Wells College

Name:_____

Advisor:_____

Graduation Year:_____

Physics Major

The number of courses required for the major is 17 (53–58 semester hours). At least four of these courses (12 semester hours) must be at the 300-level or above. Internships may not be used to fulfill major requirements.

Requirements:

<u>All of the following (32 sem. hrs.)</u>

- ☐ MATH 111   Calculus I: Introduction to Calculus (4 sem. hrs.)
- ☐ MATH 112   Calculus II: Introduction to Calculus (4 sem. hrs.)
- ☐ MATH 211   Calculus III: Multivariable Calculus (3 sem. hrs.)
- ☐ MATH 213   Ordinary Differential Equations and Applications (3 sem. hrs.)
- ☐ MPS 402   Senior Seminar in Mathematical and Physical Sciences I (2 sem. hrs.)
- ☐ MPS 403   Senior Seminar in Mathematical and Physical Sciences II (2 sem. hrs.)
- ☐ PHYS 111L   Fundamentals of Physics I (4 sem. hrs.)
- ☐ PHYS 212L   Fundamentals of Physics II (4 sem. hrs.)
- ☐ PHYS 302   Modern Physics (3 sem. hrs.)
- ☐ PHYS 303   Theoretical Mechanics (3 sem. hrs.)

<u>Either of the following (3–4 sem. hrs.)</u>

- ☐ CHEM 107L   General Chemistry (4 sem. hrs.)
- ☐ CS 131   Programming I: Procedural Methods (3 sem. hrs.)

<u>Three of the following (9–10 sem. hrs.)</u>

- ☐ CHEM 301   Physical Chemistry (3 sem. hrs.)
- ☐ CS 132   Programming II: Object Orientation (3 sem. hrs.)
- ☐ PHYS 221L   Principles of Electronics (4 sem. hrs.)
- ☐ PHYS 307   Intermediate Quantum Mechanics (3 sem. hrs.)

<u>Two of the following (6–8 sem. hrs.)</u>

- ☐ Courses in mathematics, computer science, or physics above the 100-level or
- ☐ CHEM 301   Physical Chemistry (3 sem. hrs.)
- ☐ CS 132   Programming II: Object Orientation (3 sem. hrs.)
- ☐ PHYS 221L   Principles of Electronics (4 sem. hrs.)
- ☐ PHYS 307   Intermediate Quantum Mechanics (3 sem. hrs.)
- ☐ PHYS 340   Experimental Physics (3 sem. hrs.)

<u>One of the following (3–4 sem. hrs.)</u>

- ☐ Any course in computer science, mathematics or physics above the 100-level.

What can I do with this major?

See below for examples of what you can do with a Physics major after graduation! For more information, see the full results at http://whatcanidowiththismajor.com/major/

Areas of specialty

- Acoustical Physics
- Astronomy
- Astrophysics
- Biophysics
- Chemical Physics
- Condensed Matter
- Engineering
- Geophysics
- Medical Physics
- Nuclear Physics
- Optical Physics
- Particle Physics
- Science Education
- High Energy Physics
- Health Physics

Potential Employers

- State Agencies
- Federal Agencies
- Nonprofit Research Centers
- Engineering firms
- Public and private K-12 schools
- Universities and colleges
- Manufacturing Firms
- Consulting Firms
- Law Firms
- Software Developers
- Medical Industries
- Observatories
- Planetariums
- Science museums

- Physicists are interested in solving complex, technical problems, often extending for long periods of time.
- Visit government laboratories or research centers to learn more about opportunities in the field. Schedule informational interviews to learn about the profession and specific career paths.
- Join relevant professional associations. Attend meetings and stay up-to-date on research/publications.
- Gain experience using scientific instruments and equipment. Computer skills are critical.
- Participate in summer research institutes.
- A bachelor's degree will qualify for positions as research assistants, high-level technicians, or computer specialists, as well as nontechnical work in publishing or sales.
- An undergraduate degree also provides a solid background for pursuing advanced degrees in other employment areas such as law, business, or accounting.