

## Chemistry and Biochemistry

### LOWER-DIVISION TRANSFER PATTERN California State University (CSU) Statewide Pattern

The Lower-Division Transfer Pattern (LDTP) consists of the CSU statewide pattern of coursework outlined below, plus campus-specific coursework, bringing the total pattern to at least 60 but no more than 70 transferable semester units for students to complete at a California Community College (CCC).

The CSU statewide pattern of coursework for CCC students who plan to major in Chemistry or Biochemistry at any CSU campus offering the major includes:

- Completion of lower-division general education requirements, following either the CSU General Education Breadth (GE-Breadth) or the Intersegmental General Education Transfer Curriculum (IGETC) pattern;
- Completion of the CSU graduation requirements in United States History, Constitution and American Ideals; and
- Completion of additional semester units as specified below in (3) and (4).

Please note that the information here is an academic and curricular advising tool: a roadmap that enables transfer students to efficiently and effectively progress towards the CSU baccalaureate degree in a specified discipline. California Community College students should work closely with their advisers when planning their academic program in preparation for transfer to the CSU.

This information does not represent any guarantee with regard to admission nor does it include or replace CSU campus admissions impaction criteria. These curricular guidelines are subject to change.

CSU Statewide Pattern	Semester Unit Requirement
<p><b>(1) Complete lower-division general education requirements.</b></p> <p>Obtain a <i>certification of completion</i> of GE-Breadth or IGETC by the California Community College before transferring to a CSU campus.</p> <p>While completing general education, follow the course pattern stated below.</p>	<p><b>39 units for GE-Breadth</b> Minimum grades of C are required in courses used to meet GE-Breadth Areas A and B4.</p> <p style="text-align: center;"><b>or</b></p> <p><b>37 units for IGETC</b> Minimum grade of C is required in each course used for IGETC.</p>
<p><b>(2) Complete the graduation requirements in United States History, Constitution and American Ideals.<sup>1</sup></b></p> <p>These are typically completed with one course each in American government and American history, or a sequence of courses that integrate the history and government topics.</p> <p>Students completing GE-Breadth should ordinarily use these courses to satisfy 6 units of Area D.</p>	<p><b>0 units required for GE-Breadth</b></p> <p><b>6 units for IGETC</b> IGETC does <u>not</u> permit double counting of courses to meet IGETC and U.S. History, Constitution and American Ideals requirements.</p>
<p><b>(3) Complete the following:</b></p> <ul style="list-style-type: none"> <li>• <b>Calculus, 1<sup>st</sup> semester</b> [CAN MATH 18]. This course should be used to satisfy GE-Breadth Area B4 or IGETC Area 2. (3 units counted in #1)</li> <li>• <b>Complete with a grade of C or higher a calculus-based Physics course that counts in GE</b> [CAN PHYS 8]. (3 units counted in #1)</li> </ul> <p style="text-align: center;"><b>or</b></p> <ul style="list-style-type: none"> <li>• <b>A non-calculus-based Physics course that counts in GE</b> [CAN PHYS 2].</li> </ul> <p style="text-align: center;">This course should be used to satisfy a requirement in Area B1 (5A)</p>	<p style="text-align: center;"><b>1 unit</b> Minimum grade of C must be earned</p> <p style="text-align: center;"><b>1 unit</b> Minimum grade of C must be earned</p>

<sup>1</sup> CCC courses that fulfill general education and graduation requirements in United States History, Constitution and American Ideals are listed at [www.assist.org](http://www.assist.org).

<p><b>(4) Complete the following one-year sequence of courses:</b></p> <ul style="list-style-type: none"> <li>• <b>General Chemistry for Science Majors [CAN CHEM SEQ A]</b> These courses cannot be used for GE-Breadth or IGETC. When possible, complete the whole sequence at a single college.</li> </ul>	<p><b>10 units</b> Minimum grade of C must be earned</p>
<p><b>Total Semester Units Required for Statewide LDTP Pattern</b></p>	<p><b>51 Units (GE-Breadth)</b> <b>55 Units (IGETC)</b></p>