



LAS-Learning

Trainees Instructions

EU Module 2 - Ethics, Animal Welfare and the Three Rs - Level 1

Development of interactive e-learning modules on specific areas of the Education & Training framework facilitating implementation of DIR 2010/63/EU

Contract n. ° 09200200.A092004/2021/862589/SER/ENV.B2

Authors:

Anna Olsson
Paulin Jirkof

12/02/2025

v2.0 Second document version

Supported by:



Partners:

ONESOURCE
Consultoria Informática Lda.





Table of contents

1. Module Description	2
1.1 Overview	2
1.2 Topics Covered	2
1.3 Learning Objectives	2
2. Prerequisites and Requirements	4
2.1 Requirements	4
3. Grading and Completion	5
4. Textbooks and Reading Materials	6
5. Course Program	7
5.1 Progress Tracking	7
5.2 Module Structure	8
5.3 In-Depth Explanation Lesson by Lesson	8
6. Target Audience	11
7. Notes	12
7.1 Testers' Feedback Form	12



1. Module Description

1.1 Overview

This module - Ethics, Animal Welfare, and the Three Rs, Level 1 - is designed as an introductory course for beginners. In contrast, EU Module 9 delves deeper into these topics and better suits those with prior knowledge. Although both modules can be taken independently, we recommend beginning with Module EU-2 and progressing to Module EU-9 to enhance your understanding.

This module will cover four topics: Exploring Different Views on Animal Procedures, Ethical and Legal Obligations in Animal Science, Introducing a Culture of Care and Good Scientific Practice and Tools, and Platforms for Staying Informed.

If you are visiting the site independently, you should consult the EC Training and Education framework [guidance document](#), which provides an overview of training requirements for individuals with different responsibilities under their relevant national legislation. Additional education and training may be necessary to meet national or institutional requirements.

This document offers suggestions for supporting your training. Each module aligns with the learning outcomes specified by the EU Education & Training framework for laboratory animal science. This module was developed by Anna Olsson and Paulin Jirkof, two renowned experts with extensive experience researching, publishing, and training in animal welfare, animal ethics, and the Three Rs. In addition, an international Reflection Group panel has further refined the content, while Nuno H. Franco managed overall coordination.

Your collaboration and feedback are greatly appreciated, as the module is currently in the testing phase.

1.2 Topics Covered

- Exploring Different Views on Animal Procedures
- Ethical and Legal Obligations in Animal Science
- Introducing a Culture of Care and Good Scientific Practice and Tools
- Platforms for Staying Informed

1.3 Learning Objectives

- Understand and critically analyse diverse perspectives on the ethical, scientific, and cultural aspects of animal procedures.
- Identify and apply ethical principles and legal requirements governing the responsible use of animals in science.
- Promote humane treatment and best scientific practices by integrating a Culture of Care and responsible research methodologies.
- Utilise reliable sources and professional networks to stay updated on advancements, regulations, and ethical discussions in animal science.



To support your ongoing learning, each module concludes with a curated list of recommended readings and cited references. Whenever possible, these references are linked to facilitate further exploration.

2. Prerequisites and Requirements

No specific prior knowledge is required. However, a basic understanding of searching bibliographic databases and a background in laboratory animal science and/or non-animal methods can be advantageous.

This module is designed to guide you step by step, eliminating the need for prior study.

2.1 Requirements

- Completion of lessons and understanding of learning objectives.
- Participation in knowledge checks and assessments to evaluate understanding.

3. Grading and Completion

Grading will be based on the successful completion of knowledge checks and assessments provided at the end of each module. Upon finishing all parts of the module, students will receive a certificate of completion. If proof of completion for a specific section is required, learners may be asked to take a screenshot of the screen, as each part's completion is indicated. This ensures transparency and verifiability of progress.

4. Textbooks and Reading Materials

The **“References and Further Reading”** lesson provides most references and readings. They comprise scientific articles, sections of books, websites, and videos. Clicking on any link will open a new window to download or visualise the additional material. Several links to further resources can also be found in the module contents to better guide the reader.

The additional materials provide more information on specific topics, tools, and resources.

5. Course Program

The module is organised into eight chapters, with lessons and learning objectives as follows:

Chapter	Lesson	Learning objectives
Introduction	1	Get to know the learning objectives



Animal research and the public	2-3	Describe the different views on animal experimentation within society and their consequences Describe the conditional acceptance of animal use Explain the role of the scientist in the public discourse
Responsibilities in animal research	4-5	Explore the main ethical theories that apply to animal use Discuss how ethical frameworks and public opinion lead to national and international legislation Describe how this relates to your work with animals Discuss how your choices impact your animals' well-being
Legislation and its scientific and ethical framework: the evaluation and authorisation of projects	6-9	Examine relevant EU legislation Perform a harm-benefit analysis for the project Discuss animal welfare concepts Learn about potential harms and severity classification Assess your knowledge Describe the Three Rs guidelines
Good scientific practice and the culture of care	10-12	Describe good scientific practice, animal welfare and scientific outcomes Assess your knowledge Explain how the culture of care is used in animal research
Searching for information on alternatives	13-14	Examples of dedicated journals, websites and organisations Examples of search tools and methods to search for existing Three Rs knowledge
Trust and acceptance in scientific research	15	Explain the long-term trust in scientific research from the general public
Summary and knowledge check	16-18	Module summary List of references and further reading Assess your knowledge

Table 1 - Learning objectives per parts and lessons.



