

**Overall Major Requirements**

The Physical Sciences Major is comprised of three disciplines – chemistry, Earth and planetary sciences, and physics. Students select two of the three as primary disciplines. While students in this major are not required to complete a minor, if any of chemistry, Earth and planetary sciences, physics, or planetary physics are chosen as a minor, all senior-level credits in that discipline will only count toward the minor. Please refer to Planning Note 3 for more information on the structure of the Physical Sciences Major.

- 60-72 non-duplicative physical sciences credits
- A minimum of 42 senior-level credits
- A minimum of 12 credits at the 300- or 400-level in the primary disciplines
- A minimum of 3 credits at the 300- or 400-level in each discipline

**Specific Major Requirements**

**18 Credits**

- CHEM 101 University Chemistry I
- CHEM 102 University Chemistry II

Choose 6 credits:

- EASC 101 Introduction to Physical Science
- EASC 102 Introduction to Environmental Earth Science
- EASC 103 Historical Geology

Choose 6 credits:

- PHYS 124 Physics for Life Sciences I
- PHYS 126 Physics for Life Sciences II

or

- PHYS 144 Mechanics and Waves
- PHYS 146 Electromagnetism and Radiation

**General Major Requirements**

**42 to 54 Credits**

**Primary Discipline I**

**18 to 24 Credits**

- |                                |                                |                                |
|--------------------------------|--------------------------------|--------------------------------|
| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |
| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |
| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |                                |

**Primary Discipline II**

**18 to 24 Credits**

- |                                |                                |                                |
|--------------------------------|--------------------------------|--------------------------------|
| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |
| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |
| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |                                |

**General Requirements**

**6 to 12 Credits**

Choose 6 to 12 credits from the third discipline

- |                                |                                |                                |
|--------------------------------|--------------------------------|--------------------------------|
| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |
| <input type="checkbox"/> _____ |                                |                                |

**Physical Sciences Major (60 to 72 credits)**

**Total Credits: \_\_\_\_\_**

## Important Planning Notes

1. Courses required for the major may be used to satisfy the breadth requirements in the Bachelor of Science degree. Please refer to the applicable degree planner for details.
2. Students are required to consult the MacEwan University academic calendar to ensure they meet prerequisites for all courses they enrol in.
3. The structure of the Physical Sciences major is as follows:

### ***If a student chooses a minor in one of the Physical Sciences disciplines:***

- a. Students must choose two primary disciplines from Chemistry, Earth and Planetary Sciences, and Physics, and may choose the third discipline as their minor.
- b. All senior credits in the third discipline will count only toward the minor.
- c. Student must use only courses from their primary disciplines to complete the major's requirements, with a minimum of 18 senior level credits taken in each discipline.
- d. Students must have 12 credits at the 300- or 400-level in their primary disciplines, with at least three credits from each primary discipline.

### ***If a student chooses a minor other than in one of the Physical Sciences disciplines:***

- a. Students must choose two primary disciplines from Chemistry, Earth and Planetary Sciences, and Physics.
- b. Student must take 18 senior level credits in both of their primary disciplines to complete the major's requirements. An additional six senior level credits must be taken in the third discipline.
- c. Students must have 12 credits in their primary disciplines at the 300- or 400-level in their primary disciplines, with at least three credits from each primary discipline.

### ***If a student chooses no minor:***

- a. Students must choose two primary disciplines from Chemistry, Earth and Planetary Sciences, and Physics.
  - b. Student must take 18 senior level credits in both of their primary disciplines to complete the major's requirements. An additional six senior level credits must be taken in the third discipline.
  - c. Students must have 12 credits in their primary disciplines at the 300- or 400-level in their primary disciplines, with at least three credits from each primary discipline.
  - d. The 18 credits normally assigned to a minor will be considered options.
5. **PHSC 200** is a Physical Sciences course that covers material relevant to Chemistry, Earth and Planetary Sciences, and Physics. It can be used toward a student's Chemistry, Earth and Planetary Sciences, or Physics requirements, but while it may be applied to any of these requirements, students can only receive credit for the course one time.
    - Because the Physical Sciences major is not a discipline-specific major, **PHSC 200** can count toward a student's major. If it is taken outside the student's major, it will count toward that student's maximum of six major/minor credits in their options.
  6. Please keep in mind that course offerings will vary from academic year to academic year.