As the birthplace of the bomb and also as a main-player in the current nuclear weapons industry, New Mexico is a rich source of study for all things “nuclear.” In this course, we will explore multiple aspects of nuclearism in the Southwest, including environmental justice issues, environmental racism, radioactive colonialism, atomic tourism, and the global implications of “the bomb.” How does the ubiquitous presence of nuclearism in the Southwest impede our ability to live sustainably? What social justice concerns must we confront and what communities most bear the brunt of those concerns? We will take an interdisciplinary and critical approach to answering these questions and more throughout this course.

**Course Objectives:**

- To gain a thorough understanding of the historical, environmental, and socio-cultural impacts of nuclear colonialism on our local communities.
- To be able to identify social equity issues regarding race, class, and gender related to nuclearism.
- To strengthen critical thinking skills through intensive writing, reading, and discussion.
- To sharpen students’ ability to ask critical questions and contextualize conversations about sustainability and environmental justice within current activism and scholarship.

**Course Outcomes:**

- Students will master at least 70 percent of factual course content measurable via reading responses, a midterm exam, and critical essays.
- Students will create and present one original research project, citing at least six scholarly sources, creatively responding to the three pillars of sustainability and at least three consequences of nuclear colonialism.
- Students will complete 10 hours of community engagement such as public events and grassroots organizations to supplement classroom learning.
- Students will attend at least one of two out-of-class field trips and write a critical reflection paper grounded in scholarly literature using proper citation such as MLA.

**Required Texts:**

- Various articles available on our class UNM Learn website (https://learn.unm.edu/).
Grading Scheme:

Undergraduate Students:
- Class Participation: 15%
- Reading Responses: 20%
- Community Hours: 10%
- Field Trip Critical Reflection/Class Facilitation: 25%
- Final Project: 30%

Graduate Students:
- Class Participation: 15%
- Reading Responses: 20%
- Class Facilitation: 15%
- Community Hours: 10%
- Field Trip Critical Reflection: 10%
- Conference paper: 30%

Class Participation:
This class relies on the intellectual commitment and active participation of all students. In order for the course to be effective, you MUST have the reading assignments completed and ready for in-depth discussion for each meeting. Active listening and mutual respect are requirements for this course. Our course covers topics that you may not agree with or may elicit intense and emotional reactions from you. While some readings may challenge you or make you feel uncomfortable, take this as sign that you are learning and pushing the boundaries of what you take for granted. I ask that you keep an open mind and challenge yourself while being respectful of the authors we read, your fellow classmates, and me. Hate speech, constant interruptions, and disrespect will not be tolerated.

Please turn off and put away all cell phones during class. Refrain from facebook, email, and anything other than a word doc for note-taking as it is distracting to all around you.

Reading Responses:
For each week’s assigned readings, you are expected to identify:

1.) The author’s main arguments
2.) The author’s intended audience
3.) Their sources
4.) Write one question the reading brought up for you and one comment you have about the reading.
5.) If there are multiple readings, synthesize the arguments and answer: “How are these readings in conversation with one another?”

You may write your response in one of two ways:
1. Print out the reading and highlight, underline, and annotate the reading with your notes. Be sure you answer all 5 questions.
2. Write out a response which answers all 5 questions (either hand-written or printed out).

You should purchase a three-ring binder (or notebook) at the beginning of class to use for your reading responses, which you will bring to class each day. We will begin class every day with a discussion of the readings and I will check that responses are done. I may also collect your binders at some point in the semester and read your responses. It is very important that you stay on top of your readings as this is a discussion-based class. I will grade the responses on a complete/not-complete grading scale. No emailed responses will be accepted. If you write a reading journal for the readings labeled OPTIONAL, you will receive an extra credit point counted towards your overall reading response grade.
Class Facilitation:
Every student will get the chance to help facilitate our class discussion on one of the readings. Each undergraduate student will be required to pair up with one or two other students to help lead class discussion of an assigned reading. You will be required to provide a brief summary of the reading’s main points, audience, and sources and at least three discussion questions for the class. You will NOT be required to submit a reading response for the reading that you facilitate.

Graduate students will also be required to facilitate discussion AND present on a topic related to our course themes. You will provide a brief Powerpoint (or other visual) and presentation with a background on your chosen topic and facilitate a discussion of the topic that includes our related class readings. The presentation should deepen our understanding of a topic or issue related to nuclearism.

Graduate Students:
Graduate students in SUST 418 are expected to complete all assignments that undergraduates students are required to complete and are also expected to present on one topic related to course themes and facilitate discussion on this topic. Graduate students are expected to complete at least one reading response from the “optional” readings each week. Graduate students are required to write short conference-style papers at the end of the course instead of the final projects. The paper’s length and topic will be decided after a consultation with the instructor.

