

The University of Arizona

Syllabus for Bioethics (MCB 404)

Spring 2022

Instructor:	Dr. Angel C. Pimentel
Class Meeting:	Wednesdays 4:30 PM to 5:45 PM at the Steward Observatory Room N210.
Office:	Biological Sciences West Room 234
Office Hours	Mondays 10:00 to 11:00 PM, Thursday 3:30 to 4:45
Telephone:	520- 626-1045
Email:	pimen@email.arizona.edu
TA:	Mr. Dong Kyun (Corey) Kim (dongkk@arizona.edu) Miss. Emily Ngu (nguemily@email.arizona.edu)

Description: Biology is the science that tries to explain the nature of the mechanisms that keep living organisms functioning as well as their interaction with the environment. Getting to know these mechanisms is not only interesting from the pure sense of knowledge, but this information can be used to manipulate the physiology of the organism as well as its environment. The speed at which many biological discoveries have taken place in the last decades has been extraordinary. Terms like stem cell, gene cloning, and crop bioengineering are commonly used by science students in high school and the general public, and you hear about them in the media frequently. Many of these discoveries have immediate applications while others could (or will) be used in future ones. Many scholars (scientists in general and philosophers in particular) have raised concerns on the moral/ethical implications of several applications of this knowledge. This course is intended to bring these concerns to the consideration of this group. We will present and evaluate a select number of topics from the following points of view: 1) the science of the issue in question, 2) the significance and application of this scientific knowledge, 3) moral and ethical issues raised by the application of this science, 4) the social impact, and 5) legal consideration that these advances of biology could cause. We will evaluate, analyze, and argue each of these points. These exercises will help us to develop a more critical analysis of these ethical issues in order to better prepare for real-life application in the healthcare field.

Notification of Objectionable Materials: In this class we will discuss ethical dilemmas involving race, gender, gender identity, sex, sexual behaviors and social as well as economic issues. Students are not automatically excused from interacting with such materials, but they are encouraged to speak with the instructor to voice concerns and to provide feedback.

Course objectives for students enrolled in the MCB 404 session. During the semester students enrolled in the MCB 404 session of the class will

- Identify scientific applications causing ethical issues.
- Determine the importance of the scientific application in question to our society.
- Evaluate the moral and ethical issues raised by the applications of this scientific knowledge.
- Predict the possible societal impact of scientific applications.
- Consider the legal considerations that these advances of biology could cause.
- Evaluate, analyze and argue an ethical dilemma in the context of the ethical theories presented in class.

Course Objectives for students enrolled in the MCB 504 session: In addition to the course objectives listed above for the students enrolled in the MCB 404, students enrolled in the MCB 504 session of the course will

- Familiarize with ethical peer review articles.
- Raise persuasive ethical arguments.
- Be able to identify all the stakeholders in an ethical dilemma.
- Read primary research literature in bioethics journals
- Learn to identify in bioethical peer review articles the values in conflict in the ethical dilemma challenge cultural and social expectations.
- Identify the ethical theory used to construct the argument of the article.
- Articulate/write arguments and counter arguments for and ethical dilemma.
- Reach a compromise position when making a decision for an ethical dilemma.
- Explain a bioethical issue from various points of view to a person without any scientific background.

Learning outcomes (MCB 404):

The learning outcomes of this course are based on the Ethical Reasoning Value Rubric developed by the Association of American Colleges and Universities. These learning outcomes are based on five core elements that will serve as introspective tools that students will utilize to develop effective ethical reasoning guidelines to write and analyze persuasive ethical arguments. These elements are ethical self-awareness, understanding different ethical theories and concepts, identifying ethical issues, solving an ethical issue using ethical theories and concepts, considering different ethical theories and concepts in the development of an ethical argument. The learning outcomes for this course are as following:

- Students will demonstrate self-awareness in how personal beliefs can influence ethical analyses and decision making in their writing ethical arguments.
- Students will analyze their core beliefs in the context of their origins and how those beliefs are coupled or uncoupled with cultural and societal expectations.
- Students will be expected to compare and contrast different ethical theories and determine how the utilization of each theory could change the perspective of an ethical argument.
- Students will demonstrate a capacity for recognizing an ethical dilemma and determine the values in question.
- Students will correctly apply ethical theories to an argument and resolution of an ethical dilemma.
- Students will demonstrate good practices in objecting to the assumptions and implications of an ethical decision that they disagree with.
- Students will demonstrate good practices in defending their ethical decision if an objection is raised.
- Students will be expected to name and explain the tenets of different ethical concepts and theories

Course Objectives for students enrolled in the MCB 504 session: In addition to the course objectives listed above for the students enrolled in the MCB 404, students enrolled in the MCB 504 session of the course will

- Familiarize with ethical peer review articles.
- Raise persuasive ethical arguments.
- Be able to identify all the stakeholders in an ethical dilemma.
- Read primary research literature in bioethics journals
- Learn to identify in bioethical peer review articles the values in conflict in the ethical dilemma challenge cultural and social expectations.
- Identify the ethical theory used to construct the argument of the article.
- Articulate/write arguments and counter arguments for and ethical dilemma.
- Reach a compromise position when making a decision for an ethical dilemma.
- Explain a bioethical issue from various points of view to a person without any scientific background.

Public Speaking: College students are expected to clearly organize and articulate verbally their ideas. Regardless of whether or not the student is addressing an audience of one or hundreds, the argument must be expressed persuasively. Public speaking is a skill that needs to be learned, developed and practiced. In this class your public speaking skills will be constantly tested, which means that you will be called to express your stance towards the issue under discussion. You must know how to organize and articulate your ethical position by developing and sharing a clear argument in front of the group. These skills will not only prove useful in this class, but they will also help you to succeed in any interview (e.g. medical, dental, pharmacy, vet school, etc.) that you might have in the future. Due to its importance, this course will focus its attention to the development and use of public speaking techniques which is how you will be evaluated in the interviews for the aforementioned professional schools.

