

RESIDENCY IN VETERINARY DIAGNOSTIC IMAGING

**Louisiana State University
School of Veterinary Medicine
Department of Veterinary Clinical Sciences
Veterinary Teaching Hospital**

Revised September 2016

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**RESIDENCY PROGRAM
IN
VETERINARY THERIOGENOLOGY**

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1.0 INTRODUCTION

1.1 The residency will fulfill the training requirements and fulfill the requirements for examination (certification) of the American College of Veterinary Radiology. The training program will utilize faculty of the Department of Veterinary Clinical Sciences (VCS) as mentors. Clinical facilities of the Veterinary Teaching Hospital (VTH) will be the primary training location for the LSU portion of the residency.

2.0 OBJECTIVES

2.1 To provide advanced training in clinical problem solving and diagnostic and therapeutic techniques in the specialty field.

2.2 To satisfy the eligibility requirements for examination by the American College of Veterinary Radiology

2.3 To provide experience in scientific and clinical case presentation through the seminar and house officer rounds program.

2.4 To provide experience in the preparation and submission of scientific articles for publication and/or presentation.

2.5 To provide opportunity to participate in graduate level courses that support and strengthen the clinical training program and are relevant to the field of veterinary diagnostic imaging.

2.6 To obtain advanced training in veterinary diagnostic imaging using current techniques for examination of a wide variety of diseases in animals

2.7 Become an expert with imaging equipment, radiographic positioning and technique in small and large animal and routine abdominal ultrasound procedures in small animal.

2.8 Review and learn anatomy with an emphasis on radiographic anatomy.

2.9 Become proficient with the correct terminology used in the dictation for radiographic studies.

2.10 Become prepared for after hour's emergency duty associated with diagnostic imaging. Allow the resident to develop confidence in diagnostic radiology in an emergency setting.

- 2.11 Perform and interpret ultrasonographic examinations on all small and large animals as well as exotic and wildlife species.
- 2.12 To learn the principles of nuclear medicine examination techniques and interpretation.
- 2.13 To learn the principles, examination techniques and interpretation of computed tomography and magnetic resonance imaging.
- 2.14 To provide didactic and tutorial teaching training and experience through the house officer rounds and seminars as well as with student rounds and courses in Phases I and II.
- 2.15 To provide experience in designing and conducting clinical research projects and preparation and submission of scientific articles for publication and/or presentation.
- 2.16 To provide experience in presenting at national or international meetings and conferences.
- 2.17 Prepare the resident for training and/or graduate study or entry into a high quality specialty practice or academic institution.

3.0 PREREQUISITES

- 3.1 Candidates must have a DVM or an equivalent degree.
- 3.2 Candidates must have satisfactorily completed at least a one year rotating small animal internship or its equivalent post graduate veterinary experience.
- 3.3 Candidates must have successfully completed the National Board examination or its equivalent in the certifying country.
- 3.4 Candidates must have the goal of board certification by the ACVR.

4.0 FACULTY MENTOR

- 4.1 The resident will be assigned to a faculty mentor who has diplomate status in the specialty field of Diagnostic Imaging. Responsibilities of the mentor include direction and coordination of the clinical program, provide advice toward research, publications, and preparation for Specialty Board examinations and general counseling.

5.0 HOUSE OFFICER ROUNDS AND SEMINAR PROGRAM

- 5.1 The House Officer Rounds are designed to provide the resident the opportunity to receive and present interesting, unusual, or difficult clinical case material utilizing a problem oriented approach to professional colleagues and to develop manuscripts for publication. The resident will participate with the other VCS house officers on a rotating basis and will

make at least 1 case presentation in House Officer Rounds during the year.