Field Trip Critical Reflections:
You are required to attend at least ONE of the two Saturday field trips (Los Alamos on TBA the Jackpile-Paguate Uranium Mine near Laguna on TBA) in addition to the class trip to the NMNSH in Albuquerque and an in-class video of the Trinity Site. Note: if you want to attend the Trinity Site on your own you can on October. After attending these field trips, you will write a critical reflection in which you compare the sites you visited, and tie in your original observations with our course material. Your paper should be 3-5 pages double-space and typewritten with a bibliography submitted on Learn. The reflection must follow the specific guidelines that will be provided on Learn and cite at least 3 sources from our class readings and 2 outside scholarly sources. This paper is due through Learn on November 26th.

Community Hours:
A central facet of the Sustainability Studies Program is bridging the gap between theory and action/activism. In this course, you are required to log ten “Community Hours” in which you connect the topics of this course with events, organizations, and activism within our wider community. I will share many opportunities via email and in class such as public lectures, events, and volunteer opportunities that will count towards these hours. You need to keep a log of your hours (how many hours at each event), get a signature if possible or provide a brochure, and write a one-paragraph reflection on the hours and how they complimented your learning in our course. Be sure to email me ahead of time if you are unsure if an event will count towards these hours. The log is due December 5th.

Final Projects:
Students will have the opportunity to create original projects that align with our course topics. You will have the option to pair with one or two other students in your project, or to work alone. Ideally, your projects will respond creatively to the social justice issues brought up by our discussions, speakers, and
reading material and also be useful to communities beyond our classroom. Past projects include: creating a website with information about the health impacts of radiation, art projects responding creatively to nuclearism, mapping projects visualizing the impacts of nuclearism on the land, organizing a panel discussion with local activists on nuclear issues...the sky is the limit. Go with your passions and as well as your gifts.

You will turn in a proposal for your project on September 19th and then discuss your project and progress with me during one outside-of-class meeting scheduled during the semester. You will present your final project on December 12th and turn in a short reflection paper about the work you did over the semester. With your permission, I will post your project on our class website: www.nuclearnewmexico.com.

**Attendance Policy and Late Work:**
Regular attendance is crucial to maintaining a committed and vibrant intellectual atmosphere. You are allowed TWO absences, and after two absences your overall participation grade will be lowered by 5 points for each additional absence. Documented medical and family emergencies are not included. (Note: Stellar participation in class has the potential to raise a borderline grade. Attendance problems or lack of engagement can lower your grade.) Unless you have made prior arrangements with me, late papers will be graded after a 10% reduction for each day past the due date. This does not apply to documented medical or family emergencies. Late reading responses will receive half credit.

**Trigger warning: sexual assault and related issues:**
According to UNM policy your instructor is a "mandatory reporter" required to report sexual assault, misconduct, and harassment they observe or learn of through communications with students. Students who bring such information to the attention of their instructor may become subject of an investigation by the Office of Equal Opportunity. Your option is to first contact a confidential reporting location such as LoboRESPECT Advocacy Center, WRC, or LGBTQ office to assess your options without creating automatic actions beyond your control. Nonetheless, your SUST instructor remains a resource and direct contact with UNM if you so desire.

**Immigration Status:**
As an educator, I fully support the rights of undocumented students to an education and to live free from the fear of deportation. I pledge that I will not disclose the immigration status of any student who shares this information with me unless required by a judicial warrant, and I will work with students who require immigration-related accommodations. For more information and/or resources, please contact the New Mexico Dream Team at info@nmdreamteam.org.

**Academic Dishonesty:**
See pathfinder.unm.edu/common/policies/academic-dishonesty.html for the official policy. Let me know if you have any questions. Always cite your sources (whether you quote directly or paraphrase) to clearly to avoid problems with plagiarism. We will discuss plagiarism in detail at the beginning of the course so as to avoid any confusion.

