

**Dr. Melissa Maldonado-Salcedo**  
**SCIENCE AND DIFFERENCE**  
**STS-UY 3204**  
**Tandon School of Engineering / New York University**  
**Spring 2023**

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Office Hours: by Appointment



This course brings together a wide range of thinking and scholarship concerning the concept of “difference” in relation to scientific theory, practice, and its implications. While recognizing the importance of intersectionality, we will focus on some of the most charged dimensions of diversity in the world which are often the most difficult to discuss: race, gender, sexuality, and disability. We will also consider how these markers of difference are predictors of wealth, education, health, housing, employment, and other necessary measures of well-being.

Additionally, this course will explore the intersection between science, technology, and medicine through the lens of race, gender, sexuality, and disability.

We will focus on the interplay between the life sciences and politics, social identity, and cultural belonging when it comes to (re)defining, resisting, or subverting “difference.” We will consider how scientific claims and technological developments influence cultural understandings of

differences. How do cultural ideas about differences influence knowledge and knowledge production?

## **LEARNING OBJECTIVES**

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We will consider how scientific claims and technological developments influence cultural understandings of difference. How do cultural ideas about differences influence knowledge and knowledge production?

### **Moses Statement**

You must be registered with CSD to receive accommodations. If you are a student with a disability who is requesting accommodations, please contact New York University’s Moses Center for Students with Disabilities at 212.998.4980 or [mosescsd@nyu.edu](mailto:mosescsd@nyu.edu). Information about the Moses Center can be found at [www.nyu.edu/csd](http://www.nyu.edu/csd). The Moses Center is located at 726 Broadway on the 2nd floor.

### **COURSE POLICIES**

- Due to the topics discussed in class, conflicting opinions and thoughts are expected. However, all class discussions should be conducted and presented with the utmost respect for others. (We “*call in*”- no, “*calling out*.”)
- This course consists of lectures, discussions, and ethical reasoning exercises.
- The course will run *asynchronously*.
- If you need help meeting the requirements of this course, please come and speak with me as soon as possible. I will work with you and will remain invested in your success.
- Though I will remain as faithful as possible to this syllabus, I reserve the right to make changes. These will be announced in advance in class and in writing when appropriate.
- This is a tough time; however, you are not alone. I am here for you, and I hope that as the course progresses, we can become a community

to support each other.

## GRADE BREAKDOWN

### Reflections- 30%

- A total of 3 reflections addressing the week's themes/texts.
- You will have to engage with 2-3 texts, provide an analysis, and reflect critically on the broader implications.
- Videos/Lectures/documentaries also count as texts.
- Focus on demonstrating evidence of what you have learned with the application of language and terms of the course.
- Reflect on a range of texts and understandings (do not repeat texts in your reflections).

For example, choose another text you have yet to explore if we have discussed the documentary with discussion questions.

- Do not summarize the readings/texts.
- These submissions are reflections on the texts in conversation *with* the lecture.
- Maximum three (3)pages, minimum two (2).
- Post in the **assignment tab** only.
- **Due Weeks 4, 8, 12**
  - Reflection 1 can address any topic/text from week -2-6,  
Due **March 5, 2023**
  - Reflection 2 can address any topic/text from week -7-11  
Due **April 9, 2023,**
  - Reflection 3 can address any topic/text from weeks  
12-14 **due May 7, 2023**

### Homeworks and Ethical Exercises-20%

- Discussion Questions
- Homeworks

### Class Participation -15%

- Responses to Classmates

### Film Review-10%

### Abstract for Final-5%

### Final-20%

- You will be required to turn in an abstract that will need to be approved before submitting the final on Week 14.
- Review *Explainer* on Final

- Propose an original project that builds on your interests and will best showcase your skills in responding to the question, “What is the relationship between science and difference?”

**A few examples of final projects for this course that creatively engaged with this question include**

- Relationship of AI and Learning Differences (Reflective Essay)
- South Korean Beauty Standards (short documentary)
- Child of Immigrants (collection of poems)

### **Course Schedule\***

- **Monday-** Weekly Check-In Posted on Brightspace **Tuesday-** follow the Syllabus
- **Thursday-** follow the Syllabus
- **Fridays-** Assignments/HWs due
- **Sunday-** Class participation responses are due

*\*All deviations or revisions to the schedule will be communicated in writing. The syllabus will then be revised accordingly, and the latest version will be posted on Brightspace.\**

### **COURSE OUTLINE**

#### **WEEK 1 Introduction**

##### **January 24, 2023**

- Review of Syllabus
- Overview of the Course
- Homework- Introduce yourself! (Post on Discussion board & Assignment Tab)

