The revisions and updates provided here are listed in page order as they relate to content within the College’s 2018-20 Graduate Catalog. Dates provided here reflect the effective date of said changes.

**List of Minors**

*Page 131*

*May 24, 2019*

The minor is Equine Management and Therapeutic Horsemanship is no longer being offered.

**Minor – Equine Management and Therapeutic Horsemanship**

*Page 137*

*May 24, 2019*

This minor is no longer being offered.

**Minor- Chemistry**

*New Addition*

*June 5, 2019*

**Sponsoring department: Chemistry and Physics**

Fundamental knowledge of chemistry is relevant in a variety of careers, and a minor in chemistry is a good complement to many majors. For Business majors there are opportunities to become entrepreneurs or work with tech start-up companies using applications of chemistry such as development of new materials for energy, electronics, buildings, and medical implants. Other prime business opportunities include discoveries of cures for diseases, new pharmaceuticals and natural medicines. Criminology majors gain hands-on experience with chemistry techniques and instrumentation used in crime scene investigation and forensic analysis. Education students complete coursework for an additional area of teacher certification. Mathematics and Computer Science majors apply chemistry to molecular modeling, computational chemistry, drug discovery and informatics. Pre-Law students gain understanding of chemicals and processes important in Patent Law. Psychology
majors apply chemistry to understanding the nervous system, brain, and effects of drugs. Biology majors broaden and deepen their knowledge of the fundamental topics inorganic chemistry, biochemistry, analytical chemistry, and physical chemistry.

Requirements for the Minor in Chemistry
Students must take at least 18 credits, distributed as follows:

**A. Foundation Courses: (8 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP2120</td>
<td>Principles of Chemistry I</td>
<td>3 cr</td>
</tr>
<tr>
<td>CP2121</td>
<td>Principles of Chemistry Lab I</td>
<td>1 cr</td>
</tr>
<tr>
<td>CP2130</td>
<td>Principles of Chemistry II</td>
<td>3 cr</td>
</tr>
<tr>
<td>CP2131</td>
<td>Principles of Chemistry Lab II</td>
<td>1 cr</td>
</tr>
</tbody>
</table>

**B. Elective Courses: (minimum of 10 credits from among the following)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP3300</td>
<td>Organic Chemistry I</td>
<td>3 cr</td>
</tr>
<tr>
<td>CP3310</td>
<td>Organic Chemistry II</td>
<td>3 cr</td>
</tr>
<tr>
<td>CP3400</td>
<td>Analytical Chemistry</td>
<td>5 cr</td>
</tr>
<tr>
<td>CP3450</td>
<td>Inorganic Chemistry</td>
<td>3 cr</td>
</tr>
<tr>
<td>CP4490</td>
<td>Biochemistry for Life Sciences</td>
<td>3 cr</td>
</tr>
<tr>
<td>CP4520</td>
<td>Biochemistry I</td>
<td>3 cr</td>
</tr>
<tr>
<td>CP4525</td>
<td>Biochemistry II</td>
<td>3 cr</td>
</tr>
<tr>
<td>CP4520</td>
<td>Biochemistry Lab</td>
<td>2 cr</td>
</tr>
<tr>
<td>CP4700</td>
<td>Physical Chemistry I</td>
<td>3 cr</td>
</tr>
<tr>
<td>CP4710</td>
<td>Physical Chemistry II</td>
<td>3 cr</td>
</tr>
<tr>
<td>CP4720</td>
<td>Physical Chemistry Lab</td>
<td>2 cr</td>
</tr>
<tr>
<td>CP4800</td>
<td>Advanced Chemical Methods</td>
<td>5 cr</td>
</tr>
<tr>
<td>CP5500</td>
<td>Advanced Topics in Chemistry</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

Minor - Physics

*New Addition*

*June 5, 2019*

Sponsoring department: Chemistry and Physics

Physics is the most fundamental of the sciences, and undergraduate training in physics provides a solid grounding in quantitative problem solving, analytical reasoning, and mathematical modeling. Fundamental knowledge of physics is relevant to a wide variety of majors and careers. A minor in physics is designed for students who have an interest in the fundamental laws of nature, the basic properties of matter, and the nature of space and time.

The physics minor consists of the introductory sequence General Physics I, II, and III, each with their respective lab. Although not recommended, it is possible to substitute Structure of Physics I and II for General Physics I and II. Students then take any two additional advanced physics courses.

