NUCLEAR SAFEGUARDS AND SECURITY GRADUATE ACADEMIC CERTIFICATE

This fully online graduate certificate is not intended to modify or replace any existing program, and instead will offer students the opportunity to focus their education on a growing workforce need within the United States. The certificate will be tied to the Nuclear Engineering and Industrial Management Department at the University of Idaho (UI), the Nuclear Engineering Department at Idaho State University (ISU), and the School of Public Policy at Boise State University (BSU). All courses are asynchronous and online, and will be available through Online Idaho.

Code	Title	Hours
NE 513	Nuclear Security Science	3
BSU Coursework		6
PUBADM 555 Security Regulation & Policy for Nuclear, Radiation & Cyber-related Risk		
CS 581 Cyber Security for the Nuclear Industry		
ISU Coursework		3
NE 4488/5588 Nonproliferation and Safeguards		
Total Hours		**12**

Courses to total 12 credits for this certificate

Course Title and Descriptions:

ISU - NE 4488 / 5588, Nonproliferation and Nuclear Safeguards (3 credits lecture); Offered every other Spring in even years (Spring 2024)

Course Description: https://coursecat.isu.edu/graduate/allcourses/ne/ (https://urldefense.com/v3/__https:/coursecat.isu.edu/graduate/allcourses/ne/__;!!JYXjzlvb!mtGPhnZCNL-oFD3HpKPN4GjfmqPQp1e2WbzTCeYQDflCI2pI129X1375BlvJFfOE0ZXSZz8-1dJpsZQ7Ke_S$/)

Note: BSU links for courses below will updated when available late spring 2023.

BSU - PUBADM 555 Security Regulation and Policy for Nuclear, Radiation and Cyber-related Risk (3 credits lecture); Offered every other Spring in odd years (Spring 2025)

Course Description: This regulation and policy course examines nuclear-radiation security, including cyber-nuclear risk, with an emphasis on the civilian sector. Topics cover: historical developments and relationships across nuclear security, safety and safeguards;
national and international legal frameworks; organizations; transport and import/export; cooperation; culture and management.

BSU - CS581 Cybersecurity for Nuclear Industry (3 credits lecture); Offered every other Fall in even years (Fall 2024)

Course Description: A balance of theoretical and practical knowledge of cyber and information security as it pertains to computing, networking, and electronic communication systems for the nuclear industry. Practical exercises (sometimes in teams) support the theoretical content of the lectures. Examples will be drawn from the nuclear industry.

UI - NE 513 Nuclear Security Science (3 credits lecture); Offered every other Fall in odd years (Fall 2023)

Course Description: An engineering course on threat and risk informed nuclear security covering topics including: physical protection, facility characterization, consequence analysis, access control/delay, insider threats, security culture, transportation security, radiological crime scene, and nuclear forensics. PRE-or-COREQ: BS in Science or Engineering or permission of instructor.

Specific learning outcomes for each course are identified in the attached course syllabi.