**Accommodation:**
Accessibility Services (Mesa Vista Hall 2021, 277-3506) provides academic support to students who have disabilities. If you think you need alternative accessible formats for undertaking and completing coursework, you should contact this service right away to assure your needs are met in a timely manner. If you need local assistance in contacting Accessibility Services, see the Bachelor and Graduate Programs office.
Week 1: Introductions, Origin Stories, and Nuclearism

Tuesday, Aug. 20th:

Topics:
1. Introductions  
2. Go Over Syllabus, Class Structure, Reading Journals, Class Facilitation Sign-Up  
3. Hiroshima and Nagasaki: The decision to drop the bomb  
   Watch the beginning of Oliver Stone’s Untold History of the United States: The Bomb

Thursday, Aug. 22nd:

Topics:
1. Post- Cold War New Mexico  
2. The Manhattan Project  
3. An Interdisciplinary Introduction to Nuclearism: the Four Characteristics

Readings:
- Excerpt from Barefoot Gen by Keiji Nakazawa  
- “Nuclear Legacies: Arrogance, Secrecy, Ignorance, Lies, Silence, Suffering, Action” by Laura Nader and Hugh Gusterson  
- OPTIONAL: “Introduction and The Origins of Los Alamos” from The Day the Sun Rose Twice by Ferenc Szasz  
- OPTIONAL: Selections from Hiroshima by John Hersey

Due: Reading journals

Week 2: Health Impacts of Radiation, Uranium, & Indigenous Activism

Tuesday, Aug. 27th:

Topics:
1. Reference Man  
2. Radiation 101: “No Safe Amount” Hormesis theory vs. linear threshold  
3. Radium dial painters, BEIR report, gender & radiation

Readings:
- “Radiation Basics” from The Nukes Next Door  
- Excerpts from Multiple Exposures by Catherine Caufield  
- OPTIONAL: “Bad to the Bone: Analysis of the Federal Maximum Contaminant Levels for Plutonium-239 and Other Alpha-Emitting Transuranic Radionuclides in Drinking Water” by Arjun Makhijani  
- OPTIONAL: “Background Radiation” from A Field Guide to Radiation

Due: Reading Responses
Topics:
1. Uranium, Nuclear Colonialism, & Indigenous Activism
2. The “Front End” of the Nuclear Fuel Cycle

Readings:
- Excerpt from Land of Nuclear Enchantment by Lucie Genay
- Guest Speaker: Leona Morgan from The Nuclear Issues Study Group, Diné No Nukes & The Radiation Monitoring Project

Due: Reading responses

Week 3: Environmental Racism and Settler Colonialism

Tuesday, Sept. 3rd:
Topics:
1. Environmental Racism

In class film: The Return of Navajo Boy

Thursday, Sept. 5th:
Topics:
1. Settler Colonialism and Radioactive Colonialism
2. New Mexico’s Three Periods of Colonialism

Readings:
- “Sacrificial Land” from Wastelanding: Legacies of Uranium Mining in Navajo Country by Traci Voyles
- Excerpts from The Militarization of Indian Country by Winona LaDuke
- OPTIONAL: “Native America: The Political Economy of Radioactive Colonialism” by Ward Churchill and Winona LaDuke

Due: Reading responses

Week 4: Science as Violence? The Logic of Progress, Human Experimentation

Tuesday, Sept. 10th:
Topics:
1. Science, Gender, and Violence

Readings:
- “Science, Nature, and Gender” by Vandana Shiva
- “Science” from Welcome to the Machine by Derrick Jensen
- OPTIONAL: “Macho Science” from The Gendered Atom by Theodore Roszak

Due: Reading responses

Thursday, Sept. 12th:
Topics:
1. Human Experimentation
2. Knowledge at What Cost?
Readings:
- Selections from *The Plutonium Files* by Eileen Welsome
- OPTIONAL: Selections from *The Nazi Doctors* by Robert Jay Lifton

(FYI: Zimmerman Library has a collection of government documents titled “Human Radiation Experiments” - if you are interested in this topic for your project, talk to me about accessing these documents.)

Due: Reading responses

**Week 5: Global Nuclear Testing, Nuclear Accidents, Nuclear Winter**

**Tuesday, Sept. 17th:**

**Topics:**
1. Nuclear Winter
2. Nuclear Accidents/Close-Calls

Readings:
- “The Nuclear Winter” by Carl Sagan
- Selections from “The Limits of Safety” by Scott Sagan
- “Trump and the Nuclear Codes: How to Launch a Nuclear Weapon” Union of Concerned Scientists
- Selections from *The Doomsday Machine: Confessions of a Nuclear War Planner* by Daniel Ellsberg
- OPTIONAL: Babysitting the Bomb” by Reid Cherlin
- OPTIONAL: Selections from *Broken Arrow*
- OPTIONAL: “Death Wears Bunny Slippers: Hanging Out with the Disgruntled Guys who Babysit Our Aging Nuclear Missiles.” By Josh Harkinson

Due: Reading responses

**Thursday, Sept. 19th:**

**Topics:**
1. Nuclear Testing/ “Rehearsals”
2. Radionuclides and Bioaccumulation
3. NUKEMAP

Readings:
- “From Hell to Breakfast” from *Savage Dreams* by Rebecca Solnit
- “So Long Mom, I’m Off to Drop the Bomb” by Alex Wellerstein
- OPTIONAL: Selections from *Under the Cloud: The Decades of Nuclear Testing* by Richard Miller