Writing emphasis: This course fulfills the writing requirement for graduation. It is expected that any college graduate must be able to express their ideas in writing. Ideas that you write must be expressed clearly. In this class, specific instructions will be provided to guide you in the process of writing a research paper. The research paper has proven to be challenging for many students in the past, but you will soon find that plenty of help will be provided so that you can write a college-level paper. This is a research paper and **not a persuasive** paper and the prose must remain scholastic. The first line of help will come from the preceptors of this class, who will guide you. Their guidance will focus on the selection and direction of the topic that you chose to write about for the paper. For students that require help with grammar and sentence structure, they are encouraged to seek the assistance from the Writing Center located in the THINK TANK. In short, you will find that the class provides you with the resources you need to succeed in this course.

Group Collaboration: Discussion Activities. TBA on further instructions

Prerequisite(s): One year of college-level introductory biology (MCB 181 and ECOL 182); botany is not acceptable. Satisfaction of the Mid-Career Writing Assessment (MCWA).

Text and required materials: There is no textbook required for this course. I will post any material that you might need for the discussions that will take place in class as well as any presentation file in D2L.

Students must verify that clicker answers are submitted. You must also check the D2L gradebook to make sure that your class participation points were loaded for each class day. Grades are usually posted right after class. If your clicker score doesn't show in the gradebook or if you disagree with your score, you have **48 hours** (after I post the clicker points) to bring any issue to my attention. You should expect a written response from me within 24 hour after reading your email. Thus, the deadline for raising any clicker issue is 48 hours after I post the scores. After that period, any clicker issue will not be considered. If your clicker is not working properly during the class, you should ask the preceptors for assistance. They will assist you with your problem. If the preceptor of the class can't solve the issue, then you should come and see me after the class. Do not wait to bring technical issues to my attention. I cannot grant any clicker points to you if you don't bring the issue to my attention.

Cheating with Clickers: Under the University of Arizona Code of Conduct, any student caught using multiple clickers is engaging in an act of cheating. In the event that a student is caught with multiple devices with the purpose of answering clicker questions for other students, they will be asked to surrender all the devices. The devices will be sent to the Dean of Student Affairs, where the rightful owners of the devices will be able to pick them up after talking with the Dean about this incident.

Special needs and accommodations:

Students needing special accommodations or special services should contact the Center for Disability Related Resources, 1224 East Lowell Street (East of the 6th Street Garage), 520-621-3268. The need for specialized services must be documented, verified, and presented to the instructor AT LEAST TWO WEEKS prior to the first exam. We will do everything we can to enhance your learning experience.

At the University of Arizona we strive to make learning experiences as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, you are welcome to let me know so that we can discuss options. You are also encouraged to contact Disability Resources (520) 621-3268 to explore reasonable accommodation.

If our class meets at a campus location, please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

See <http://drc.arizona.edu/instructors/syllabus-statement>.

Class Meetings: This class is scheduled to be taught in the in-person modality. It means that our class will meet in person on Wednesdays in the Steward Observatory room N210. Students will have an opportunity to participate by asking questions, engaging in discussions, and submitting their clicker responses through the Responseware application or clicker device. In order to earn points for your participation in the clicker questions you must participate synchronously with the rest of the class.

Remain flexible: If pandemic conditions warrant, the University may require that we return to remote operations. If that is the case, we will notify you by D2L Announcement and email that we are moving to remote operations.

Classroom expectations

Face coverings are required in our classroom: Per UArizona's **Administrative Directive**, face coverings that cover the nose, mouth, and chin are required to be worn in all learning spaces at the University of Arizona (e.g., in classrooms, laboratories and studios).

Physical distancing is required in our classroom: During our in-person class meetings, we will respect CDC guidelines, including restricted seating to increase physical distancing and appropriately-worn face coverings. Per UArizona's Administrative Directive, face coverings that cover the nose, mouth, and chin are required to be worn in all learning spaces at the University of Arizona (e.g., in classrooms, laboratories and studios).

**Any student who violates this directive will be asked to immediately leave the learning space, and will be allowed to return only when they are wearing a face covering. Subsequent episodes of noncompliance will result in a Student Code of Conduct complaint being filed with the Dean of Students Office, which may result in sanctions being applied. The student will not be able to return to the learning space until the matter is resolved.

- The Disability Resource Center is available to explore face coverings and accessibility considerations if you believe that your disability or medical condition precludes you from utilizing any face covering or mask option. DRC will explore the range of potential options as well as remote course offerings. Should DRC determine an accommodation to this directive is reasonable, DRC will communicate this accommodation with your instructor.

Classroom attendance:

- If you feel sick, or may have been in contact with someone who is infectious, **stay home**. Except for seeking medical care, avoid contact with others and do not travel.
- Notify your instructors if you will be missing an in person or online course.
- Campus Health is testing for COVID-19. Please call (520) 621-9202 before you visit in person.
- Visit the UArizona COVID-19 page for regular updates.

Academic advising: If you have questions about your academic progress this semester, or your chosen degree program, please note that advisors at the Advising Resource Center can guide you toward university resources to help you succeed.

Life challenges: If you are experiencing unexpected barriers to your success in your courses, please note the Dean of Students Office is a central support resource for all students and may be helpful. The Dean of Students Office can be reached at 520-621-2057 or DOS-deanofstudents@email.arizona.edu.

Physical and mental-health challenges: If you are facing physical or mental health challenges this semester, please note that Campus Health provides quality medical and mental health care. For medical appointments, call (520)-621-9202. For After Hours care, call (520) 570-7898. For the Counseling & Psych Services (CAPS) 24/7 hotline, call (520) 621-3334.

