



RESEARCH ANIMAL COORDINATOR CERTIFICATION

Program Overview

The Duke Animal Care and Use Program offers a training and certification program for individuals wishing to serve as their laboratory 'go-to' person for animal care and use activities. Referred to as the Research Animal Coordinator Certification (RACC) Program, individuals who participate in this program will receive specific and detailed information concerning animal care and use at Duke. Those who achieve certification may be designated by the Principal Investigator to serve as the laboratory coordinator for all animal activities and provide in-lab guidance regarding animal care and use at Duke. In addition to assisting with protocol development and processing, the RACC will be trained to provide internal compliance assistance and hands-on procedure skills to laboratory members. The Duke Animal Program views the RACC as the laboratory 'subject matter expert,' who will facilitate successful use of animals in research activities while also knowing how to accomplish the variety of regulatory tasks at Duke. This program provides direct applicability to the researcher (smoother research application approval, accelerated approval, decreased risk of non-compliance issues) while also benefiting the RACC candidate (enhancing the value to the research team, improving research skills, providing an improved knowledge of how to 'get things done' for animal care or use issues). RACC training is consistent with required training for certification with AALAS (American Association for Laboratory Animal Science), and if desired by the candidate may be used as training leading to formal certification with AALAS as an ALAT (Assistant Laboratory Animal Technician), LAT (Laboratory Animal Technician), or LATG (Laboratory Animal Technologist).

The RACC program is voluntary, and offered at no-cost by the Duke Animal Care and Use Program. Managed by the Office of Animal Welfare Assurance (OAWA) with significant contributions from the Division of Laboratory Animal Resources (DLAR) and the Institutional Animal Care and Use Committee (IACUC), the RACC program uses a multi-modal educational approach (e.g., lectures, web-modules, meetings, one-on-one discussion, and hands-on learning). The Research Animal Coordinator will develop new knowledge and research skills in all aspects of animal program oversight and management to include protocol development, compliance oversight, common animal procedures involving anesthesia and analgesia, aseptic surgical technique, DLAR husbandry procedures, facility security, literature searches for alternatives to painful or distressful procedures, and much more. The RACC candidate will be evaluated throughout the RACC program and those meeting or exceeding the minimum knowledge and skill requirements will be certified as a Duke Animal Care and Use Program RACC. As a certified RACC, individuals shall have a greater overall knowledge of animal research, and a clear understanding of how to efficiently conduct fully compliant research at Duke. The RACC program will include:

- **SKILLS DEVELOPMENT FOR PROTOCOL APPLICATIONS AND AMENDMENTS:** The RACC will receive tips and suggestions for writing an animal use application which is complete and will pass muster of IACUC review. An application which meets the regulatory requirements is generally approved more rapidly than an application with significant issues requiring attention.

- **TIPS FOR PROCESSING OF PROTOCOL APPLICATIONS & AMENDMENTS:** The RACC will receive training in specific processing measures and tips to make the application process most efficient. The RACC will be able to facilitate the principal investigator through the application processes.
- **PROTOCOL AND GRANT CONCORDANCE GUIDANCE:** The RACC will be trained in the process of grant concordance reviews. Having this skill set will encourage an earlier assessment and, if necessary, proper amendment submission to make the protocol and grant concordant, and therefore a more rapid receipt of concordance letters for the researcher.
- **POLICIES AND GUIDELINES:** The RACC will receive training in Duke animal program policies, the process of policy development, interpretation and application of the Duke policies, and the differences between policies and guidelines. The RACC will become well versed in Duke's policies and learn strategies to apply those policies to benefit animal welfare and maintain compliance.
- **LABORATORY PERSONNEL TRAINING:** The RACC will receive advice and direction on effective monitoring of laboratory personnel training status and recommendation to ensure that all members are up-to-date and compliant.
- **LABORATORY RESOURCE:** The RACC will be seen as the 'in-lab' go-to person for questions on animal welfare, regulations, protocol compliance and animal procedures.
- **TRAINER FOR BASIC ANIMAL PROCEDURES:** The RACC will receive wet-lab training and be able to instruct laboratory personnel on appropriate animal handling and basic animal procedures.
- **LABORATORY LIAISON:** The RACC will have the skills to serve as a liaison and facilitator for communication between the laboratory and the IACUC, OAWA and DLAR.
- **LABORATORY MENTOR:** The RACC will have the skills to educate other laboratory personnel on proper techniques and procedures such as aseptic surgical technique, monitoring animals for well-being, and required record keeping.
- **ANIMAL CARE AND USE COMPLIANCE:** The RACC will have the knowledge to effectively guide laboratory personnel in reporting animal concerns, protocol noncompliance, and devising self-corrective measures which have a high likelihood of being IACUC approved.
- **LABORATORY OMBUDSMAN:** The RACC can serve as a central laboratory member who will disseminate updates in protocol information, new or modified policy updates.

The RACC program consist small 'CLASSES' of participants, generally 6-8 candidates in a specific class. The successful candidate will complete both 'PHASES' of the RACC program.

PHASE I will consist of an introductory session which describes the expectations and sets a time frame for accomplishment of the required modules. PHASE I is core material required of all candidates. Core material training is approximately 80% web module training which can be accomplished at the convenience of the candidate, but within the range of dates for the specific class. The remaining sessions are small group seminars presented by Duke Animal Care and Use Program leadership.

PHASE II will consist of species specific training. The discussions and activities of PHASE II will focus on the specie(s) in use in the RACC candidate's laboratory. The Curriculum Matrix provides more detailed information about PHASE 1 and PHASE II.



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AALAS LEARNING LIBRARY ASSIGNMENTS

RACC PHASE II - SPECIES CURRICULUM

Amphibians
Birds
Cats
Dogs
Fish
Gerbils
Guinea Pigs
Mice
Nonhuman primates
Rats
Swine
Rabbits

RACC PROCEDURES TRAINING FORM

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RACC CERTIFICATE OF COMPLETION

RESEARCH ANIMAL COORDINATOR CERTIFICATION (RACC) CURRICULUM					
SESSION	TOPIC	SUB-TOPICS	FORMAT	INSTRUCTOR	AALAS LEARNING LIBRARY MODULES
A	ORIENTATION	Curriculum Review Introduction to the RACC	Seminar	RACC Facilitator	
B	THE DUKE IACUC	IACUC Membership Subcommittees Regulations <i>Mock Protocol Review</i>	Seminar <i>Practical</i>	IACUC Chairperson OAWA Director	Working with the IACUC – Non VA version Animal Welfare Act Regulations PHS Policy on Humane Care & Use
C	APPLICATION DEVELOPMENT LITERATURE REVIEW FOR ALTERNATIVES TO PAINFUL OR DISTRESSFUL PROCEDURES	Protocol Development Animal number justification Policies and Exemptions <i>"Does this activity require an exemption?"</i> Components of a literature search 3 R's Search strategies/databases <i>Literature search assignment</i>	Seminar Seminar <i>Practical</i>	Senior Compliance Liaison Biomedical Research Librarian	Euthanasia of Research Animals Pain Recognition and Alleviation in Laboratory Animals Ethical Decision Making in Animal Research
D	DOCUMENT PROCESSING	OAWA Processing IACUC Review and Disposition	Seminar	Grants and Contracts Specialists	
E	INSPECTIONS AND AUDITS	IACUC Semi-annual Inspections Compliance Audits <i>Case-based scenarios to illustrate compliance or non-compliance</i>	Seminar <i>Practical</i>	Compliance Liaison Staff	The Semiannual Facility Inspection Common Compliance Issues Maintaining Animal Procedure Areas Post Approval Monitoring
F	REPORTS (USDA, OLAW, AAALAC)	Institutional reporting Annual progress reports Counting animals <i>Scenario discussion of USDA pain and distress categories and quiz</i>	Seminar <i>Practical</i>	IACUC Administrator OAWA Associate Director	
G	EMPLOYEE OCCUPATIONAL HEALTH & WELLNESS (EOHW)	Employee Health Resources Recognition of risk assessment Required training and medical surveillance	Seminar	Occ. Health Physician/Nurse	Occupational Health and Safety in the Care and Use of Animals Laboratory Animal Allergy
H	OCCUPATIONAL ENVIRONMENTAL SAFETY OFFICE (OESO)	OESO processes and protocol review SOP writing Requirements for the use of hazardous agents <i>Locate SOPs using OESO websites; chemical look-up; reporting compliance</i>	Seminar <i>Practical</i>	Occupational Environmental Safety Office	Syringes and Needles Orientation to Bio-Safety in Microbiological and Biomedical Laboratories Blood-borne Pathogens Training for Animal Research Laboratory Bio-Security
I	CONTROLLED SUBSTANCES	Review of schedules C.S. storage and recordkeeping Process for DEA registration and licensure	Seminar	IACUC Vice-chairperson OAWA Director	Working with Controlled Substances
J	DLAR POLICIES AND PROCEDURES	DLAR resources Biosecurity	Seminar	DLAR Veterinarian/Assistant Director of Facility Operations	Personal Protective Equipment for Working in a Laboratory Animal Facility

RESEARCH ANIMAL COORDINATOR CERTIFICATION

TEACHING PLAN

SESSION TITLE: ORIENTATION

OBJECTIVES OF THIS SESSION:

1. To provide the new RAC candidate with an overview of the course and the expectations of each candidate.
2. To introduce the three 'legs' of the animal program.
3. To remind candidates of the obligatory nature of animal protections in animal based research.
4. To encourage RAC candidate to explore the opportunities before them in animal care & use.

