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The Science of Nuclear Materials: a one semester graduate course for policy students at GW

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The Science of Nuclear Materials is a graduate level course offered within GW's Elliott School of International Affairs Masters' program. The target audience is students pursuing degrees in nuclear policy or energy studies, security policy studies, or science and technology policy writ large. The assumption is that the students have not had a science class since high-school and consequently, we have a developed a rigorous, yet guided curriculum to teach the basics of nuclear fission, radioactivity, weapons effects, energy production and waste management/disposition. Then goal is to develop a modicum of technical literacy in these basic areas so that students are empowered to engage more fully in their current or future employment aspirations. Meeting only once per week for two hours, as is the norm for policy courses, we have designed a dense offering wherein lecture content is reinforced by hands-on laboratory experiments, the latter of which are typically modified from (for example) a freshman physics course. To date, we have engaged over 100 students with diverse backgrounds and interests, and who have gone on to work at the US Departments of State, Energy and Justice, numerous think tanks, contractors and congressional offices.