Creating a Supportive Classroom:

Disruptive behavior is prohibited. "Disruptive behavior" means conduct that materially and substantially interferes with or obstructs the teaching or learning process in the context of a classroom or educational setting. This type of behavior includes cell phone use, refusing to collaborate, interrupting class activities, sleeping, newspaper reading, etc. In the event of disruptive behavior by one of the students in the course, official policies and procedures will be followed as described at <http://policy.web.arizona.edu/disrupt.shtml>.

1. I expect all students to act professionally in the classroom.
2. Wait for your turn to participate. Making comments out of turn and asking questions to the student next to you will distract others. This behavior is extremely disruptive to the students around you. You should respect your fellow students' right to learn.
3. Turn off your cell phone before entering the classroom. If your cell phone accidentally rings, turn it off!! Do not answer your cell phone while the class is in progress. You can always check for messages and missed calls after the class period. The same goes for text messaging. Do not engage in text messaging while the class is in progress.
4. I will post the PowerPoint presentation files and handout(s) on the D2L site for this class. These files will be incomplete. There is information for each lecture that I don't want students to see prior to the lecture. That information will be included in the complete version of the PowerPoint, which I will post after the class.
5. The primary method of communication with my students outside of the classroom is by email. You should check your email each day.
6. You are responsible for visiting D2L every day and looking for course announcement(s).
7. Many of the issues that we will cover in this course can be very provocative and controversial. It is common that during the presentation, discussion can be heated and passionate. Everyone should respect each other's point of view. You should use reason and knowledge while engaging in the class discussion.
8. **All assignments in this course submitted to the Dropbox must be in Microsoft Word format (.Doc or .Docx). Failure to do this will result in a zero for the assignment grade.**

- **Staying current:** In the D2L content you will find a tasks list (some suggested, and others required) to be complete for each particular week. You must complete and submit your assignments in the required day and time indicated in that task list.
- The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself.
See <http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students>.

Attendance policies

1. Attendance is crucial!!!
2. This course uses a team-based learning approach. This means that you will be part of a group of students, which will remain together for the rest of the semester. If you are absent, somebody else in the group will have to take over your responsibilities. In that particular day you will lose points because you were not there to be part of the discussion.
3. If you miss an activity, it is your responsibility to obtain any material distributed during the period that you missed. Remember that you are part of a learning community in general and a learning team in particular. Contact your fellow students. I will suggest that you exchange phone numbers and emails with your classmates.
4. Each class will last for one hour and fifteen minutes. I will take note if you are excessively late or if you leave early. During the first five to ten minutes of class, students will have to submit a homework assignment or answer a quiz question using clickers. At the end of the class the students will also have to answer some questions to test their comprehension of the material.
5. The UA's policy concerning Class Attendance, Participation, and Administrative Drops is available at: <http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop>

Grade scheme: Students' performance in this class will be evaluated following the grading scheme below. The final letter grade will be based on the following point grade scale.

Assignments:	Points per assignment and number of assignments	Total Points per category
Exams	3 @ 200 points each	600
Class Discussions	4 @ 25 points each	100
Class Participation	10 @ 2.5 points each	25
Research Paper MCB 404 minimum 10 pages MCB 504 minimum 20 pages	1@ 200 points each	200
Total Class Points		925

Letter Grade	Point Range	Percentage	Grade Point Value
A	925 – 832.5	100-90	4
B	832.4 – 740	89.99-80	3
C	739.91- 647.5	79.99-70	2
D	647.41 – 555	69.99-60	1
E	554.91 – 0	59.99-0	0

Late Work. All assignments are expected to be turned in at the assigned deadline provided in the syllabus unless notification of deadline changes is made by instructional staff; said change in deadline will take precedence. Any work that is not submitted to D2L in the appropriate folder or website section, as determined by the instructor, will not be considered for grading unless they have an approved, documented extenuating circumstance. **Any work submitted late will be subject to a 10% penalty per day late (up to 5 days, after which the assignment will be awarded a grade of 0%)** In order to receive an approved extension, students must contact Dr. Pimentel and/or their teaching assistant directly and immediately with the circumstances and supporting documentation.

Submission. All assignments in this course must be submitted through the D2L Assignment Dropbox in the proper word document format (.doc or .docx). **Any work that is *not* submitted through this Dropbox in the correct format will get an automatic 50% penalty.** Even though some assignments, such as Discussions and are to be posted in the Discussions thread, students must still create the proper word document and submit it through Dropbox.

Dean's Excuse. All approved documentation must be submitted via email or in person to the instructional staff at least 48 hours **prior** to the event/ deadline. Any late submission of Dean's Excuses will not be accepted. These excuses will only be considered for group discussions and exams, unless otherwise given approval by the instructor. For more information about Dean's Excuses, refer to <https://deanofstudents.arizona.edu/absences>.

Absence for religious observance. The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable, <http://policy.arizona.edu/human-resources/religious-accommodation-policy>.

Exams. Exams are closed book and all answers must be original and in a student's own words. Exams will be taken in-person during the class times. The exam will have a theoretical part in which ethical theory will be assessed. In addition, one or two ethical problems will be presented to you so you can argue them. I will not grant make-up examinations unless an **extreme and documented** circumstance impedes the student from taking the test. If such a situation exists, the student will have 24 hours from the time of the examination to present a valid document explaining the reason for the absence. The document should clearly state the day and reason for which the student could not take the exam. If I find the document to be vague, I reserve the right to deny the make-up examination. No make-up examination will be given to any student if he/she doesn't get in touch with me within 24 hours after the initiation of the exam.

