

Term Information

Effective Term Autumn 2018

General Information

Course Bulletin Listing/Subject Area Pharmacy
Fiscal Unit/Academic Org Pharmacy - D1800
College/Academic Group Pharmacy
Level/Career Undergraduate
Course Number/Catalog 3530
Course Title Drug Human Enhancement and Mastery of Nature
Transcript Abbreviation Drgs & Hmn Enhncmt
Course Description How should we navigate questions of identity in the world of cognitive and mood enhancing drugs? Where do we draw the line on "smart drugs" for intellectual endeavors or the use of performance enhancing drugs in athletic pursuits? More broadly, we will debate whether and how as a society we might enact particular restraints on our pursuit of human enhancements.
Semester Credit Hours/Units Fixed: 3

Offering Information

Length Of Course 14 Week
Flexibly Scheduled Course Never
Does any section of this course have a distance education component? No
Grading Basis Letter Grade
Repeatable No
Course Components Lecture
Grade Roster Component Lecture
Credit Available by Exam No
Admission Condition Course No
Off Campus Never
Campus of Offering Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites
Exclusions
Electronically Enforced Yes

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code 51.2001
Subsidy Level Baccalaureate Course
Intended Rank Freshman, Sophomore, Junior, Senior

Requirement/Elective Designation

General Education course:
Culture and Ideas

Course Details

Course goals or learning objectives/outcomes

- Explain fundamental concepts, theories, and distinctions in the human enhancement debate.
- Analyze emerging ethical issues related to key domains of human enhancement including cognitive, mood, and physical enhancement.
- Evaluate moral dilemmas related to human enhancement and healthcare, and develop solutions or policies that address the relevant issues.
- Explain the social and economic impacts of human enhancement policy decisions on class and disability categories in American society.
- Compose strong oral and written arguments that use evidence to justify positions on challenging issues.

Content Topic List

- Foundations: Arguments & the Human Enhancement Debate
 - Cognitive Enhancement
 - Mood/Emotion Enhancement
 - Physical Enhancement
 - Game: Anticipating the Future: Enhancement in a Post U.S. World
- No

Sought Concurrence

Attachments

- PHR 3530 Syllabus 11 2 2017.pdf
(Syllabus. Owner: Stiles, Beth M)
- PHR 3530 GE Rationale & Assessment Plan Final.docx
(GEC Course Assessment Plan. Owner: Stiles, Beth M)

Comments

- Please upload GE rationale & GE assessment plan. *(by Vankeerbergen, Bernadette Chantal on 11/13/2017 08:21 AM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Stiles, Beth M	11/09/2017 01:05 PM	Submitted for Approval
Approved	Kelley, Katherine Ann	11/10/2017 07:25 AM	Unit Approval
Approved	Kelley, Katherine Ann	11/10/2017 07:26 AM	College Approval
Revision Requested	Vankeerbergen, Bernadette Chantal	11/13/2017 08:21 AM	ASCCAO Approval
Submitted	Stiles, Beth M	11/20/2017 12:28 PM	Submitted for Approval
Approved	Kelley, Katherine Ann	11/20/2017 01:40 PM	Unit Approval
Approved	Kelley, Katherine Ann	11/20/2017 01:41 PM	College Approval
Pending Approval	Nolen, Dawn Vankeerbergen, Bernadette Chantal Oldroyd, Shelby Quinn Hanlin, Deborah Kay Jenkins, Mary Ellen Bigler	11/20/2017 01:41 PM	ASCCAO Approval

PHR 3530 Drugs, Human Enhancement, and the Mastery of Nature
The Ohio State University
College of Pharmacy

Justin Habash, Ph.D.
Habash.5@osu.edu
3 Credits
T/R 9:35-10:55
Office Hours WF 11:30-12:20

Course Description:

This course examines the ethical issues and controversies surrounding the use of pharmaceuticals for enhancement rather than therapeutic purposes. Some of the questions we will tackle include: How should we navigate questions of identity in the world of cognitive and mood enhancing drugs? Where do we draw the line on “smart drugs” for intellectual endeavors or the use of performance enhancing drugs in athletic pursuits? More broadly, we will debate whether and how as a society we might enact particular restraints on our pursuit of human enhancements.

