

Science

- (b-1) The State Board of Education by rule shall require that the curriculum requirements for the foundation high school program under Subsection (a) include a requirement that students successfully complete:
 - (3) three credits in science under Section 28.002(a)(1)(C), including one credit in biology, one credit in **any advanced science course** authorized under Subsection (b-2), and one credit in integrated physics and chemistry or in **an additional advanced science course** authorized under Subsection (b-2)

- (b-15) A student may earn a distinguished level of achievement under the foundation high school program by successfully completing:
 - (2) **four credits in science**, which must include the courses described by Subsection (b-1)(3)

- (c-2) In adopting rules under Subsection (c-1), the State Board of Education shall:
 - (1) require a student in order to earn any endorsement to successfully complete:
 - (B) **four credits in science**, which must include:
 - (i) the courses described by Subsection (b-1)(3); and
 - (ii) **an additional advanced science course** authorized under Subsection (b-2) **or an advanced career and technology course** designated by the State Board of Education

Minimum High School Program	Recommended High School Program	Distinguished Achievement Program	Foundation High School Program
Two credits: <ul style="list-style-type: none"> • Biology • IPC or Chemistry and Physics (one of the two serves as an academic elective) 	Four credits: <ul style="list-style-type: none"> • Biology • Chemistry • Physics • An additional science credit 	Four credits: <ul style="list-style-type: none"> • Biology • Chemistry • Physics • An additional science credit 	Three credits: <ul style="list-style-type: none"> • Biology • IPC or an advanced science course • Any advanced science course

Minimum High School Program	Recommended High School Program	Distinguished Achievement Program	Foundation High School Program
<p>Science-two credits. The credits must consist of Biology and Integrated Physics and Chemistry (IPC). A student may substitute a chemistry credit (Chemistry, AP Chemistry, or IB Chemistry), or a physics credit (Physics, Principles of Technology, AP Physics, or IB Physics) and then must use the second of these two courses as the academic elective credit identified in subsection (b)(5) of this section.</p>	<p>Science-four credits. Three of the credits must consist of a biology credit (Biology, AP Biology, or IB Biology), a chemistry credit (Chemistry, AP Chemistry, or IB Chemistry), and a physics credit (Physics, Principles of Technology, AP Physics, or IB Physics).</p> <p>(A) The additional credit may be Integrated Physics and Chemistry (IPC) and must be successfully completed prior to chemistry and physics.</p> <p>(B) The fourth credit may be selected from the following laboratory-based courses:</p> <ul style="list-style-type: none"> (i) Aquatic Science; (ii) Astronomy; (iii) Earth and Space Science; (iv) Environmental Systems; (v) AP Biology; (vi) AP Chemistry; (vii) AP Physics B; (viii) AP Physics C; (ix) AP Environmental Science; (x) IB Biology; (xi) IB Chemistry; (xii) IB Physics; (xiii) IB Environmental Systems; and (xiv) pursuant to the TEC, §28.025(b-5), a science course endorsed by an institution of higher education as a course for which the institution would award course credit or as a prerequisite for a course for which the institution would award course credit. The TEA shall maintain a current list of courses approved under this clause. <p>(C) The additional credit may be selected from the following laboratory-based courses and may be taken after the successful completion of biology and chemistry and either after the successful completion of or concurrently with physics:</p> <ul style="list-style-type: none"> (i) Scientific Research and Design; (ii) Anatomy and Physiology; (iii) Engineering Design and Problem Solving; (iv) Medical Microbiology; (v) Pathophysiology; (vi) Advanced Animal Science; (vii) Advanced Biotechnology; (viii) Advanced Plant and Soil Science; (ix) Food Science; and (x) Forensic Science. 	<p>Science-four credits. Three of the credits must consist of a biology credit (Biology, AP Biology, or IB Biology), a chemistry credit (Chemistry, AP Chemistry, or IB Chemistry), and a physics credit (Physics, AP Physics, or IB Physics).</p> <p>(A) The fourth credit may be selected from the following laboratory-based courses:</p> <ul style="list-style-type: none"> (i) Aquatic Science; (ii) Astronomy; (iii) Earth and Space Science; (iv) Environmental Systems; (v) AP Biology; (vi) AP Chemistry; (vii) AP Physics B; (viii) AP Physics C; (ix) AP Environmental Science; (x) IB Biology; (xi) IB Chemistry; (xii) IB Physics; (xiii) IB Environmental Systems; and (xiv) pursuant to the TEC, §28.025(b-5), a science course endorsed by an institution of higher education as a course for which the institution would award course credit or as a prerequisite for a course for which the institution would award course credit. The TEA shall maintain a current list of courses approved under this clause. <p>(B) The additional credit may be selected from the following laboratory-based courses and may be taken after the successful completion of biology and chemistry and either after the successful completion of or concurrently with physics:</p> <ul style="list-style-type: none"> (i) Scientific Research and Design; (ii) Anatomy and Physiology; (iii) Engineering Design and Problem Solving; (iv) Medical Microbiology; (v) Pathophysiology; (vi) Advanced Animal Science; (vii) Advanced Biotechnology; (viii) Advanced Plant and Soil Science; (ix) Food Science; and (x) Forensic Science. 	<p>Science-three credits. One credit must consist of biology.</p> <p>The second credit may be selected from IPC or:</p> <p>The third credit may be selected from the following courses:</p>

Considerations:

- Advanced science courses must prepare students to enter the workforce successfully or postsecondary education without remediation.
- Students will have the option to select up to two advanced science courses for the foundation high school program and up to three advanced science courses to earn an endorsement.
- Three out of four courses could be CTE courses for science credit which would limit the number of pure science courses a student takes in high school.
- Science courses have a variety of prerequisites, including some mathematics prerequisites.
- New, more specific AP Physics 1: Algebra-Based and AP Physics 2: Algebra-Based courses will replace current AP Physics B and AP Physics C courses. The new courses will align with first-semester and second-semester college courses.
- Students must be permitted to use a course that has been developed locally by a school district in partnership with a public or private IHE and local business, labor, and community leaders to satisfy an advanced science requirement.

Decisions Points:

- Determine courses that will be eligible to satisfy the advanced science credit requirements.
- Determine whether to differentiate between courses that may satisfy a second science credit under the foundation high school program and courses that may satisfy a third science credit under the foundation high school program.
- Determine whether to differentiate between courses that may satisfy a third science credit under the foundation high school program and courses that may satisfy a fourth science credit for the endorsements.
- Allow AP/IB courses to satisfy the biology credit, advanced science credit, or either.

Examples:

- Second science credit options: IPC, chemistry, or physics
- Allow chemistry, physics, and courses that may currently satisfy a science credit requirement to satisfy the third science credit under the foundation high school program.
- Allow chemistry, physics, and courses that may currently satisfy a science credit requirement to satisfy the fourth science credit required to earn an endorsement.
- Identify additional CTE courses to satisfy the advanced science requirements.