- 5.2 The House Officer Seminar series is designed to provide the resident with the opportunity to research and present scientific information to professional colleagues.
- 5.3 One seminar will be prepared and given in each year of the residency.
- 5.4 The seminar will include a written manuscript with references in a suitable form for a publication that is to be forwarded electronically one week prior to the seminar to the faculty and house officers.
- 5.5 One seminar topic will relate to original research conducted by the resident.
- 5.6 Attendance: The resident is required to attend and participate in the following: VMED 7001 (VCS Seminar), Grand Rounds, House Officer Rounds, and other seminars that are requirements of the resident's home department and/or section.

5.6.1 VCS HO Rounds/Seminar Policy

- 5.6.1.1 HO attendance at all HO Rounds/Seminar sessions is required. HO attendance is required at only those rounds and seminars designated as VCS HO Rounds/Seminar sessions and that others occurring in the same time slot are not required by the House Officer Committee.
- 5.6.1.2 Attendance will be taken at the beginning of each session.
- 5.6.1.3 HO will be required to present an additional seminar if they have more than one unexcused absence during the program year. All absences must be accounted for by completing a HO Leave Request Form and submitting it to the HOC chair.
- 5.6.1.4 Excused absences include the following: illness, annual leave, attendance or participation in a continuing education program, presentation of a student lecture, scheduled out-rotation or special service requirements per request of advisor. All other absences are unexcused unless deemed excusable by the HO advisor.

6.0 TEACHING PROGRAM

- 6.1 Throughout the program residents will be viewed as role models by both interns and professional students. They should always present themselves in a professional manner.

- 6.2 The resident will participate in clinical instruction and in the evaluation of Phase II veterinary students assigned to the section.
- 6.3 The resident will participate in preclinical didactic lecture and laboratory instruction as assigned by his/her mentor.

7.0 BOARD CERTIFICATION

- 7.1 An important credential in veterinary medicine is board certification in a specialty area. One of the objectives of the program is to prepare the resident for certification by the ACVR.
- 7.2 In order to qualify for examination the resident should refer to the published requirements of the college.
- 7.3 It is solely the responsibility of the resident to submit any material and fees required by the college for registration for board examinations.

8.0 CLINICAL PROGRAM

Below a description of the 52 weeks per year of training is required. Each individual year of training should be described in detail with the number of weeks in various sections, out-rotations, independent study, leave, etc... adding up to the total weeks in the training program

8.1 Year I Resident's Program

- 8.1.1 Weeks of training described in detail
- 8.1.2 The resident will participate in the instruction of Phase II students and interns. Participation in SVM student laboratories will be assigned.
- 8.1.3 The resident will participate in house officer rounds, ward rounds, journal club, special topic conferences, seminars, and other scheduled conferences of the VTH. He/She will attend other scheduled seminars in the SVM as time permits.
- 8.1.4 The resident will present 1 seminar (to faculty and house officers) on a topic of interest to the resident.
- 8.1.5 The resident may attend a major professional meeting at some point during the program with the advice and approval of his/her faculty mentor and the house officer committee. Expenses will be paid by the resident. The meeting must be scheduled during a non-clinical block.
- 8.1.6 The resident is encouraged to attend and participate in continuing education meetings sponsored by the SVM or by local and regional veterinary organizations.
- 8.1.7 The resident must register with the specialty college.

- 8.1.8 The resident is encouraged to prepare a research proposal; review it with his/her faculty mentor, and submit it for funding consideration. The resident will register with the ACVR within 90 days of starting the program
- 8.1.9 The resident will participate in emergency duty along with the responsible radiologist.
- 8.1.10 The resident may attend formal course work at human hospitals as approved by the program supervisor.
- 8.1.11 The resident may, with the approval of the resident's advisor and the medicine faculty, participate in clinically relevant graduate courses. Course work must not interfere with the clinical and instructional responsibilities of the resident.