The challenges concerning the permissibility of human enhancement also bring into sharp relief important questions around essential facets of American society. Through reading and class discussion, we will examine philosophical foundations of diversity issues focused specifically on categories of class and disability, as well as American cultural norms relative to the pursuit of happiness and the nature of interpersonal relationships. Some of these questions include: How should we understand disability and how will human enhancement technologies alter the way we understand (or should understand) it? Will increased human enhancement capabilities lead to greater class divides in America? And, should we aim for the manipulation of love-related drives and interpersonal relationships through pharmaceutical enhancement?

While the course focuses primarily on issues of human enhancement related directly to pharmaceuticals, we will also discuss some of the controversies more closely related to advances in other forms of biomedical technology, particularly the possibility of genetic manipulation for the purposes on enhancement.

Course Learning Outcomes:

General Education: Cultures and Ideas

Goals:

Students evaluate significant cultural phenomena and ideas in order to develop capacities for aesthetic and historical response and judgment; and interpretation and evaluation.

Expected Learning Outcomes:

1. Students analyze and interpret major forms of human thought, culture, and expression.
2. Students evaluate how ideas influence the character of human beliefs, the perception of reality, and the norms which guide human behavior.

Course Specific Learning Outcomes:

By the end of this course, students should successfully be able to:

1. Explain fundamental concepts, theories, and distinctions in the human enhancement debate.
2. Analyze emerging ethical issues related to key domains of human enhancement including cognitive, mood, and physical enhancement.

3. Evaluate moral dilemmas related to human enhancement and healthcare, and develop solutions or policies that address the relevant issues.
4. Explain the social and economic impacts of human enhancement policy decisions on class and disability categories in American society.
5. Compose strong oral and written arguments that use evidence to justify positions on challenging issues.

This course will achieve these outcomes through close analysis of required readings, class and team discussions, short writing assignments, and specific active learning pedagogical methods like Team-Based Learning. Through a gradual but consistent process over the course of the semester, you will build your ability to analyze social and ethical dilemmas raised by the idea of human enhancement, as well as to your ability to evaluate individual and group processes for the formation of beliefs and ethical norms. Finally, evaluation always entails justification, and this course helps you become better at evaluating choices in difficult dilemmas by assisting you in improving your ability to form strong arguments to support your position.

Course Materials:

Required:

Weston, Anthony. *A Rulebook for Arguments*. 4th Edition. Hackett Publishing Company, 2009.

Selected readings for the course will be provided either on Carmen or through online access via the OSU Library. An annotated bibliography of the essential texts for the course is provided in the course Carmen shell. You may wish to read additional selections from these works to deepen their knowledge of the subject.

Assessments:

Participation and Carmen Quizzes	20% of the final grade
Team-Based Learning Assessments	25% of the final grade
Short Writing Assignments	20% of the final grade
Exams	20% of the final grade
Game Activities	15% of the final grade

Participation and Carmen Quizzes:

Short pre-class quizzes on Carmen covering the assigned reading will occur as specified in the assignment schedule. The questions are designed to be a pre-class check of your knowledge of the primary ideas ahead of class discussions and activities and must be prior to the start of class on the day scheduled. The participation portion of the grade will be assessed from your in class contributions, your peer evaluation scores from the Team-Based Learning Process, and your attendance grade for the course.

Team-Based Learning:

Team-Based Learning is a specific pedagogical technique that assesses your content knowledge and develops leadership and teamwork skills while focusing on the *application* of content knowledge to challenging problems or cases. In this course there will be five TBL days throughout the semester. The method will be explained in detail during our first class session, but as quick description: the assessment is comprised of an individual quiz score, a team quiz score, and a team application exercise score. You will also be afforded the opportunity to assess your team-mates contributions to the team's efforts; these scores will be a part of the participation portion of the final grade.

