

## High School Student Summer Internship with UNEP

This summer three local high school students are completing summer internships with Utah's Nuclear Engineering Program conducting research into Nuclear Engineering. Each student is conducting their own research using computer simulations under the guidance of graduate students and post-doctoral fellows. The students participate in weekly research meetings presenting their work. By the end of the summer, students will have formally written up their research and have learned to use UNEP's high purity germanium detectors to complete passive counting of gamma spectrum's for soil samples.



Pictures from Left to Right: Matthew Hansen, Christian Lamber, and Josh Whisenant

### Christian Lambert

School: Riverton High School

Academic Year: Senior

Research: Simulation of Radiation Protection for Orion Spacecraft

Advisor: Graduate Student Matthew Lund

Christian is currently working on using Geant4 to simulate the radiation that astronauts and spacecraft would be exposed to in various environments. Christian hopes to enter his research into science fairs and to strengthen his Sterling Scholar application. From this research, he hopes to be able to not only learn about nuclear engineering, but to also bolster his future college and job applications, as well as decide on a major for college. Christian enjoys working with computers and has started web and mobile development.

### Matthew Hansen

School: Copper Hills High School

Academic Year: Senior

Research: Simulation of Radiation Protection for Orion Spacecraft

Advisor: Graduate Student Matthew Lund

The goal of Matthew's research is to participate in the national NASA Exploration Design Challenge, which is to design radiation shielding for the Orion spacecraft. He hopes to obtain real research experience and better understand the research process. Matthew plans on majoring

in Mechanical Engineering for his undergraduate degree, followed by a Masters in Business or Engineering. He runs Cross Country and Track for Copper Hills High School.

Josh Whisenant

School: Highland High School

Academic Year: Junior

Research: Simulation of Nuclear Fuel Burnup in UUTR

Advisor: Post-Doctoral Fellow Hermilo Hernandez

Josh has been fascinated with nuclear engineering since his being introduced to the topic in high school chemistry. Working with Doctor Hermilo Hernandez, he is using KENO-VI computer simulations to model burnup rates inside the University of Utah TRIGA reactor, which he hopes will assist UNEP in decisions about reactor reconfiguration and refueling. Josh swims for Highland High School, and he competes in the University of Utah school of music piano competition.