Due: Reading responses, **Project Proposals**
**Week 6: Operation Crossroads, Bikini Atoll, and Nuclear Waste**

**Tuesday, Sept. 24th:**

**Topics:**
1. Nuclear Testing in the Pacific Islands

**Reading:**
- “The Movement for Environmental Justice in the Pacific Islands” in *The Environmental Justice Reader* by Valerie Kuletz
- OPTIONAL: “‘more like us than mice’: Radiation Experiments with Indigenous Peoples” by Barbara Rose Johnston

Watch *Nuclear Savage*

Due: Reading responses and schedule individual meetings with Eileen

**Thursday, Sept. 26th:**

**Topics:**
1. Nuclear Waste: An Overview of the Problem
2. Waste Classification and WIPP
3. International perspectives on nuclear waste

**Reading:**
- “Nuclear Wasteland” from *The Tainted Desert* by Valerie Kuletz
- “This Place is Not a Place of Honor” Sandia National Laboratories Report
- OPTIONAL: Excerpts from *Nuclear Wastelands*

Due: Reading responses

**Week 7: The Mixed Waste Landfill & CIS: Ongoing Struggles for Clean Air and Water**

**Tuesday, Oct. 1st:**

**Topics:**
1. The Mixed Waste Landfill: Albuquerque’s Dangerous Dump
2. Isleta Pueblo and Water Rights

**Reading:**
- “Toxic Waste: Everything Has to Go Somewhere” from *The Orphaned Land* by V.B. Price

Due: Reading responses

**Thursday, Oct. 3rd:**

**Topics:**
1. Holtec and proposed CIS nuclear waste storage in NM
2. HLRW Storage in the U.S.

**Reading:**
- “All Spent Nuclear Fuel in the U.S. Will Soon End Up in One Place” *National Geographic* by Sammy Feldblum
- Excerpt from Holtec’s HI-STORE Environmental Report

Due: Reading responses
**(Optional Individual) FIELD TRIP TO THE TRINITY SITE: SATURDAY, OCTOBER 5, 2019**
(Readings: Alex Wellerstein, and Michihiko Hachiya)

### Week 8: Phytoremediation; Anti-Nuclear Movements and Encampments

**Tuesday, Oct. 8th:**

**Topics:**

1. Phytoremediation and nuclear contamination
2. Radical mycology
3. Civil Rights & Anti-Nuclear Movements: Black activism

**Readings:**

- Selection from *Radical Mycology: A Treatise on Seeing & Working with Fungi* by Peter McCoy
- Selections from *Africans Against the Bomb: Nuclear Weapons, Colonialism, and the Black Freedom Movement* by Vincent Intondi

Due: Reading responses, **Project/Paper Outline**

**Thursday, Oct. 10th:**

**FALL BREAK: No Class**

### Week 9: Nukespeak, The Trinity Site & the Tularosa Basin Downwinders

**Tuesday, Oct. 15th:**

**Topics:**

1. Examining Nuclear Discourse
2. Nukespeak

**Readings:**

- “The Metaphors of Radiation Or, Why a Beautiful Woman is Like a Nuclear Power Plant” by Jane Caputi
- Selections from *Nukespeak* by Stephen Hilgartner

Due: Reading Responses

**Thursday, Oct. 17th:**

**Topics:**

1. Tularosa Basin Downwinders
2. Radiation Exposure Compensation Act

**Reading:**

- Excerpts from *Unknowing, Unwilling, and Uncompensated*  
  Guest Speaker: Tina Cordova, Tularosa Basin Downwinders Consortium

Due: Reading Responses

### Week 10: Feminist Perspectives on the Bomb

**Tuesday, Oct. 22nd:**

**Topics:**

1. Gendering the Bomb
2. Feminist analysis of discourse

**Readings:**

- “Sex and Death in the Rational World of Defense Intellectuals” by Carol Cohn

Due: Reading responses
Thursday, Oct. 24th:

Topics:
1. Feminism and Nuclearism
2. Sexual Violence and Nuclearism

Readings:
- “Explosive Issues: Sex, Women, and the Bomb” from *Homeward Bound* by Elaine Tyler May
- “Hot Spots: Justice, Power, and Gender in the Radioactive Present” from *Wastelanding: Legacies of Uranium Mining in Navajo Country* by Traci Voyles
- OPTIONAL: “From Secrets of Life to Secrets of Death” by Evelyn Fox Keller

