

Pure and Applied Physics Major Track – updated 8/15

<p>Graduate School/Career Options: (work with advisor to choose appropriate coursework)</p> <p>Government or Industry Employment:</p> <ul style="list-style-type: none"> Patent Agent, Quantitative Finance, Energy Exploration, Nuclear Power, Software Development, Research Scientist/Research Engineer, operations planning, applied research. <p>Graduate School Options:</p> <ul style="list-style-type: none"> Pursue graduate studies in fields such as Materials Science, Atmospheric Science, Electrical Engineering, or Biomechanical Engineering.
<p>Physics and Mathematics Prerequisites:</p> <ul style="list-style-type: none"> Two semesters of Introductory Physics: <ul style="list-style-type: none"> PH 2850/2860 <u>or</u> PH 2800/2810 (4) PH 2940/2920 <u>or</u> PH 2900/2910 (4) MT 1800 Calculus I (4)
<p>Required Upper Division Courses for Pure and Applied Physics Track:</p> <ul style="list-style-type: none"> Statics (3) PH 3500 Dynamics (3) PH 4100 Electric Circuits (3) PH 4000 Physical Chemistry I (3) PH/CH 3510 <u>OR</u> Thermodynamics (3) PH 3400 Physical Chemistry II (3) PH/CH 3530 Physical Chemistry Lab (1) PH/CH 3560 Modern Physics (3) PH 4500 Advanced Lab (1) PH 4215 Capstone - Research in Physics (1) PH 4940
<p>Additional Courses Required for the Pure and Applied Physics Track:</p> <ul style="list-style-type: none"> Calculus II (4) MT 1810 Differential Equations (3) MT 3700 & Linear Algebra (3) MT 3810 <u>OR</u> Mathematical Methods in Physics (3) PH 3710
<p>Total Upper Division Hours Required: 24 – 27 hours (depending on needed math courses)</p>
<p>Recommended Courses:</p> <p>Physics of Medical Imaging (3) PH 3240</p> <p>Optics (3) PH 4400</p> <p>Mathematical Modeling (3) MT 3260</p> <p>Probability & Statistics II (3) MT 3410</p>
<p>Per university requirements, students must choose additional upper division coursework to complete the major requirement of 30 hours of upper division coursework. Students are advised to work with advisor to choose these hours to complete coursework necessary for desired career goals/graduate school entrance requirements.</p>

Other Requirements: A grade of "C" or better is required in each upper division course of this major. A grade of "C-" will not fulfill the requirement. A grade of "C" or better is required in composition and other writing courses.

FOR MORE INFORMATION:

Contact Rockhurst University Physics Department Faculty:

Nancy Donaldson, Ph.D.
Professor of Physics
Chair, Physics Department
(816) 501-4634
Nancy.donaldson@rockhurst.edu

Mark Pecaut, Ph.D.
Assistant Professor of Physics
Mark.pecaut@rockhurst.edu