Short Writing Assignments (SWAs):

These assignments are intended to build your ability to analyze, interpret, and evaluate arguments offered by scholars throughout the readings for the course. The assignments build your ability over time by focusing first on recognizing and analyzing the essential parts of any argument you are presented with, then interpreting that argument, and finally offering your own arguments that evaluate the ideas of the original author. The assignments are intended to help you develop your

ability to offer analysis and evaluation in a concise format. Instructions and a rubric are provided for you on Carmen.

Exams

The bulk of the exam questions will come directly from the reading questions. The best method of preparation for exams is to follow a continuous pattern throughout the course: look over the reading questions first, read the text, answer the questions, take the Carmen quiz on the reading, and discuss the text in class. If you develop the habit of following this process, you will have engaged with the questions and key ideas many times in a number of different settings prior to the exam.

Game Activities:

The activities you'll participate in during the final module of the course will include quizzes over assigned reading, short written arguments and oral speeches. The dates and instructions for the various assignments associated with the game are spelled out in the game guide that will be provided for you.

Teaching Methods:

The ultimate aim of this course is to help you **build and apply** your own ethical framework to emerging and unexpected ethical dilemmas. We will examine the current challenges and debates related to human enhancement and society with an eye toward the future. The activities and assignments in this course are meant to hone your ability to **make reasonable and informed judgments** on complex issues and to **justify your position** through verbal and written arguments. Those are skills and skills are only developed by repeatedly practicing them in a methodical way.

The course builds toward an extended role-playing game at the end of the semester that will require you to bring together all of the skills and knowledge gained throughout the semester. The game will challenge your ability to make the best arguments you can in both writing and in speech using your newfound knowledge of the key concepts, theories, and distinctions in human enhancement. It will also help you develop the ability to think on your feet, and respond quickly with solid counter-arguments, which is something many of us struggle with when it comes to collaborative decision-making endeavors.

With respect to the aim of helping you build and apply your own ethical framework and your ability to make good arguments and justify your decisions, the two primary teaching methods we will use Socratic discussion and practical application/problem solving with peers. In other words, most of our time together will be spent with you actively engaged with your colleagues, not listening to me lecture. In order to facilitate application, we will use both Team-Based Learning and Peer Instruction methods, which will be fully explained during the first week of class. Both methods are highly collaborative and in order for them to be effective, students must adequately prepare by completing the work assigned prior to class. Failure to do so not only negatively impacts your own learning, but that of your peers as well.

Attendance:

You are expected to attend each class session and are responsible for any missed materials. There will be interactive questions during class and points for team based activities conducted in class. Attendance will be taken using the student response system Top Hat, which you will be required to use. All students will get two "freebies" when it comes to attendance, more than 2 absences will cost you points on your participation grade. More than 6 absences for the term will result in failure of the course. If you have extenuating circumstances that will keep you out of class for an extended period of time, it is your responsibility to contact me as soon as possible.

Academic integrity policy:

The Ohio State University's Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University, or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. **Ignorance of the University's Code of Student Conduct is never considered an excuse, so please review the Code of Student Conduct if you have any questions as to what constitutes academic misconduct.**

Faculty are obligated by University Rules to report suspicions of academic misconduct to the Committee on Academic Misconduct. If COAM determines that a student has violated the University's Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in the course and suspension or dismissal from the University. **If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.**

Accommodations for accessibility:

If you would like to request academic accommodations based on the impact of a disability qualified under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, contact me (Dr. Habash) privately as soon as possible to discuss your specific needs. All such discussions are confidential.

In addition to contacting me (Dr. Habash), please contact the Office for Disability Services at 614-292-3307 or ods@osu.edu to register for services and/or to coordinate any accommodations you might need in your courses at The Ohio State University. Go to <http://ods.osu.edu> for more information.

Title IX:

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu.

Your Mental Health:

A recent American College Health Survey found stress, sleep problems, anxiety, depression, interpersonal concerns, death of a significant other and alcohol use among the top ten health impediments to academic performance. Students experiencing personal problems or situational crises during the semester are encouraged to contact OSU Counseling and Consultation Services (614-292-5766) for assistance, support and advocacy. This service is free and confidential.

