

**NATURAL SCIENCES**  
**Physics Option, B.A. (120 Units)**

Valid for Catalog Years: 2009/2010 to 2017/2018

\*Official planning guide approved by the College of Science & Math

For assistance or to schedule an advising appointment, please contact the  
**CSM Advising and Resources Center**  
at 559-278-4150, Science I 136  
**Department of Science & Mathematics**  
**Interdisciplinary Courses and Programs:**  
559-278-5173, Science I 100

| Units             | Freshman   |   | Sophomore  |  | Junior   |   | Senior   |  |
|-------------------|--|---|--|--|--|---|--|--|
|                   | Fall   | Spring  | Fall   | Spring   | Fall   | Spring  | Fall   | Spring   |
|                   | 15   | 16  | 14-15  | 16-17  | 13-14  | 14-18   | 17   | 15-17  |
| General Education | <b>A1 (3 Units)</b><br>Oral Communication<br>*Must pass with a C or better   | <b>A2 (3 Units)</b><br>Written Communication<br>*Must pass with a C or better   | <b>C1 (3-4 Units)</b><br>Arts  | <b>C1/C2 (3-4 Units)</b><br>Arts or Humanities                 | <b>C2 (3-4 Units)</b><br>Humanities  | <b>D2 (3 Units)</b><br>American Government  | <b>E1 (3 Units)</b><br>Lifelong Understanding & Self Development   | <b>IC (3-4 Units)</b><br>Arts & Humanities                             |
|                   | <b>A3 (3 Units)</b><br>Critical Thinking<br>*Must pass with a C or better  |   |  | <b>D1 (3 Units)</b><br>American History                        |  | <b>D3 (3 Units)</b><br>Social Science   |  | <b>ID (3-4 Units)</b><br>Social, Political, & Economic Institutions    |
|                   |  |   |  |  |  |   |  | <b>MI (3 Units)</b><br>Multicultural/International                     |
| Major             | <b>GE Area B1</b><br><b>CHEM 1A (3 Units)</b><br>Physical Sciences<br>[Pre-Req: High school chemistry. May be taken concurrently: GE B4; CHEM 1AL]<br>*Not open to students with credit in CHEM 1B | <b>CHEM 1B (3 Units)</b><br>[Pre-Req: CHEM 1A & 1AL (both passed with a C or better); CHEM 1BL (may be taken concurrently)] | <b>CHEM 128A (3 Units)</b><br>[Pre-Req: CHEM 1B or 8 (C or better) or instructor permission] | <b>GE Area B2</b><br><b>BIOL 1A (4 Units)</b><br>Life Sciences | <b>BIOL 1B (3 Units)</b><br>[Pre-Req: BIOL 1A; first-time enrollees must take BIOL 1BL concurrently] | <b>EES 1 (4 Units)</b><br>[Pre-Req: MATH 4R or second-year high school algebra recommended] | <b>GE Area IB</b><br><b>EES 168 (3 Units)</b><br>Physical Universe & Its Life Forms<br>[Pre-Req: GE Foundation & Breadth Area B] | <b>NSCI 106 (3 Units)</b>  |
|                   | <b>GE Area B3</b><br><b>CHEM 1AL (2 Units)</b><br>Lab<br>[Pre-Req: CHEM 1A (may be taken concurrently)]  | <b>CHEM 1BL (2 Units)</b><br>[Pre-Req: CHEM 1B (may be taken concurrently)]   | <b>MATH 77 (4 Units)</b><br>[Pre-Req: MATH 76]   | <b>MATH 81 (3 Units)</b><br>[Pre-Req: MATH 77]                 | <b>BIOL 1BL (1 Unit)</b><br>[Pre-Req: First-time enrollees must take BIOL 1B concurrently]           |   | <b>BIOL 101 (4 Units)</b><br>[Pre-Req: BIOL 1A, 1B; PSYCH 42 or MATH 101; MATH 70 or equivalent recommended]                     | <b>PSCI 168 (3 Units)</b><br>[Pre-Req: GE Foundation & Breadth Area B] |

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| Units     | Freshman   |   | Sophomore   |   | Junior  |   | Senior   |        |
|-----------|--|---|---|---|---|---|--|--------|
|           | Fall   | Spring  | Fall  | Spring  | Fall  | Spring  | Fall   | Spring |
|           | 15   | 16  | 14-15   | 16-17   | 13-14   | 14-18   | 17   | 15-17  |
| Major     | <b>GE Area B4</b><br><b>MATH 75 (4 Units)</b><br>Quantitative Reasoning<br>*See course catalog for prerequisite requirements | <b>MATH 76 (4 Units)</b><br>[Pre-Req: MATH 75 or MATH 75A & B]                    | <b>PHYS 4B (3 Units)</b><br>[Pre-Req: PHYS 4A; MATH 77 (may be taken concurrently)] | <b>PHYS 4C (3 Units)</b><br>[Pre-Req: PHYS 4B; MATH 77] | <b>PHYS 102 (3 Units)</b><br>[Pre-Req: PHYS 4C; MATH 81 (may be taken concurrently)]  |   | <b>PHYS 107A (3 Units)</b><br>[Pre-Req: PHYS 105A; MATH 81]                        |        |
|           |  | <b>PHYS 4A (3 Units)</b><br>[Pre-Req: GE B4; MATH 76 (may be taken concurrently)] | <b>PHYS 4BL (1 Unit)</b><br>[Co-Req: PHYS 4B]                                       |   | <b>PHYS 105A (3 Units)</b><br>[Pre-Req: PHYS 4C; MATH 81 (may be taken concurrently)] |   | <b>PSCI 21 (4 Units)</b><br>[Pre-Req: Second-year high school algebra recommended] |        |
|           |  | <b>PHYS 4AL (1 Unit)</b><br>[Co-Req: PHYS 4A]                                     |   |   |   |   |  |        |
| Electives |  |   |   |   |   | <b>UDWS (0-4 Units)</b><br>*Upper Division Writing Exam OR "W" Course (must pass with a C or better)                                  |  |        |
|           |  |   |   |   |   | <b>MATH 101 (4 Units)</b><br>[Pre-Req: MATH 70, 75, or 75A & B]<br>*No credit if taken after MATH 108<br><b>or PSYCH 42 (4 Units)</b> |  |        |

**FOOTNOTES:**

**Prerequisites/Corequisites:** Other restrictions may apply. Please see your course catalog for detailed prerequisite/corequisite requirements.

**Electives (4 units):** Units in this area may be used toward a double major or minor. Students must earn a minimum of 120 units total to graduate. The number of required elective units may vary, depending on the amount of units earned from major and GE courses.

**Upper Division Writing Skills requirement (UDWS):** All undergraduate students must demonstrate competency in writing skills by passing the Upper Division Writing Exam (UDWE) or by obtaining a C or better in an approved upper division writing course, identified by the letter "W."