|  |  |
| --- | --- |
| **2021-2022****Courses in BOLD are required by this major****Courses in regular type are to fulfill essential education requirements and DO NOT have to be taken the specific semester stated.** **If you choose to earn an Essential Education Theme Concentration, you must complete 4 theme-based courses from one of the Essential Education themes.*****Courses in ITALIC are strongly recommended*****ALSO REQUIRED FOR GRADUATION*** **120 credit hours**
* **39 Upper division credits**
* **2.00 GPA**
* **Completion of all major & gen ed requirements**

**+ Denotes courses offered only every other year****EE=Essential Education** | **Bachelor of Science (B.S.) Degree – Biology and Chemistry Double Major Name:       ID:** |
|  | **First Year Fall** | **EE****Learning Outcome** | **Sem. Hours** | **Date Met** | **First Year Spring** | **EE****Learning Outcome** | **Sem. Hours** | **Date Met** |
|  | **BIOL1500 Fund of Ecol & Evol** |  | **3** |  | **BIOL1520 Fund of Org. Biology** |  | **4** |  |
|  | **CHEM1410 General Chemistry I Workshop** |  | **4** |  | **CHEM1420 General Chemistry Workshop II** |  | **4** |  |
|  | **MATH1510 Calculus I** | **LO 6 (b)** | **4** |  | **MATH1520 Calculus II** |  | **4** |  |
|  | ENGL1100 Discourse I ORHONR1010 Honors 101 | LO 1 (a) | 3 |  | Ethical Thinking and Action Course | LO 3 | 3 |  |
|  | INTD1100 Critical Thinking in Arts & Sciences | LO 2 | 3 |  | Knowledge of the Physical and Natural World Science Course | **LO 6 (a)**  | 3 |  |
|  | **Total Hours** |  |  |  | **Total Hours** |  |  |  |
|  | **Notes: Think about student leadership positions, volunteering or joining a club or organization on campus (Science club, etc.)** |
|  | **Second Year Fall*****(Meet w/ advisor in your major(s)!)*** | **EE****Learning Outcome** | **Sem.****Hours** | **Date Met** | **Second Year Spring** | **EE****Learning Outcome** | **Sem. Hours** | **Date Met** |
|  | **CHEM3410/3411 Organic Chem I w/lab** |  | **4** |  | **CHEM3420/3421 Organic Chem II w/lab** |  | **4** |  |
|  | **PHYS1410 Elements of Physics I w/lab** |  | **4** |  | **PHYS1420 Elements of Phys II w/lab** |  | **4** |  |
|  | ENGL2100 Discourse II ORHONR2010 Honors 201 | LO 1 (b) | **3** |  | **BIOL2100 Fund of Cell Bio & Gen** |  | **4** |  |
|  | BIOL2440 Plant Biology or BIOL2430 Animal Biology or Essential Education Class     Knowledge of Human Culture: Arts | LO 5 (a) | **3-4****3** |  | Global Learning Essential Education Course  | LO 4 | 3 |  |
|  | **Total Hours** |  |  |  | **Total Hours** |  |  |  |
|  | **Connect with your faculty advisor early the Junior year to discuss internships, graduate school admission, and mentoring programs. Notes:**  |
|  | **Third Year Fall*****(Check your degree audit!)*** | **EE****Learning Outcome** | **Sem.****Hours** | **Date Met** | **Third Year Spring*****(Check your degree audit!)*** | **EE****Learning Outcome** | **Sem. Hours** | **Date Met** |
|  | **CHEM3610+ Phys Chem I w/Lab** (*odd fall*) |  | **4** |  | **CHEM3620+ Phys. Chem II w/Lab** *(even spring)* |  | **4** |  |
|  | ENGL3100 Discourse III | LO 1 (c) | 3 |  | *CSIT1100**Principles of Computing*\*\*\* |  | 3  |  |
|  | **CHEM4310 Biochem** |  | **4** |  | **Biology Elective\*** |  | **3 or 4** |  |
|  | **Biology Elective\*** |  | **3 or 4** |  | **CHEM3110 Chem Seminar I** |  | **1** |  |
|  | **MATH1380 Intro to Statistics** |  | **3** |  | **Biology Elective\*\***       |       | **3 or 4** |  |
|  | **Total Hours** |  |  |  | **Total Hours** |  |  |  |
|  | **Notes:** |
|  | **Fourth Year Fall*****(Apply for graduation!)*** | **EE****Learning Outcome** | **Sem.****Hours** | **Date Met** | **Fourth Year Spring** | **EE****Learning Outcome** | **Sem. Hours** | **Date Met** |
|  | **CHEM4330+ Instrumental Analysis W/Lab** *(even fall)* |  | **4** |  | **CHEM3300+ Analytical Chemistry W/Lab** *(odd spring)*  |  | **4** |  |
|  | **BIOL/CHEM4120 Sr Research I** |  | **1** |  | **BIOL/CHEM4130 Sr Research II** |  | **1** |  |
|  | **BIOL4110 Bio Seminar** |  | **1** |  | **CHEM4110 Chem Seminar II** |  | **1** |  |
|  | Knowledge of Human Cultures: Humanities  | LO 5 (b)  | **3** |  | **Biology Elective \*\***       |  | **3** |  |
|  | Knowledge of Human Cultures: Social Science  | **LO 5 (c)** | **3**  |  | **Biology Elective\*\***        |  | **3-4** |       |
|  | **BIOL/CHEM4310 Biochemistry**  |  | **4** |  | Knowledge of Human Cultures: Histories  | **LO 5 (d)**  | 3 |       |
|  | **Total Hours** |  |  |  | **Total Hours** |  |  |  |
|  | **Notes: \* Choose five of the following courses with at least one in each of the three areas (17-20 s.h.) AREA 1: BIOL2360, 2430, 2440, 3400/3401 AREA 2: BIOL3310, 3500, 4310, 4450, 4460 AREA 3: BIOL3420, 3440, 4400** **\*\* For students planning to attend professional or graduate school, there are several strongly recommended bio courses: Professional School Recommendations: ATHT2500, BIOL2360, 3120, 3310, 3420, 3440, 3500, 4310, 4450 Graduate School Recommendations: BIO3120, 3 BIOL electives (depending on field of interest) Please meet with your faculty advisor to discuss these recommended courses.\*\*\**These courses are strongly recommended for Chemistry B.S. majors. A math minor is also strongly recommended.*** |
| **Updated:****06/11/2021** |  |