Re-grades. Students will have access to their graded exams through d2l. Students then have **one week** after the exams are returned to review their tests and if necessary submit a re- grade petition form if they believe that any question of the exam was misgraded. **No late submissions** of a re-grade petition form will be accepted -- no changes in test grades will be considered after that time. If you believe that an exam was graded incorrectly, you must address the issue within one week

after the exams are returned. Do not wait until the end of the course to improve your grade. The professor will reply and return the re-grade petition no later than two weeks after the submission day of the re-grade. You can find the re-grade petition form with instructions in the important information module of D2L.

Class participation: Class participation consists of your participation via your responses with your clicker as well as in-class activities. The maximum amount of points that you received per session will be 2.5 points. I will assign points proportional to the number of questions that the students' answers during class. For example, students that answer all the questions will receive 3 points, students that answer 2/3 of the questions receive 2 points, students that answer 1/3 of the questions receive and if the student answers less than 1/3 of the questions you will receive 0.5 points.

Documentaries: Several movies and documentaries containing bioethical issues will be assigned in this class. It is the student's responsibility to: 1) have the proper software uploaded in your computer to play this material. 2) Call the 24/7 U of A computer support phone if you have any problems accessing the documentary. You don't need to have any special computer knowledge to install the software to watch the documentaries. The installation of the software is relatively easy. However, if the installation of the software takes you more than 10 minutes, I will recommend that you call the 24/7 line. Do not try to watch the documentaries at the last minute because this could overload the server from which the documentary is playing. I will assign this material at least two weeks before presenting the topic in class so you can have time to watch this material and/or have enough time to solve any foreseeable problems.

Audit Grades:

Students registered for Audit will receive "O" grades. This course is not offered as Pass/Fail. Switching from a letter grade to an audit will not be allowed in this class.

Incompletes: I will emphatically avoid giving incompletes. In situations of extreme circumstances, I will discuss this option with the student. I will weigh the severity of the situation and make a decision. The circumstances must be valid and documented. Students who do not take the final exam will, in general, receive a grade of "0" for the final exam and an "E" for the course. In accordance with University policy, the grade of "I," or incomplete, can only be awarded in the case of students whose circumstances prevent them from finishing the required work for the course. In every case the instructor must approve the incomplete before the last week of classes. Thus, students must make arrangements with the instructor to receive an incomplete before the last week of classes. If a student is expected to repeat the course, the grade of "E" must be assigned. Incompletes that are not removed by the instructor within one year are converted to "E" grades. For undergraduate courses, the one-year limit may be extended if approved by the instructor and the dean of the college in which the student is registered.

Academic Integrity:

Integrity is expected of every student in all academic work and there is a zero tolerance policy for breaking these rules. The guiding principle of academic integrity is that a student's submitted work must be the student's own. This principle is

described in the Student Code of Conduct and disciplinary procedures established by ABOR Policies 5-308-5-403, all provisions of which apply to all University of Arizona students. This Code of Academic Integrity is intended to fulfill the requirement imposed by ABOR Policy 5-403.A.4 and otherwise to supplement the student Code of Conduct as permitted by ABOR Policy 5-308.C.1. Any form of cheating or plagiarism will result in a failing grade for the course, and in other appropriate disciplinary actions as described. Cheating **includes but is not limited to** the clicker device policies, plagiarism, working together on exams, relying on external sources/materials during exams, etc.

Students should not submit work that was used for a previous class. Resubmitting previous work again, though written by the student, is plagiarism and will be treated according to the University of Arizona's plagiarism policy. Refer to the University of Arizona's guidelines to distinguish what is considered plagiarism. All assignments will be submitted to Turnitin.

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog.

See: <https://deanofstudents.arizona.edu/policies/code-academic-integrity> and <http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity>.

Nondiscrimination and Anti-Harassment policy

The University of Arizona is committed to creating and maintaining an environment free of discrimination. In support of this commitment, the University prohibits discrimination, including harassment and retaliation, based on a protected classification, including race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity, or genetic information. For more information, including how to report a concern, please see <http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy>.

Preferred Gender Pronoun

This course affirms people of all gender expressions and gender identities. If you prefer to be called a different name than what is on the class roster, please let me know. Feel free to correct instructors on your preferred gender pronoun. If you have any questions or concerns, please do not hesitate to contact me directly in class or via email (instructor email). If you wish to change your preferred name or pronoun in the UAccess system, please use the following guidelines:

Preferred name: University of Arizona students may choose to identify themselves within the University community using a preferred first name that differs from their official/legal name. A student's preferred name will appear instead of the person's official/legal first name in select University-related systems and documents, provided that the name is not being used for the purpose of misrepresentation. Students are able to update their preferred names in UAccess.

Pronouns: Students may designate pronouns they use to identify themselves. Instructors and staff are encouraged to use pronouns for people that they use for themselves as a sign of respect and inclusion. Students are able to update and edit their pronouns in UAccess.

More information on updating your preferred name and pronouns is available on the Office of the Registrar site at <https://www.registrar.arizona.edu/>.

Changes to this syllabus:

The information contained in this syllabus, other than the grading and missed-exam policies, may be subject to change with reasonable advance notice, as deemed appropriate by the instructor

<http://policy.arizona.edu/faculty-affairs-and-academics/course-syllabus-policy-undergraduate-template>.

