

# The Department of Physics

PRESENTS

## Nuclear Physics & Society

*A free, four-day short course on nuclear physics and public policy  
for anyone who wants to better understand*  
**nuclear power ● nuclear weapons ● scientific policy ● homeland security**

*Led by Dr. Patrick Regan, University of Surrey,  
Dr. Con Beausang, University of Richmond, and Dr. Jerry Gilfoyle, University of Richmond*

### MONDAY, APRIL 13

*Open Lecture, 5:45 - 7:45 P.M.*

**Nuclear Basics:** What are atoms made of? What is radioactivity? In addition to discussing the nucleus, alpha, beta and gamma decay, fusion, and fission, the talk will cover environmental and manmade radiation sources and the methods by which radiation is detected.

### TUESDAY, APRIL 14

*Laboratory Experience, 12:30 - 3:30 P.M.*

Participants will be introduced to an environmental radiation laboratory and led through a series of simple experiments to demonstrate radiation detection and measurement. Laboratory space is limited, so register in advance by E-mailing [cbeausan@richmond.edu](mailto:cbeausan@richmond.edu).

### TUESDAY, APRIL 14

*Open Lecture, 6:15 - 8:15 P.M.*

**Nuclear Alchemy:** How are the elements made? The talk will include explanation of nucleosynthesis or the creation of the elements in stars, including exploding stars, novae and supernovae, x-ray bursters, and seeding the cosmos with new elements.

### WEDNESDAY, APRIL 15

*Open Lecture, 6 - 8 P.M.*

**Applications of Nuclear Physics on Earth:** Nuclear power, weapons, and nuclear medicine. Topics include homeland security, dirty and nuclear bombs, and the Litvinenko story.

### THURSDAY, APRIL 16

*Laboratory Experience, 12:30 - 3:30 P.M.*

This lab will continue some of Tuesday's experiments. E-mail [cbeausan@richmond.edu](mailto:cbeausan@richmond.edu) to register.

### THURSDAY, APRIL 16

*Open Lecture, 6 - 8 P.M.*

**Nuclear Extremes:** (Some) current research frontiers in nuclear science. The talk will address modern nuclear physics research.

*All open lectures take place in the Gottwald Science Center's auditorium. Lab locations will be E-mailed to registrants. Visit [physics.richmond.edu](http://physics.richmond.edu) for more details.*

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