MATERIALS/RESOURCES NEEDED FOR THIS SESSION:

- Course syllabus
- Course Schedule
- Password & training for AALAS Learning Library
- Initial Survey

OBJECTIVE OF THIS SESSION: Student will recognize the significance of their training and the value that they can contribute to their laboratory with this certification. Students will receive the necessary guidance to begin their self-training using the AALAS LL. Students will be able to describe why they desire RAC certification and how the certification may assist their laboratory.

ANTICIPATORY KNOWLEDGE FOR THIS SESSION:

1. A general knowledge of animal care & use at Duke.
2. Recognition of role of the IACUC in animal care & use.
3. Recognition of the value of animals in research, testing, teaching, or exhibition.
4. Recognition of their laboratories activities.

STUDENT PREPARATION PRIOR TO THE SESSION: None.

METHODOLOGY TO ASSESS UNDERSTANDING:

1. Questions during the presentation
2. Scenarios discussed during the presentation

OPENING STATEMENT: The Research Animal Coordinator can serve a pivotal role within the laboratory by assuring animal well-being and quality research outcomes and improving the efficiency of proposals and approvals, while also discouraging the development of adverse events which could be reportable to federal oversight agencies.

POINTS TO ADDRESS DURING THIS SESSION:

- Candidate introductions and description of why they want to become a RAC.
- Certification will not be tied to protocol approval or renewal.
- This is a one-time certification, but will have annual 'refreshers' and quarterly interactions.
- Designed to improve communications between PI, OAWA, DLAR, IACUC.
- Reduce incidence of protocol non-compliance within the laboratory.
- Improve flow of work between lab and support entities.
- Better prepare lab staff for their roles – support of PIs projects.
- Course open to all lab staff (preferred candidates are those with lab management responsibilities).
- Focus of course will be on processes, procedures which will make the researcher successful.
- Consist of didactic, hands-on training, AALAS Learning Library, and Facility tours.
- Hands on workshop: DLAR training and vet staff.

CLOSING STATEMENT/CONCLUSION OF TRAINING: This course is exactly what you invest into it. You can significantly enhance your laboratories research opportunities while inoculating them from potentially important adverse outcomes.

POST-SESSION ASSIGNMENTS:

1. Completion of AALAS LL assignments prior to the next RAC meeting.
2. Development of a single idea to improve your laboratory's function.

DUKE UNIVERSITY
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TEACHING PLAN
SESSION TITLE: The Duke IACUC

MATERIALS/RESOURCES NEEDED FOR THIS SESSION: Students are provided an IACUC proposal for review. The proposal has several problems that students should identify and be prepared to discuss.

OBJECTIVES OF THIS SESSION: Be able to answer the following questions:

1. Why are IACUCs necessary?
2. What is the make-up of the IACUC at this institution?
3. What are the responsibilities of IACUC members?
4. How does the Committee function during meetings (deliberations, dispositions)?
5. By what principles do IACUCs evaluate proposals for animal use?

ANTICIPATORY KNOWLEDGE FOR THIS SESSION: Completion of the following AALAS LL Web Modules:

- Working with the IACUC – Non VA version
- Animal Welfare Act Regulations
- PHS Policy on Humane Care & Use

STUDENT PREPARATION PRIOR TO THE SESSION:

1. Complete AALAS Learning Library modules.
2. Read, edit, and be prepared to discuss the sample IACUC protocol in a mock protocol review session.

METHODOLOGY TO ASSESS UNDERSTANDING:

1. Did the student successfully complete the AALAS Web Modules?
2. Did the student participate in the discussion and correctly identify the protocol concerns?
3. Did the student express a familiarity with the regulations / policies that apply to the protocol?
4. Did the student ask questions regarding aspects of the protocol that were in the 'gray' area?

POINTS TO ADDRESS DURING THIS SESSION:

- Regulatory basis for IACUC requirements
- Animal rights vs. animal welfare, including intrinsic value for mankind vs. ethical costs for animals, 3Rs (reduce, replace, refine).
- Composition of local IACUC
- Responsibilities of IACUC: protocol approval, annual protocol reviews, semi-annual facility site visits, semi-annual program evaluations, monitor protocol compliance, investigate animal welfare concerns
- Structure of local IACUC meeting (particularly important if IACUC meetings are "closed")
- Principles to consider in protocol review, including examples
- Discussion of sample protocol

POST-SESSION ASSIGNMENT: None

**DUKE UNIVERSITY
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TEACHING PLAN**

SESSION TITLE: Application Development

TRAINING OBJECTIVES OF THIS SESSION:

1. Introduce the RAC candidates to the regulatory bodies and documents that guide the IACUC Animal Use Application review process.
2. Introduce the 3 R's: Replacement, Reduction and Refinement
3. Orient the RAC candidate to the structure and format of the Animal Use Application
4. Discuss common pitfalls of the application process (personnel, animal number justification, research facilities, special husbandry requirements, controlled substance use for research, withholding anesthesia or analgesia, euthanasia and exemptions).

MATERIALS/RESOURCES NEEDED FOR THIS SESSION:

- Dr. Hale's mock protocol – PI: Smythe, "Mechanisms of Inflammatory Bowel Disease Pathogenesis"
- Dr. Vanderford's OAWA review for mock protocol
- Power Point handout for note taking

STUDENT OBJECTIVE OF THIS SESSION:

At the conclusion of this session, the student will gain insight into the OAWA and IACUC review process. They will become more familiar with the application process and the regulatory reasons for the requested information. The RAC graduates will be well-prepared to take on the responsibility of protocol and amendment application for their laboratories.

ANTICIPATORY KNOWLEDGE FOR THIS SESSION:

Students will have varied backgrounds in laboratories, but will all be familiar with the Animal Use Application and IACUC review process.

STUDENT PREPARATION PRIOR TO THE SESSION:

Students will have gone over Dr. Hale's mock protocol in a previous class.

METHODOLOGY TO ASSESS UNDERSTANDING:

Students are provided with the OAWA review of Dr. Hale's mock protocol from the previous session. At the conclusion of my presentation, we will apply the concepts by going over the review and eliciting questions from their own laboratory experiences (i.e. different species, different types of procedures,

etc.). Hopefully they will get a broader understanding of how to apply the regulatory review concepts in various contexts.

OPENING STATEMENT:

What happens to your protocol after you submit it to IACUC@duke.edu?

POINTS TO ADDRESS DURING THIS SESSION:

- Animal Use Application processing and review process
- Regulatory guidance and resources
- Goals of OAWA and IACUC protocol review
- The 3 R's
- Introduction to the Animal Use Application
- Common pitfalls of the application process
- Expectations for recognition and treatment of painful or distressful procedures
- The requirements for scientific justification for withholding anesthesia or analgesia
- Euthanasia policies at Duke
- The requirements for scientific justification for exemptions
- Process for requesting a pre-review of a draft application
- Contact information for assistance with protocol application development

INTERACTIVE EXERCISE OR ASSIGNMENT:

I will lead a scenario based game entitled "Does this activity require an exemption?"

CLOSING STATEMENT:

Encourage RAC students to be the representatives for their laboratories and consider taking on the role of protocol and amendment processing for their PI's.

POST-SESSION ASSIGNMENT:

Encourage students to call with questions as they arise.

**DUKE UNIVERSITY
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TEACHING PLAN**

SESSION TITLE: Searching the Literature for Animal Alternatives to Painful Procedures

OBJECTIVES OF THIS SESSION:

Learners will be able to:

- Focus a research protocol question into the components needed to conduct a thorough literature search
- Select appropriate databases to search
- Design search strategies to cover the 3 R's
- Understand and apply basic search tools like Boolean operators, truncation, and subject headings appropriately
- Conduct a search in PubMed

MATERIALS/RESOURCES NEEDED FOR THIS SESSION:

- Projector
- Computer with access to the internet

ANTICIPATORY KNOWLEDGE FOR THIS SESSION: It would be useful for students to have some prior knowledge of basic literature search skills. Students should also have knowledge of the 3 R's and why it is important to do a search for animal alternatives to painful procedures. It would be more relevant for the student if they came to the session with an example protocol in mind from work they have done or plan to do.

STUDENT PREPARATION PRIOR TO THE SESSION:

Students should review the online guide: <http://guides.mclibrary.duke.edu/animalalternatives>

METHODOLOGY TO ASSESS UNDERSTANDING:

A brief assignment given after the session requiring them to complete an animal alternatives literature search and fill out a series of questions describing the process. I will review their answers and provide feedback.

