**THE UNIVERSITY OF PUGET SOUND**

2015-2016 CURRICULUM GUIDE

**BIOCHEMISTRY – AMERICAN CHEMICAL SOCIETY CERTIFIED DEGREE**

DEGREE: BS

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| --- | --- | --- | --- | --- |
|  | **A suggested four-year program:** | | |  |
| *Fall Semester Classes* |  | | *Spring Semester Classes* |  |
|  |  | |  |  |
| **Freshman** | **Units** | |  | **Units** |
|  |  | |  |  |
| SSI 1 |  | 1 | SSI 2 | 1 |
|  |  |  |  |  |
| CHEM 110/lab or 115/lab1 (NS core) |  | 1 | CHEM 120/lab or 230/lab1 | 1 |
|  |  |  |  |  |
| MATH 180 (MA core) |  | 1 | MATH 181 | 1 |
|  |  |  |  |  |
| Approaches core |  | 1 | BIOL 111 | 1 |
|  |  |  |  |  |
|  |  | |  |  |
| **Sophomore** | **Units** | |  | **Units** |
|  |  | |  |  |
| CHEM 250/lab |  | 1 | CHEM 251/lab | 1 |
|  |  |  |  |  |
| PHYS 121/lab |  | 1 | PHYS 122/lab | 1 |
|  |  |  |  |  |
| FL (if needed) or Approaches core |  | 1 | FL (if needed) or Approaches core | 1 |
|  |  |  |  |  |
| MATH 280 |  | 1 | BIOL 212/lab | 1 |
|  |  |  |  |  |
|  |  |  | CHEM 231 (if needed)2 | 0.5 |
|  |  | |  |  |
| **Junior** | **Units** | |  | **Units** |
|  |  | |  |  |
| CHEM 340 |  | 1 | BIOL 311/lab | 1 |
|  |  |  |  |  |
| Approaches core (if needed) |  | 1 | Approaches core (if needed) | 1 |
|  |  |  |  |  |
| CHEM 330 or CHEM 300-400 elective4 |  | 1 | Elective | 1 |
| Elective |  | 1 | Elective | 1 |
|  |  |  |  |  |
|  |  | |  |  |
| **Senior** | **Units** | |  | **Units** |
|  |  | |  |  |
| CHEM 460/lab |  | 1 | CHEM 461 | 1 |
|  |  |  |  |  |
| CHEM 490 |  | 1 | CHEM 420/lab | 1 |
| CN core5 |  | 1 | Elective | 1 |
|  |  |  |  |  |
| Elective |  | 1 | Elective | 1 |
|  |  |  |  |  |
|  |  |  | **Puget Sound requires a total of 32 units to graduate.** |  |

**NOTES:**

1. CHEM 110, 120 and 231 or CHEM 115 and 230.
2. Either CHEM 110 and 120 or 115 and 230 serve as prerequisites for CHEM 250. Biochemistry majors who take the 110/120 sequence will also need to take 231. Students enrolling in CHEM 231 may have up to 4.5 academic units without incurring additional tuition fees.
3. BIOL 361 may not be used to satisfy this requirement\
4. If a CHEM 300-400 elective other than CHEM 330 is selected, then an additional 48 hours of laboratory work (e.g., summer research) must be included as part of the degree (since the other electives don’t have a lab component). BIOL 404 may be used here.
5. Of the three units of upper division coursework required outside the first major, the Connections course will count for one unless it is used to meet a major requirement.

A minimum grade of C must be earned in all courses for the major.

Upper-level courses in Biology that are not used for the Biochemistry major will count as upper division courses outside the major.