Due: Reading responses

**Week 11: Atomic Tourism**

Tuesday, Oct. 29th:

Topics:
1. Atomic Tourism and “Consuming” the Bomb

Readings:
- “Atomic Tourism” Hugh Gusterson
- “Wicked Things: Exploring the Future of Nuclear Weapons at Sandia and Livermore” from *A Nuclear Family Vacation* by Nathan Hodge & Sharon Weinberger

Due: Reading responses

Thursday, Oct. 31st:

In-class field trip to the National Museum of Nuclear Science and History (NMNSH) in Albuquerque

Visit [http://www.pcf.city.hiroshima.jp/frame/Virtual_e/tour_e/guide2_4.html](http://www.pcf.city.hiroshima.jp/frame/Virtual_e/tour_e/guide2_4.html) for a comparison to the Hiroshima Peace Museum and write a brief (3-5 paragraph) response to the field trip comparing these two sites and relating them to our class themes. Due on Learn November 5th.

**Week 12: LANL, the “Nuclear Uncanny,” and Cultural Responses to the Bomb**

Tuesday, Nov. 5th:

Topics:
1. “The Nuclear Uncanny” at Los Alamos
2. LANL’s impact on communities of color

Readings:
- Excerpts from *Los Alamos Revisited: A Workers’ History* by Peter Malmgren and Kay Matthews

Due: Reading responses

Thursday, Nov. 7th:

Topics:
1. LANL and “Scientific Conquest”
Readings:
- “The Sociocultural Impacts of Scientific Conquest” from
  *Land of Nuclear Enchantment* by Lucie Genay

Due: Reading Response

### Week 13: Nuclear Energy: Fukushima, Chernobyl, Church Rock
Tuesday, Nov. 12th:

**Topics:**
1. **Fukushima Daiichi Meltdown**
2. **The Connection Between Nuclear Power and Nuclear Weapons**
3. **International perspectives on nuclear energy**

**Readings:**
- Excerpts from *Devil’s Tango: How I Learned the Fukushima Step by Step* by Cecile Pineda
- Selections from *Nuclear Roulette* by Gar Smith
- OPTIONAL: Reading: *Not in the Name of Climate: Not in Our Name! People in India Resist Nuclear Power* by Kumar Sundaram

Due: Reading responses

Thursday, Nov. 14th:

**Topics:**
1. **Cultural Responses to the Bomb**
2. **Sci-fi, Cold War Films and Beyond**
3. **Informal Project Check-ins**

**Reading:**
- “Mutant Ecologies: Radioactive Life in Post-Cold War New Mexico”, Joseph Masco
- “The Nuclear Mushroom Cloud as Cultural Image” by Peggy Rosenthal

Due: Reading responses

### Week 14: Resistance, Resilience, and Activism
Tuesday, Nov. 19th:

**Topics:**
1. **The Work that Reconnects: Trauma and Environmental Destruction**
2. **Finding Support and Inspiration: The Great Turning**

**Reading:**
- “The Greening of the Self” by Joanna Macy
- “How to Deal with Despair” by Joanna Macy

Due: Reading Responses
Thursday, Nov. 21st:

**Topics:**
1. Leslie Marmon Silko’s *Ceremony*

**Reading:**
- *Ceremony* p.1-78

Due: Reading responses and Critical Field Trip Reflection

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<tr>
<th><strong>Week 15: No Class, Read Ceremony</strong></th>
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<tr>
<td>Tuesday, Nov. 26th: No Class: continue work on final projects and read <em>Ceremony</em></td>
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<td>Thursday, Nov. 28th: No Class: “Things-taken” Break (read <em>Ceremony</em>)</td>
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<th><strong>Week 16: Ceremony Pt. 2 and Final Projects</strong></th>
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<td>Tuesday, Dec. 3rd: Topics:</td>
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<tr>
<td>1. Leslie Marmon Silko’s <em>Ceremony</em> continued</td>
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**Reading:**
- *Ceremony* p.78- end

Due: Reading responses

Thursday, Dec. 5th:

**Topics:**
1. Final Prep and Practice for Presentations
2. Integration of the Whole
3. Nuclear Guardianship: Rocky Flats
4. Art as Activism: Judy Chicago, Patrick Nagatani, and more

**Reading:**
- “Rocky Flats & Nuclear Guardianship”
- “The Billboard Campaign” by Joseph Masco
- Radiation Monitoring Project website

Due: Community Hours Log Sheet

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<tr>
<th><strong>Week 17: Finals Presentations, Final Projects</strong></th>
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<td>Thursday, Dec. 12th (3:00-5pm): Location TBA</td>
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