

**BILD 60 - Winter 2024  
TuTh 8:00AM-9:20AM  
Peterson Hall 102**

**Diversity, Equity and Inclusion (DEI) and Human Biology**

**Instructor:** Prof. Hiruy Meharena  
Pacific Hall 3224A  
[hmearena@ucsd.edu](mailto:hmearena@ucsd.edu)  
Office hours: TBD

**Instructional Assistant:**  
Xiaoqing Fan  
[xifan@ucsd.edu](mailto:xifan@ucsd.edu)  
Office hours: TBD

**Class and Section Schedule**

Class: TuTh 8:00am - 9:20am  
Peterson Hall 102

Discussion Section: 08:00AM-08:50AM  
TBD

**Course Website:** <https://canvas.ucsd.edu/courses/51425>

## **Course Principles**

By its very nature, this course will include readings, presentations and discussions on difficult topics that affect human relations and feelings. **Mutual respect and sensitivity are essential, as well as the strong consideration of privacy and tolerance.** The class room and spaces on-line should be experienced as “**safe zones**”, where participation, conversation and discussion lead to learning and understanding, **not to confrontation.** Adherence to these principles is a requirement.

## **Course Overview**

In this course we will examine how biology has influenced and continues to influence society around the issues of diversity, equity and inclusion (DEI), and how DEI principles influence scientific discourse and the future of the discipline. The course integrates topics from biology, history, sociology, and anthropology, and the primary focus for this quarter will be on the intersection of biology with race, sex, gender, socio-economic status and disabilities. In each section, we will discuss the underlying biological differences and examine how these features can and have been used to support bias and prejudice against particular groups. This is a biology course and so the course intersects fundamental biological principles with real-life consequences.

**Ethical considerations, as they relate to the topics of diversity, equity, and inclusion, will be an important focal point of this course.**

## **Course Goals**

- To understand biological arguments that have been and are used to explain differences between human groups and their misuse to justify prejudice, discrimination and injustice
- To learn how environmental factors may play an important role in human biology at molecular, cellular, and organismal levels
- To better understand the impact and benefits of one’s racial/ethnic/gender/cultural/experienced identity in the wider context

## **Student Teams/Groups**

The course is designed to be highly interactive. Lectures will include questions to the students and plenty of time for discussion. Students will also work cooperatively in teams/groups on in-class exercises as well as on a final research proposal/oral presentation. Teams of 4-5 students will be formed during the first week of class.

## **Presentation/Discussion**

A key part of the course is student led presentation and discussions at the end of each section. There will be 2 classes of student led presentations/discussions on assigned topics. During these classes 2 teams will present separately, covering one broad topic (**Presentation**). Each team member should aim to present ~5 minutes for a total of 20-minute presentation per team. Many questions and ideas will arise from these presentations and, as such, 10 people will breakout into groups to discuss (30 minutes) the topics presented (**Discussion**). These group discussions will be moderated by one member from each presenting group (2 total moderators = 12 people per breakout group total). Many of these questions have no easy answers, nor are there observations/data that would support specific answers.

## **Discussion Sections**

Members of each team need to exchange contact information (phone numbers and email information) and arrange meetings to discuss the overall presentation and who will be presenting. It is essential that every member of the team contributes to the presentation. As such, it is required that every slide has the specific group members name that prepared the slide on the bottom right corner. These meetings are essential and if a group member does not contribute to the presentation or contribute during the discussion section, they will not receive grades for the presentation/discussion, which is a significant part of the final grade.

The presenting groups will meet with the instructional assistant during the Discussion Section on **Wednesday at 8:00am** the week before their presentation. The presentation slides should be emailed to the instructional assistant ([xifan@ucsd.edu](mailto:xifan@ucsd.edu)) and instructor ([hmeharena@ucsd.edu](mailto:hmeharena@ucsd.edu)) by 6pm the day before the scheduled Discussion Section. Email should be titled "**BILD 60 – Team # Practice Talk**" this will ensure your email is received by the instructional team. During the Discussion Section each group must come prepared to give a 20-minute practice presentation. During this time the instructional assistant will provide constructive feedback and ensure you are ready to present to the entire class. Attendance of Discussion Section is mandatory for all members of the presenting group.

## **Presentation Details**

The group's entire presentation should be in one document, using PowerPoint, Google slides, or Keynote file formats. Please make sure that all group members, the instructional assistant and I have a copy of the presentation (a draft prior to the Discussion Section meeting and a final copy prior to the in-class presentation) in case there are technical issues. **Your presentation should be uploaded to Canvas by 6pm the day before the presentation.** The presenting group should arrive to class promptly to ensure that the presentation and screen sharing is working properly.