8.2 Year II Resident's Program

- 8.2.1 Number of weeks of type of training detailed here
- 8.2.2 The resident will submit one paper suitable for publication to their mentor and the House Officer Chair by June 1. Topic considerations should be discussed with his/her mentor prior to working on the manuscript.
- 8.2.3 The resident should make applications for sitting examinations if applicable.
- 8.2.4 The resident will begin or continue the research project if funding has been obtained.
- 8.2.5 The resident is required to give at least 1 hour of didactic instruction in courses offered to veterinary students.
- 8.2.6 The resident will apply to sit the theoretical part of the ACVR board examination by the published deadlines on the ACVR website during year II (examination is in September of each year, which will be year II of the program).
- 8.2.7 The resident may attend 1 major professional meeting during Year III if not done in Year II and an abstract is accepted for oral or poster presentation. Expenses are paid by the resident.

8.3 Year III Resident's Program

- 8.3.1 The resident will submit one paper suitable for publication to their mentor and the House Officer Chair by June 1.
- 8.3.2 The resident should make applications for sitting examinations if applicable.
- 8.3.3 Sit the practical part of the examination in September of year III.

8.3.4 The resident will perform primary diagnostic imaging emergency backup for the hospital.

8.4 Year IV Resident's Program

8.4.1 The resident will be assigned 10 blocks of clinical rotation, 2 blocks of elective.

8.4.2 Training content while on clinics is listed above.

8.4.3 The resident will participate in phase II student's instruction.

8.4.4 Participation in Phase I laboratories will be assigned.

8.4.5 1 hour of lecture will be presented in Phase I and be observed by a radiologist.

8.4.6 The resident will hold a portion of the Phase II student rounds in diagnostic imaging. These duties will be equally shared with the other radiologists.

8.4.7 Residents will present 1 rounds and 1 seminar presentation to faculty and house officers on an imaging topic of interest to the resident

8.4.8 The resident will submit one manuscript based on their research project to a refereed journal for publication.

8.4.9 The resident will perform primary diagnostic imaging emergency backup for the hospital to be equally shared with the other radiologists.

8.4.10 The resident may, with the approval of the resident's advisor participate in clinically relevant graduate courses. The course work must not interfere with the clinical and instructional responsibilities of the resident.

8.4.11 The resident will continue work on their research project.

8.4.12 The resident may attend 1 major professional meeting during Year IV if an abstract is accepted for oral or poster presentation. Expenses are paid by the resident.

8.4.13 The resident will hold a portion of the Phase II student rounds in diagnostic imaging. These duties will be equally shared with the other radiologists.

8.5 Details of training content

The approximate number of cases that will be examined during the training period is based on the average case load of the hospital and number of months spent training in that area.

	Full time equivalent months	Approximate number of cases
Small Animal Radiology	10	5800
Large Animal Radiology	2	850 (incl. Teaching file)
Small animal ultrasonography	8	1300
Large animal ultrasonography	1	20
Computed Tomography	3	500 (incl. Teaching file)
Magnetic Resonance Imaging	1	100 (incl. teaching file)
Nuclear Medicine	1	10
Elective (includes board prep, research, echocardiography and 12 weeks vacation)	6	
RT	1	10
Special Procedures	3	50
Total	36	9940

9.0 RESEARCH PROJECT

The Department of Veterinary Clinical Sciences requires its residents to participate in scholarly activity such as basic, applied or clinical research. The resident is required to:

- 9.1** Design a research project to address a specific question or problem in the discipline.
- 9.2** Write a research grant proposal that may be used to seek funding for the project.
- 9.3** Conduct the research according to the experimental design.
- 9.4** Analyze and report the results of the project.
- 9.5** Publication of these results in a refereed journal is strongly encouraged.

10.0 GRADUATE PROGRAM – OPTIONAL

- 10.1** The graduate academic program is considered to be an important adjunct to the residency program. Enrollment will produce a more balanced educational experience, which will prepare the resident for an academic career as a member of the clinical faculty of a school or college of veterinary medicine. The graduate program is not required, but is encouraged.
- 10.2** Requirements for admission to the LSU Graduate School are given in the current catalog under “Requirements for Advanced Degrees”. The resident

should apply for admission to the Graduate School at the time of acceptance to the residency.