Course Schedule:

The reading and assignment schedule outlined below is subject to change. The readings and assignments are to be completed prior to class on the day listed.

Date	Module	Topic	Reading	Assignment
21-Aug	Foundations: Arguments & the Human Enhancement Debate	"Pharmacy of the Future" thought experiment, TBL, and Fundamentals of Arguments		
23-Aug		TBL Day #1: Arguments	Weston, Short Arguments, Generalizations, Arguments by Analogy, p. 1-22	
28-Aug		Intro to Human Enhancement	Giubilini and Sanyal, The Ethics of Human Enhancement	Carmen Quiz #1
30-Aug		Arguments Against Human Enhancement	Sandel, The Case Against Perfection	SWA #1
4-Sep		Arguments For Human Enhancement	Harris, Enhancements Are a Moral Obligation	SWA #2
6-Sep		TBL Day #2: Human Enhancement Debate	None	
11-Sep		Cognitive Enhancement	Executive Function, Memory, and Psychopharmaceutical enhancement; Sources and Causes in Arguments	1) Farah, Neurocognitive Enhancement: What Can We Do and What Should we do? 2) Weston, Sources and Arguments about Causes, pp. 23-36
13-Sep	Social and Economic Impacts of Cognitive Enhancement in the U.S.		Sandberg and Savulescu, The Social and Economic Impacts of Cognitive Enhancement	SWA #3
18-Sep	Cognitive Enhancement in Education; Access and inequality in the U.S.		1) J. Harris, Chemical Cognitive Enhancement: Is it Unfair, Unjust, Discriminatory, or cheating for healthy adults to use smart drugs? 2) Weston, Deductive Arguments and Extended Arguments pp. 37-58	SWA #4
20-Sep	TBL Day #3: Cognitive Enhancement		None	
25-Sep			Midterm Exam	None
27-Sep	Mood/Emotion Enhancement	Authenticity, psychopharmacology, and social agenda in the cultural context of the U.S.	Forsberg, Mood Enhancement and the Authenticity of Experience: Ethical Considerations	Carmen Quiz #3
2-Oct		Psychopharmacology and the American Approach to Happiness	Elliot, The tyranny of happiness: ethics and cosmetic psychopharmacology	Carmen Quiz #4
4-Oct		Arguments for and against Mood Brighteners	Kramer, "The Message in the Capsule" from <i>Listening to Prozac</i>	SWA #5
9-Oct		Mood Brighteners, "Normalcy," and Modes of Perception & Cognition	Freedman, Aspirin for the Mind? Some Ethical Worries about Psychopharmacology	SWA #6

11-Oct		Fall Break		
16-Oct		Cultural norms and the impact of human enhancement on relationships	Savulescu, Neuroenhancement of love and marriage: the chemicals between us	Carmen Quiz #5
18-Oct		Manipulating love related drives and emotions	Earp et al, The medicalization of love	Carmen Quiz #6
23-Oct		TBL Day #4: Mood/Emotion Enhancement	None	
25-Oct	Physical Enhancement	Self-Determination and the illusion of independence in the cultural context of the U.S	Kukla on Disability and Autonomy	Carmen Quiz #7
30-Oct		Physical Enhancement and Disability in the American Culture	1) Harris, Is there a coherent social conception of disability? 2) Reindal, Disability, Gene Therapy, and Eugenics: A Challenge to John Harris	SWA #7
1-Nov		Performance Enhancing Drugs in Sport	Savulescu and Foddy, Le Tour and Failure of Zero Tolerance: Time to Relax Doping Controls	Carmen Quiz #8
6-Nov		Performance Enhancing Drugs in Sport	Loland, Can a Ban on Doping in Sport be Morally Justified?	SWA #8
8-Nov		TBL Day #5: Physical Enhancement	None	
13-Nov		Game: Anticipating the Future: Enhancement in a Post U.S. World	Oral Argument Practice; Game Preview; Role Selection	Weston, Argumentative Essays and Oral Arguments, pp. 59-73; See Game Guide
15-Nov	Day 1: Electing Commission Leadership; Enhancement Issue #1 Discovery		See Game Guide	See Game Guide
20-Nov	Day 2: Enhancement Issue #1 Debate; and Vote		See Game Guide	See Game Guide
22-Nov	Thanksgiving-No Class			
27-Nov	Day 3: Enhancement Issue #2 Discovery		See Game Guide	See Game Guide
29-Nov	Day 4: Enhancement Issue #2 Debate		See Game Guide	See Game Guide
4-Dec	Day 5: Final Arguments and Final Vote; Debrief		See Game Guide	See Game Guide
			Final Exam	

