

# PHY

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## Courses

### PHY 105 Fire Service Physics

**2 Credits. 1 Lecture Hour. 3 Lab Hours.**

A course on concepts and principles of physics that are applied in public safety technologies. Topics include: the kinematics and dynamics of linear motion, machines, fluid mechanics, thermodynamics, electricity, and electrical safety.

Prerequisites: AFM 095 or appropriate placement test score

View Sections ([http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course\\_number=105subject\\_code=PHY](http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=105subject_code=PHY))

### PHY 110 Health Physics

**3 Credits. 2 Lecture Hours. 3 Lab Hours.**

A course on concepts and principles of physics that are applied in health technologies. Topics include: math for physics, the kinematics and dynamics of linear motion, machines, fluid mechanics, temperature, electricity and electrical safety, waves, and light.

Prerequisites: AFM 095 or appropriate placement test score

View Sections ([http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course\\_number=110subject\\_code=PHY](http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=110subject_code=PHY))

### PHY 121 Technical Physics 1

**3 Credits. 2 Lecture Hours. 3 Lab Hours.**

A course on concepts and principles of physics that are applied in engineering technologies. Topics include: the kinematics and dynamics of linear motion, machines, fluid mechanics, and thermodynamics.

Prerequisites: MAT 120 or appropriate placement test score

View Sections ([http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course\\_number=121subject\\_code=PHY](http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=121subject_code=PHY))

### PHY 122 Technical Physics 2

**3 Credits. 2 Lecture Hours. 3 Lab Hours.**

A continuation of PHY 121. Topics include: rotational motion; physical properties; AC, DC, and digital electronics; circuit analysis; waves; and optics.

Prerequisites: PHY 121 or BMT 151

View Sections ([http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course\\_number=122subject\\_code=PHY](http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=122subject_code=PHY))

### PHY 150 Introduction to Physics

**3 Credits. 2 Lecture Hours. 2 Lab Hours.**

A course on fundamentals of physics. Topics include: laboratory procedures, the controlled experiment, methods of measurement, data collection and analysis techniques, and interpreting experimental results.

Prerequisites: MAT 120 or appropriate placement test score

View Sections ([http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course\\_number=150subject\\_code=PHY](http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=150subject_code=PHY))

### PHY 151 Physics 1: Algebra and Trigonometry-Based

**4 Credits. 3 Lecture Hours. 3 Lab Hours.**

A course on concepts and principles of algebra-and-trigonometry-based physics. Topics include: kinematics, dynamics, statics, heat, and thermodynamics.

Prerequisites: PHY 150 or MAT 125 or appropriate math placement score

View Sections ([http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course\\_number=151subject\\_code=PHY](http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=151subject_code=PHY))

### PHY 152 Physics 2: Algebra and Trigonometry-Based

**4 Credits. 3 Lecture Hours. 3 Lab Hours.**

A continuation of PHY 151. Topics include: waves, electromagnetic radiation, geometrical optics, physical optics, photometry, basic forces in physics, AC and DC circuits, quantum mechanics, and atomic and nuclear physics.

Prerequisites: PHY 151

View Sections ([http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course\\_number=152subject\\_code=PHY](http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=152subject_code=PHY))

### PHY 198 First Year Special Topics in Physics

**1-9 Credits. 0 Lecture Hour. 0 Lab Hour.**

A course on selected topics related to Physics, which gives students opportunities to study information not currently covered in other courses. Grades issued are A, B, C, D, or F.

Prerequisites: Vary by section

View Sections ([http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course\\_number=198subject\\_code=PHY](http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=198subject_code=PHY))

**PHY 199 First Year Independent Project in Physics****1-9 Credits. 0 Lecture Hour. 0 Lab Hour.**

A project related to Physics that is completed by one or more students to meet specific educational goals. Projects must have prior approval and supervision by Physics faculty. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: Vary by section

View Sections ([http://webapps.cincinnatiastate.edu/wwwTools/MCL/default.aspx?course\\_number=199subject\\_code=PHY](http://webapps.cincinnatiastate.edu/wwwTools/MCL/default.aspx?course_number=199subject_code=PHY))

**PHY 201 Physics 1: Calculus-Based****5 Credits. 4 Lecture Hours. 2 Lab Hours.**

A course on concepts and principles of calculus-based physics. Topics include: the kinematics and dynamics of linear and rotational motion, gravity, oscillatory motion, waves, and fluid mechanics.

Prerequisites: MAT 126 or MAT 152 or MAT 153 or appropriate placement test score

View Sections ([http://webapps.cincinnatiastate.edu/wwwTools/MCL/default.aspx?course\\_number=201subject\\_code=PHY](http://webapps.cincinnatiastate.edu/wwwTools/MCL/default.aspx?course_number=201subject_code=PHY))

**PHY 202 Physics 2: Calculus-Based****5 Credits. 4 Lecture Hours. 2 Lab Hours.**

A continuation of PHY 201. Topics include: thermodynamics, electric and magnetic fields, dc and ac circuit analysis, electromagnetic radiation, optics including interference and diffraction, and modern physics.

Prerequisites: PHY 201

View Sections ([http://webapps.cincinnatiastate.edu/wwwTools/MCL/default.aspx?course\\_number=202subject\\_code=PHY](http://webapps.cincinnatiastate.edu/wwwTools/MCL/default.aspx?course_number=202subject_code=PHY))

**PHY 298 Second Year Special Topics in Physics****1-9 Credits. 0 Lecture Hour. 0 Lab Hour.**

A course on selected topics related to Physics, which gives students opportunities to study information not currently covered in other courses. Grades issued are A, B, C, D, or F.

Prerequisites: Vary by section

View Sections ([http://webapps.cincinnatiastate.edu/wwwTools/MCL/default.aspx?course\\_number=298subject\\_code=PHY](http://webapps.cincinnatiastate.edu/wwwTools/MCL/default.aspx?course_number=298subject_code=PHY))

**PHY 299 Second Year Independent Project in Physics****1-9 Credits. 0 Lecture Hour. 0 Lab Hour.**

A project related to Physics that is completed by one or more students to meet specific educational goals. Projects must have prior approval and supervision by Physics faculty. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: Vary by section

View Sections ([http://webapps.cincinnatiastate.edu/wwwTools/MCL/default.aspx?course\\_number=299subject\\_code=PHY](http://webapps.cincinnatiastate.edu/wwwTools/MCL/default.aspx?course_number=299subject_code=PHY))