

Implementation Guide – University Seminar

Broader Impacts: Public Outreach, Education, and Engagement for Animal Research

1 Introduction

This guide is meant to assist you in implementing the Broader Impacts seminar in a seminar for university students (undergraduate and graduate) working in animal research.

IMPORTANT: Context is key. The course organizers should modify and implement the course as they see fit. Not all materials may be suitable to your setting- you may want to remove certain topics or add others that address your university and environment. The provided materials and syllabi are guidelines and are all able to be modified.

1.1 Purpose

The aims for this implementation guide is to provide step-by-step implementation instructions for anyone interested in using these course materials for their own setting.

Why teach Broader Impacts as university seminar?

- Gap in university setting for public outreach and engagement about the role of animals in research.
- Offering the course as a credited university seminar may be the best option if:
 - Potential for course to fulfil a program requirement
 - Principal investigators and department heads are supportive of animal research outreach and are willing to help with seminar recruitment and implementation (such as guest-lecturing).
 - There is gap in opportunities to provide public engagement and outreach within the university.

1.2 Overview of Broader Impacts Seminar Certificate

Broader Impacts: Public Outreach, Education and Engagement for Animal Research was a course initially taught at the University of Wisconsin-Madison in Spring 2016. This course was taught as a one-credit seminar for PhD students working in animal research and related fields. The course aimed to educate graduate students about a range of information and issues surrounding animal research, and to provide them with the knowledge, skills, and tools to conduct effective outreach with the public. This course has now been modified to suit an audience outside of the University of Wisconsin-Madison.

1.2.1 Broader Impacts Description

The course will be organized into two broad phases. Phase one consists of education about a wide variety of fields relating to animal research: philosophy and ethics of animal research, policy, regulation, principles of science, public opinion surrounding animal research, and the wide range of views shared by individuals and organizations. Phase two focuses more on the outreach component, with an emphasis on what has been done previously in the scope of animal research outreach and how you can become personally involved.

1.2.2 Assumptions and Constraints

Students do not necessarily need to work in animal research to take part in the course, but studying, researching, and/or working in a psychology, biology, or medical field is recommended.

It is assumed that students will watch lecture videos before coming to discussion. This course is most successful when students come to the seminar prepared ready to have a discussion based on the assigned preparatory work. The course makes use of a flipped-classroom model, in which students watch videos and do readings prior to attending seminar, as the seminars are primarily for discussion and questions.

1.2.3 Seminar Organization

The original Broader Impact seminar was 15 weeks (1x/week for a full semester) long. However, you may want to shorten it depending on the schedule your university is on (e.g quarters, trimesters, block-schedule, etc.).

Suggestions for shortening the course:

- Combine Week 4 (IACUC and Animal Research Regulation) and Week 5 (Alternatives and the 3R's)
- Combine Week 13 (Challenges, Obstacles and Troubleshooting your Animal Research Dialogue) and Week 14 (How to Get Involved with Pre-Existing Animal Research Outreach Programs)
- Incorporate Week 6 (The Spectrum of Voices in Animal Research: Pro and Anti; Philosophy 101) into Weeks 7 and 8 (Understanding Opposing Voice Parts 1 & 2)

2 Management Overview

2.1 Points-of-Contact

If you have questions or concerns about any aspect of Broader Impacts and its implementation in your setting, contact the Americans for Medical Progress via their contact form online and reference "Broader Impacts seminar" in the first line: <https://www.amprogress.org/about/contact-us/>

2.2 Major Tasks

2.2.1 Material Review and Preparation

The course organizer will be primarily responsible for ensuring the seminar runs smoothly each week. This includes watching/reading course material beforehand, preparing discussion questions and activities (if modified from template materials provided). Much of this work can (and potentially should) be completed prior to commencement of the seminar- to pre-empt any problems before they occur. They also will be responsible for grading the assignments. The Gantt chart below details a suggested timeline of the major tasks to be undertaken prior to the start of the course.

