PHYSICAL GEOGRAPHY MAJOR, B.S. – 2019-2020
OCEAN SCIENCE EMPHASIS

PREPARATION FOR THE MAJOR

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geography 3, 4</td>
<td>8</td>
</tr>
<tr>
<td>Geography 5</td>
<td>4</td>
</tr>
<tr>
<td>Math 3A-B (or 2A-B) and 4A</td>
<td>12 or 14</td>
</tr>
<tr>
<td>Physics 6A-B-C or 1-2-3L-4-4L</td>
<td>9 or 16</td>
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<tr>
<td>PSTAT 5A or 5LS</td>
<td>5</td>
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<tr>
<td>Chemistry 1A-1AL or 2A-2AC</td>
<td>5</td>
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<tr>
<td>12 units from: Chemistry 1B, 1BL, 1C, 1CL, 2B, 2BC, 2C, 2CC; MCDB 1A, 1AL, 1LL 1B, 1BL; EEMB 2, 2L, 2LL, 3, 3L; Earth Science 2, 3, 4; Astronomy 1, 2; Math 4B, 6A, 6B, 8</td>
<td>12</td>
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</tbody>
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(Note: Chemistry 1A-B-C is prerequisite to MCDB 1A)

Strongly recommended: Computer Science 8; Geography 12 (or W 12); any additional courses from the above elective selection

UPPER-DIVISION MAJOR

44-48 UD units are required, distributed as follows:

A. 1 class from Statistical Analysis:
Geography 172; PSTAT 120A (or W 120A); Earth Science 134

B. 1 class of Physical Oceanography:
Geography 104

C. 3 classes from Oceanography and Marine Systems:
Geography 132, 149, 158, 163, 165; EEMB 142B-C

D. 3 classes from Climate and Earth System Science:
Geography 110, 119, 131, 133, 134, 142; Earth Science 105, 130, 164B

E. 3 classes from Geographical Techniques:
Geography 115A-B-C, 117, 126, 128, 175, 176A-B-C, 178, 183, 184, 190, 191

Note: Geography 115A-B-C or 176A-B-C are recommended sequences

Note: Geography 193, 198, 199, 199RA may be applied to any UD area by petition, depending on the subject matter, up to a maximum of 5 units. A maximum of 8 units from courses in related fields may be applied to the major by petition (see department office or website for more information).

MAJOR REGULATIONS

PREREQUISITES
Check the General Catalog for the prerequisites to all listed courses.

P/NP GRADING OPTION
Up to 5 units of the following courses may be taken P/NP for major credit: Geography 193, 198, 199RA. All other major courses (prep or UD), including those applied to the major from other departments, must be completed on a letter-graded basis.

SUBSTITUTIONS
In the major requirements are permissible only by petition to the department chair and dean.

RESIDENCE REQUIREMENTS
At least 20 UD units in major while in residence at UCSB.

G.P.A. REQUIREMENTS
At least 2.0 overall UC average in all upper-division major courses and all courses (Prep and UD) for the major.

DOUBLE MAJORS
With the approval of each department chairperson, up to a total of 8 units may be applied simultaneously to both UD majors.