OPENING STATEMENT:

- Introduce myself

- Introduce Library Guide: <http://guides.mclibrary.duke.edu/animalalternatives>
- Discuss the need for searching and the 3 R's

POINTS TO ADDRESS DURING THIS SESSION:

- Developing a Search strategy
 - Focus your question
 - Strategies for each of the 3 R's
 - Searching basics (Boolean operators, truncation, etc.)
 - Search PubMed
 - How to use MeSH terms
 - Demonstrate a search in PubMed
 - Review NCBI Account Features

CLOSING STATEMENT

Contact the Library for help with searching the literature and use the materials we have provided in class and online as guides.

INTERACTIVE EXERCISE OR ASSIGNMENT:

During the session I will work through an example and will engage students in helping to make decisions and complete a search. After the session they will have a brief assignment to conduct a literature search and answer questions about the search.

**DUKE UNIVERSITY
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TEACHING PLAN**

SESSION TITLE: Document Processing

OBJECTIVES OF THIS SESSION:

1. To familiarize the RACC students with the forms to submit for protocols and amendments, and the deadlines to do so.
2. To discuss the protocol specialist role in processing amendments, protocols and renewals.
3. To exemplify common mistakes when filling out and submitting the forms.

MATERIALS/RESOURCES NEEDED FOR THIS SESSION:

-Print outs of common forms RACCs will submit.

OBJECTIVE OF THIS SESSION:

Students should have a better understanding of the protocol, renewal and amendment submission process. They should be able to recognize common mistakes when filling out these forms, so as to insure they will not make these mistakes in the future.

ANTICIPATORY KNOWLEDGE FOR THIS SESSION:

- Appreciation of the importance of properly filling out and submitting protocol and amendment forms.
- Familiarization with commonly submitted forms.
- Resources to assist RACCs in their submissions.

STUDENT PREPARATION PRIOR TO THE SESSION:

None

METHODOLOGY TO ASSESS UNDERSTANDING:

- Questions during the presentation
- Active discussion during presentation
- Role play with students reviewing form as if they were processing it.

OPENING STATEMENT:

Submitting forms correctly is extremely important, because without protocols PIs cannot conduct research. The speed in which protocols and amendments can be approved is much faster if originally submitted correctly.

POINTS TO ADDRESS DURING THIS SESSION:

- Commonly used forms and where they are located.
- The importance in checking for the newest version.
- Deadlines
- Common mistakes
- Granite numbers
- Importance in responding to questions regarding submissions.

CLOSING STATEMENT:

Protocol and amendment approval is extremely important and are much more efficiently processed when submitted correctly initially. Learn who the protocol specialist is for your department and they can assist you in future submissions.

POST-SESSION ASSIGNMENT:

None

**DUKE UNIVERSITY
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TEACHING PLAN**

SESSION TITLE: Post Approval Monitoring

OBJECTIVES OF THIS SESSION:

1. To provide an overview of the post approval monitoring program
2. To identify and discuss most common non-compliances
3. To discuss reporting of adverse events

MATERIALS/RESOURCES NEEDED FOR THIS SESSION:

None

OBJECTIVE OF THIS SESSION:

Student should be able to understand how the post approval monitoring program works and its importance at Duke. They should also understand what the common categories of non-compliance are and how to avoid these, as well as how to report adverse or unanticipated events to the IACUC.

ANTICIPATORY KNOWLEDGE FOR THIS SESSION:

- Recognition of the role of the IACUC in animal care and use
- Recognition of the value of animals in research, testing and teaching
- Recognition of their laboratory's activities

STUDENT PREPARATION PRIOR TO THE SESSION:

None

METHODOLOGY TO ASSESS UNDERSTANDING:

- Questions during the presentation
- Active discussion during presentation

OPENING STATEMENT:

Post Approval Monitoring is an important part of the Duke research community and serves as a way to validate training, knowledge of the animal care and use policies and individual protocols. It is a team effort among the OAWA, IACUC, DLAR and research personnel. Everyone is responsible for assuring the humane care and use of the animals at Duke.

POINTS TO ADDRESS DURING THIS SESSION:

- Description of Post Approval Monitoring Program at Duke

- Importance of Post Approval Monitoring
- Importance of Post Approval Monitoring being a team effort
- Common categories of non-compliance for previous year
- How to identify non-compliances
- How to avoid non-compliances
- How to report non-compliances and adverse or unanticipated events

CLOSING STATEMENT:

Post Approval Monitoring is an important part of the Duke animal care and use community. It takes a team effort to ensure the highest quality program. Research personnel are vital to this program as they are daily participants in animal care and use and serve as eyes and ears in the field.

INTERACTIVE EXERCISE OR ASSIGNMENT:

We will list some scenarios and ask students to tell us whether procedures are non-compliant or compliant.

**DUKE UNIVERSITY
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TEACHING PLAN**

SESSION TITLE: Annual Reporting

OBJECTIVES OF THIS SESSION: Be able to: 1) Describe the details of what the institution is required to report to PHS, USDA, and AAALAC, Int. each year; 2) Understand how to count “animals used” for USDA, AAALAC, and protocol-specific annual reports; and 3) Provide accurate annual reports related to the participant’s own research protocols .

MATERIALS/RESOURCES NEEDED FOR THIS SESSION: None

ANTICIPATORY KNOWLEDGE FOR THIS SESSION: Basic understanding of regulatory entities: PHS, USDA, and AAALAC, Int. and Duke’s requirement for submission of a protocol annual report for all protocols.

STUDENT PREPARATION PRIOR TO THE SESSION: The AALAS Learning Library modules covering PHS Policy and Animal Welfare Act/Regulations have previously been covered with the regulations component of “The Duke IACUC” seminar.

METHODOLOGY TO ASSESS UNDERSTANDING: Evaluation of the completeness and accuracy of future reports submitted as data for preparation of institutional annual reports and for annual protocol renewals.

OPENING STATEMENT: Not applicable

POINTS TO ADDRESS DURING THIS SESSION:

- Differences in definition of an animal between USDA, OLAW, AAALAC, and your institution
- What information is required from each lab group with regard to preparation of the USDA annual report, including categorization of animals in pain categories B – E
- What information is required for preparation of annual reports to OLAW
- What information is required for preparation of annual reports to AAALAC
- What information is required in annual reports specific to each protocol (“annual renewals”) and how that may differ from what is provided for the other institution-wide reports

CLOSING STATEMENT: Not applicable

INTERACTIVE EXERCISE OR ASSIGNMENT:

- In class scenario discussion of USDA pain and distress categories
- In class group quiz on animal counting, deadlines, USDA pain and distress categories, exemptions, and Category E scientific justification

**DUKE UNIVERSITY
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TEACHING PLAN**

SESSION TITLE: Employee Occupational Health and Wellness: Ensuring Health and Safety of Employees Working with Research Animals

OBJECTIVES OF THIS SESSION:

1. Know the component resources comprising EOHW: Personal Assistance Service (PAS), Live for Life (LFL) and Employee Occupational Health (EOH)
2. Recognize circumstances EOH utilization is indicated: work-related injury/illness, preparation for work-related international travel, fitness for duty evaluations, reproductive health consultation
3. Understand reason employees are required to complete employee health medical surveillance for animal handlers – prevention of lab animal allergies, protection of animals

MATERIALS/RESOURCES NEEDED FOR THIS SESSION: EOHW and OESO websites

OBJECTIVE OF THIS SESSION: Access EOHW appropriately and ensure employees comply with surveillance requirements

ANTICIPATORY KNOWLEDGE FOR THIS SESSION: Work at Duke in a research lab

STUDENT PREPARATION PRIOR TO THE SESSION: Be familiar with OESO and EOHW websites

METHODOLOGY TO ASSESS UNDERSTANDING: Answer questions at end of session

OPENING STATEMENT: EOHW Mission – enhance health and productivity of the workforce, diminish risk to individual employee, and institution, address regulatory expectations.

POINTS TO ADDRESS DURING THIS SESSION:

- 1. PAS overview
- 2. LFL overview
- 3. EOHW services including Fitness for Duty assessments, Travel Health Services, Reproductive Health Counsel, Work-related injury/illness care and medical surveillance
- 4. Goals of Medical Surveillance
- 5. Lab animal allergies etiology and preventive methods
- 6. Process of Duke Animal Handler medical surveillance
- 7. General overview of medical surveillance for respirator use, latex exposure, high containment laboratory work

CLOSING STATEMENT: Students should now have an improved knowledge of EOHW resources available, basis for medical surveillance requirements including animal handler surveillance and how to access EOHW.

