

# Course: Bioethics

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*Design Document*





## Part I: Course Overview

### Course Description

#### Overview

*Bioethics* is intended to serve as an early course in the responsibilities of scientists to act ethically and with integrity both as a scientist and as part of a larger community. It will create the foundation of conduct for individuals as they progress through the Biorisk Management (BRM) Curriculum.

#### Scope

This course will provide awareness of situations that can be encountered in a business setting that will contain legal, ethical, or moral dilemmas. This course will show the learner how to manage these situations and act appropriately. Stemming from the basic conduct expected out of any institutional worker, ethics related to biological studies, and specifically dual use will be taught to frame the special ethical considerations that must be taken into account while doing biological research.

#### Learning Level based on Bloom's taxonomy

- ✓ knowledge
- ✓ comprehension
- application
- synthesis
- evaluation

#### Length of Course

4 hours

### Course Objectives

#### At the end of this Course, Students will be able to:

#### Organizational Objectives

- Understand personal responsibilities for acting within an organization
- Understand the ethical responsibilities for conducting biological research
- Be prepared to act appropriately when put into to situations causing an ethical dilemma

#### Instructional Objectives

- Explain personal responsibility as a member of an institution and as part of the larger community
- Explain what a Code of Conduct is and its relation to personal responsibility
- Introduce and bound Bioethics in its relation to Dual Use Research of Concern
- Discuss both responsibility and integrity
- Describe the actions to be taken when situations deviate from the Code of Conduct or ethical norm

#### Personal Objectives

##### Know

- Expectations of laboratory ethical behavior and proper conduct
- What actions should be taken during ethical dilemmas both at work and



in life

<b>Feel</b>	<ul style="list-style-type: none"><li>• Capable of identifying and resolving ethical dilemmas</li></ul>
<b>Do</b>	<ul style="list-style-type: none"><li>• Identify potential concerns in own work</li><li>• Properly communicate or report issues where appropriate</li><li>• Be held personally accountable for own actions</li><li>• Document and justify decisions as appropriate</li></ul>
<b>Key Messages</b>	<ol style="list-style-type: none"><li>1. Each individual is responsible for their own behavior.</li><li>2. Ethical conduct is not only a key to personal integrity but reflects on the integrity of the institution.</li><li>3. Bioethics is not a separate task to research but an integral part to all activities.</li><li>4. In the absence of legal constraints, ethical conduct is still important as a societal benefit.</li></ol>

### *Evaluation Strategy*

<b>Level 1 (satisfaction):</b>	Students will complete a satisfaction survey about their experience with the course
<b>Level 2 (learning):</b>	Students will complete a “learning contract” for the next steps needed to begin biorisk management implementation
<b>Level 3 (behavior):</b>	Desired behavior is for students to participate in additional learning opportunities on BRM – this behavior will be evaluated three to six months post-training and may encompass additional training courses
<b>Level 4 (organizational change):</b>	A repeat of the training needs assessment will be performed at least annually – this annual assessment can be compared to the baseline assessment to determine improvements in biorisk management performance



## Learner Description (for Course design purposes)

**Number of Students:** 10 to 25; small groups of 5 people each

**Biorisk Management Role:**

- ✓ Policy Makers
- ✓ Top Management
- ✓ Biorisk Management Advisors/Advocates
- ✓ Scientific/Lab Management
- ✓ Workforce

**Audience Assumptions:**

(assumed range is indicated by shaded cells)

		Novice		Practitioner		Expert
Education	Scientific	1	2	3	4	5
	BRM*	1	2	3	4	5
Expertise	Scientific	1	2	3	4	5
	BRM	1	2	3	4	5
Competence	Scientific	1	2	3	4	5
	BRM	1	2	3	4	5

*BRM = "biorisk management". See definitions for terms in Resources section*

**Language of instruction;  
translation or  
interpretation anticipated:**

English (for design purposes)

**Prerequisites**

Orientation to Biorisk Management

**Pre- or post-work required  
for completion**

None

**Certificates or documents  
of completion:**

Certificates of completion will be provided

**Preparation for future  
coursework**

This course is a pre-requisite for the Dual Use Research of Concern and the Responsible Conduct of Research course and will serve as a foundation course for all three of the curriculum tracks

**Anticipated next steps**

Students will participate in learning tracks, as defined by the local training needs assessment and other subject matter expert (SME) recommendations.



## Instructional Environment

*Number of Instructors/Staff required:*

TBD depending on number of Students – optimal ratio is 1 Instructor per no more than 12 Students

*Instructor Qualifications:*

Instructors must have completed the Global Biorisk Management Curriculum (GBRMC) orientation, including this course, and be enrolled in the GBRMC training network.

## Learning Environment

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*Media:* Instructor-led course.

### Exercises & Activities

*Experience (Activists)*

Students will be asked to consider their experiences in regard to ethics and if any of their past research could have fallen into an ethical dilemma

*Reflection (Reflectors)*

Students will be asked to reflect on those experiences to reflect on the next steps for working towards integrating bioethics into their working environment.

*Models (Theorists)*

Students will be introduced to scenarios and asked to analyze the bioethical practices and evaluate them.

*Practice (Pragmatists)*

Students will be given a scenario as a case study to see how the topics discussed are practiced in real life

## On-Site Specifics

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*Location* TBD

*Room organization* Clusters of tables to facilitate small group (no more than 5 Students per group)

*Dress code and/or important cultural considerations*

TBD

## Instructional Materials

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*Equipment & Supplies*

Large flip charts  
Markers (enough for up to 5 groups plus instructor(s))  
6 x 8 inch Post-it notes (no lines)  
Student binders (1" or less) and tabs  
Pens  
Laptop computer with powerpoint files loaded  
Projector  
Easels (1 per group)  
Name tags/lanyards or Tent Cards



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	Certificates Notepads
<i>Student Handouts</i>	Course agenda and schedule Student notes Glossary CWA 15793 Hippocratic Oath
<b>Resources</b>	
<i>Dependencies</i>	DTRA – TRNRSM-00013 Bioethics The Nuremberg Code IBTR – Introductory Bioethics IBTR – Introduction to Dual Use Materials, Equipment, and Expertise IBTR – Case Studies of Dual Use Research
<i>Authorities</i>	
<i>References</i>	CWA 15793 Glossary of terms (in development)
<i>Terms used in this document</i>	<ul style="list-style-type: none"><li>• Knowledge – remembering the material in the same form as it was taught</li><li>• Comprehension – student’s ability to understand the material by (for example) explaining or summarizing key messages</li><li>• Application – ability to use the material in a new or given situation</li><li>• Synthesis – ability to put together learning material in a new whole entirety. For example, using the material to create a new program or plan.</li><li>• Evaluation – ability to judge the value of the material presented as a peer (to be able to critically advise or judge others on their application and synthesis of this learning material).</li><li>• Novice – a person who is new to the circumstances, work, etc. in which s/he is placed; beginner</li><li>• Practitioner – a person engaged in the practice of a profession; a person who practices something specified</li><li>• Expert – a person who has special skill or knowledge in some particular field; specialist; authority; trained by practice</li><li>• Education – the act of acquiring particular knowledge or skills, as for a profession</li><li>• Expertise – the process of personally observing, encountering or undergoing something; knowledge or practical wisdom gained from what one has observed, encountered, or undergone</li><li>• Competence – Possession of a suitable or sufficient skill, knowledge, experience, etc. for some specified purpose; properly qualified</li></ul>





## **Part II: Course Outline/Schedule**