2.2.2 Guest Lecturers

In the initial course, several guest lecturers gave their expertise in subjects relating to animal research and outreach. Guest lecturers can provide a refreshing change of pace and new perspective. The following weeks had guest lecturers in the original seminar:

- Week 4: IACUC and Animal Research Regulation (member of IACUC guest lecture)

- Week 5: Alternatives and the 3Rs (expert in animal research alternatives and the 3R's of reducing animal use in research)
- Week 6: Philosophy and the Spectrum of Voices in Animal Research (expert in animal research and animal rights outreach and academic opposition to animal research)
- Week 10: Past and Present Pro-Animal Research Campaigns and Tactics Used (expert in animal research outreach and animal rights campaigns)
- Week 11: Science Communication (expert in science communication)
- Week 12: Methods of Outreach (expert in social marketing and psychology of attitude change)

It may be useful to see if there are faculty in your university or nearby facility with related expertise who be interested in guest-speaking. Skype-lectures were also used several times in the original course for experts to speak from afar and are easy to use in a room with a projector screen. The following format was soon discovered to be optimal for guest-lecturers, and subsequently encouraged for your setting.

- Assuming a one-hour seminar:
 - 20-30 minutes of lecture (via PowerPoint or other means)
 - 20 minutes of discussion and questions (with students having prepared questions for the guest-lecturer)
 - 10 minutes of group discussion contextualizing the lecture topic into the other weeks

If you decide not to, or are otherwise unable, to have guest-lecturers, audio-recordings of the original guest-lecture and/or substitute activities for these weeks are available.

2.3 Implementation Schedule

Below is a suggested implementation schedule. It is highly recommended that you review each of the materials alone and alongside the teaching assistants/seminar leaders prior to commencement of the seminar.

<u>Steps</u>	<u>6 months to start</u>	<u>5 months to start</u>	<u>4 months to start</u>	<u>3 months to start</u>	<u>2 months to start</u>	<u>1 month to start</u>
Course adaptation to context	*	*	*			
Recruit guest lecturers			*	*	*	
Advertise course						
Recruit seminar leaders						
Review materials with seminar leaders; adjust as desired						

Determine location of course (based on attendance)						
*Optional						

3 Implementation Support

3.1 Equipment

3.1.1 Materials

All materials necessary for the course are available on the Americans for Medical Progress website. Again, they should be modified as necessary to make them more relevant to your setting. For example, in Week 2: A History of Animal Research lecture video, it may be useful to change some of the examples to discoveries more specific to your university's history. As the original course was taught at the University of Wisconsin-Madison, much of the research discoveries discussed originated from there (e.g. Harry Harlow's work on maternal attachment).

3.1.2 Facilities

Holding the course in a room with a projector or a large monitor would be best, as on occasion you may need to display a PowerPoint presentation, or watch a video online. It is recommended that a round-table setting is used, to encourage everyone to interact comfortably.

3.1.3 Software

The students taking the course will need Adobe Acrobat DC and the Adobe Reader-specific Flash Player to download the lecture videos. Both are freely available to download. Refer to the "Instructions for Playing PDF Lectures" for information on how to view the lectures.

3.2 Personnel

3.2.1 Staffing Requirements

It is suggested that one or two people oversee the weekly meetings. They will be responsible for facilitating discussions and keeping the class on-track. It is recommended that these are also students, to maintain the informal atmosphere and to encourage open dialogue.

A faculty member is suggested to oversee the course for its duration. They will provide troubleshooting and modification, as well as serve as the point of contact for any contact needed with Americans for Medical Progress.

3.2.2 Training of Staff

It is recommended that the discussion facilitators and course organizers read and watch all materials prior to the onset of the course. Carefully consider whether the materials available suit the context that the seminar will be taught in, and edit the materials and readings as necessary. Additionally, refer to the "Tips for Leading a Discussion" PowerPoint slide set for advice in facilitating discussions in an egalitarian and open manner.

4 Attracting Students: (4) P's of Marketing

The following are suggestions for advertising the course within your department and university.

4.1 Place

- Post flyers (see sample) around department, bulletins, weekly department newsletters
- Send emails to advisers, supervisors, journal clubs, department heads, etc.

4.2 Product

- The course has been developed by an Americans for Medical Progress Michael D. Hayre Fellow for Public Outreach (Audrey Buelo). The course was designed in collaboration with faculty at animal research facilities and societies around the world.
- See 1.2 above for further description.

4.3 Promotion: Benefits of taking the course

- Learn about animal research, outreach, and advocacy in a relaxed and informal atmosphere
- Build your CV and gain science communication and outreach experience
 - Public engagement is increasingly a necessity for academics applying for grants and faculty positions.
 - Science communication is an essential skill for both academic and non-academic future in the biomedical field.
- *Optional: Receive credit for a major (or program) requirement, such as Ethics or Public Engagement requirements.

4.4 "Price"

- Minimal outside-of-seminar work (approximately 1 hour per week).