MCDB 50  Summer Sessions - UCLA Institutes 2013  Dr. Amy McWhorter

**Syllabus Updated: 06/17/13**

**MCDB 50 Stem Cell Biology, Politics, and Ethics: Teasing Apart the Issues**

**Instructor:** Amy McWhorter, Ph.D.

Lecture: M & W 9 – 10:50 am  location: Boelter Hall 2760

CCLE Course website: [https://ccle.ucla.edu/course/view/131A-MCDBIO50-2](https://ccle.ucla.edu/course/view/131A-MCDBIO50-2)

Discussion Section: Mon or Wed 12:30 – 1:50 pm  location: TBD

E-mail: amcwhorter@mcdb.ucla.edu (course # in subject line please)

Office Hours: M & W 8 – 9 am  location: TBD

**Course Description**

In this course, we will explore the developmental biology of stem cells with a particular focus on human stem cells and investigate the larger debate on human embryonic stem cell research while drawing connections to the established fields of bioethics, politics, and philosophy. The course will ground the issues by looking at the history of the debate over the embryo, with careful attention paid to the language used in arguments. An exploration of important social, ethical, political, and economic issues will round out the remainder of the course.

**Tentative Texts:**

- Additional readings will be posted on the CCLE course website, including the latest advances, political and ethical discussions regarding Stem Cell Research.

**Required**

Over this course you will read *Stem Cell Now* in its entirety.

For section, you **must read, annotate, & print out** the reading material posted on the CCLE website and bring it to section.

For lecture, I recommend reading additional materials posted on the website but they are not required, unless specifically announced.

**iClicker will be required for lecture.**

**Laptops are not permitted in the lecture or discussion sections.**

**Grading**

If you have any testing difficulties or learning disabilities, please inform me during the first week of class or as soon as possible after a new diagnosis.

I expect to assign final grades based on the following:

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**Total:** 100%  600 pts
Your lowest Lecture Quiz score will be dropped. No questions asked. But this also means that I will not accept any form of excuse (funeral, sickness, job interview, car accident…) for another missed quiz. Attendance at discussion sections is required for passing the course; one absence will be excused only in the case of unexpected, documented medical or family emergencies. If you miss one discussion without excuse or if you have more than one absence, you must schedule a meeting with Dr. McWhorter within one week.

Final grades will be assigned based on the number of points you have earned throughout the quarter. I expect to assign grades as follows: an A range grade for 90% or more of the points, a B range grade for 80% or more, a C range grade for 70% or more, a D range grade for more than 55%, an F for equal or fewer than 55% of the points. I may adjust the grade ranges in your favor if the overall mean is relatively low. You always know your minimum grade (e.g. a C range grade if your score is 78%) but your final grade may actually be better (e.g. a B- if I adjust the scores). If you have problems during the summer session that may impact your performance in the course, please come and talk to me right away.

Written Assignments & Exams

Late work will be penalized by a 20% deduction for each day that it is late. For example, the highest score that a one-day late assignment can receive is 80% of the total score possible.

I accept re-grade requests for written assignments. However, please make sure that you are certain that you have good reasons to seek more points because I personally will look over your work in its entirety and check the grading quality. If you feel an answer/essay section deserves more points, please submit a request but if you are simply looking for more points, you should refrain from doing so. All requests must specify exactly how many additional points are requested for what reason in comparison to the comments/answer key. It must be typed and handed in as a hardcopy together with the original graded assignment within three working days after the assignment/exam is returned to you.

Scientific dishonesty and plagiarism are not acceptable and because many people (not just students!) are confused about this, we will talk about it in lecture. If in doubt, ask your TA and me about what is and is not okay. If you worry you may have been academically dishonest but didn’t realize it at the time, do come and talk to me.

1) Discussion Section

Attendance and participation at discussion section is required. Your discussion grade will primarily be based on the weekly Write-Up assignments (Discussion Forum posts) worth 10 points each week, and attendance and participation worth 5 points. Each week, you are expected to (1) bring printed, annotated readings to discussion, (2) be prepared to discuss the material, (3) actively participate in group discussion, and (4) be respectful of your peers online and in class.

Weekly Write-Up assignments consist of questions and responses that you will post on the CCLE website’s “Discussion Forum.” Simply log on to the course website, click on the appropriate Discussion Forum for the week and your section. Here you will be able to initiate new threads by selecting “Add a new discussion topic” and respond to other students by selecting “Reply” while you are reading their posts. If you have any trouble with the DF, please refer to the help button along the top right of the CCLE site window.

