Physics, BS - Optics Concentration

- All College of Science degrees require at least 120 credit hours.
- 36 of those 120 credit hours must be taken at 300 level or higher.
- 12 credit hours of 300 level and above must be taken in the major or 6 credit hours in the major and 6 credit hours in the minor (if chosen).
- 12 of the last 18 credit hours must be taken at UAH, with an overall 25% of coursework taken at UAH.
- No more than 60 credit hours from a two-year college can be applied toward a UAH degree.
- A C- or better is required for all College of Science prerequisite courses, unless otherwise noted.

For UAH degree requirements and graduation application instructions, see [here](http://catalog.uah.edu/undergrad/policies-procedures/application-graduation/).

### Charger Foundations

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**Area III: Mathematics and Sciences**  
3-4 credits

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<td>MA 107</td>
<td>ALGEBRA WITH APPLICATIONS</td>
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<td>MA 110</td>
<td>FINITE MATHEMATICS</td>
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<td>MA 115</td>
<td>PRECALCULUS ALGEBRA &amp; TRIG</td>
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<td>MA 120</td>
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<td>MA 181</td>
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**Natural Sciences (Lab)**  
8 credits

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<td>AST 106</td>
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<td>BYS 119</td>
<td>PRINCIPLES OF BIOLOGY</td>
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<tr>
<td>&amp; BYS 121</td>
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### Physics, BS - Optics Concentration

**Area IV: History and Social and Behavioral Sciences**

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<tr>
<td>HY 221</td>
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**Social and Behavioral Sciences**

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<td>PRINCIPLES OF HUMAN GEOGRAPHY</td>
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<td>SOC 102</td>
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<td>SOC 103</td>
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### Area V: Pre-Professional

**Code** | **Title**                                               | **Semester Hours** |
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<td>For Physics &amp; Astronomy Majors (OPY)</td>
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Courses in this area may also fulfill Charger Foundations requirements

**First Year Experience:**

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**Computer Programming:** choose one

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<td>or CS 103</td>
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<td>or CS 104</td>
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Physics, BS - Optics Concentration

CH 123 & CH 126
GENERAL CHEMISTRY II
and GENERAL CHEMISTRY LAB II

Mathematics:

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**Major Requirements**

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**Optics Concentration Requirements:**

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**General Electives**

Additional courses to reach 120 credit hours. Electives can be taken from any department and do not have to be taken in your major or minor. No more than 4 credits of 100-level HPE courses can count toward degree requirements.

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**Total Degree Hours**

* Students must take one literature and one history course. Students must also take either a second literature or history course to complete a sequence. Acceptable Literature sequences must include one early literature (EH 207 or EH 242 or EH 209) and one later literature (EH 208 or EH 210). Acceptable history sequences are (HY 103 + HY 104), or (HY 221 + HY 222)

** Based on Math placement, (http://www.uah.edu/science/departments/math/undergraduate-students/placement/) prerequisite MA 112 and/or MA 113 Mathematics courses may be required.

Note: This is only an example and variations are possible. Please work with your advisor (https://www.uah.edu/science/academic-advising/) as some courses are only offered one semester out of the academic year.
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<tr>
<td>CS 104</td>
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<td>MA 201</td>
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<td>&amp; PH 115</td>
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<tr>
<td>PH 251</td>
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<td>Literature</td>
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<tr>
<td>MA 244</td>
<td>INTRO TO LINEAR ALGEBRA</td>
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<td>PH 351</td>
<td>INTRODUCTION TO MODERN PHYSICS&lt;sup&gt;FA&lt;/sup&gt;</td>
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### Year 4

#### Fall
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<td>GEOMETRICAL OPTICS</td>
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<td>General Elective (300+ or 400+ course)</td>
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**Term Semester Hours:** 16

#### Spring
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**Term Semester Hours:** 15

**Total Semester Hours:** 120

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**Course Codes**
- **FA** Course is historically offered only in Fall semesters.
- **SP** Course is historically offered only in Spring semesters.