## Suggested Study Plan For B.A. Chemistry Major With Licensure in Secondary Chemistry Teaching

| Freshman Year |  |  |  |  |
| :--- | :---: | :--- | :--- | :---: |
| Fall | Sem. Hours |  | Spring | Sem. Hours |
| CHE 111, 112 General Chemistry I ${ }^{\mathrm{F}, \mathrm{S}, \mathrm{Su}}$ | 4 |  | CHE 114,115 General Chemistry II ${ }^{\mathrm{F}, \mathrm{S}, \mathrm{Su}}$ | 4 |
| CHE 170 Engaging in Chem\&Biochem | 1 |  | MAT 191 Calculus $\mathrm{F}, \mathrm{S}, \mathrm{Su}(\mathrm{MAT})$ | 3 |
| MAT 151 PreCalculus II $\mathrm{F}, \mathrm{S}, \mathrm{Su}$ |  |  |  |  |
| or MAT 190 ${ }^{\mathrm{F}, \mathrm{S}}$ | 3 |  | Historical Perspective (GHP-GPM) | 3 |
| ENG 101 (GRD1) | 3 |  | Reasoning \& Discourse (GRD2) | 3 |
| Foreign Language (GFL1) | 3 | $/ 14$ |  | Foreign Language (GFL2) |


| Sophomore Year |  |  |  |  |
| :--- | :---: | :--- | :--- | :---: |
| Fall | Sem. Hours |  | Spring | Sem. Hours |
| CHE 342 Inorganic Chemistry ${ }^{\mathrm{F}}$ | 3 |  | CHE 352, 355 Organic Chemistry II ${ }^{\mathrm{S}, \mathrm{Su}}$ | 5 |
| CHE 351 ${ }^{\mathrm{F}, \mathrm{S}, \mathrm{Su}}, 353^{\mathrm{F}}$ Organic Chem I \& Lab | 5 |  | PHY 211 General Physics I ${ }^{\mathrm{F}, \mathrm{S}, \mathrm{Su}}$ | 3 |
| MAT 292 Calculus II ${ }^{\mathrm{F}, \mathrm{S}, \mathrm{Su}}$ | 3 |  | Foreign Language (GFL4) | 3 |
| Philosophical, Religious, Ethical Principles (GPR) | 3 |  | GEO 103 | 3 |
| Foreign Language (GFL3) | 3 |  | Social/ Behavioral Science (GSB2) | 3 |
| Social/ Behavioral Science (GSB1) | $3 / 20$ |  | Historical Perspective (GHP-GMO) | $3 / 17$ |


| Junior Year |  |  |  |  |
| :--- | :--- | :--- | :--- | :---: |
| Fall | Sem. Hours |  | Spring | Sem. Hours |
| CHE 331, 333 Quantitative Analysis |  |  |  |  |
| PHY 212 General Physics II ${ }^{\mathrm{F}, ~ \mathrm{~S}, \mathrm{Su}}$ | 4 |  | Adv. Chemistry Elective | 3 |
| BIO 111 General Biology (GLS) | 4 | CHE 401 Chemistry Seminar ${ }^{\mathrm{F}, \mathrm{S}}$ |  |  |
| GEO Elective | 4 |  | Fine Arts (GFA) | Au |
| TED 445 Diverse Learners | 3 |  | BIO 112 | 3 |
| ERM401, LIS 120 | 3 |  | Literature (GLT1) | 4 |
|  | 1,1 |  | Social/ Behavioral Science (GSB3) | 3 |


| Senior Year |  |  |  |  |
| :--- | :---: | :--- | :--- | :---: |
| Fall | Sem. Hours |  | Spring | Sem. Hours |
| CHE 402 Chemistry Seminar ${ }^{\mathrm{F}, \mathrm{S}}$ | 1 |  |  |  |
| CHE 406 Physical Chemistry |  |  |  |  |
| Adv. Chemistry Elective | 4 |  | CUI 465 Student Teaching and Seminar: <br> Science**** | 12 |
| Literature (GLT2) | 3 |  |  |  |
| TED 459 Teaching Practices and Curriculum in <br> Science | 3 |  |  |  |
| TED 435 Literacy in the Content Area | 3 |  |  | $/ 12$ |
| ERM 403 | $1 / 18$ |  |  |  |

****Student teaching is full time for a semester. No other courses may be taken. Student teaching usually occurs in the spring of the senior year. Attempts should be made to complete other courses prior to this semester.