POST-SESSION ASSIGNMENT: None

**DUKE UNIVERSITY
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SESSION TITLE: Research Animal Coordinator Certification (RACC) Training – Occupational & Environmental Safety Office

OBJECTIVES OF THIS SESSION:

1. To become familiar with OESO and the responsibilities of each division and their resources
2. To understand the protocol review process through OESO
3. To review use of the OESO Laboratory Management System
4. To review writing SOPs and further explain OESO and IACUC requirements for use of hazardous agents in animals

MATERIALS/RESOURCES NEEDED FOR THIS SESSION: Copies of slides, sample protocol review form, homework questions

OBJECTIVE OF THIS SESSION: The objective is to have students be able to assist in preparing protocols for submission with all the required information included (e.g., SOPs, updated personnel in the online management system) to enable quick, efficient clearance of their protocol.

ANTICIPATORY KNOWLEDGE FOR THIS SESSION: Knowledge of their laboratory's biological, chemical, and/or radiological hazards relevant to animal research

STUDENT PREPARATION PRIOR TO THE SESSION: Read slides, familiarize self with OESO website, attempt to answer the homework questions

METHODOLOGY TO ASSESS UNDERSTANDING: Completion and review of homework assignment

OPENING STATEMENT: OESO wants to partner with labs to create a safer work environment. Through this class you will learn to use the OESO website and many resources available to lab employees. You will be prepared to submit your protocol with all required information and understand why these requirements are in place in order to achieve OESO clearance.

POINTS TO ADDRESS DURING THIS SESSION:

- Prevention of Occupational Exposure to Biological, Chemical and Radiological agents
- Prevention of injuries from safety and ergonomic hazards
- What OESO screens for in the protocol review
- Section H
- Training compliance
- Hazardous Agent and Animal Handling SOPs
- OESO clearance

CLOSING STATEMENT: We hope that you have learned about the many resources available through OESO and we look forward to working with you to make your lab a safer work environment. (Contact information for OESO staff involved in the protocol review process is made available.)

INTERACTIVE EXERCISE OR ASSIGNMENT: The class will participate in the following: Locate SOPs using various OESO websites; conduct chemical look up; reporting and training compliance within the Laboratory Safety Management database; complete homework assignment and review.

**DUKE UNIVERSITY
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SESSION TITLE: Controlled Substances Management in Animal Research at Duke

OBJECTIVES OF THIS SESSION: At the completion of this module, students should understand 1) the regulatory oversight for the use of controlled agents for animal research at Duke, 2) controlled drug schedules, 3) the application process for federal and state registrations, 4) security and storage of controlled agents, 5) record-keeping and documentation for controlled drugs, 6) method of disposal, 7) audits and 8) how to report concerns.

MATERIALS/RESOURCES NEEDED FOR THIS SESSION: None

ANTICIPATORY KNOWLEDGE FOR THIS SESSION: Basic understanding of regulatory oversight for controlled drugs: DEA (Drug Enforcement Administration) and DHHS (Department of Health and Human Services).

STUDENT PREPARATION PRIOR TO THE SESSION: AALAS Learning Library module “Working with Controlled Substances.”

METHODOLOGY TO ASSESS UNDERSTANDING: Group discussion on key points presented

OPENING STATEMENT: Seminar will follow Power Point presentation

POINTS TO ADDRESS DURING THIS SESSION:

- Regulatory oversight for controlled drug use for animal research
- Controlled substance schedules and commonly used drugs for animal research
- Definitions related to licensure and oversight of controlled drugs
- Application process for DEA and DHHS registration
- Security and storage for controlled drugs
- Recordkeeping
- Methods of disposal
- Controlled drug auditing
- Reporting concerns related to diversion
- Helpful resources

CLOSING STATEMENT: Not applicable

INTERACTIVE EXERCISE OR ASSIGNMENT: Question and answer session

**DUKE UNIVERSITY
RESEARCH ANIMAL COORDINATOR CERTIFICATION
TEACHING PLAN**

SESSION TITLE: DLAR Husbandry and Operations

OBJECTIVES OF THIS SESSION: Provide information for research staff on what DLAR's mission is, what our staff brings to the research equation, what DLAR resources are available, and provide contact information to make it easier to access DLAR services.

MATERIALS/RESOURCES NEEDED FOR THIS SESSION: None

OBJECTIVE OF THIS SESSION: To provide useful information about DLAR operations and husbandry procedures and to encourage dialog between DLAR and research staff.

ANTICIPATORY KNOWLEDGE FOR THIS SESSION: N/A

STUDENT PREPARATION PRIOR TO THE SESSION: N/A

METHODOLOGY TO ASSESS UNDERSTANDING: Open dialog

OPENING STATEMENT: We are Happy to have the opportunity to find out what DLAR can do to provide you with excellent customer service and easy access to DLAR resources.

POINTS TO ADDRESS DURING THIS SESSION:

- Services we provide
- How to contact the right DLAR personnel for what you need
- How can we help?

CLOSING STATEMENT: We want to emphasize that our goal is to be a valued member of your research team and to provide the best possible animal care and customer service.

POST-SESSION ASSIGNMENT: None

DUKE UNIVERSITY ANIMAL CARE AND USE PROGRAM
RESEARCH ANIMAL COORDINATOR CERTIFICATION PROGRAM

AALAS LEARNING LIBRARY ASSIGNMENTS FOR COURSE COMPLETION

*Please Note**:* These modules should be completed prior to the date class meets.

SUBJECT: The Duke IACUC

- Working with the IACUC – Non VA version
- Animal Welfare Act Regulations
- PHS Policy on Humane Care & Use

SUBJECT: Application Development

- Euthanasia of Research Animals – AVMA Guidelines
- Pain Recognition and Alleviation in Laboratory Animals
- Ethical Decision Making in Animal Research

SUBJECT: Inspections/Audits

- The Semiannual Facility Inspection
- Ethical Decision Making in Animal Research
- Common Compliance Issues
- Maintaining Animal Procedure Areas
- Post Approval Monitoring

SUBJECT: Employee Occupational Health and Welfare (EOHW)

- Occupational Health & Safety in the Care and Use of Animals
- Laboratory Animal Allergy

SUBJECT: Occupational Environmental Safety Office (OESO)

- Syringes and Needles
- Orientation to Bio-Safety in Microbiological and Biomedical Laboratories
- Bloodborne Pathogens Training for Animal Research
- Laboratory Bio-Security

SUBJECT: Controlled Substances

- Working with Controlled Substances

SUBJECT: DLAR Animal Care Policies and Procedures

- Personal Protective Equipment for Working in a Laboratory Animal Facility

Research Animal Coordinator Certification (RACC) Curriculum Section 2-D

Animal Specific Training: Amphibians

Topic	Sub-topics	Format	Details	Time	Notes	Exceptions	
Species Specific Training		Web Module	A.L.L. Module + Quiz for ALAT Training "ALAT 30: Amphibians"	120		If working with a species where there is NOT a A.L.L. module for, one-on-one training may be required	
Procedures	Handling and Restraint	Lecture	Lecture covering the basics of common procedures	60	<ul style="list-style-type: none"> Focus of this lecture should cover general considerations for common procedures and highlight any obvious species specific differences Review Duke's policies and procedures (what ones are available and where to find them) Allow time for specific questions on species or web module Discuss means to request individual or protocol/species specific training 	As the RACC training program grows, consider a hands-on portion that is protocol/species specific	
	Injections						
	Blood withdrawals						
	Identification						
	Oral gavage						
Expectations of care	Pain, anesthesia and analgesia	Web Module	A.L.L. Module + Quiz "Pain recognition and alleviation in laboratory animals"	90	Recommend this prior to lecture to address any questions		
		Lecture		60	Cover Duke's policies; stress importance of following anesthetic and analgesic plan outlined in the approved protocol		
	Aseptic Surgical Technique	Web Module	A.L.L. Module + Quiz "Aseptic Technique for Rodent Survival Surgery"	120	Recommend this prior to lecture to address any questions	Future Recommendation: Cover this topic in a hands-on wet-lab	
		Web Video		12	http://oacu.od.nih.gov/UsefulResources/AT_TC.wmv		
		Lecture		30	Cover Duke's policies and STRESS different requirements of mouse/rat aseptic procedures (seen in module) and Bird species		
	Surgical Monitoring	Peri-op	Lecture		90	Cover Duke's policies and record requirements <ul style="list-style-type: none"> Highlight: Peri-op analgesics, fasting, evaluation of animal condition; Intra-op monitoring for surgical depth; Post-op monitoring requirements 	
		Intra-op					
		Post-op					
	Recordkeeping	Lecture		30	Cover Duke's policies		
	DLAR Husbandry	Maintenance of the facility	Tour		60	Tour to be scheduled with DLAR staff member, preferable to coordinate with husbandry supervisor of the area their animals are housed	Should be required for RACs from PI managed areas also; facility they tour should have similar species/housing that is used in the laboratory
Review of husbandry policies							
Security							
Do's and Don'ts							
Euthanasia	Protocol compliance	Lecture		30	Focus on Duke/IACUC policy and stress secondary method		
	Ensuring death						
Total Time:				702	11.7 hours		
Lecture				300	5 hours		
Web Based				342	5.7 hours		
Other				60	1 hours		