PHR 3530 Drugs, Human Enhancement and the Mastery of Nature GE Rationale & Assessment Plan

Cultures and Ideas:

Goal:

Students evaluate significant cultural phenomena and ideas in order to develop capacities for aesthetic and historical response and judgment; and interpretation and evaluation.

Expected Learning Outcomes:

1. Students analyze and interpret major forms of human thought, culture, and expression.
2. Students evaluate how ideas influence the character of human beliefs, the perception of reality, and the norms which guide human behavior.

Course Specific Learning Objectives:

1. Explain fundamental concepts, theories, and distinctions in the human enhancement debate.
2. Analyze emerging ethical issues related to key domains of human enhancement including cognitive, mood, and physical enhancement.
3. Evaluate moral dilemmas related to human enhancement and healthcare, and develop solutions or policies that address the relevant issues.
4. Explain the social and economic impacts of human enhancement policy decisions on class and disability categories in American society.
5. Compose strong oral and written arguments that use evidence to justify positions on challenging issues.

Overview

Beyond therapeutic uses, drugs and other emerging medical technologies present increasing opportunities to enhance specific human capacities and faculties. As a controversial goal of biomedical research and healthcare generally, such an “enhancement enterprise” raises near limitless moral dilemmas and corresponding debates as we propose to use pharmaceuticals and biomedical technology to fundamentally alter ourselves, as well as human nature and society more generally. This course examines some of the controversies, questions, arguments, and positions related to the potential scientific control and manipulation of our thoughts, feelings, bodies and intellectual capacities. Students will wrestle with questions of distributive justice, personhood, social categories, and intangible values in a society where drugs are routinely used beyond the treatment and cure of disease. We will also examine the impact of pharmaceutical enhancement on particular areas of culture including education, the economy, and sports and recreation. While the course focuses topically on the use of drugs for enhancement purposes, the emphasis for skill development is on building students’ ability to navigate *future* ethical and societal challenges. A variety of individual and team activities will push students to develop their own solutions to possible emerging dilemmas within the realm of human enhancement and to build strong arguments justifying their positions.

Cultures and Ideas

ELO #1. Students analyze and interpret major forms of human thought, culture, and expression.

A. Course Objectives (CO)

This expected learning outcome is supported by all of the course specific objectives, but primarily by COs 1, 2, 4, and 5. COs 1 and 4 help students understand the intellectual context (philosophical, religious, scientific) through which thinkers have engaged essential questions of enhancement and human nature as well as the facets of culture that are most immediately impacted by human enhancement. CO2 aims to help students develop their skills at analysis as it relates to different facets of the human experience and CO5 reinforces the habit of interpreting challenging dilemmas through the lens of arguments. Both of these course objectives (2 and 5) thus reinforce the skills of analysis and interpretation outlined in ELO1.

B. Topics and Readings

The course is broken down into four topical modules with a final culminating module that challenges students to bring together the content knowledge and rhetorical skills they have been developing throughout the course.

The topics in the foundational module introduce students to the basic skills required to analyze and interpret arguments offered in support of particular positions on ethical questions related to the idea of human enhancement. The readings in this module present the broad themes related to the idea of human enhancement, outlining the various positions scholars have staked out. They also include two readings that lay out extensive cases in support of (Harris, *Enhancements Are a Moral Obligation*) and against (Sandel, *The Case Against Perfection*) the idea of human enhancement in general. From there we move into the module on cognitive enhancement that focuses on the use of drugs to enhance particular facets of human cognitive capability, specifically executive function and memory. The topics and the readings in this section of the course push students to examine the connection between human cognitive faculties and certain facets of human culture, especially how societal pursuits like the “enhancement enterprise” have significant potential effects on social norms, class distinctions, and economic features of societies.