Exam and Assignments schedule:

Exam and Assignments schedule:

First Exam.....Wednesday, February 16th at 4:30-5:45 PM
Second Exam.....Wednesday, March 30th at 4:30-5:45 PM
Third Exam.....Friday, May 6th at 3:30 to 5:30 PM

Due dates for the research paper:

1- Submission of your Topic Approval.....Friday, February 4th at 11:59 PM
2- Submission of your Research Paper Proposal.....Friday, February 25th at 11:59 PM
3- Submission of your Research Paper Rough Draft.....Friday, March 25th at 11:59 PM
4- Submission of your Final Research Paper.....Friday, April 22nd at 11:59 PM

Due dates for the Discussion assignments:

Discussion 1 submission.....Friday, January 28th at 11:59 PM
Discussion 2 submission.....Friday, February 11th at 11:59 PM
Discussion 3 submission.....Friday, March 11th at 11:59 PM
Discussion 4 submission.....Friday, April 8th at 11:59 PM

Tentative Schedule of Topics: The aim of this schedule is to provide the students with an idea of the topics that am planning to cover during the semester. It is very possible that during the term a new bioethical issue will be discussed in the media and for that reason I may decide to include that material in the schedule. Thus, it could benecessary to make changes in this schedule. I will be constantly upgrading the information in this schedule of topics in D2L and I will announce such changes in the class. A more accurate schedule of topics will be posted in D2L.

Date	Topic	Readings and Videos to Watch for Each Topic
Week 1 (January 12)	Syllabus overview Can good intentions lead us towards unethical behaviors?	Videos: 1. The Lobotomist 2. ADHD and the Brain Reading: 1. Read the Syllabus and MCB 404 2. Ethical Theory and Bioethics
Week 2 (January 19)	1- Morality and the Four Ethical Principles. 2- Why do ethicists disagree on the same issue?	Videos: 1. Intersex 2. Ashley X Reading 1. Ethical Theory and Bioethics 2. Pillow Angel Ethics 3. A convenient truth. 4. Is Peter Pan Treatment a Moral Choice? 5. The Ashley Treatment a step too far or not far enough
Week 3 (January 26)	Utilitarian Theory and Blogs Exercise.	Video: 1- Peter Singer, A dangerous mind.
Week 4 (February 2)	Deontological Theory and Medical Ethics	1- Video: Skin and Bone: the Shadowy Trade in Human Body Parts

<p>Week 5 (February 9)</p>	<p>Anencephalic Infants and Post-Modern Ethics</p>	<p>Readings:</p> <ul style="list-style-type: none"> 2- That Others May Live. 3- Infants with Anencephaly as Organ Sources: Ethical Consideration. 4- The Use of Anencephalic Newborns as Organ Donors. <p>Video:</p> <ul style="list-style-type: none"> 1- Baby Faith Hope 1 day old 2- Baby Faith Hope 8 days old 3- Baby Faith Hope 10 Months old 4- Man wakes from 19 year coma
<p>Week 6 (February 16)</p>	<p>Exam 1</p> <p>Five Step Approach to solve and Ethical Dilemma</p>	<p>Robots Love and Sex The Ethics of Building a Love Machine</p>
<p>Week 7 (February 23)</p>	<p>Values and Scientific Miss-conduct</p>	<p>Readings:</p> <ul style="list-style-type: none"> 1- Sabotage <p>Videos:</p> <ul style="list-style-type: none"> 2- Ig Nobel Prize 3- Vipal Bhrigu on security camera <p>Deception at Duke</p>
<p>Week 8 (March 2)</p>	<p>Ethical Issues in Human Experimentation</p>	<p>Readings:</p> <ul style="list-style-type: none"> 1- Ethical Issues in Human Experimentation 2- Ugly Medical Experiments <p>Videos:</p> <ul style="list-style-type: none"> 1- The Pill 2- Declassified Human Experimentation <p>Radiation Performed in US Troops</p>

Week 9 (March 9)	Spring Break	
Week 10 (March 16)	-Nuremberg and Helsinki -The Tuskegee syphilis study	Readings: 1- The Nuremberg Code 2- Declaration of Helsinki 3- First, Do Harm Videos: 1- The Deadly Deception 2- Nazi experiments part 1 and
Week 11 (March 23)	Jesse Gelsinger (Gene Therapy Trial)	Reading: 1- Lessons Learned from a Gene Therapy Trial 2- Adverse Events in Gene Transfer Trial 3- Current Advancement in Gene Therapy Videos: 1- Trial and Error: The Rise and Fall of Gene Therapy
Week 12 (March 30)	Exam 2 Animal Rights	1- All Animals Are Equal...
Week 13 (April 6)	Animals as Experimental Model	Readings 1- The Ethics of Animal Research Videos: 2- Alcoholic Monkeys 3- Chimp Retirement 4- Chimp Haven 5- PETA at ONPRC 6- Covance Undercover Investigation in Virginia 7- Animal Liberation Front 8- Tour of an Animal Facility 9- Position from a Research Lab Veterinary 10- Story of a Dog that Benefited from Animal Research.

		<ul style="list-style-type: none"> 11- Monkey Controlling Robotic Arm 12- Monkey uses Robotic Arm to eat marshmallows 13- Walking Suit 14- Brain Power 60 Minutes
Week 14 (April 13)	Who Owns Your Body?	<p>Readings:</p> <ul style="list-style-type: none"> 1- Indian Tribe Wins Fight to Limit Research of Its DNA. 2- Body of Research- Ownership and Use of Human Tissues. 3- Taking the least of You <p>Videos</p> <ul style="list-style-type: none"> 1- Seeking Henrietta 2- The Immortal Henrietta Lacks 3- Blood Journey
Week 15 (April 20)	<ul style="list-style-type: none"> -Genetic Testing and Pair-Bonding. -Genetic Testing for Behavioral Factors -Genetic Testing for Diseases 	<p>Videos:</p> <ul style="list-style-type: none"> 1- Pair Bonding of Prairie Voles 2- Pair Bonding of Voles 2 3- Pair Bonding of Voles 3 4- Predictor: Genetic Screening 5- Social Behavior Genes 6- Podcast on Criminal on Behavioral Genes 7- Predictor: Genetic Screening 8- Social Behavior Genes 9- Podcast on Criminal on Behavioral Genes 10- In the Family. 11- Interview with Milton, Alice and Nancy Wexler 12- When DNA Test Shows a Lethal Fate

