

**PHYS 315 RADIATION SCIENCE**

**INSTRUCTOR:** *DR. CREMALDI*

**OFFICE:** *RM 209 LEWIS HALL*

**TEXT:** *MODERN PHYSICS 3rd – SERWAY*

**OFFICE HOURS:** *T Th 9:30-11:00*  
*by appointment*

<i>3 EXAMS</i>	<i>45pts</i>
<i>1 FINAL</i>	<i>25</i>
<i>~10 QUIZZES</i>	<i>15</i>
<i>HW</i>	<i>15</i>

In Radiation Science we will look in to the concepts behind the Scientific Revolution which occurred at the turn of the 20<sup>th</sup> century. This begins with the Einstein's theory of relativity and the discovery of light quanta. Then the discovery that particles behave as waves, first proposed by De Broglie. A beginning treatment of Schrodinger's quantum theory in one dimension is presented, introducing the ideas of wave functions and tunneling. We then move to particle physics concepts, and the building of the nucleus. We finish with concepts in nuclear physics and nuclear physics applications related to radiation science and technology.