

## **Statistical Methods for Dosimetry and Health Physics Measurements**

### **Executive Summary**

Colorado State University proposes to develop two permanent, graduate-level, stand-alone courses: one in statistical methods and one covering Monte Carlo techniques. Each class will be offered both online and in-residence as 17-week graduate-level courses. The first will cover statistics specifically for health physicists, focusing on dosimetric and radiochemistry applications. The second will focus on using Monte Carlo techniques to solve complex dosimetry and shielding problems.

Objectives: 1) Educate practicing health physicists, regulators and students regarding the unique applications of statistics for bioassay and counting, especially the use of Bayesian statistics and Monte Carlo methods; 2) Make classes available for online delivery regardless of physical location.

Benefits: Students and professionals will understand and be able to utilize statistics to effectively quantify values in all measurements. Students and professionals will be able to understand and use Monte Carlo techniques to solve complex dosimetry and shielding problems.

**Principal Investigator:** Thomas E. Johnson, [tj@colostate.edu](mailto:tj@colostate.edu)