		<p>13- China's Program to Genetically Test Children</p> <p>14- At Home Genetic Test</p> <p>15- At Home Genetic Tests Might be Unreliable</p> <p>16-</p>
Week 16 (April 27)	Pre-Implantation Genetic Diagnosis	TBA
Week 17 (May 4)	<p>Ethics of the Health Care System</p> <p>Trans Humanism</p>	<p>Readings:</p> <p>Will Genetics Destroy Sports?</p> <p>Videos:</p> <ul style="list-style-type: none"> - Artificial retina (2 parts) - Cochlear implant - Genetically modified humans - Designed Babies - Designed Babies II
May 6	Final Exam	

Short Research Paper:

Since the discovery of the structural organization of the DNA molecule, there has been a significant influx of molecular information related to the genes encoded by this molecule, in addition to the genetic regulation that orchestrates the development and metabolism of various organisms. This knowledge has allowed us to manipulate some aspects of nature; for example, while insulin was exclusively produced from cattle and pigs before the 1980's, once the gene encoding this hormone was discovered and characterized, scientists were able to insert its DNA sequence into bacteria. Using this recombinant-DNA technology, the biotech companies were able to increase the production of insulin. The pharmaceutical company Eli Lilly markets this recombinant insulin as Humulin™. In 2001 more than 95% of the insulin was produced as Humulin™. The genetic and molecular manipulation of insulin allows biotechnology companies to manufacture large amounts of this hormone with less animal contaminants, which lowers the probability of triggering an immune reaction against this molecule. This manipulation has resulted in many positive consequences to our society, e.g. patients with Type I diabetes can have an almost normal life. In the other hand, most people don't have the same positive opinion for other types of recombinant products; for instance, genetically modified foods have seen much opposition; however, genetically modified foods and Humulin™ are both recombinant products.

Science is moving at an accelerated speed and many bioethicists are concerned that regulation and legislation on the safety and ethical application of this knowledge is lagging behind. During the semester, we will discuss bioethical issues covering diverse topics such as using humans as experimental models, animals as experimental models, gene therapy, genetic testing, and genetic screening. Occasionally, students get curious about some of these issues and they research additional information on the Internet, which they later share with me. Keeping this in mind, I have put together the following short research paper project. This paper is your opportunity to share with the rest of the group additional bioethical issues not covered in the class.

In this short paper your aim is to find, research, and share new bioethical issues in the areas of genetics, molecular, cellular, and developmental biology with the rest of the class. Environmental issues are not accepted as topics for this research project

The Format

This is not a persuasive paper. This is a research paper. If you are not familiar with the difference between a research paper and a persuasive paper, you are urged to visit the writing center for a complete explanation.

- 1- The report should be 10 to 12 pages long (not including the references or a title page), double-spaced, with normal margins (Top/Bottom: 1 in, Left/Right: 1 in), and 12 pt font in Times New Roman.
 - a. Papers that are less than a full 10 pages long will receive a 10% deduction per page.
 - b. Papers that are less than a full 5 pages long will be given an automatic 0% for the final grade of the paper.
- 2- All papers should be submitted as a Microsoft Office document in the format of .doc or .docx.
 - a. Any documents that cannot be opened will receive a grade of 0% for the assignment.
 - b. Any documents that are not in the correct format (but can be opened) will be subject to a 10% penalty for each day

(after the deadline) the student takes to submit the document in the correct format.

- 3- Do not add extra spaces or change the font or font size of punctuation or any other changes to increase the length of the paper. This will be considered cheating and shall be penalized as seen fit by instructional staff.
- 4- Do not add extra lines above or below other lines or titles/subtitles.
- 5- **No quotations will be accepted in this paper and the entire work must be your own work, which means that all sources must be paraphrased and then referenced properly.**
- 6- For more information on how to properly paraphrase, refer to: <http://owl.english.purdue.edu/owl/resource/619/01/>
- 7- Students should not submit work that was used for a previous class. Using work, though written by the student, again is plagiarism and will be treated according to the University of Arizona's plagiarism policy.

References The use of sources from the Internet is absolutely banned from this project. You can start to search for ideas using the Internet but the primary sources should come from peer-reviewed journals, reputable newspapers and magazines such as the New York Times, Newsweek, The Wall Street Journal etc. Yes, this means that you will need to use the resources of the library and maybe even have to read real books! You must be extremely careful when you first search for a topic. From my own experience, I have found that many so-called "bioethical websites" sensationalize these issues. For example, when I was researching the topic of genetically modified foods I found a site that claimed that several scientific studies made a link between Morgellon's disease and GM foods (Example). After doing further research in Pubmed, FDA, and the CDC, I found no evidence of such information. I wasted more than 2 hours chasing a hoax. The topic that you select should be about a current ethical issue in the areas of genetics, developmental biology, cellular biology, neurobiology, biochemistry, or any other natural science field. Ethical issues involving medical or environmental topics will not be accepted. I suggest you forward the title of your research topic to one of the preceptors once you find an issue that you deem appropriate for this work. Your references must be in MLA format. The list below includes reputable journals that you can use to find possible topics. Remember that you can access all these resources through the UofA main and health library for free.

1. Reputable news organization
2. Government reports
3. Pubmed
4. The Hastings Center Report
5. American Journal of Bioethics
6. Journal of Neuroethics
7. Journal of Bioethics
8. Journal of the American Medical Association
9. Nature (journal)
10. Science
11. Nature
12. Any other peer review scientific or bioethical journals.