Research Animal Coordinator Certification (RACC) Curriculum Section 2-D

Animal Specific Training: Birds

	Topic	Sub-topics	Format	Details	Time	Notes	Exceptions		
Species Specific Training			Web Module	A.L.L. Module + Quiz for ALAT Training "ALAT 29: Birds"	120		If working with a species where there is NOT an A.L.L. module, one-on-one training may be required		
Procedures	Handling and Restraint		Lecture	Lecture covering the basics of common procedures	60	<ul style="list-style-type: none"> Focus of this lecture should cover general considerations for common procedures and highlight any obvious species specific differences Review Duke's policies and procedures (what ones are available and where to find them) Allow time for specific questions on species or web module Discuss means to request individual or protocol/species specific training 	As the RACC training program grows, consider a hands-on portion that is protocol/species specific		
	Injections								
	Blood withdrawals								
	Identification								
	Oral gavage								
Expectations of care	Pain, anesthesia and analgesia	<ul style="list-style-type: none"> Pain recognition Anesthetics, analgesics, tranquilizers, neuromuscular blocking agents 	Web Module	A.L.L. Module + Quiz "Pain recognition and alleviation in laboratory animals"	90	Recommend this prior to lecture to address any questions			
			Lecture		60	Cover Duke's policies; stress importance of following anesthetic and analgesic plan outlined in the approved protocol			
	Aseptic Surgical Technique			Web Module	A.L.L. Module + Quiz "Aseptic Technique for Rodent Survival Surgery"	120	Recommend this prior to lecture to address any questions	Future Recommendation: Cover this topic in a hands-on wet-lab	
				Web Video		12	http://oacu.od.nih.gov/UsefulResources/AT-TC.wmv		
				Lecture		30	Cover Duke's policies and STRESS different requirements of mouse/rat aseptic procedures (seen in module) and Bird species		
	Surgical Monitoring	Peri-op		Lecture		90	Cover Duke's policies and record requirements <ul style="list-style-type: none"> Highlight: Peri-op analgesics, fasting, evaluation of animal condition; Intra-op monitoring for surgical depth; Post-op monitoring requirements 		
									Intra-op
									Post-op
Recordkeeping			Lecture		30	Cover Duke's policies			
DLAR Husbandry	Maintenance of the facility		Tour		60	Tour to be scheduled with DLAR staff member, preferable to coordinate with husbandry supervisor of the area their animals are housed	Should be required for RACs from PI managed areas also; facility they tour should have similar species/housing that is used in the laboratory		
	Review of husbandry policies								
	Security								
	Do's and Don'ts								
Euthanasia	Protocol compliance		Lecture		30	Focus on Duke/IACUC policy and stress secondary method			
	Ensuring death								
Total Time:					702	11.7 hours			
Lecture					300	5 hours			
Web Based					342	5.7 hours			
Other					60	1 hours			

Research Animal Coordinator Certification (RACC) Curriculum Section 2-D

Animal Specific Training: Cats

Topic	Sub-topics	Format	Details	Time	Notes	Exceptions			
Species Specific Training		Web Module	A.L.L. Module + Quiz for ALAT Training "ALAT 24: Cats"	120		If working with a species where there is NOT a A.L.L. module for, one-on-one training may be required			
Procedures	Handling and Restraint	Lecture	Lecture covering the basics of common procedures	60	<ul style="list-style-type: none"> Focus of this lecture should cover general considerations for common procedures and highlight any obvious species specific differences Review Duke's policies and procedures (what ones are available and where to find them) Allow time for specific questions on species or web module Discuss means to request individual or protocol/species specific training 	As the RACC training program grows, consider a hands-on portion that is protocol/species specific			
	Injections								
	Blood withdrawals								
	Identification								
	Oral gavage								
Expectations of care	Pain, anesthesia and analgesia	<ul style="list-style-type: none"> Pain recognition Anesthetics, analgesics, tranquilizers, neuromuscular blocking agents 	Web Module	A.L.L. Module + Quiz "Pain recognition and alleviation in laboratory animals"	90	Recommend this prior to lecture to address any questions			
			Lecture		60	Cover Duke's policies; stress importance of following anesthetic and analgesic plan outlined in the approved protocol			
Aseptic Surgical Technique			Web Module	A.L.L. Module + Quiz "Aseptic Technique for Rodent Survival Surgery"	120	Recommend this prior to lecture to address any questions	Future Recommendation: Cover this topic in a hands-on wet-lab		
			Web Video		12	http://oacu.od.nih.gov/UsefulResources/AT_TC.wmv			
			Lecture		30	Cover Duke's policies and STRESS different requirements of mouse/rat aseptic procedures (seen in module) and Bird species			
			Surgical Monitoring	Peri-op	Lecture		90	Cover Duke's policies and record requirements <ul style="list-style-type: none"> Highlight: Peri-op analgesics, fasting, evaluation of animal condition; Intra-op monitoring for surgical depth; Post-op monitoring requirements 	
				Intra-op					
Post-op									
Recordkeeping		Lecture		30	Cover Duke's policies				
DLAR Husbandry	Maintenance of the facility		Tour		60	Tour to be scheduled with DLAR staff member, preferable to coordinate with husbandry supervisor of the area their animals are housed	Should be required for RACCs from PI managed areas also; facility they tour should have similar species/housing that is used in the laboratory		
	Review of husbandry policies								
	Security								
	Do's and Don'ts								
Euthanasia	Protocol compliance	Lecture		30	Focus on Duke/IACUC policy and stress secondary method				
	Ensuring death								
Total Time:				702	11.7 hours				
Lecture				300	5 hours				
Web Based				342	5.7 hours				
Other				60	1 hours				

Research Animal Coordinator Certification (RACC) Curriculum Section 2-D

Animal Specific Training: Dogs

Topic	Sub-topics	Format	Details	Time	Notes	Exceptions	
Species Specific Training		Web Module	A.L.L. Module + Quiz for ALAT Training "ALAT 25: Dogs"	120		If working with a species where there is NOT a A.L.L. module for, one-on-one training may be required	
Procedures	Handling and Restraint	Lecture	Lecture covering the basics of common procedures	60	<ul style="list-style-type: none"> Focus of this lecture should cover general considerations for common procedures and highlight any obvious species specific differences Review Duke's policies and procedures (what ones are available and where to find them) Allow time for specific questions on species or web module Discuss means to request individual or protocol/species specific training 	As the RACC training program grows, consider a hands-on portion that is protocol/species specific	
	Injections						
	Blood withdrawals						
	Identification						
	Oral gavage						
Expectations of care	Pain, anesthesia and analgesia	<ul style="list-style-type: none"> Pain recognition Anesthetics, analgesics, tranquilizers, neuromuscular blocking agents 	Web Module	A.L.L. Module + Quiz "Pain recognition and alleviation in laboratory animals"	90	Recommend this prior to lecture to address any questions	
			Lecture		60	Cover Duke's policies; stress importance of following anesthetic and analgesic plan outlined in the approved protocol	
	Aseptic Surgical Technique		Web Module	A.L.L. Module + Quiz "Aseptic Technique for Rodent Survival Surgery"	120	Recommend this prior to lecture to address any questions	Future Recommendation: Cover this topic in a hands-on wet-lab
			Web Video		12	http://oacu.od.nih.gov/UsefulResources/AT_IC.wmv	
			Lecture		30	Cover Duke's policies and STRESS different requirements of mouse/rat aseptic procedures (seen in module) and Bird species	
	Surgical Monitoring	Peri-op	Lecture		90	Cover Duke's policies and record requirements <ul style="list-style-type: none"> Highlight: Peri-op analgesics, fasting, evaluation of animal condition; Intra-op monitoring for surgical depth; Post-op monitoring requirements 	
		Intra-op					
Post-op							
Recordkeeping		Lecture		30	Cover Duke's policies		
DLAR Husbandry	Maintenance of the facility		Tour		60	Tour to be scheduled with DLAR staff member, preferable to coordinate with husbandry supervisor of the area their animals are housed	Should be required for RACs from PI managed areas also; facility they tour should have similar species/housing that is used in the laboratory
	Review of husbandry policies						
	Security						
	Do's and Don'ts						
Euthanasia	Protocol compliance		Lecture		30	Focus on Duke/IACUC policy and stress secondary method	
	Ensuring death						
Total Time:				702	11.7 hours		
Lecture				300	5 hours		
Web Based				342	5.7 hours		
Other				60	1 hours		