## **Presentation Components**

1. *Background/Introduction:* Provide the necessary background for the audience to understand the overall focus of the assigned reading material, methodology, if any, and the significance.
2. *Present the case:* Present the history of the topic, the injustice that occurred, the individuals or group of individuals impacted.
3. *Overall conclusions and long-term implications:* How has the field changed since then? Where do we currently stand, what is the evidence for this change? How can it be better?
4. *References:* Make sure all citations are included on each slide (bottom left corner, font size 10) as well as on one slide at the end with all citations used in the entire presentation.

## **Non-presenters:**

**Written Summary:** Written summaries in **Word Doc format are due by 11:59pm the day before each presentation.** Late assignments will not be accepted. Students are required to read the assigned papers and write a one-page summary (maximum), **except** on the day your team is presenting and leading the discussions. Please use 1" margin, single space, Arial font, and font size 11 for the writing assignment. Your summary should address the following points:

- What is the overarching subject matter?
- Why is this important?
- Who is most impacted and who benefits?
- Is the cost-to-benefit justified?
- How did/does this impact the progress of biology and medicine?
- What would you recommend we do in the future?

**Written Evaluation:** You are expected to read every paper before coming to class and be prepared to discuss the subject matter. If students are not participating on their own, the moderators, instructor assistant and instructor will randomly call on individuals to participate. **At the end of each presentation class, you will write a short (1 paragraph for each team),** constructive evaluation of the presentation and discussion, except on the day you are presenting and/or leading the discussion. These evaluations need to address how the presentation/discussion helped clarify the subject matter and your questions, what aspects of the presentation/discussion were particularly good, and how the presentation/discussion could have been improved. These evaluations need to be constructive and are an important part of your participation grade. Your comments may be shared with the presenters. **Evaluations are due by 11:59pm** three days after each session and are to be uploaded on Canvas in a **Word Doc format**.

Your evaluation should address these points:

1. Did the presentation and discussions help you expand your understanding of the topic?
2. Was the presentation clear?
3. Was there something that the presenters did that you found particularly useful?
4. Was there something that presenters can improve? Provide constructive feedback.

**Evaluation/Grading****Grading and Evaluations:**

Attendance	4%
Reflection Essay 1	5%
Reflection Essay 2	5%
Group Presentation/Discussion	30%
Written Summary	24%
Written Evaluation	12%
Final Writing Assignment	20%
<b>Total</b>	<b>100%</b>

**Grading Scale:** Grades will be rounded to the nearest whole number. The class grades will not be curved.

%	Grade	%	Grade	%	Grade	%	Grade
>97	A+	87-89	B+	77-79	C+	60-69	D
93-97	A	83-86	B	73-76	C	0-59	F
90-92	A-	80-82	B-	70-72	C-		

**Summary of due dates:** Please upload your documents to Canvas.

Written Summary of each Topic:	Due by 11:59pm the day prior to the presentation
Written Evaluation of each Presentation:	Due within 3 days of the presentation by 11:59pm
Group Presentation:	Due by 6pm the day before the presentation
Final Writing Assignment:	Due <b>Thursday, March 15, 2024</b> by 11:59pm
Reflection Essay 1:	Due <b>Sunday, January 14, 2024</b> by 11:59pm
Reflection Essay 2:	Due <b>Thursday, March 15, 2024</b> by 11:59pm

**Attendance and Participation:** (4% of grade) Attendance is mandatory. Points can be earned by attending and contributing to the discussions in class.

**Reflection Essay 1:** (5% of grade) At the beginning of the course you will be asked to write no more than 1-page essay on your views of DEI in Biological sciences.

**Group Presentation/Discussion:** (30% of grade) Every group will give a 20-minute oral presentation to the entire class and leading discussions of breakout groups.

**Written Summary of each Topic:** (24% of grade) Prior to the presentation classes, a one-page summary must be submitted by 11:59pm the day before the presentation. One page total for both topics assigned to the presenting teams. Presenting groups are not required to submit a written summary when presenting.

**Written Evaluation of each Presentation/Discussion:** (12% of grade) Following the presentation classes, a constructive evaluation of the presentation/discussion must be turned in within 3 days of the oral presentation.

