**2019 DINÉ Seminar Topics**

Impacts of Hard Rock Mining

Jani C. Ingram, PhD

Professor of Chemistry & Biochemistry

A century and a half of hard-rock mining has had long-term effects on agriculture, ranching, aquatic life, human and wild life, and aquifers. The focus of this seminar will be to discuss the impact of hard rock mining on the environment from a scientific perspective. We will discuss topics such as water chemistry, geology, plant uptake of metals, mining-related contaminant exposure routes for animals including people, and remediation strategies. The seminar will include demonstrations and activities that focus on providing a better understanding of the science associated with hard rock mining.

The Human Body: Marvels of Physics, Chemistry and Biology working together!

Max Dass, PhD

Professor of Science Teaching and Learning

This seminar will explore the functioning of the human body in the context of specific principles of Physics, Chemistry, and Biology that work together to produce a healthy living human being. Examples of the principles of Physics may include laws of motion, types of levers, and other examples of ‘simple machines’ that can be found in the human body. Chemistry principles may include balance of reactions and how that balance produces just the right conditions for keeping the body alive. These principles would also include the regulatory mechanisms that operate in the body to keep the balance right and how certain imbalances may lead to harmful conditions such as diabetes and obesity. The biological principles can be ultimately reduced down to chemistry but on a “gross” level they might include biological phenomena such as how various traits are governed/influenced by genetic processes and how they are passed on from parents to offspring. This topic can be can be incorporated in the curriculum at any grade level using various levels of detail and depth as developmentally appropriate for the age group of students.

Clean Air and Water: Keeping the Environment Clean and Safe on the Navajo Nation

Karen Jarratt-Snider, PhD

Associate Professor of Applied Indigenous Studies

Water and air are natural elements that many Native peoples consider sacred elements. But how do we know if the air we breathe and water we drink, cook with and use in our households each day are safe from both human-made and naturally-occurring contaminants? This seminar will examine environmental laws and regulations such as the Clean Water Act, the Clean Air Act, the Safe Drinking Water Act, and the Emergency Planning and Community Right-to-Know Act. Teacher Fellows will examine how the Navajo Nation and other tribal nations can exercise their sovereignty and assume authority to implement these federal environmental safety and health laws in their own communities to keep Navajo people safe from environmental contaminants.

Twentieth-Century and Contemporary Native North American Art

Jennifer McLerran, PhD

Associate Professor of Art History

This seminar explores twentieth-century and contemporary Native North American art. We will critically evaluate and analyze recent Native arts within their diverse contexts of production and reception. Teacher Fellows will gain an understanding of how and why recent Native North American arts have been created, and they will examine how their varying forms work to produce and reinforce specific world views and belief systems. Readings are paired with examination of artworks. Through this seminar, Teacher Fellows will be able to analyze, compare, and contrast twentieth-century and contemporary Native North American arts and the cultural contexts within which these arts have been produced and circulated. We will explore various types of art mediums, and arts from multiple diverse Native communities. Art can be connected to every grade level and subject area, and teachers can determine how to enrich their curriculum and students’ critical thinking skills through the integration of Native North American art.

Native Americans as Victims and Offenders

Marianne Nielsen, PhD

Professor of Criminology and Criminal Justice

Why are there so many Native Americans as offenders and victims in the Criminal Justice System? Why and how are Native Americans are discriminated against by the criminal justice system? This seminar tackles these questions and explores different kinds of victimization such as hate crimes, environmental dumping, human trafficking, and sexual assault. The seminar will focus on the impacts of colonial tools such as boarding school, discriminatory laws, and reservations that have led to disadvantages and trauma for Native American communities, families, and individuals. The seminar will also explore the role of colonial beliefs on present day racism, discrimination, and micro-aggressions by non-Natives. And finally, the seminar will review Native American initiatives to overcome these trends and impacts. Teacher Fellows will be encouraged to consult community members such as ex-offenders, former victims, police officers, judges, behavioral specialists, tribal Human Rights Commissioners, elders, peacemakers and medicine people, in developing their curriculum unit. Seminar materials will include scholarly journal articles, book chapters, and popular media such as films, magazines, and newspaper articles.