## FOOTNOTES FOR B.A. CHEMISTRY STUDY PLAN

1. All B.A. majors must complete mathematics* at least through MAT 292 Calculus II. Depending upon the individual mathematics background*, some students may start with MAT 150 rather than MAT 151 and extend the sequence of math courses by one semester. MAT 190 is a one-semester precalculus course for science majors. Majors are strongly advised to elect additional advanced mathematics courses. A Math Placement Test should be taken. (*See http://www.uncg.edu/mat/undergraduate/mathplacetest.html)
2. If the student is able to begin Foreign Language at the intermediate level in the Freshman Year, a second year of language may not be required. The requirement is Foreign Language through the Intermediate (204) level.
3. The sequence listed here for meeting the General Education Requirements (GEC) and College Additional Requirements (CAR) (identified by capital letters in parentheses) is a suggestion only and may be arranged to fit each student's particular situation. Note: Four Writing Intensive, two Speaking Intensive, and four Global (including one nonwestern) marker courses must be completed.
4. The only difference in the B.A. and B.S. programs in the first two years is the PHY 291-292 requirement for the B.S.* The B.A. student may take PHY 211-212. Should the B.A. student switch to the B.S. program after the sophomore year, one advance Physics course will be required; PHY 321 Modern Physics, is suggested. *(MAT 191, Calculus I, is a prerequisite for PHY 291.)
5. Electives may be taken in any area, including chemistry, related sciences and mathematics. Additional hours may be taken in the major and related areas, but the number of hours at graduation will increase accordingly. CHE 491, 492 Independent Study is encouraged.
6. Only major requirement and related area requirement courses in which grades of C - or better are earned will be counted toward the major. Students must earn a C - or better in prerequisite major requirement and related area requirement courses before advancing to subsequent courses.
7. Two courses from among CHE $442,481,431$, and 456 must be chosen as a Chemistry elective. CHE 433 Instrumental Analysis Lab need not accompany CHE 431 Instrumental Analysis Lecture, but may be elected.
8. Senior Chemistry majors register for CHE 401 and attend seminar, whether or not they plan to present a seminar this first semester. All must register for CHE 402 for the second semester. A grade will be given in the second semester, based on presentation and attendance in CHE 401 and CHE 402. Juniors are encouraged to attend.

## Major Requirements

1. CHE 111*, $112^{*}, 114,115,331,333,342,351,352,354,355,401$ (audit), 402,406 or 461
2. Two courses from among: CHE 420 or 456 and 457 (which counts as one course), 442, 481, 431, 436, 453, TED 459. Related Area Requirements
3. MAT191, 292
4. PHY 211, 212 or 291, 292

## Licensure requirements:

Teacher Licensure Requirements The following courses must be taken in a specified sequence, terminating in student teaching in the spring semester of the senior year. See below and the online Secondary Education
Handbook for more information.

1. TED 535 Literacy in the Content Area
2. ERM 401, 402, and 403
3. TED 403 (requires 25 hours of internship in the schools)
4. TED 445 Diverse Learners (requires 25 hours of internship in the schools)
5. TED 459 Teaching Practices and Curriculum in Science (requires 50 hours of internship in the schools)
6. TED 465 Student Teaching and Seminar: Secondary School (12 s.h.)

LIS 120 is strongly recommended.
The courses should be taken in the following sequence:

- Junior Year, Fall: ERM 401, TED 445, LIS 120
- Junior Year, Spring: ERM 402, TED 444
- Senior Year, Fall: ERM 403, TED 435, TED 459
- Senior Year, Spring: TED 465

Other information: https://soe.uncg.edu/academics/departments/tehe/tehe-programs/
Teacher Education Handbook: https://soe.uncg.edu/wp-content/uploads/2016/01/2017-18-Secondary-Education-Handbook.pdf