**THE UNIVERSITY OF PUGET SOUND**

COURSE CHECKLIST

**CHEMISTRY (BS IN BIOCHEMISTRY – ACS CERTIFIED)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CORE CURRICULUM** | | | | | **MAJOR REQUIREMENTS** | | | | | | | |  |
| UNIVERSITY CORE |  | CRS | TERM | GRADE |  | | COURSE | UNITS | | TERM | | GRADE |  |
|  |  |  |  |  |  | |  |  | |  | |  |  |
| SSI1 |  |  |  |  |  | | CHEM 110, 120 and 231 | 2.5 | |  | |  |  |
|  |  |  |  |  |  | | OR | OR | |  | |  |  |
| SSI2 |  |  |  |  |  | |  | |  |  |
|  |  |  |  |  |  | | CHEM 115 and 230 | 2 | |  | |  |  |
| AR |  |  |  |  |  | |  | |  |  |
|  |  |  |  |  |  | |  |  | |  | |  |  |
| HM |  |  |  |  |  | | CHEM 250 | 1 | |  | |  |  |
|  |  |  |  |  |  | |  |  | |  | |  |  |
| MA (MATH 180 or 181)# |  |  |  |  |  | | CHEM 251 | 1 | |  | |  |  |
|  |  |  |  |  |  | |  |  | |  | |  |  |
| NS (CHEM 110 or 115)# |  |  |  |  |  | | CHEM 340 | 1 | |  | |  |  |
|  |  |  |  |  |  | |  |  | |  | |  |  |
| SL |  |  |  |  |  | | CHEM 460 | 1 | |  | |  |  |
|  |  |  |  |  |  | |  |  | |  | |  |  |
| CN |  |  |  |  |  | | CHEM 461 | 1 | |  | |  |  |
|  |  |  |  |  |  | |  |  | |  | |  |  |
| **KEY**  SSI1= Seminar in Scholarly Inquiry1 AR= Artistic Approaches  SSI2= Seminar in Scholarly Inquiry2 HM= Humanistic Approaches  MA= Mathematical Approaches CN= Connections  NS= Natural Scientific Approaches FL= Foreign Language  SL= Social Scientific Approaches | | | | |  | | BIOL 111 | 1 | |  | |  |  |
|  | |  |  | |  | |  |  |
|  |  | | | |  | |  |  | |  | |  |  |
|  |  | | | |  | | BIOL 212 | 1 | |  | |  |  |
|  |  | | | |  | |  |  | |  | |  |  |
|  | | BIOL 311 | 1 | |  | |  |  |
|  |  | | | |  | |  | |  |  |
|  |  | | | |  | |  |  | |  | |  |  |
|  | | CHEM 420 | 1 | |  | |  |  |
|  |  | | | |  | |  | |  |  |
| **Foreign Language Requirement** (circle one)  1) Two semesters at 101/102 level or One semester at 200+ level  2) Proficiency exam (3rd year high school level or 1st year college level)  3) AP foreign language score of 4 or 5  4) IB higher level foreign language score of 5, 6, or 7 |  | | | |  | |  |  | |  | |  |  |
|  |  |  |  |  |  | | CHEM 300 or 400 level elective\* | 1 | |  | |  |  |
|  | | | | |  |  |  |  | |  | |  |  |
|  | | | | |  |  |  |  | |  | |  |  |
|  |  | MATH 180 | 1 | |  | |  |  |
|  | | | | |  |  |  |  | |  | |  |  |
|  |  | MATH 181 | 1 | |  | |  |  |
|  | | | | |  |  |  | |  |  |
|  |  | | | |  |  |  |  | |  | |  |  |
|  |  |  |  |  |  | MATH 280 | 1 | |  | |  |  |
|  | | | | |  |  |  | |  |  |
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| **Upper Division Level Requirement**  Three units at the upper division level outside the first major. | | | | |  |  |  |  | |  | |  |  |
|  |  | PHYS 121 | 1 | |  | |  |  |
|  |  | | | |  |  |  | |  |  |
|  |  | | | |  |  |  |  | |  | |  |  |
|  |  |  |  |  |  |  | PHYS 122 | 1 | |  | |  |  |
|  |  |  |  |  |  |  |  | |  |  |
|  | | | | |  |  |  | |  |  |
|  |  |  |  | |  | |  |  |
| **KNOWledge, Identity, and Power Requirement**  One course. See Bulletin for details. Courses may also fulfill other program or graduation requirements. | | | | |  | |  | | --- | | **THIS FORM IS** | | **NOT AN** | | **OFFICIAL GRADUATION ANALYSIS** | | | | | | | | |  |
| **NOTES**  # These major requirements may be used to fulfill university cores.   * If this course does not contain a laboratory component, then an additional 48 hours of lab work (e.g. summer research) as part of the degree. BIOL 404 may be used here. * A minimum grade of C must be earned in all courses for the major.   Majors in Biochemistry may not earn additional majors in Chemistry or Molecular and Cellular Biology.  Students must contact the Chemistry Chair to confirm that their particular plan satisfies the ACS certification guidelines. |  | | | |  |  |
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