**Final Writing Assignment:** (20% of grade) The final essay to select a DEI topic/issue in Biological Sciences not discussed in class and summarize why this is important for the next class to learn about. The final assignments requires that you download and attach all of the articles associated with your paper. Similar to those you received for your presentation. **Final writing assignment is due on March 15<sup>th</sup> by 11:59pm.**

**Reflection Essay 2:** (5% of grade) At the end of the course you will be asked to write a 1-page essay reflecting on your experiences in the class and how (or whether) these have impacted your views of issues

related to DEI in Biological sciences.

### **CLASSROOM CODE OF CONDUCT**

**Technology Etiquette:** Please refrain from engaging in personal internet or other communications during class and ensure that your cell phones and tablets are turned off. This is a participation-based course.

**Academic Integrity:** Integrity of scholarship and learning is fundamental to creating our classroom community and the academic community at large. The University expects that both students and faculty will honor this principle and in so doing protect the validity of University intellectual work. Therefore, Academic dishonesty will not be tolerated. This means that all academic work you submit for this course should be your own new original work. Chatgpt or any AI/machine learning based technology IS NOT ALLOWED. Use of this technology on your assignments will be considered academic dishonesty. To hold everyone accountable for their actions, any serious suspected instances of a breach of academic integrity will be reported to the Academic Integrity Office for review. For more information on academic integrity, please visit <https://students.ucsd.edu/academics/academic-integrity/index.html>.

**Accommodations:** Students requesting accommodations and services due to a disability for this course need to provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD), prior to eligibility for requests. Receipt of AFAs in advance is necessary for appropriate planning for the provision of reasonable accommodations. Please note that instructors are unable to provide accommodations unless they are first authorized by OSD. For more information, contact the OSD at (858) 534-4382 (voice), [osd@ucsd.edu](mailto:osd@ucsd.edu), or visit <https://osd.ucsd.edu/>

**LECTURE/CLASS SCHEDULE****(NOTE: Topics may change)**

Jan 9	<b>1. <u>Introduction: course goals and logistics</u></b>
<b>Section 1</b> (Jan 11 – Jan 31)	<b>2. <u>Biology and Race</u></b> <ol style="list-style-type: none"> <li>1. Jan 11: Genetic variation</li> <li>2. Jan 16: Eugenics</li> <li>3. Jan 17: Discussion Section – Team 1 and Team 2</li> <li>4. Jan 18: Genetic testing</li> <li>5. Jan 23: CRISPR</li> <li>6. Jan 24: Discussion Section – Team 3 and Team 4</li> <li>7. Student presentations <ol style="list-style-type: none"> <li>a. Jan 25: Race injustice/bias in biology and medicine (Team 1 and Team 2)</li> <li>b. Jan 30: Designer babies and Genetic Bias (Team 3 and Team 4)</li> </ol> </li> </ol>
<b>Section 2</b> (Feb 1 – Feb 21)	<b>3. <u>Biology and Sex/Gender</u></b> <ol style="list-style-type: none"> <li>1. Feb 1: Sex differences: From development to aging</li> <li>2. Feb 6: Gender and sexual orientation in health and disease</li> <li>3. Feb 7: Discussion Section – Team 5 and Team 6</li> <li>4. Feb 8: Spotlight Ben Barres</li> <li>5. Feb 13: Imposter syndrome</li> <li>6. Feb 14: Discussion Section – Team 7 and Team 8</li> <li>7. Student presentations <ol style="list-style-type: none"> <li>a. Feb 15: Sex/gender/ injustice in academia (Team 5 and Team 6)</li> <li>b. Feb 20: Sex/gender bias in biomedical research (Team 7 and Team 8)</li> </ol> </li> </ol>
<b>Section 3</b> (Feb 22 – Mar 6)	<b>4. <u>Biology of Experience</u></b> <ol style="list-style-type: none"> <li>1. Feb 22: Epigenetics</li> <li>2. Feb 27: Intergenerational and Transgenerational inheritance</li> <li>3. Feb 28: Discussion Section – Team 9 and Team 10</li> <li>4. Feb 29: Memory and Identity</li> <li>5. Mar 5: Early life stress: From development to aging</li> <li>6. Mar 6: Discussion Section – Team 11 and Team 12</li> <li>7. Student presentations <ol style="list-style-type: none"> <li>a. Mar 7: Learning Disabilities (Team 9 and Team 10)</li> <li>b. Mar 12: Environmental Impact (Team 11 and Team 12)</li> </ol> </li> </ol>
Mar 14	<b><u>Work on Final Writing Assignment</u></b>

NOTE: There is no Midterm or Final Exam in this Course