10.3 All MS graduate students must complete a minimum of 30 credit hours of graduate courses, a final examination and a thesis. Course requirements include:

10.3.1 A minimum of 12 hours of graduate work must be at the 7000 level or greater.

10.3.2 A minimum of 10 hours of course credit must be from VCS courses

10.3.3 A minimum of 6 hours of research/thesis credit must be completed (only 6 hours counted towards degree)

10.3.4 A maximum of 4 hours of seminar (VCS 7001) may be applied toward the MS degree

10.3.5 A maximum 8 hours of special topics (VCS 7003) may be applied toward the MS degree

10.3.6 A minimum of 8 hours of non-VCS courses

10.4 The resident shall choose a major advisor. The resident and major advisor are responsible for the selection of a graduate committee (usually 3 members) by January of the first year.

11.0 ADDITIONAL OBJECTIVES

11.1 Formal didactic classes or organized self-study modules must be included in:

11.1.1 Radiobiology

11.1.2 Physics of diagnostic radiology, nuclear medicine, ultrasonography, CT, and MRI

11.2 Formal course, organized self-study modules or supervised practical experience must be included to provide the resident knowledge of the basic patterns of disease and principles of interpretation of disease in:

11.2.1 Diagnostic nuclear medicine

11.2.2 Echocardiography

11.2.3 Large animal ultrasound

11.2.4 MRI

11.2.5 CT

12.0 EVALUATION & REAPPOINTMENT

- 12.1** An evaluation will be provided by the block mentor at the end of each assigned block through the E*Value software. A summary evaluation will be made quarterly by the faculty in conjunction with the resident's advisor. The evaluation covers:
- 12.1.1** Professional ability; to include theoretical knowledge and application of that knowledge, clinical skills, tutorial skills, and scholarly activity.
 - 12.1.2** Hospital services; to include communication skills, patient care, medical record quality, emergency duty quality, and adherence to VTH protocol.
 - 12.1.3** Personal characteristics; to include responsibility, initiative, interaction with faculty, staff and students, department and leadership.
- 12.2** The resident and mentor will meet on a quarterly basis to discuss progress and block evaluations
- 12.3** At any time in the resident's program, and at the latest in March of each year, the House Officer Committee will review all evaluations to date. Following that review, the committee will make a recommendation to the Head of the Department of Veterinary Clinical Sciences to:
- 12.3.1** Continue the appointment until the next review
 - 12.3.2** Award a certificate upon satisfactory completion of the program.
 - 12.3.3** Not to reappoint the resident, with a minimum of 30 days notice of termination. At the discretion of the House Officer Committee and in consultation with the resident's service, guidelines can be formulated that if met, may allow the resident to be re-instated at the end of the specified period.
- 12.4** All House Officers are required to complete an annual evaluation of their program with suggestions for improvement before continuation or completion of their program is granted.

13.0 HOUSE OFFICER COMMITTEE

- 13.1** The Committee is comprised of a representative of each House Officer program. It is responsible for the year-end review of each house officer's progress. This review is based on block evaluations received throughout the course of the program. The Committee grants recommendation for reappointment or a certificate to those who successfully complete the program.
- 13.2** All House Officers are required to complete an annual evaluation of their program with suggestions for improvement before continuation or completion of their program is granted.

