number of Residents That Passed After Multiple
Attempts: 0

Number of Residents That Have Not Passed: 0

2019

Number of Certifying Board Eligible Residents: 0

Number of Residents That Took Certifying Exam: 0

Number of Residents That Passed On 1st Attempt:
0

Number of Residents That Passed After Multiple
Attempts: 0

Number of Residents That Have Not Passed: 0

2018

Number of Certifying Board Eligible Residents: 0

Number of Residents That Took Certifying Exam: 0

Number of Residents That Passed On 1st Attempt:
0

Number of Residents That Passed After Multiple
Attempts: 0

Number of Residents That Have Not Passed: 0

2017

Number of Certifying Board Eligible Residents: 0

Number of Residents That Took Certifying Exam: 0

Number of Residents That Passed On 1st Attempt:
0

Number of Residents That Passed After Multiple
Attempts: 0

Number of Residents That Have Not Passed: 0

2016

Number of Certifying Board Eligible Residents: 0

Number of Residents That Took Certifying Exam: 0

Number of Residents That Passed On 1st Attempt:
0

Number of Residents That Passed After Multiple
Attempts: 0

Number of Residents That Have Not Passed: 0

Program Schedule

Upload a schedule for your residents that outlines their clinical and non-clinical work over the course of the residency program. This may be a master schedule or duty roster for your entire radiology section, if desired. If available, an example weekly or monthly rounds schedule can also be included.

Program Schedule



Schedule ACVR residency.xlsx

Affiliation Agreements

Upload digital copies of any affiliation agreements that have not been included elsewhere in this document. Refer to the RPE document for an explanation of what information should be included in such agreements.