Your work must start with an introduction in which you must clearly state the issue(s) behind your topic. This introduction

should be followed by the body of your work in which you present and explain the details of the science and/or technology behind the issue and how this knowledge has been applied (or could be applied in the future). As you know, there are always two ethical views for each issue. You should present those arguments in the main body of work. It is expected that you develop your own arguments and analysis of the issue. Remember to base your arguments upon facts and precedents. Refrain from expressing your own opinion during the introduction or the main body of the work. In the conclusion you will have to summarize the problem and develop your own recommendation. Remember that you could make a recommendation one way or another but you should refrain from giving absolute answers to the problem.

One last note about your topic—your topic must be case specific. It could be related to topics presented in class; however, do not use any of the topics that we will be covering in class. The idea of this research project is that you and your classmates learn something new about current bioethical cases. Below there is a list of topics that you **cannot** choose from for your research project.

- Anencephalic Infants
- Headless human clone program
- Animals as experimental subjects (specific examples are acceptable)
- Humans as experimental subjects (specific examples are acceptable)
- Tuskegee Syphilis Study
- Gene therapy
- Patenting genetic modified crops
- Biotechnology on the farm and in the factory
- Recombinant bovine growth hormone (rBGH)
- Monsanto
- Genetic testing
- Genetic screening
- Stem cell research
- Trans-humanist movement
- The ethics of creating synthetic life
- Genetically modified bacteria
- Patents on genes and gene products
- Use of the knowledge of a person's genome
- Cloning extinct animals
- Selection of a child's genetic characteristics
- Biotechnology in agriculture
- Frozen embryo ownership
- The safety and use of bioengineered (transgenic) crops to feed humans
- Genetically altered fish as a protein source
- Owner of scientific knowledge?
- Biofuels

- Medical cases
- Environmental cases
- Xenotransplantation
- Eugenics
- Euthanasia/Physician Assisted Suicide
- Abortion

Each part of the research paper:

Topic Approval. In this part of the research paper I want you to come up with 3 to 5 different topics and how you plan to approach this work. At this point you only have to demonstrate that you are actively searching for a suitable topic for your paper. This is also the point in which preceptors can let you know if you are going in the right direction. Preceptors will be prompt in notifying you which of your topics is acceptable for this work. This is an informal paragraph, but you should keep your grammar and spelling tight. Please list at least one reputable source of information for each of your topics.

Proposal: Once you have received feedback from a preceptor you can start putting the ideas in a formal paragraph. In this part of your work I would like to have a formal title, the scientific field that you will cover in your paper, the general ethical issues that you will discuss and the two opposite sides of the issue that you will present. This proposal should include the references that you have used to build this section. Ideally, you should have at least 10 reputable sources of information.

Draft: You should think about this draft as your final work. A preceptor will give you final feedback about the quality of your work and whether or not you have followed all of the rules of the paper. Everything in this draft should be neat. You will be receiving feedback from the preceptors, but your paper will not be graded yet. You should have a minimum of 10 reputable sources in your references.

Final Paper: You will submit your work on D2L in the appropriate Dropbox folder. The student does not have to submit a hard copy of the research paper.

Note: You can earn up to 10 extra credit points for attending 60 minutes (by appointment) at the Think Tank. Each session last for 30 minutes and you will need to request a writing tutor that has been trained to assist students from MCB 404. In addition to these bonus points, by attending the ThinkTank writing center you can also make sure that your research paper is well written.

Late Submissions:

Students that choose to submit their research paper late will be subject to the late work policy listed in the syllabus. Late work will not be accepted for grading without an extenuating, documented circumstance or have an approved extension from Dr. Pimentel.

Requirements: For an extensive list of requirements for the final paper go to the research paper instructions document and look for the section titles “The Format”

Ethical Arguments Worth: 30	30	25	15	10	0
	- Two sides of the issue were clearly presented.	- Two sides of the issue were presented but not clearly.	- Only one side the ethical issue was clearly presented.	- Only one side of the issue was presented but not clearly.	- Ethical issues not presented.
Facts & Precedents Worth: 30	30	25	15	10	0
	- Each side of the argument is supported by more than five strong facts and/or precedents.	- Each side of the argument is supported by four to five strong facts and/or precedents.	- Each side of the argument is supported by two to three strong facts and/or precedents.	- Each side of the argument is supported by only one strong fact or arguments.	- The arguments are extremely weak or completely absent from the discussion.
	30	25	15	10	0

Ethical theory Worth: 30	- The arguments in the research paper show a strong and clear (explicit) use of any of the ethical theories discussed in class.	- The arguments in the research paper show a weak but clear (explicit) use of any of the ethical theories	- The arguments in the research paper show implicit use of the ethical theories discussed in the class but the use is	- The arguments in the research paper show the implicit use of the ethical theories discussed in the class but the use is	- No use (not even implicit) of any ethical theory was used in the research paper.
-----------------------------	---	---	---	---	--

		discussed in class.	strong and clear.	not strong and clear.	
	20	15	10	5	0

Presentation of Sciences and/or Medical Issue Worth: 20	<ul style="list-style-type: none"> - The work clearly explains the science causing the issue. - General scientific ideas were presented and were not the majority of the paper (1-3 pg). - No conceptual errors in the writer's explanation of the science involved. 	<ul style="list-style-type: none"> - The science causing the issue is presented, but not clearly. - General scientific ideas are presented, but not clearly. -Some (1-4) conceptual errors within the science presented. 	<ul style="list-style-type: none"> - A minimum amount of science is presented. - General scientific ideas are not clearly presented. - Most of the paper (5 pages or more) on scientific background rather than ethics. - There are 5-7 errors in science presented. 	<ul style="list-style-type: none"> - Only acronyms were used (PCR, DNA sequencing, HGH etc..) instead of explaining them. - No general scientific ideas are presented. - There are 8-10 errors in the science concepts presented. 	<ul style="list-style-type: none"> - No science or scientific ideas were presented in this work. -Majority of the work is flawed in the concepts associated within the science presented.
	15	-	10	5	0
Sources Worth: 15	<ul style="list-style-type: none"> - Reputable Print/Non-Print sources used (journals, news websites) - No use of unscholarly 		<ul style="list-style-type: none"> - Writer used at least 1 non-reputable resource. - At least 1 source was 	<ul style="list-style-type: none"> - Three or more non-reputable print or non-print sources were used. 	<ul style="list-style-type: none"> - Writer used all non-reputable sources - All sources were not properly

