**Physics**

**Associate Degree Graduation Requirements**

(1) Complete all department requirements with a “C” or better or “P” in each course (at least 20% of the department requirements must be completed through SBCC); (2) Complete one of the following three General Education options: **OPTION 1**: SBCC General Education Requirements (Areas A-D) and Institutional Requirements (Area E) and Information Competency Requirement (Area F) **OR** **OPTION 2**: IGETC Pattern **OR** **OPTION 3**: CSU GE Breadth Pattern; (3) Complete a total of 60 degree-applicable units (SBCC courses numbered 100 and higher); (4) Maintain a cumulative GPA of 2.0 or better in all units attempted at SBCC; (5) Maintain a cumulative GPA of 2.0 or better in all college units attempted; and (6) Complete 15 units through SBCC.

### Department Requirements
*(Total Department Units: 50-51)*

<table>
<thead>
<tr>
<th>Current Course No.</th>
<th>Previous Course No.</th>
<th>Title applies to SBCC GE areas</th>
<th>Units</th>
<th>Institution &amp; Course No.</th>
<th>Grade</th>
<th>Units (s/q)</th>
<th>Term</th>
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</thead>
<tbody>
<tr>
<td>• CHEM 155 .......(5)............................. General Chemistry I (^A)...............................5.0</td>
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<td>• CHEM 156 .......(6)............................. General Chemistry II...............................5.0</td>
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<tr>
<td>• CS 105 ...........(135/COMSC 135/35) Theory and Practice I OR ..................3.0</td>
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<tr>
<td>CS 107 ...........(131/COMSC 131/31) Computer Architecture &amp; Organization OR ..3.0</td>
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<tr>
<td>CS 120 ...........(COMSC 120) .......... Java Programming OR ..........................3.0</td>
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<td>CS 137 ..........(COMSC 137/37) ... C Programming OR .....................3.0</td>
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<tr>
<td>CS 140 ..........(COMSC 140) ...... Object-Oriented Programming, Using C++ ...4.0</td>
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<td>• MATH 150 .......(25)............................. Calculus with Analytic Geometry I (^D_2)........5.0</td>
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<td>• MATH 160 .......(26)............................. Calculus with Analytic Geometry II (^D_2) .......5.0</td>
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<td>• MATH 200* ......(27)............................. Multivariable Calculus (^D_2) ..................4.0</td>
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<tr>
<td>• MATH 210* ......(29)............................. Linear Algebra (^D_2) ....................4.0</td>
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<tr>
<td>• MATH 220* ......(28)............................. Differential Equations (^D_2) ..................4.0</td>
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<td>• PHYS 121 ......(21)............................. Mechanics of Solids and Fluids (^A) ............5.0</td>
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<td>• PHYS 122 ......(22)............................. Electricity and Magnetism ..........................5.0</td>
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<tr>
<td>• PHYS 123 ......(23)............................. Heat, Light and Modern Physics ..........................5.0</td>
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*MATH 250 & 260 will also satisfy the MATH 200 & 210 & 220 requirements.*

### Additional Program Information

For further information, contact the Counseling Center, 965-0581, Ext. 2285, or Michael Young, Department Chair, 965-0581, Ext. 2697.

*Santa Barbara City College*
SBCC AA/AS Degree Graduation Requirements Worksheet (Must complete IA or IB or IC, and II, and III and IV below)

IA. IGETC (http://articulation.sbcc.edu/IGETC/IGETC.pdf) Course # Grade Units (s/q) Term

1A. English Composition
1B. Critical Thinking-English Composition
1C. Oral Communication (CSU only)
2A. Mathematics
3A. Arts
3B. Humanities
4. Social Sciences
5A/5C. Physical Sciences
5B/5C. Biological Sciences
6A. Language Other Than English (UC only)

IB. CSU GE Breadth Pattern (http://articulation.sbcc.edu/CSU/CSUGE.pdf) Course # Grade Units (s/q) Term

A1. Oral Communication
A2. Written Communication
A3. Critical Thinking
B1/B3. Physical Science
B2/B3. Life Science
B4. Mathematics
C1. Arts
C2. Humanities
D. Social Sciences
E. Lifelong Learning and Self-Development

IC. SBCC GE, Institutional & Info Competency (http://www.sbcc.edu/apply/files/gereq.pdf) Course # Grade Units (s/q) Term

A. Natural Sciences with Lab
B. Social and Behavioral Science
C. Humanities
D-1. English Composition
D-2. Communication and Analytical Thinking
E-1. Mathematics - Plus complete 3 out of the 4 areas listed below (E-2 through E-5)
E-2. American Institutions
E-3. Physical Education/Health Education
E-4. Oral Communication
E-5. Multicultural/Gender Studies
F. Information Competency

II. Unit and Grade Point Average Requirements: Refer to Graduation Requirements on the other side of this document.

<table>
<thead>
<tr>
<th>SBCC</th>
<th>Transfer</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Total Semester Units Attempted</td>
<td>Total Semester Units Completed</td>
<td>Grade Points</td>
</tr>
</tbody>
</table>

III. Residency Requirements: 15 units completed through SBCC & 20% of Department Requirements completed through SBCC? Yes ☐ No ☐

IV. Department Requirements: Refer to the other side of this document for a list of department required courses. Yes ☐ No ☐