**Genetical Ethics**

**GENE 671**

**Catalog Number**

**Spring semester – 2022**

Instructors – Nathan Ellis, Ph.D., and Keith Maggert, Ph.D., Associate Professors of the Department of Cellular and Molecular Medicine

Tuesday 3:15 – 5 PM every other week

Max class size – 15

**Office Hours**

On request

**Course Description**

The question this 1-credit course is designed to address is what code of professional behavior do modern scientists set for themselves, what are the philosophical origins of this code, and how do scientists set about applying this code to their professional conduct in their work?

**Seminar Approach**

For each class, we start with a reading from the Western philosophical literature or readings about famous cases, historical analyses, consensus reports or position papers from expert panels. Students are expected to read these sometimes long and dense writings, think about them, and come to class prepared to discuss them in an open forum.

The course is run as a seminar (as opposed to lecture or polemical tirade) that starts with a question from one of the discussion leaders, who can be faculty or student. The question is meant to begin the conversation, and the conversation goes where it goes without a preset structure. Consequently, there are no learning objectives in the normally understood sense, because the acquisition of pre-stated individual informational goals would presuppose that we know ahead of time how the conversation will shape itself, which cannot be known.

On the other hand, one could say the learning objective is to learn how to discuss complex ethical issues from a wide variety of perspectives, many of which are provided by the different participants themselves. The readings and the exegesis that develops from thinking carefully, precisely, and deeply about the readings will promote in the participants of the class – faculty and students alike – the application of human reason to difficult and long-recognized problems concerning the relationship between a person and their sub-group, department, institution, state, society and civilization as a whole in the enterprise in which we partake – to create new knowledge.

During each class, one or more stories will be read about something that actually happened (names are not named to protect the privacy of the correspondents) in the science work place that raises questions about what is appropriate or what actions should be taken when presented with a moral dilemma. The class will explore these vignettes in the context of the reading and comes to terms with the questions they raise.

**Learning Outcomes**

1. Learn how to apply an exegetic approach to classical philosophical texts on morality and ethics
2. Read, discuss, and interpret, classical philosophical texts in a seminar setting.
3. Apply ethical principles raised and treated in these classical texts to real-life and historical cases as examples for ethical interpretation and analysis of “right conduct.”
4. Discuss motivation to act ethically.

**Course Objectives**

1. Learn how to question, explore, and investigate assumptions and inherent

biases in codes of conduct.

2. Learn to listen and to discuss ethical concerns with peers and their obviously

much wiser but thoroughly corrupted elders.

**Course Materials**

Classical philosophical texts are available in translation from Amazon and they will also be made available free from open on-line sources via D2L whenever possible. Other materials are available as pdfs from our library or open sources and they will be provided on D2L. Recommendations to specific translations of non-English texts will be made when appropriate. The course instructors disclose no conflict of interest sources from these recommendations; they are purely and simply prejudices of the readers.

**Grading**

Pass/Fail. Absences will only be allowed by permission. More than one absence (two absences is equal to one quarter of class time) is grounds for failure.

**Evaluation**

This is a seminar course with a moderate amount of non-technical reading. Students are expected to complete the readings and to come prepared to discuss these readings. Participation consists in discussion.

**Syllabus and Readings Materials**

**January 18 — Class 1**

Happiness and friendship: What is the good, how is it known? What is virtue/excellence? What is happiness? Thinking about these questions in the context of the scientific enterprise is meaningful, particularly during a discussion about ethics in science. What is the role of courage in an ethical investigation of scientific conduct?

Reading: Aristotle – Nicomachean Ethics (all 10 Books)

[The translation I have, which I like, is Martin Otswald’s published by Open Library in 1962. Good notes and a lexicon of classical terms, such as arete, in the back.]

**February 1 — Class 2**

What is integrity in research? How is this integrity achieved? Do we know integrity best from its absence? What do we learn from cases of scientific fraud and other types of amoral conduct? What is the appropriate personal, institutional, corporate, and government response to fraud in science? The problem of fraud in research has only gotten worse since it was first presented to the public by New York Times’ journalists Wade and Broad and Congressional hearings spearheaded by Albert Gore in 1981.

Readings: Chevassus-au-Louis – Fraud in the Lab: The High Stakes of Scientific Research

Barry D. Gold: Congressional Activities Regarding Misconduct and Integrity in Science (1993)

Kevles – The Iminishi Kari case, from the author’s book excerpted in the New Yorker 1999

[Kevles is a historian of science of repute. Also wrote an earlier book on the history of the eugenics movement starting with Darwin’s cousin Francis Galton.]

**February 15 — Class 3**

What is the purpose and impact of laws on written rules of conduct? How is compliance assured and how are laws enforced? How does government regulation contribute to or ameliorate problems in scientific integrity?