The module on Mood/Emotion enhancement examines controversies related to the use of drugs like Prozac not for therapy for depression but instead as a “mood brightener” (Kramer, "The Message in the Capsule" from *Listening to Prozac* and Freedman, *Aspirin for the Mind? Some Ethical Worries about Psychopharmacology*). Here we tackle questions of identity and authenticity of experience (Forsberg, *Mood Enhancement and the Authenticity of Experience: Ethical Considerations*), and the intersection of psychopharmacologic enhancement and cultural concepts and expectations (Elliot, *The Tyranny of Happiness: Ethics and Cosmetic Psychopharmacology*). We also examine the implications of using drugs to manipulate love-related drives and the effect on human relationships (Savulescu, *Neuroenhancement of Love and Marriage: the Chemicals Between Us* and Earp et al., *The Medicalization of Love*). The readings and topics in this module thus tie directly into ELO1 by engaging multiple forms of human thought and aspects of culture.

The final topic-focused module centers on human enhancement issues as they relate to our physical bodies. Here we delve into questions of “normalcy” and “disability” and the impact these classifications have on perceptions of self and others (Harris, *Is There a Social Conception of Disability?*). This module

also probes the connection between pharmacologic enhancement and cultural norms in athletic endeavors, specifically by presenting contrasting views relative to the morality of doping in professional cycling (Savulescu and Foddy, *Le Tour and Failure of Zero Tolerance: Time to Relax Doping Controls* and Loland, *Can a Ban on Doping in Sport be Morally Justified?*). This module in particular expands the students' critical analysis as mentioned in ELO1 by including social categories like disability and cultural areas like sports and recreation.

Additionally, throughout the course students will periodically read relevant chapters from Weston's *Rulebook for Arguments* and we will spend time discussing the content from these chapters in class as they apply to specific arguments made in the readings on human enhancement. This focus on arguments directly supports ELO1 since here the students explicitly learn how to *analyze* and *interpret* arguments as a form of human thought and expression, especially as they relate to emerging ethical dilemmas and the moral reasoning skills required to navigate them.

C. Written Assignments

The written assignments for the course focus on building students ability to analyze arguments they see in the readings and to construct their own arguments as a result of this analysis over the course of the semester. Students first practice outlining key arguments in the Sandel and Harris texts by identifying the conclusion, premises, and key supporting evidence for each argument (SWAs 1 and 2). They then practice their interpretive abilities with the next set of short writing assignments focused on paraphrasing by putting the arguments from the reading assignments into their own words (SWAs 3 and 4). Following this, they have to first paraphrase the arguments and then develop their own arguments in response (SWAs 5, 6, 7, and 8); in this way these assignments combine the skills specified in both ELO1 and ELO2 by requiring students to analyze, interpret, and evaluate. This constitutes the largest portion of the short writing assignments since it combines a number of essential skills.

As part of the Team-Based Learning days throughout the course, students collaborate with their teams to produce a written argument during the application activity. Here they are challenged to argue in favor of a particular solution to a dilemma related to an area of human enhancement. The nature of the assignment as a *team* argument presents students with the opportunity to debate with one another, sharpening their ability to analyze key ideas and interpret the relevant texts. These arguments then become part of the "record of history" that come into play at the end of the course as students debate solutions to emerging ethical dilemmas during the role-playing game in the final module. This allows students an opportunity for spiral learning and reflection by returning to previous arguments they and their peers made, thus further practicing skills of evaluation (ELO2) by deciding which are the strongest arguments and how to deploy or adapt them in support of particular positions in a new context.

Within the context of the game at the end of the semester, students have various short assignments that require them to utilize the knowledge and skills they have been building throughout the semester. For certain roles in the game, these include writing short essays in support of their positions, for others it involves writing short speeches to deliver in front of the class. Although the precise assignments differ somewhat depending on the nature of their individual role in the game, all students analyze and interpret a variety of ideas through their participation in a vigorous philosophical debate as a major form of human expression.