Research Animal Coordinator Certification (RACC) Curriculum Section 2-D

Animal Specific Training: Fish

	Topic	Sub-topics	Format	Details	Time	Notes	Exceptions
Species Specific Training			Web Module	A.L.L. Module + Quiz for ALAT Training "ALAT 31: Fish"	120		If working with a species where there is NOT a A.L.L. module for, one-on-one training may be required
Procedures	Handling and Restraint		Lecture	Lecture covering the basics of common procedures	60	<ul style="list-style-type: none"> Focus of this lecture should cover general considerations for common procedures and highlight any obvious species specific differences Review Duke's policies and procedures (what ones are available and where to find them) Allow time for specific questions on species or web module Discuss means to request individual or protocol/species specific training 	As the RACC training program grows, consider a hands-on portion that is protocol/species specific
	Injections						
	Blood withdrawals						
	Identification						
	Oral gavage						
Expectations of care	Pain, anesthesia and analgesia	<ul style="list-style-type: none"> Pain recognition Anesthetics, analgesics, tranquilizers, neuromuscular blocking agents 	Web Module	A.L.L. Module + Quiz "Pain recognition and alleviation in laboratory animals"	90	Recommend this prior to lecture to address any questions	
			Lecture		60	Cover Duke's policies; stress importance of following anesthetic and analgesic plan outlined in the approved protocol	
	Aseptic Surgical Technique		Web Module	A.L.L. Module + Quiz "Aseptic Technique for Rodent Survival Surgery"	120	Recommend this prior to lecture to address any questions	Future Recommendation: Cover this topic in a hands-on wet-lab
			Web Video		12	http://oacu.od.nih.gov/UsefulResources/AT/TC.wmv	
			Lecture		30	Cover Duke's policies and STRESS different requirements of mouse/rat aseptic procedures (seen in module) and Bird species	
	Surgical Monitoring	Peri-op	Lecture		90	Cover Duke's policies and record requirements <ul style="list-style-type: none"> Highlight: Peri-op analgesics, fasting, evaluation of animal condition; Intra-op monitoring for surgical depth; Post-op monitoring requirements 	
		Intra-op					
Post-op							
Recordkeeping		Lecture		30	Cover Duke's policies		
DLAR Husbandry	Maintenance of the facility		Tour		60	Tour to be scheduled with DLAR staff member, preferable to coordinate with husbandry supervisor of the area their animals are housed	Should be required for RACs from PI managed areas also; facility they tour should have similar species/housing that is used in the laboratory
	Review of husbandry policies						
	Security						
	Do's and Don'ts						
Euthanasia	Protocol compliance		Lecture		30	Focus on Duke/IACUC policy and stress secondary method	
	Ensuring death						
Total Time:					702	11.7 hours	
Lecture					300	5 hours	
Web Based					342	5.7 hours	
Other					60	1 hours	

Research Animal Coordinator Certification (RACC) Curriculum Section 2-D

Animal Specific Training: Gerbils

Topic	Sub-topics	Format	Details	Time	Notes	Exceptions							
Species Specific Training		Web Module	A.L.L. Module + Quiz for ALAT Training "ALAT 21: Gerbils"	120		If working for a species where there is NOT a A.L.L. module for, one-on-one training may be required							
Procedures	Handling and Restraint	Lecture	Lecture covering the basics of common procedures	60	<ul style="list-style-type: none"> • Focus of this lecture should cover general considerations for common procedures and highlight any obvious species specific differences • Review Duke's policies and procedures (what ones are available and where to find them) • Allow time for specific questions on species or web module • Discuss means to request individual or protocol/species specific training 	As the RACC training program grows, consider a hands-on portion that is protocol/species specific							
	Injections												
	Blood withdrawals												
	Identification												
	Oral gavage												
Expectations of care	Pain, anesthesia and analgesia	Web Module	A.L.L. Module + Quiz "Pain recognition and alleviation in laboratory animals"	90	Recommend this prior to lecture to address any questions								
		Lecture		60	Cover Duke's policies; stress importance of following anesthetic and analgesic plan outlined in the approved protocol								
	Aseptic Surgical Technique	Web Module	A.L.L. Module + Quiz "Aseptic Technique for Rodent Survival Surgery"	120	Recommend this prior to lecture to address any questions	Future Recommendation: Cover this topic in a hands-on wet-lab							
		Web Video		12	http://oacu.od.nih.gov/UsefulResources/AT-TC.wmv								
		Lecture		30	Cover Duke's policies and STRESS different requirements of mouse/rat aseptic procedures (seen in module) and Bird species								
	Surgical Monitoring	Peri-op Intra-op Post-op	Lecture		90	Cover Duke's policies and record requirements • Highlight: Peri-op analgesics, fasting, evaluation of animal condition; Intra-op monitoring for surgical depth; Post-op monitoring requirements							
								Recordkeeping	Lecture		30	Cover Duke's policies	
								DLAR Husbandry	Maintenance of the facility Review of husbandry policies Security Do's and Don'ts	Tour		60	Tour to be scheduled with DLAR staff member, preferable to coordinate with husbandry supervisor of the area their animals are housed
	Euthanasia	Protocol compliance Ensuring death	Lecture		30	Focus on Duke/IACUC policy and stress secondary method							
	Total Time:							702	11.7 hours				
Lecture				300		5 hours							
Web Based				342		5.7 hours							
Other				60		1 hours							

Research Animal Coordinator Certification (RACC) Curriculum Section 2-D

Animal Specific Training: Guinea Pigs

	Topic	Sub-topics	Format	Details	Time	Notes	Exceptions	
Species Specific Training			Web Module	A.L.L. Module + Quiz for ALAT Training "ALAT 22: Guinea Pigs"	120		If working for a species where there is NOT a A.L.L. module for, one-on-one training may be required	
Procedures	Handling and Restraint		Lecture	Lecture covering the basics of common procedures	60	<ul style="list-style-type: none"> Focus of this lecture should cover general considerations for common procedures and highlight any obvious species specific differences Review Duke's policies and procedures (what ones are available and where to find them) Allow time for specific questions on species or web module Discuss means to request individual or protocol/species specific training 	As the RACC training program grows, consider a hands-on portion that is protocol/species specific	
	Injections							
	Blood withdrawals							
	Identification							
	Oral gavage							
Expectations of care	Pain, anesthesia and analgesia	<ul style="list-style-type: none"> Pain recognition Anesthetics, analgesics, tranquilizers, neuromuscular blocking agents 	Web Module	A.L.L. Module + Quiz "Pain recognition and alleviation in laboratory animals"	90	Recommend this prior to lecture to address any questions		
			Lecture		60	Cover Duke's policies; stress importance of following anesthetic and analgesic plan outlined in the approved protocol		
	Aseptic Surgical Technique		Web Module	A.L.L. Module + Quiz "Aseptic Technique for Rodent Survival Surgery"	120	Recommend this prior to lecture to address any questions	Future Recommendation: Cover this topic in a hands-on wet-lab	
			Web Video		12	http://oacu.od.nih.gov/UsefulResources/AT_TC.wmv		
			Lecture		30	Cover Duke's policies and STRESS different requirements of mouse/rat aseptic procedures (seen in module) and Bird species		
	Surgical Monitoring	Peri-op		Lecture		90	Cover Duke's policies and record requirements <ul style="list-style-type: none"> Highlight: Peri-op analgesics, fasting, evaluation of animal condition; Intra-op monitoring for surgical depth; Post-op monitoring requirements 	
		Intra-op						
		Post-op						
	Recordkeeping		Lecture		30	Cover Duke's policies		
	DLAR Husbandry	Maintenance of the facility		Tour		60	Tour to be scheduled with DLAR staff member, preferable to coordinate with husbandry supervisor of the area their animals are housed	Should be required for RACs from PI managed areas also; facility they tour should have similar species/housing that is used in the laboratory
Review of husbandry policies								
Security								
Do's and Don'ts								
Euthanasia	Protocol compliance		Lecture		30	Focus on Duke/IACUC policy and stress secondary method		
	Ensuring death							
Total Time:					702		11.7 hours	
Lecture					300		5 hours	
Web Based					342		5.7 hours	
Other					60		1 hours	