Readings: The following selected chapters/essays from a compilation of Popper essays (Popper Selections, ed. David Miller):

***NOTE: all the readings are available as PDFs on D2L.***

Editor’s Introduction

Part I: Theory of Knowledge

Essays 3, 7, 8

Part II: Philosophy of Science

Essays 9, 10, 11

Part IV: Social Philosophy

Essays 24, 25, 27, 30

**March 1 — Class 4**

Can we escape the logic of the master-slave syllogism? Is experimentation on human beings inherently immoral? Or do we have an obligation in medical research to address problems with human experimentation?

Readings: Harriet A. Washington – *Medical Apartheid: The Dark History of Medical Experimentation on Black Americans from Colonial Times to the Present*

Please read Part One: A Troubling Tradition. You are welcome to read the rest but I think the point is made, if you can accept the notion that the past is still configured in the present.

Adam Smith – *Theory of Moral Sentiments* – Please read

All of Part I; Part II, section I and II; Part III, chapters I-IV; and all of Part IV (in sum 170 pages)

Belmont and Helsinki Reports

An optional reading about the Sackler family’s business practices regarding the pharmaceutical development and sale by Purdue Pharma of their blockbuster pain medications MS Contin and OxyContin, which had been preceded by Valium (did you know that?):

Patrick Radden Keefe – *The family that built an empire of pain* (excepted in the New Yorker in October 2017 from author’s book *Empire of Pain*; the book is an even more enlightening read.)

Alternatively, you could sit back and watch Michael Keaton in *Dopesick*, a HuLa mini-series.

And there is similar story regarding John Kapoor and fentanyl nasal spray developed for breakthrough cancer pain and 100 x more additive than morphine.

**March 15 — Class 5**

Marx: excerpts from *Das Kapital* – readings to be selected still]

Marx – *The Communist Manifesto*

**March 29 — Class 6**

Eugenics. Advances in technology makes possible hitherto unimagined capabilities to change the nature of the human gene pool and the genetics of plants and animals. Industrial and corporate forces shape the genetics of the plants and animals that comprise the food we eat. Intersecting these modern currents, there are historical connections between racism and eugenics. How do we understand and navigate these challenges?

Readings: Richard Lewontin ­– *Not in Our Genes*

Sarah Zhang – *The last children of Down syndrome* (The Atlantic, December 2020)

**April 19 — Class 7**

What is the reality of our conception of truth? Is it a debatable concept or it the debate actually one about power and ranking? Are scientists clerics of truth, creators of brave new worlds, or cynical panderers of nihilism?

Nietzsche – *The Genealogy of Morals*

As scientists, we are obliged to create the morality we live by, but is this necessary urge possible in a political-economic system based on a powerful centralized state? For Nietzsche and Freud, the compelling question is “*What is going to become of* Homo sapiens?”

[Translation, two words: Walter Kaufmann]

**May 3 — Class 8**

On the origins of religious feelings and our ingrained unhappiness as a consequence of the development of civilization. Is there really a death wish? Are we actively trying to destroy ourselves and our civilization? Or is life what happens when you are planning other things? Can there by morality in the absence of religion?

Reading: Freud – *Civilization and its Discontents*. This reading is subject to change.]

Codecils, Anaphoras

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog, which I have to admit, I have not read. See <https://deanofstudents.arizona.edu/policies/code-academic-integrity>.

Threatening Behavior Policy

At the University of Arizona, we regard as holy the policy “UA Threatening Behavior by Students Policy” which prohibits threats of physical harm to any member of the University community, including oneself. See <https://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students>.

UA Nondiscrimination and Anti-harassment Policy

At the University of Arizona, we are committed to creating and maintaining an environment free of discrimination. See <https://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy>.

Accessibility and Accommodations

At the University of Arizona, we strive to make learning experiences as accessible as possible. If you anticipate or experience barriers based on disability or pregnancy, please contact the Disability Resource Center (520-621-3268, https://drc.arizona.edu/) to establish reasonable accommodations.

Trigger Warnings and Syllabus Subject to Change

The information contained in the course syllabus, other than the grade and attendance policies, may be subject to change with reasonable advance notice, as deemed appropriate by the instructors.

What should be the material for this course? We have run the course once and there was a cautious consensus that the readings were pretty good. That said, there is the possibility that statements made by authors or by participants in class will be perceived as offensive and persons issuing such statements should be sent to a “camp” for re-education. If you feel a panic attack coming on, please just lie down on the floor and consider yourself temporarily excused; as you recover your balance, no apologies are necessary, simply rejoin the conversation. On the other hand, if you feel uncontrollable rage, please raise your hand and excuse yourself from the room. Again, as you recover your balance, no apologies are necessary, simply re-enter the room and join the conversation. We would be very pleased and eager to entertain your thoughts and engage in conversation about why that happened. In all such and similar circumstances, no pressure, we encourage sharing.

All participants by taking this course affirm that they are searching for the truth and their opinions are their own and are stated for the purposes of that searching.

Also subject to change is the time we decide to meet and where. We will stick to the in-person format.