More information on how to write your questions/responses will be provided during the first discussion section.
Due each week **by 9 pm two days before** your discussion section meets:
1. **One** thoughtful discussion question about assigned reading material for the current week’s section. (5pts)

Due each week **by 9 pm one day before** your discussion section meets:
2. **Two** responses to other student’s questions. (2.5pts each)

It is your responsibility to ensure that the questions/responses have posted correctly: I recommend signing out and logging back on to view your questions before the deadline. **No points for empty posts under any circumstances.**

**2) Lecture Quizzes**
You will take seven unannounced quizzes, each worth 10 pts, during lecture using your clicker. Your lowest score will be dropped: (max. 60 pts).

**3) Midterm Exam** – Monday July 15th during lecture
The exam covers the material from Lectures 1-5 and includes multiple-choice and written-answer questions. Be sure you can explain the concepts and examples! There is no make-up exam; special provisions may be made only in the case of unexpected, documented medical or family emergencies.

**4) Final Paper** – “The ethical justification of _________ hESC policy.”
(due Friday August 2nd)
This assignment is about ethical justifications of human ESC research and will be discussed in more detail in lecture and section during Weeks 4 and 5.

**5) Final Exam** – Wednesday July 31st during lecture
The exam will focus on the material covered since the midterm, unless specified otherwise and be formatted similarly to the midterm. There are no make-up exams; special provisions may be made only in the case of unexpected, documented medical or family emergencies.

**Week 1**

**Lecture 1 (June 24)** – What is an Embryo? & Introduction to Stem Cells
Required: *Stem Cell Now* – read the following three chapters: “Chapter 1: The Experiment That Shook The World” & “Chapter 2: The Cell” & “Chapter 3: How We Get to How We Are”

**Lecture 2 (June 26)** – Embryonic Stem Cells
Required: *Stem Cell Now*: “Chapter 4: A Brief History of Embryonic Stem Cells” & “Chapter 6: Seven Questions” (first half only: pp 75-82)

- **Discussion 1**: Introduction & Really Knowing the Basics: Landmark Papers

**Week 2**

**Lecture 3 (July 1)** – Reprogramming I: Epigenetics, Nuclear Transfer, and Cloning
Required (as for Lecture 2): *Stem Cell Now*: “Chapter 4: A Brief History of Embryonic Stem Cells”
Lecture 4 (July 3) – Reprogramming II: Induced Pluripotent Cells – The Hottest Thing Around

- Discussion 2: Science, Language, and Media Portrayals

**WEEK 3**

Lecture 5 (July 8) – Adult Stem Cells and their Niches
Lecture 6 (July 10) – Stem Cell-Based Therapies


- Discussion 3: Cloning – what’s real, what’s possible, what’s not?

**WEEK 4**

Lecture 7 (July 15) – Midterm Exam (on Lectures 1-6)
Introduction to the Human ESC Debate

Required: Stem Cell Now: “Chapter 8: The Great Moral Divide”

Lecture 8 (July 17) – Human ESC Debate: IVF, rDNA, Abortion & Major Lines of Argument, Ethical Theories & Religious Viewpoints

Required (as for Lecture 7): Stem Cell Now: “Chapter 8: The Great Moral Divide”

- Discussion 4: What is the Moral Status of the Human Embryo?

**WEEK 5**

Post outline of Your Final Paper: due at the same time that your questions for discussion section are due (i.e. 2 days before section by 9 pm)

Lecture 9 (July 22) – Informed Consent; International Policy

Required: Stem Cell Now: “Chapter 10: The South Korean Affair”

Lecture 10 (July 24) – US Federal Policy; California’s Policy

Required: Stem Cell Now: “Chapter 9: The Consequences of Politics”

- Discussion 5: Working with Your Paper Outlines (you must bring a hard copy to section); South Korean Research Scandal & Research Ethics

**WEEK 6**

Lecture 11 (July 29) – WARF, Patents, and Science as a Commodity

Lecture 12 (July 31) – Final Exam (on Lectures 7-11)

- Discussion 6: Who Should Fund Stem Cell Research? What does it mean to patent science? (Wed. discussion section encouraged to join Monday’s section this week)

Due by Friday August 2nd: Final Paper