

Development of an Educational Course Centered on Nuclear Power Technology with Emphasis on Space Exploration as a Segment of Energy Program Curricula

Executive Summary

The objective of this project is to develop a graduate-level course based on past and future application of nuclear power systems that are employed in various commercial and space exploratory applications. The course will center on educating future engineers and researchers on various aspects of nuclear power including: materials selections, relevant nuclear fuel forms and radioisotopes, thermal to electrical conversion technologies, power generation and modeling, as well as transportation, environmental and launch safety considerations. The course is centered on space nuclear power, which is an innovative and excellent way to introduce technical students to nuclear technology. The course will help form the basis for the development of a graduate degree program at the University of Dayton, in Energy, which includes nuclear-related technologies. The developed course will support and help to develop educational infrastructure in nuclear energy initiatives, which aligns with the thrust of the NRC's Nuclear Education Grant Program.

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