Requirements for the Minor in Physics

Students must take at least 18 credits, distributed as follows:

**A. Foundational courses: (12 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP2241</td>
<td>General Physics I Laboratory</td>
<td></td>
</tr>
<tr>
<td><strong>or</strong></td>
<td>CP22221 Structure of Physics I Laboratory</td>
<td></td>
</tr>
</tbody>
</table>
CP 2250 General Physics II

or CP 2230 Structure of Physics II 3 cr

CP 2251 General Physics II Laboratory

or CP 2231 Structure of Physics I Laboratory 1 cr

CP 2260 General Physics III 3 cr

CP 2261 General Physics III Lab 1 cr

B. Elective Courses: Two courses from among the following (6-8 credits)

CP 2260 General Physics III 3 cr

Course Description: This is the third course in the General Physics sequence which provides an overview of the fundamentals and analytical methods of physics. Students will learn to think logically and quantitatively about the behavior of nature and gain a systematic approach to problem solving. This course will cover selected classical topics, including harmonic oscillations, waves, optics, and fluid mechanics, as well as an introduction to select topics in modern physics, including special relativity, quantum mechanics, atomic, nuclear, and particle physics. Students enrolled in CP 2260 General Physics III should concurrently enroll in the associated lab course, CP 2261 General Physics III Lab.

Prerequisites: CP 2230 or CP 2250, MA 2310

Co-Requisite: CP 2261

CP 2261 General Physics III Lab 1 cr

Course Description: This is the third course in the General Physics sequence which provides an overview of the fundamentals and analytical methods of physics. Students will learn to think logically and quantitatively about the behavior of nature and gain a systematic approach to problem solving. This course will cover selected classical topics, including harmonic oscillations, waves, optics, and fluid mechanics, as well as an introduction to select topics in modern physics, including special relativity, quantum mechanics, atomic, nuclear, and particle physics. Students enrolled in CP 2260 General Physics III should concurrently enroll in the associated lab course, CP 2261 General Physics III Lab.

Prerequisites: CP 2230 or CP 2250, MA 2310

Co-Requisite: CP 2260

CP 2900 Astronomy 3 cr

and co-requisite CP 2901 Astronomy Lab 1 cr

CP 3230 Mathematical Methods in the Physical Sciences 3 cr

CP 4700 Physical Chemistry I 3 cr

CP 4710 Physical Chemistry II 3 cr

CP 4720 Physical Chemistry Lab 1 cr

Chemistry Courses

Pg. 174

June 5, 2019

The following courses have been added to the offerings of the Chemistry and Physics Department:

CP 2260 General Physics III 3 cr

Course Description: This is the third course in the General Physics sequence which provides an overview of the fundamentals and analytical methods of physics. Students will learn to think logically and quantitatively about the behavior of nature and gain a systematic approach to problem solving. This course will cover selected classical topics, including harmonic oscillations, waves, optics, and fluid mechanics, as well as an introduction to select topics in modern physics, including special relativity, quantum mechanics, atomic, nuclear, and particle physics. Students enrolled in CP 2260 General Physics III should concurrently enroll in the associated lab course, CP 2261 General Physics III Lab.

Prerequisites: CP 2230 or CP 2250, MA 2310

Co-Requisite: CP 2261

CP 2261 General Physics III Lab 1 cr

Course Description: This is the third course in the General Physics sequence which provides an overview of the fundamentals and analytical methods of physics. Students will learn to think logically and quantitatively about the behavior of nature and gain a systematic approach to problem solving. This course will cover selected classical topics, including harmonic oscillations, waves, optics, and fluid mechanics, as well as an introduction to select topics in modern physics, including special relativity, quantum mechanics, atomic, nuclear, and particle physics. Students enrolled in CP 2260 General Physics III should concurrently enroll in the associated lab course, CP 2261 General Physics III Lab.

Prerequisites: CP 2230 or CP 2250, MA 2310

Co-Requisite: CP 2260

CP 2900 Astronomy 3 cr
**Course Description:** Survey course of astronomy topics ranging from the solar system to the universe, with application of evidence-based reasoning, critical thinking, and use of theoretical models and observations. This course has a focus on the solar system: apparent sky motions, telescopes, properties of the planets, structure and evolution of the solar system, stellar evolution, organization of the Milky Way Galaxy, galaxies, quasars, structure and evolution of the universe.

*Pre-Requisite: MA1020*

**CP 2901 Astronomy Lab**

1 cr.

**Course Description:** This is a one credit lab course, which is a co-requisite of Astronomy CP 2900. It serves as an introduction to observation astronomy. This course addresses the basic techniques of unaided astronomical observing as well as observation with a telescope. Observations will include the constellations of the fall sky, the moon, binary and variable stars, planetary observations and deep sky objects. Indoor labs will feature study of spectroscopy, celestial coordinates, astronomical images and data concerning variables stars, galactic mergers and universal expansion.

*Pre-Requisite: MA1020*

*Co-Requisite: CP2900*