##### **January 26, 2023 History, Privilege, and Science**

###### Lecture

- Privilege

###### Read

- "Unpacking the Invisible Knapsack" by Peggy McIntosh

###### Listen

- "How to Recognize your Privilege"- by McIntosh (TED Talk)
- "The Power of Privilege"- by Kalan (TED Talk)

#### **Week 2 January 31, 2023 (Cont.)**

###### Lecture

- History of Science

###### Read

- “The Forgotten Lessons of the American Eugenics Movement” by Andrea DenHoed
- “Geneologies of Modern Racism” by Cornel West

- “Race does not Equal DNA” by Joseph L. Graves

Watch

- “The Couple in the Cage” by Coco Fusco and Guillermo Gomez-Peña
- “Home is the Place...” by Subhadra Das (TED Talk)

**Week 3 In Defense of Intersectionality**

**February 7, 2023**

Lecture

- Gender Identity & Performance

Read

- “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective” by Donna Haraway
- “Op-Ed: Are gender feminists and transgender activists undermining science?” by Debra W. Soh (recommended)
- “Feminist Encounters: Locating the Politics of Experience” by Chandra Talpade Mohanty

Watch

- *Period. End of Sentence* (2018)

**February 9, 2023**

Lecture

- Intersectionality and Power
- “Dangers of a Single Story” by Chimamanda Ngozi Adichie

Read

- “Mapping the Margins: Intersectionality, Identity Politics, and the Violence against Women of Color” by Kimberly Crenshaw
- “Understanding Patriarchy” by bell hooks

Homework

- “How do you identify? What does science say about who you are, and how you conform/resist these narratives/stereotypes in your life?” (1-2 page)
- Due by February 12, 2023

**WEEK 4 Medical Gaslighting and Pseudoscience**

**February 14, 2023**

Lecture

- Battling Bad Science

Read

- “Chapter 1, the Data of Biology” by Simone de Beauvoir
- “Scientific Racism and the Emergence of the homosexual Body” by Siobhan Somerville
- “The Disturbing Resilience of Scientific Racism” by Ramkin Skibba

Watch

- “Scientific Studies” on Last Week Tonight

- “Battling Bad Science” by Ben Goldacre (TED Talk)

### February 16, 2023

#### Read

- “A Genderless Future?” by Fausto Sterling

#### Watch

- *XXY* (2007)

#### Homework

- Respond to Discussion Questions (due Friday)
- Respond to two (2) of your classmates (due Sunday)

## WEEK 5 Medicalizing Differences

### February 21, 2023

#### Lecture

- Medicalization

#### Read

- “I’m Not Lazy, I’m Sick” by Melissa Maldonado-Salcedo
- “Why Racial Justice needs to include Mental Health” by Oliver Glass

#### Watch

- “I’m not your inspiration, thank you very much” by Stella Young (TED Talk)
- *Holding Moses: Motherhood in the Face of Disability* (2022)

### February 23, 2023

#### Lecture

- Ableism

#### Read

- “Rethinking disability: the social model of disability and chronic disease” by Sara Goering
- “Special Education too often leads to Jail” by Jackie Mader and Sarah Butrymowicz

#### Watch

- *Tuesco: Laughing in the Face of Disability* (2022)

#### Homework

- Using one of the short documentaries from this week, write a persuasive letter to an elected official to advocate for a policy of your choice to improve the lives of *Tuesco* or *Moses* (1-2) pages.

## WEEK 6 Defining Personhood

### February 28, 2023

#### Lecture

- Personhood

#### Read

- “Catholic Conceptions of Personhood and Gene Editing” by Alience Kalbian

- “What makes a Fetus a Person?” by Erika Bachiochi

**March 2, 2023,**

Watch

- *My Octopus Friend (2020)*

Homework

- Respond to Discussion Questions (due Friday)
- Respond to two (2) of your classmates (due Sunday)

## **WEEK 7 Poetic Science**

**March 7, 2023**

Lecture

- Poetry 101
- “How Poetry can Heal Us?” by Rafael Campo (TED Talk)

Read

- “Sonnet: to Science” by Edgar Allen Poe
- “Mosquitos” by Alison Hawthorne Deming
- “Scientists Take on Poetry” by Katherine Wrights
- “Artificial Intelligence-Enagled Science Poetry” by Ahmad R. Kirmani

**March 9, 2023**

Lecture

- Identity Formation and Emotions

Read

- “Poetry is not a Luxury” by Audre Lorde
- “The Exactitude of Science” by Jorge Luis Borges
- “Poetry as a Creative Practice to Enhance Engagement and Learning in Conservation Science” by Janchowski-Hartley

Homework

- Respond to this question in poetry form:  
*“When was the first time you felt different?”*
  - Due March 21, 2023