5.1 Progress Tracking

Once you begin working through a module, your progress is tracked, and you can break off and resume your studies at any point. Once the module is completed, the trainee can access any section to refresh their understanding of a topic.

5.2 Module Structure

The module is divided into several parts, and although they were designed to be followed sequentially, they can also be taken iteratively. Please note that a certificate of completion is only issued to learners who complete all module parts. If proof of completion for a specific part of the module is required, the trainee should provide a snapshot of the screen because the module indicates progress after each part is completed.

5.3 In-Depth Explanation Lesson by Lesson

Lesson	Title	LO	Explanation
1	Introduction		Image and tagline.
2	Different views on animal experimentation within the society and their consequences	2.1	Image and a short introduction. Flip cards with relevant images and short details. Link to two initiatives. Image with highlights about conditional acceptance of animal experiments.
3	The role of the scientist in the public discourse	2.1	Image and a short introduction. Video about the role of the scientist in the public discourse.
4	Ethical theories shape public opinion and legislation	2.2 2.3	Image and a short introduction. Steps to introduce Animal Ethics. Knowledge check question.
5	Ethical and animal welfare issues in your own work	2.2 2.3	Image and a short introduction. Design of experiments flip cards. Performance of procedures and handling flip cards. Monitoring and mitigating measures flip cards. Culture of Care introduction and image.
6	Relevant EU legislation	2.5 2.6 2.7 2.8	Image and a short introduction. Collapsible with details about the Advancement of alternatives and high level of animal protection, the Principle of



		2.9 2.10	replacement, reduction and refinement and the Choice of methods.
7	The harm-benefit analysis - an essential part of the project evaluation	2.5 2.6 2.7 2.8 2.9 2.10	Image and a short introduction. Collapsible with details about Article 36: Project authorisation, Article 37: Application for project authorisation and Article 38: Project evaluation. Description and image of the harm-benefit analysis. How to perform an HBA image and description. Assessment of the benefits is split into 3 tabs. Knowledge check question.
8	Animal welfare, harm and severity	2.5 2.6 2.7 2.8 2.9 2.10	Image and a short introduction. The Five Freedoms is split into 3 tabs. Image with highlights about The Five Freedoms Description of Other Animal Welfare concepts with multiple illustrative images. Harm and suffering description. Terms definitions are split into 4 tabs with videos and images to illustrate each term. Limits to suffering in animal research, description and image. Severity classification description and Severity categories are split into 4 tabs with images. Recitals and articles are presented in collapsible form. Re-use of animal description and legislation in collapsible. Knowledge check question.
9	The Three Rs	2.5 2.6 2.7 2.8 2.9 2.10	Image, a short introduction and illustrative diagrams and figures. Replacement of animal experiments is presented in 2 tabs with images. The reduction of animal experiments is presented in one tab with images. Refinement of animal experiments description and image. Refinement methods are presented in 4 tabs with images.



			Relevant articles are presented in collapsible. Interactive scenario.
10	Good Scientific Practice	2.11	Optimising the use of animals in research is presented in a 4-step process with images, vídeos, figures and illustrative diagrams.
11	Animal welfare and scientific outcomes	2.11	Good moral and ethical reasons to safeguard animal welfare are represented with an image and 2 short quizzes. Effects of analgesia and untreated pain presented in 1 short quiz
12	The Culture of Care	2.11	Description of Culture of Care is presented in a 5-step process illustrated with figures. The Animal Welfare Body is represented with images and a collapsible for the DIRECTIVE 2010/63/EU, Articles 26-27 (AWB). Challenging situations that one could encounter in animal research are represented with an interactive scenario.
13	Dedicated journals and organisations	2.13 2.14	Examples of sources of information are represented with figures and logos.
14	Search tools and methods	2.13 2.14	Description and examples of dedicated databases illustrated with one image. Description of Systematic reviews and meta-analyses presented in tabs with diagrams, 1 video and 1 multiple choice quiz.
15	Long-term trust in scientific research from the general public	2.4	Trust and acceptance are presented in a 3 step process.
16	Summary		Module summary
17	References and Further Reading		References for additional materials
18	Knowledge-check		Assesses progress and knowledge acquired during the module

Table 2 - Explanation lesson by lesson.



6. Target Audience

This module is intended for (bio)medical researchers, participants in laboratory animal science courses, university students, biology/medical teachers, animal welfare body members, regulators, and anyone interested in learning more about animal research ethics and the principles of Replacement, Reduction, and Refinement of animal use for scientific and educational purposes.

7. Notes

As this is a test run, we kindly request one feedback form for each tested module to ensure we gather thorough insights for every tested module. The majority of the modules are designed to complement other components of your training, and the content should be accessible even if you have relatively little experience working with laboratory animal science. Where appropriate, the introduction to the module suggests pre-reading and suggested training that should be completed before continuing with the module.

7.1 Testers' Feedback Form

We would greatly appreciate your valuable insights and detailed feedback regarding the instructions provided. Your input will help us ensure clarity, accuracy, and overall effectiveness in conveying the necessary information.

https://forms.uu.nl/universiteitutrecht/TestReview_LASLearning_instructions