D. Pedagogical Method

The specific pedagogical methods in this course are designed to promote analysis and interpretation from students in an active learning classroom environment. The readings are done in advance of the class discussion on the topic, driven by particular questions to answer. The basic in-class activity is Socratic dialogue where we interpret the essential premises of the arguments offered in the readings in support of particular positions surrounding the debates and controversies in human enhancement.

The Team-Based Learning method used periodically throughout the course encourages analysis and interpretation of arguments, and cultural and social norms by having students prepare to answer questions from readings on these ideas related to human enhancement as part of the Readiness Assurance Process. Students first take an individual quiz over their knowledge in the topic area, followed immediately by taking the same quiz as a team. The nature of the team quiz pushes them to debate with one another and argue for why their chosen answer is correct. The pedagogy thus demands that students practice significant analytic and interpretive skills in working together toward common answers. Students then put these skills into practice by engaging in an application activity as described in Section C above.

Finally, the immersive role-playing game at the end of the course enhances student engagement throughout the course by connecting the things they are reading with an imminent debate and collective decision-making process. As part of a secret commission in a futuristic society beset by a number of new enhancement dilemmas (radical lifespan extension and moral enhancement, for example), students must use the analytical and interpretive skills and the content knowledge they have developed throughout the course to craft arguments that incorporate cultural considerations, and ethical and social norms into pragmatic solutions to the societal dilemmas. They have specific personas within the game that have specific victory conditions and philosophical leanings to guide them in their interactions with other players. As the culminating pedagogy, the game brings many of the ideas and arguments throughout the course to life by pushing students to adopt and argue for positions they may not necessarily hold themselves. This enhances their ability to analyze and interpret ideas related to human thought and culture (ELO1) by helping them to invest in certain positions and seek to understand them better in order to defend them.

ELO #2: Students evaluate how ideas influence the character of human beliefs, the perception of reality, and the norms which guide human behavior.

A. Course Objectives (CO)

This expected learning outcome is supported by all of the course objectives. COs 3 and 5 reinforce the skill of evaluation, as well as the relationship between ideas and beliefs. COs 1 and 4 deal with the perception of reality, while COs 2, 3, and 4 are focused in various capacities on the ethical and social “norms which guide human behavior”.

B. Topics and Readings:

Part of what makes the idea of human enhancement such a compelling subject of study is that it forces us to examine our basic assumptions about what it means to be human. In doing so it invariably raises questions about each of the areas specified in ELO2, namely how we formulate beliefs, what sort of

ethical and social norms guide our behavior, and even how we understand the basic facets of our reality. The use of drugs to enhance cognitive or emotional aspects of the human person creates a malleable reality and the ethical and social norms, and epistemological frameworks, that govern it are suddenly similarly malleable or perhaps even completely inadequate. The arrangement of topics and readings in the course aim to promote a diversity of views that illustrate how arguments are marshaled in support of significantly different beliefs. The juxtaposition of selected articles that argue for substantially different conclusions about the same issue allows students to develop the capacity to *evaluate* the arguments offered on their merits (for specific examples of these pairings throughout the course, see Harris-Sandel, Kramer-Freedman, and Savulescu and Foddy-Loland). The topics and readings in this course thus support ELO2 by developing the individual student's ability to evaluate the connections between the idea of human enhancement and the fundamental features of human reality described in ELO2.

C. Written Assignments:

The focus on arguments in the written assignments helps train students with the habit of mind of evaluating different ideas based on the best argument. Regarding the conceptual areas mentioned in ELO2, the written assignments are connected strongly with ethical principles and social considerations as “the norms which guide human behavior.” Following the earlier assignments that develop their ability to analyze the arguments of others, students offer their own arguments as an evaluation of the ideas presented in the various texts (SWAs 5-8).

D. Pedagogical Methods:

The use of Socratic Discussion/Team Based Learning and Peer Instruction as highly interactive, recurring class activities means that students will constantly be evaluating the nature of their own beliefs, perceptions of reality, and the norms which govern our behavior as they are pushed to debate and, at times, come to consensus on challenging ethical dilemmas. In short, the methods used in the class encourage reflective learning and debate amongst peers about their understanding of the different facets of the human condition featured in ELO2.