## **WEEK 8- SPRING BREAK - March 13-20, 2023**

## **WEEK 9 Fitting In and Perfecting Beauty**

**March 21, 2023**

Lecture

- Beauty Industries

Read

- “Beauty Weighs in Argentina” by Melissa Maldonado-Salcedo
- “Equal Skin-care Rights now!” by Sheila Yasmin Marikar”

- “Acrostic Poems about Going Gray in my Thirties” by Kerry Elson

#### Watch

- *The Ritual in Beauty* (2022)

#### Thursday

#### Listen

- “Killing us Softly 4” by Jean Kilbourne

#### Homework

- “When was the first time you recognized beauty in the world?” (1 page)
- Respond to 5 Discussion Questions (due Friday)
- Respond to two (2) of your classmates (due Sunday)

### **WEEK 10    Techno-Hysteria**

#### **March 28, 2023**

#### Lecture

- Programming Inequality

#### Read

- “Should we be afraid of AI?” by Ron Schmelzer
- “An A. I Pioneer on What We Should Really Fear” by David Marchese

#### **March 30, 2023**

#### Read

- “How Frightened Should I be of A.I?” by Tad Friend

#### Watch

- *Megan* (2023)

#### Homework

- Write a film review that also integrates an analysis using the assigned texts on the selected film
- Review *Explainer*
- Due April 2, 2023

### **WEEK 11    Black Experience**

#### **April 4, 2023**

#### Lecture

- Black Sexuality

#### Read

- “The Black Experience; A Slow Walk of Trees (as Grandmother Would Say) Hopeless (as Grandfather Would Say)
- “Racism is Terrible. Blackness is Not” by Imani Perry
- “The Transformation of Silence into Language and Action” by Audre Lorde

#### **April 6, 2023**

#### Listen



- “The Trauma of being Black in America” by NPR

#### Watch

- *Get Out* (2017) - Available on Kanopy

#### Homework

- Respond to Discussion Questions (due Friday)
- Respond to two (2) of your classmates (due Sunday)

### **WEEK 12 Community and Belonging**

#### **April 11, 2023**

#### Lecture

- Community and Identity

#### Read

- “The Master’s Tools Will Never Dismantle the Master’s House” by Audre Lorde
- “The Construction of Masculinity and the Triad of Men’s Violence” by Michael Kaufman
- “Homophobia: A Weapon of Sexism” by Suzanne Pharr (recommended)

#### **April 13, 2023**

#### Lecture

- Violence

#### Read

- “Amérka, Amérka: A Palestiian abroad in the Land of the Free” by Anton Shammas
- “Unspeakable Conversations” by Harriet McBryde Johnson

#### Watch

- “The Necessity of Normalizing Queer Love” by Panti Bliss (TED Talk)

### **WEEK 13 Extraterrestrials and Humans**

#### **April 18, 2023**

#### Lecture

- Aliens and ETs

#### Read

- “Guidelines Following First Contact” by Dennard Dayle
- “Aliens I Wish I could Date” by Avi Steinberg and Irving Ruan
- “Technology of the Ancients” by Andrew May

#### Watch

- *Specimen* (Alien 40th Anniversary)

#### **April 20, 2023**

#### Homework

- Using “Alien Love Underpants” by Claire Freeman and Ben Cort as a guide. Create a resource (infographic) to “teach” children about the topic of E.Ts, building on the selection of texts and the latest, most significant information available to the world.
- Post a resource (PDF or JPG) and a link to an *Explainer*.

- Due April 23, 2023

## **WEEK 14 Decolonizing STEM**

**April 25, 2023**

### Lecture

- Decolonizing Science

### Read

- “How Sun Ra Taught us to Believe in the Impossible” by Hua Hsu
- “Decolonizing the Biosciences: Turning Lip Service into Action” by Virginia Gewin

### **Thursday**

### Read

- “Imperialism, History, Writing, and Theory” by Linda Tuhiwai Smith

### Watch

- *The Body Remembers When the World Broke Open* (2019)

### Homework

- Write a 1-page Film review on the film
- Review *Explainer*
- Final Abstract Due

## **WEEK 15 The Science of Wokeness**

**May 2, 2023**

### Review

*Explainer* on Final

### Read

- “The Truth Will Out: Scientific Pragmatism and the Geneticization of Race and Ethnicity” by Simon M. Outram and George T. H. Ellison
- “Reading Off: On the Emergence of the Scientific Gaze” by Helmut et al.

### **May 4, 2023- OPEN OFFICE HOUR\***

### Read

- “Who Needs the Scientific Methods?” by Stephen G. Brush
- “Formative Forces: Biological, Philosophical, and Linguistic Generativity” by Sievers et al. (recommended)
- “Science goes Woke” by Daniel Tenreiro

\*I will hold an open office hour for general questions and reviews on the final day of our scheduled class.\*