14.0 EMPLOYMENT AND BENEFITS

- 14.1** Louisiana State University classifies interns and residents as University employees. As such, they (and their eligible dependents) qualify for the Louisiana State University Baton Rouge health insurance and benefits. The School of Veterinary Medicine provides malpractice insurance coverage. The salary (not a stipend) is published in the Directory of Internships and Residencies as published by the American Association of Veterinary Clinicians (www.virmp.org). Salary is payable in monthly increments via direct deposit. Retirement contributions are required and withheld from each paycheck. No social security tax is withheld. Federal and state income tax is withheld. The employee may be eligible to petition the IRS for exemption from federal tax on part of his/her salary.
- 14.2** The Veterinary Teaching Hospital operates year round. House officers will share emergency duty with other house officers within their specialty. House Officers will also share evening, weekend and holiday duty on a scheduled basis.
- 14.3** The University offers accrual of annual time off following either the University accrual rate (14 hours/month with a maximum accumulation of 176 hours) or the Civil Service Schedule rate (8 hours/month with no maximum accumulation). Sick time off accrual is 8 hours/month. All time off, except for illness and emergencies, should be requested and approved 30 days in advance. Time off requests must be entered into Workday (via the employee's MyLSU account) by the employee and approved by the supervisor before time off will be granted. Annual time off will be granted on an individual basis taking into account the reason for the requested absence and the needs of the service and hospital. Annual time off for personal business is to be taken during elective or research blocks. Emergency absence such as for illness or a death in the immediate family should be brought to the attention of the clinician to whom the House Officer is assigned as soon as the House Officer learns that he/she will be absent. The official request should be entered into Workday upon the House Officer's return. Except in unusual circumstances, approval will not be granted for time off during the final month of the program.
- 14.4** Reappointment to the second and third years of the residency program is contingent upon satisfactory completion of the previous year's requirements.

15.0 APPLICATION

- 15.1** Candidates may apply for the Residency in Diagnostic Imaging by completing:
- 15.1.1** A standard residency application through www.virmp.org.
 - 15.1.2** A statement of residency objectives and subsequent career goals.
 - 15.1.3** Official academic transcripts.
 - 15.1.4** Three letters of reference from individuals currently familiar with the applicant's professional status.

15.1.5 A curriculum vitae.

15.1.6 A GRE score less than five years old if admission to graduate school is sought.

16.0 APPENDIX

16.1 HOUSE OFFICER ROUNDS EVALUATION FORM

House Officer: _____ Date: _____

Evaluator: _____

	<u>Evaluation</u> E=Excellent G=Good N=Needs Improvement	<u>Comments</u>
Case Selection		
Complexity of case		
Appropriate follow-up		
Content		
Format of presentation		
Discussion		
Conclusions		
Use of problem-oriented approach		
Delivery		
Clarity of speech		
Rate of delivery		
Effectiveness of Visual Presentation		
Use of visual aids		
Body language and enthusiasm		
Questions handled appropriately		

Additional Comments:

16.2 VCS SEMINAR EVALUATION FORM

Presenter: _____ Date: _____

Audience: _____

Title/Topic: _____

Evaluation Criteria:

	Points	Evaluation
Definition of subject: introduction, importance, clinical significance	0-5	
Organization	0-10	
Quality of material	0-10	
Presence: speaking ability		
Clarity	0-10	
Rate of delivery	0-10	
Enthusiasm, expressiveness	0-10	
Support Materials		
Handouts, manuscript	0-15	
Visual aids	0-5	
Appropriate Summary	0-5	
Presentation consistent with audience level	0-10	
Questions/discussion handled appropriately	0-10	
	Total	

Comments:

Evaluator: _____

16.4 HOUSE OFFICER BLOCK EVALUATION FORM (E-Value)

<u>House Officer Evaluation Form in E-Value</u>	Needs Improvement	Satisfactory	Good	Excellent	Not Applicable
Professional Ability					
Theoretical Knowledge					
Knowledge Application					
Skills					
Patient Care					
Thoroughness					
Individual Characteristics					
Communication with clinicians					
Communication with students					
Communication with staff					
Independent study & initiative					
Awareness of current literature					
Contribution to student education					
Performance under stress					
Ability to accept criticism					
Organizational skills					
Ability to work in a team					
Reliability					
Motivation					
Attendance at seminars & rounds					
Presentation at seminars & rounds					
Ability to make independent decisions					
Hospital Service					
Completion of duties					
Quality of work					
Emergency services duty					
Communication with veterinarians					
Client communication					
Referral letters & record keeping					
Acceptance of service & case responsibility					
Adherence to VTH protocol					
Strengths:					
Areas for Improvement:					