The role playing game at the end of the semester focuses students on the relationship of ideas and human beliefs by illustrating the way other factors influence beliefs and decision-making. As players in the game, some students have additional secret resources by which they can influence the votes of their fellow secret commission members on key policy issues related to the human enhancement agenda. A portion of the debrief session with students focuses them on the relationship between ideas and beliefs as it competes with these other factors in decision-making endeavors by individuals and groups. As the game is set in a futuristic society, the features of reality are less fixed and require far more interpretation from students as they plot strategy for how to successfully navigate the political situation and philosophical debate. This pedagogical method thus supports ELO2 directly by pushing students to understand the connection between ideas, beliefs, and norms and to make specific interpretive decisions for their role in the game.

**PHR 3530 Human Enhancement and the Mastery of Nature
GE Assessment Plan**

Cultures and Ideas

Goal:

Students evaluate significant cultural phenomena and ideas in order to develop capacities for aesthetic and historical response and judgment; and interpretation and evaluation.

Expected Learning Outcomes:

1. Students analyze and interpret major forms of human thought, culture, and expression.

2. Students evaluate how ideas influence the character of human beliefs, the perception of reality, and the norms which guide human behavior.

GE Expected Learning Outcomes	Methods of Assessment <i>*Direct methods are required. Additional Indirect methods are encouraged.</i>	Level of student achievement expected for the GE ELO. <i>(for example define percentage of students achieving a specified level on a scoring rubric)</i>	What is the process that will be used to review the data and potentially change the course to improve student learning of GE ELOs?
<p style="text-align: center;"><u>ELO 1</u></p> <p>Students analyze and interpret major forms of human thought, culture, and expression.</p>	<p>Direct: Rubric Based Evaluation of final Short Writing Assignment</p> <p>Indirect: Student Survey</p>	<p>75% of students will achieve a score of 3 or higher.</p>	
<p style="text-align: center;"><u>ELO 2</u></p> <p>Students evaluate how ideas influence the character of human beliefs, the perception of reality, and the norms which guide human behavior.</p>	<p>Direct: Rubric Based Evaluation of final Short Writing Assignment</p> <p>Indirect: Student Survey</p>	<p>75% of students will achieve an overall score of 3 or higher.</p>	

Scoring Rubric:

The final short writing assignment for the course challenges the student to analyze an ethical dilemma related to the idea of human enhancement, interpret an argument offered by an expert in the field related to that dilemma, and offer their own evaluation of the idea as it relates to at least one of the features of human experience outlined in ELO2 (the most common being ‘norms which guide human behavior’). The rubric below will be used by the instructor to assess student performance on both Cultures and Ideas ELOs for this assignment.

	Capstone (4)	Milestone (3)	Milestone (2)	Benchmark (1)
(ELO 1) Students analyze and interpret major forms of human thought, culture, and expression.	Student demonstrates superior critical analysis of ethical dilemmas and their interpretation of arguments related to human enhancement is both exceptionally clear and insightful.	Student effectively analyzes ethical dilemmas and their interpretation of arguments related to human enhancement is clear.	Student is able to analyze some ethical dilemmas effectively and interpret some arguments clearly but shows room for improvement in critical analysis or interpretation	Student demonstrates limited ability to critically analyze ethical dilemmas and does not interpret arguments effectively.
(ELO2) Students evaluate how ideas influence the character of human beliefs, the perception of reality, and the norms which guide human behavior.	Student effectively evaluates the connection between key ideas and essential features of the human experience. Their evaluation is thorough, insightful, and original.	Student evaluates the connection between key ideas and essential features of the human experience successfully. Their evaluation is generally thorough and displays some insight.	Student is moderately successful in evaluating the connection between key ideas and essential features of the human experience. Their evaluation displays some deficiencies either in thoroughness or insight.	Student demonstrates limited skill at evaluating the connection between key ideas and essential features of the human experience. Their evaluation displays significant deficiencies in both thoroughness and insight.