Research Animal Coordinator Certification (RACC) Curriculum Section 2-D

Animal Specific Training: Mice

Topic	Sub-topics	Format	Details	Time	Notes	Exceptions	
Species Specific Training		Web Module	A.L.L. Module + Quiz for ALAT Training "ALAT 18: Mice"	120		If working with a species where there is NOT a A.L.L. module, one-on-one training may be required	
Procedures	Handling and Restraint	Lecture	Lecture covering the basics of common procedures	60	<ul style="list-style-type: none"> Focus of this lecture should cover general considerations for common procedures and highlight any obvious species specific differences Review Duke's policies and procedures (what ones are available and where to find them) Allow time for specific questions on species or web module Discuss means to request individual or protocol/species specific training 	As the RACC training program grows, consider a hands-on portion that is protocol/species specific	
	Injections						
	Blood withdrawals						
	Identification						
	Oral gavage						
Expectations of care	Pain, anesthesia and analgesia	<ul style="list-style-type: none"> Pain recognition Anesthetics, analgesics, tranquilizers, neuromuscular blocking agents 	Web Module	A.L.L. Module + Quiz "Pain recognition and alleviation in laboratory animals"	90	Recommend this prior to lecture to address any questions	
			Lecture		60	Cover Duke's policies; stress importance of following anesthetic and analgesic plan outlined in the approved protocol	
DLAR Husbandry	Aseptic Surgical Technique		Web Module	A.L.L. Module + Quiz "Aseptic Technique for Rodent Survival Surgery"	120	Recommend this prior to lecture to address any questions	Future Recommendation: Cover this topic in a hands-on wet-lab
			Web Video		12	http://oacu.od.nih.gov/UsefulResources/AT/TC.wmv	
			Lecture		30	Cover Duke's policies and STRESS different requirements of mouse/rat aseptic procedures (seen in module) and Bird species	
	Surgical Monitoring	Peri-op	Lecture		90	Cover Duke's policies and record requirements <ul style="list-style-type: none"> Highlight: Peri-op analgesics, fasting, evaluation of animal condition; Intra-op monitoring for surgical depth; Post-op monitoring requirements 	
		Intra-op					
Post-op							
Recordkeeping		Lecture		30	Cover Duke's policies		
DLAR Husbandry	Maintenance of the facility		Tour		60	Tour to be scheduled with DLAR staff member, preferable to coordinate with husbandry supervisor of the area their animals are housed	Should be required for RACs from PI managed areas also; facility they tour should have similar species/housing that is used in the laboratory
	Review of husbandry policies						
	Security						
	Do's and Don'ts						
Euthanasia	Protocol compliance		Lecture		30	Focus on Duke/IACUC policy and stress secondary method	
	Ensuring death						
Total Time:				702	11.7 hours		
Lecture				300	5 hours		
Web Based				342	5.7 hours		
Other				60	1 hours		

Research Animal Coordinator Certification (RACC) Curriculum Section 2-D

Animal Specific Training: Non-Human Primates

	Topic	Sub-topics	Format	Details	Time	Notes	Exceptions
Species Specific Training			Web Module	A.L.L. Module + Quiz for ALAT Training "ALAT 28: Nonhuman Primates"	120		If working with a species where there is NOT a A.L.L. module for, one-on-one training may be required
Procedures	Handling and Restraint		Lecture	Lecture covering the basics of common procedures	60	<ul style="list-style-type: none"> Focus of this lecture should cover general considerations for common procedures and highlight any obvious species specific differences Review Duke's policies and procedures (what ones are available and where to find them) Allow time for specific questions on species or web module Discuss means to request individual or protocol/species specific training 	As the RACC training program grows, consider a hands-on portion that is protocol/species specific
	Injections						
	Blood withdrawals						
	Identification						
	Oral gavage						
Expectations of care	Pain, anesthesia and analgesia	<ul style="list-style-type: none"> Pain recognition Anesthetics, analgesics, tranquilizers, neuromuscular blocking agents 	Web Module	A.L.L. Module + Quiz "Pain recognition and alleviation in laboratory animals"	90	Recommend this prior to lecture to address any questions	
			Lecture		60	Cover Duke's policies; stress importance of following anesthetic and analgesic plan outlined in the approved protocol	
	Aseptic Surgical Technique		Web Module	A.L.L. Module + Quiz "Aseptic Technique for Rodent Survival Surgery"	120	Recommend this prior to lecture to address any questions	Future Recommendation: Cover this topic in a hands-on wet-lab
			Web Video		12	http://oacu.od.nih.gov/UsefulResources/AT_TC.wmv	
		Lecture		30	Cover Duke's policies and STRESS different requirements of mouse/rat aseptic procedures (seen in module) and Bird species		
Surgical Monitoring	Peri-op		Lecture		90	Cover Duke's policies and record requirements <ul style="list-style-type: none"> Highlight: Peri-op analgesics, fasting, evaluation of animal condition; Intra-op monitoring for surgical depth; Post-op monitoring requirements 	
	Intra-op						
	Post-op						
Recordkeeping		Lecture		30	Cover Duke's policies		
DLAR Husbandry	Maintenance of the facility		Tour		60	Tour to be scheduled with DLAR staff member, preferable to coordinate with husbandry supervisor of the area their animals are housed	Should be required for RACs from PI managed areas also; facility they tour should have similar species/housing that is used in the laboratory
	Review of husbandry policies						
	Security						
	Do's and Don'ts						
Euthanasia	Protocol compliance		Lecture		30	Focus on Duke/IACUC policy and stress secondary method	
	Ensuring death						
Total Time:					702	11.7 hours	
Lecture					300	5 hours	
Web Based					342	5.7 hours	
Other					60	1 hours	

Research Animal Coordinator Certification (RACC) Curriculum Section 2-D

Animal Specific Training: Rats

Topic	Sub-topics	Format	Details	Time	Notes	Exceptions			
Species Specific Training		Web Module	A.L.L. Module + Quiz for ALAT Training "ALAT 19: Rats	120		If working with a species where there is NOT a A.L.L. module for, one-on-one training may be required			
Procedures	Handling and Restraint	Lecture	Lecture covering the basics of common procedures	60	<ul style="list-style-type: none"> Focus of this lecture should cover general considerations for common procedures and highlight any obvious species specific differences Review Duke's policies and procedures (what ones are available and where to find them) Allow time for specific questions on species or web module Discuss means to request individual or protocol/species specific training 	As the RACC training program grows, consider a hands-on portion that is protocol/species specific			
	Injections								
	Blood withdrawals								
	Identification								
	Oral gavage								
Expectations of care	Pain, anesthesia and analgesia	<ul style="list-style-type: none"> Pain recognition Anesthetics, analgesics, tranquilizers, neuromuscular blocking agents 	Web Module	A.L.L. Module + Quiz "Pain recognition and alleviation in laboratory animals"	90	Recommend this prior to lecture to address any questions			
			Lecture		60	Cover Duke's policies; stress importance of following anesthetic and analgesic plan outlined in the approved protocol			
Aseptic Surgical Technique			Web Module	A.L.L. Module + Quiz "Aseptic Technique for Rodent Survival Surgery"	120	Recommend this prior to lecture to address any questions	Future Recommendation: Cover this topic in a hands-on wet-lab		
			Web Video		12	http://oacu.od.nih.gov/UsefulResources/AT_TC.wmv			
			Lecture		30	Cover Duke's policies and STRESS different requirements of mouse/rat aseptic procedures (seen in module) and Bird species			
			Surgical Monitoring	Peri-op	Lecture		90	Cover Duke's policies and record requirements <ul style="list-style-type: none"> Highlight: Peri-op analgesics, fasting, evaluation of animal condition; Intra-op monitoring for surgical depth; Post-op monitoring requirements 	
				Intra-op					
Post-op									
Recordkeeping		Lecture		30	Cover Duke's policies				
DLAR Husbandry	Maintenance of the facility		Tour		60	Tour to be scheduled with DLAR staff member, preferable to coordinate with husbandry supervisor of the area their animals are housed	Should be required for RACs from PI managed areas also; facility they tour should have similar species/housing that is used in the laboratory		
	Review of husbandry policies								
	Security								
	Do's and Don'ts								
Euthanasia	Protocol compliance		Lecture		30	Focus on Duke/IACUC policy and stress secondary method			
	Ensuring death								
Total Time:				702	11.7 hours				
Lecture				300	5 hours				
Web Based				342	5.7 hours				
Other				60	1 hours				

Research Animal Coordinator Certification (RACC) Curriculum Section 2-D

Animal Specific Training: Swine

Topic	Sub-topics	Format	Details	Time	Notes	Exceptions	
Species Specific Training		Web Module	A.L.L. Module + Quiz for ALAT Training "ALAT 26: Swine"	120		If working with a species where there is NOT a A.L.L. module for, one-on-one training may be required	
Procedures	Handling and Restraint	Lecture	Lecture covering the basics of common procedures	60	<ul style="list-style-type: none"> Focus of this lecture should cover general considerations for common procedures and highlight any obvious species specific differences Review Duke's policies and procedures (what ones are available and where to find them) Allow time for specific questions on species or web module Discuss means to request individual or protocol/species specific training 	As the RACC training program grows, consider a hands-on portion that is protocol/species specific	
	Injections						
	Blood withdrawals						
	Identification						
	Oral gavage						
Expectations of care	Pain, anesthesia and analgesia	<ul style="list-style-type: none"> Pain recognition Anesthetics, analgesics, tranquilizers, neuromuscular blocking agents 	Web Module	A.L.L. Module + Quiz "Pain recognition and alleviation in laboratory animals"	90	Recommend this prior to lecture to address any questions	
			Lecture		60	Cover Duke's policies; stress importance of following anesthetic and analgesic plan outlined in the approved protocol	
	Aseptic Surgical Technique		Web Module	A.L.L. Module + Quiz "Aseptic Technique for Rodent Survival Surgery"	120	Recommend this prior to lecture to address any questions	Future Recommendation: Cover this topic in a hands-on wet-lab
			Web Video		12	http://oacu.od.nih.gov/UsefulResources/AT_TC.wmv	
			Lecture		30	Cover Duke's policies and STRESS different requirements of mouse/rat aseptic procedures (seen in module) and Bird species	
	Surgical Monitoring	Peri-op Intra-op Post-op	Lecture		90	Cover Duke's policies and record requirements <ul style="list-style-type: none"> Highlight: Peri-op analgesics, fasting, evaluation of animal condition; Intra-op monitoring for surgical depth; Post-op monitoring requirements 	
	Recordkeeping		Lecture		30	Cover Duke's policies	
DLAR Husbandry	Maintenance of the facility		Tour		60	Tour to be scheduled with DLAR staff member, preferable to coordinate with husbandry supervisor of the area their animals are housed	Should be required for RACCs from PI managed areas also; facility they tour should have similar species/housing that is used in the laboratory
	Review of husbandry policies						
	Security						
	Do's and Don'ts						
Euthanasia	Protocol compliance		Lecture		30	Focus on Duke/IACUC policy and stress secondary method	
	Ensuring death						
Total Time:				702	11.7 hours		
Lecture					300		5 hours
Web Based					342		5.7 hours
Other					60		1 hours