	sources (Blogs, Magazine, Wikipedia etc...) - Sources are properly cited in MLA format in Bibliography.		not properly cited or within the Bibliography.	- 3 or more sources were not properly cited or within the Bibliography.	cited or within the Bibliography.
Paraphrasing Worth: 15	15	-	10	-	0
	- Paper contains little quotes (2-3 Max). -If quotes used, only 1-2 lines long. - Paper all paraphrased. - Proper MLA in-text citation (citing a book vs. website etc...).		- Contains quotes (4-6). - Dubious paraphrasing used. - Some (3-5) of the in-text citations are proper MLA format (citing a book vs. website).		- Paper has >6 quotes. - Improper use of paraphrasing (plagiarism). - Sources not MLA format (book vs. web).
Spelling & Grammar Worth: 15	15	10	5	2.5	0
	- Less than 10 errors were found.	- Between 11-15 errors.	- Between 15-20 errors.	- Between 20-25 errors.	- More than 25 errors.
Fluency & Readability Worth: 15	15	10	5	2.5	0
	- The writer captures the attention of the reader.	- The writer captures the attention of the reader.	- Most of the time the paper fails to keep the	- Paper lacks consistency in fluency. - Some critical ideas	- Paper is difficult to read and does not flow.

	<ul style="list-style-type: none"> - The writer makes an effort to construct engaging ideas within the paper. - The writer demonstrated critical thinking of the ideas presented in the paper. - Proper academic prose. 	<ul style="list-style-type: none"> - There were sections in the paper with ineffective use of academic prose. - Writer makes some effort to construct engaging idea. - The writer demonstrated critical thinking of the ideas presented in the paper. 	<ul style="list-style-type: none"> attention of the reader. - From time to time, the writer presents an interesting idea but fails to elaborate on it. - The writer present some critical thinking ideas. 	<ul style="list-style-type: none"> are presented. 	<ul style="list-style-type: none"> - No critical ideas were presented whatsoever.
	10	-	5	-	0
<p>Instructions Worth: 10</p>	<ul style="list-style-type: none"> - The paper has a minimum of 10 pages not including work cited. - The paper followed the format described in the instructions (1 inch margins, 12pt Times New Roman Font, 		<ul style="list-style-type: none"> - Other instructions of paper were not followed. 		<ul style="list-style-type: none"> - Writer attempted to fool the reader (bigger font sizes, wide margins, period trick etc...) - Not submitted to D21

	double spaced etc...) - There is MLA Work Cited. -Submitted to D21 on time.				
--	--	--	--	--	--

- *Medical cases are defined as issues that involve diagnosis or treatment of a person.
- * Healthcare cases are defined as issues that involve the well-being of a population.
- *The list of banned topics is found in the instructions of the research paper.

Deductions/Additions for:

+	Topic was submitted on time and correctly (up to 5 points)
+	Proposal was submitted on time and correctly (up to 5 points)
+	Draft was submitted on time and correctly (up to 10 points)
-	Late submission of the final paper (minus 10% for each day late up to 5 days, then Automatic 0)
-	10% deduction for each page under 10 up to 5 pages (less than 5 pages Automatic 0)
-	Work was plagiarized (Greater than 25% excluding the Work Cited Automatic 0)
+	Student met with writing tutors at the ThinkTank for (60min) sessions Add 10pts to score
+	Student met with writing tutors at the ThinkTank for (30min) session Add 5pts to score
+	Student met with writing tutors at the ThinkTank for (15min) session Add 2.5pts to score

TOTAL = 200pts

Additional Resources for Students

UA Academic policies and procedures are available at <http://catalog.arizona.edu/policies>

Campus Health

<http://www.health.arizona.edu/>

Campus Health provides quality medical and mental health care services through virtual and in-person care.
Phone: 520-621-9202

Counseling and Psych Services (CAPS)

<https://health.arizona.edu/counseling-psych-services>

CAPS provides mental health care, including short-term counseling services.
Phone: 520-621-3334

The Dean of Students Office's Student Assistance Program

<http://deanofstudents.arizona.edu/student-assistance/students/student-assistance>

Student Assistance helps students manage crises, life traumas, and other barriers that impede success. The staff addresses the needs of students who experience issues related to social adjustment, academic challenges, psychological health, physical health, victimization, and relationship issues, through a variety of interventions, referrals, and follow up services.

Email: DOS-deanofstudents@email.arizona.edu (link sends e-mail)

Phone: 520-621-7057

Survivor Advocacy Program

<https://survivoradvocacy.arizona.edu/>

The Survivor Advocacy Program provides confidential support and advocacy services to student survivors of sexual and gender-based violence. The Program can also advise students about relevant non-UA resources available within the local community for support.

Email: survivoradvocacy@email.arizona.edu (link sends e-mail)

Phone: 520-621-5767

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live and believes this may affect their performance in the course, is urged to contact the Dean of Students for support. In addition, the University of Arizona Campus Pantry is open for students to receive supplemental groceries at no cost. Please see their website at: campuspantry.arizona.edu for open times.