Research Animal Coordinator Certification (RACC) Curriculum Section 2-D

Animal Specific Training: Rabbits

Topic	Sub-topics	Format	Details	Time	Notes	Exceptions			
Species Specific Training		Web Module	A.L.L. Module + Quiz for ALAT Training "ALAT 23: Rabbits"	120		If working for a species where there is NOT a A.L.L. module for, one-on-one training may be required			
Procedures	Handling and Restraint	Lecture	Lecture covering the basics of common procedures	60	<ul style="list-style-type: none"> Focus of this lecture should cover general considerations for common procedures and highlight any obvious species specific differences Review Duke's policies and procedures (what ones are available and where to find them) Allow time for specific questions on species or web module Discuss means to request individual or protocol/species specific training 	As the RACC training program grows, consider a hands-on portion that is protocol/species specific			
	Injections								
	Blood withdrawals								
	Identification								
	Oral gavage								
Expectations of care	Pain, anesthesia and analgesia	<ul style="list-style-type: none"> Pain recognition Anesthetics, analgesics, tranquilizers, neuromuscular blocking agents 	Web Module	A.L.L. Module + Quiz "Pain recognition and alleviation in laboratory animals"	90	Recommend this prior to lecture to address any questions			
			Lecture		60	Cover Duke's policies; stress importance of following anesthetic and analgesic plan outlined in the approved protocol			
Aseptic Surgical Technique			Web Module	A.L.L. Module + Quiz "Aseptic Technique for Rodent Survival Surgery"	120	Recommend this prior to lecture to address any questions	Future Recommendation: Cover this topic in a hands-on wet-lab		
			Web Video		12	http://oacu.od.nih.gov/UsefulResources/AT_TC.wmv			
			Lecture		30	Cover Duke's policies and STRESS different requirements of mouse/rat aseptic procedures (seen in module) and Bird species			
			Surgical Monitoring	Peri-op	Lecture		90	Cover Duke's policies and record requirements <ul style="list-style-type: none"> Highlight: Peri-op analgesics, fasting, evaluation of animal condition; Intra-op monitoring for surgical depth; Post-op monitoring requirements 	
				Intra-op					
Post-op									
Recordkeeping		Lecture		30	Cover Duke's policies				
DLAR Husbandry	Maintenance of the facility		Tour		60	Tour to be scheduled with DLAR staff member, preferable to coordinate with husbandry supervisor of the area their animals are housed	Should be required for RACs from PI managed areas also; facility they tour should have similar species/housing that is used in the laboratory		
	Review of husbandry policies								
	Security								
	Do's and Don'ts								
Euthanasia	Protocol compliance		Lecture		30	Focus on Duke/IACUC policy and stress secondary method			
	Ensuring death								
Total Time:				702	11.7 hours				
Lecture				300	5 hours				
Web Based				342	5.7 hours				
Other				60	1 hours				

RACC Mouse Procedures Training Form

Procedure	Participant's Initials	Instructor's Initials
Handling & restraint		
Intraperitoneal (IP) injections		
Subcutaneous (SC) injections		
Intravenous (IV) injections (tail vein)		
Submandibular blood collection		
Oral gavage		
Euthanasia (CO2 followed by bilateral thoracotomy)		
Cardiac puncture (post CO2 euthanasia)		
Aseptic Technique		

Participant: _____
Print Name
Initials

Participant Signature: _____

What lab do you work in at Duke? _____

Instructor: _____
Amy McArdle

Date of Training: _____

<p style="text-align: center;">Duke University Medical Center Research Animal Coordinator Training and Certification Program Application</p>

The Duke University Animal Care and Use Program (ACUP) is hosting the Research Animal Coordinator Training and Certification Program. This program is designed to enhance an individual's knowledge of important animal research topics and facilitate smooth and efficient animal based research in the laboratory. Training includes federal regulations, Duke's policies, animal handling and welfare principles. Successful individuals will be certified as a coordinator within their laboratory to disseminate knowledge, provide training, speed-up protocol processing, and ensure animal welfare and protocol compliance within their laboratory.

To enroll in the RAC training program please complete this form and e-mail it to w.wade@duke.edu or fax it to 919.668.6725. Enrollment is limited to one person per laboratory or per principal investigator.

1. Name of laboratory member (applicant): _____
 - Educational background and/or degrees: _____
 - Contact number: _____
 - Email address: _____

2. Principal investigator recommending this applicant: _____
 - Contact number: _____
 - Email address: _____

3. Protocol number(s) associated with this laboratory: _____
 - Animal species on protocol(s): _____
 - Animal procedures on these protocols (please indicate which species the procedure will be performed on if using >1 species):

 - Some/all animals in this laboratory or under these protocols are housed in laboratory space and husbandry services are provided by the PI or laboratory staff (i.e., they are not in a DLAR managed area) Yes No (choose one)

4. The principal investigator should approve this application by hard copy signing this application, providing an electronic signature, or sending an email endorsement for the applicant to participate in the Research Animal Coordinator Certification Program. Eligibility criteria for RACC applicants:
 - Be approved by a Duke principal investigator
 - Be a permanent employee of Duke University
 - Have a role within the laboratory of animal care/use oversight, management, care, or research (e.g., lab manager, senior lab associate, principal lab person, primary lab contact, responsible person for animal care)

Signature of the applicant: _____ Date: _____

Signature of the principal investigator: _____ Date: _____

<NOTE: DOCUMENTS SENT FROM A 'DUKE.EDU' EMAIL ADDRESS ARE CONSIDERED ELECTRONICALLY SIGNED>

Need More Info?

If you would like more information on the Research Animal Coordinator Training and Certification Program, including an outline of all required courses and evaluation requirements, please contact: Bill Wade at w.wade@duke.edu or 668.6722

DUKE UNIVERSITY ANIMAL CARE AND USE PROGRAM

RESEARCH ANIMAL COORDINATOR CERTIFICATION PROGRAM

PRE-COURSE SURVEY

Please take a few moments to fill out this pre-course survey. This information will help us in preparing future course modules and allow us to provide current, practical information for the course participants.

1. Is the species of animal you work with covered by any of the federal regulations, and if so which one?

2. Which federal animal use 'policy' governs NIH funded activity with animals?

3. What federal agency provides the most funding for biomedical research?

4. Who is ultimately responsible for all research conducted on animals under an IACUC approved protocol?

5. Under what circumstances can the IACUC suspend an animal model protocol?

6. How often must protocols be reviewed? And by whom must they be reviewed?

7. What information do you particularly hope to receive from the program?

8. Who is your departmental representative to the IACUC?

9. What is the proper method to capture and transport a mouse?

10. Describe the difference (if any) between an animal rights and animal welfare activist.

11. What is a 'humane endpoint?'

12. What is the difference between IACUC Policies and IACUC Suggestions?

13. Where could you find guidance on the maximum amount of blood you can collect from a mouse?

14. What is the web address for:

a. Animal Program Website? _____

b. DLAR Website? _____

15. What disinfecting agents are safe around animals, but kill microbes?

16. What are the important environmental parameters for:

a. Aquatics? _____

b. Reptiles? _____

c. Mammals? _____

17. Euthanasia is the act of (complete sentence): _____

18. Diseases in my animals which can have negative research impact without showing signs of disease include:

19. Concerning the concepts of 'pre-emptive analgesia' and pre-emptive antibiotics' :

a. Are important because: _____

b. Are employed how: _____

20. What are the 'Animal Tracks?'

DUKE UNIVERSITY
ANIMAL CARE & USE PROGRAM
RESEARCH ANIMAL COORDINATOR

**HAS COMPLETED THE RESEARCH ANIMAL COORDINATOR CERTIFICATION
PROGRAM**

Date



Laura Hale, MD, PhD
IACUC Chair

Bill Wade, LVT, RLATG, CPIA
Education & Training Liaison