**Chemistry Major**

**Professional Track**

**Catalog Years 2023-2024**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Advisee |  |  | Advisor |  |
| Student ID |  |  | Date |  |

Please use the following notations when you complete the checklist:

 X = course completed

 IP = course in progress

 F21 = intend to register for the course in fall 2021

**Core Curriculum Requirements**

To fulfill Towson University’s Core Curriculum requirements students must

Complete one course from each of the following 14 categories. For further explanation of Core Curriculum Courses, visit: <https://www.towson.edu/advising/current/curriculum.html>

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| **Core Curriculum Requirements** |
|  | 1. Towson Seminar\* |  |  | 10. Metropolitan Perspectives |
|  | 2. English Composition\* |  |  | 11. The United States as a Nation |
|  | 3. EXEMPT |  |  | 12. Global Perspectives |
|  | 4. Creativity and Creat. Develop. |  |  | 13. Diversity and Difference |
|  | 5. Arts and Humanities |  |  | 14. Ethical Issues and Perspectives |
|  | 6. Social and Behavioral Sciences |  |  |  |
|  | 7. EXEMPT |  |  |  |
|  | 8. EXEMPT |  |  | \****Grade of ‘C’ or better required;***  |
|  | 9. Advanced Writing Seminar\* |  |  | ***all others require ‘D’ or better.*** |

**Core Courses (46 units)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | CHEM | 131/131L | 3+1 units | General Chemistry I  |
|  | CHEM | 132/132L | 3+1 units  | General Chemistry II  |
|  | CHEM | 220/220L | 3+2 units | Analytical Chemistry  |
|  | CHEM | 310 | 4 units | Instrumental Analysis |
|  | CHEM | 323 | 5 units | Inorganic Chemistry  |
|  | CHEM | 334 | 3 units | Organic Chemistry I [Lecture] |
|  | CHEM | 336 | 2 units | Introductory Organic Chemistry Lab |
|  | CHEM  | 337 | 3 units | Organic Chemistry II [Lecture] |
|  | CHEM | 339 | 2 units | Intermediate Organic Chemistry Lab |
|  | CHEM | 345 | 3 units | Principles of Physical Chemistry |
|  | CHEM | 346 | 3 units | Theoretical Foundations of Physical Chemistry |
|  | CHEM | 351 | 3 units | Biochemistry |
|  | CHEM | 372 | 2 units | Physical Chemistry Laboratory |
|  | CHEM | 401 | 1 unit | Communication Skills in Chemistry |
|  | CHEM | 491 | 1-3 units | Research in Chemistry |

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| **Elective Courses, at least 6 units** |
|  | BIOL | 408 | 4+ units | Cell Biology |
|  | BIOL | 409 | 4+ units | Molecular Biology |
|  | BIOL | 421 | 4+ units | Immunology |
|  | BIOL | 428 | 4+ units | Virology |
|  | CHEM | 356 | 2 units | Biochemistry Laboratory  |
|  | CHEM | 357 | 3 units | Advanced Biochemistry |
|  | CHEM | 391\* | 1-3 units | Special Problems in Chemistry |
|  | CHEM | 461 | 1-3 units | Advanced Lecture Topics  |
|  | CHEM | 462 | 1-2 units | Advanced Laboratory Techniques  |
|  | CHEM | 472 | 3 units | Applications of Environmental Chemistry  |
|  | CHEM | 480 | 3 units | Chemical Toxicology  |
|  | CHEM | 491\* | 1-3 units | Research in Chemistry |
|  | CHEM | 499 | 2 units | Honors Thesis in Chemistry  |
|  | FRSC | 363 | 3 units | Chemistry of Dangerous Drugs  |
|  | FRSC | 367 | 3 units | Forensic Chemistry  |
|  | FRSC | 467 | 3 units | Forensic Analytical Chemistry |
|  | GEOL | 331 | 4+ units | Mineralogy |
|  | GEOL | 415 | 4 units | Hydrogeology |
|  | MATH | 330 | 4 units | Introduction to Statistical Methods |
|  | MATH | 374 | 3 units | Differential Equations |
|  | MBBB | 301 | 4 units | Intro to Bioinformatics |
|  | MBBB | 401 | 3+ units | Advanced Bioinformatics |
|  | PHYS | 307 | 3 units | Introductory Mathematical Physics |
|  | PHYS | 311 | 3 units | Modern Physics 1 |
|  | PHYS | 352 | 3 units | Thermodynamics and Kinetic Theory |
|  | PHYS | 354 | 4+ units | Electricity and Magnetism |

**+ Courses have additional prerequisites not listed among the required courses.**

**\* A maximum of 1 unit of CHEM 391 and a maximum of 2 units from CHEM 391 and CHEM 491 may be used for elective credit.**

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| NOTE: A student may repeat no more than three courses, including multiple attempts at the same course, required for the major. This includes all foundation courses, as well as required courses and electives for the major.# repeats: \_\_\_\_\_\_ |

**Additional Required Courses (16 units)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | MATH | 273  | 4 units | Calculus I  |
|  | MATH | 274 | 4 units | Calculus II |
|  |  |  |  |  |
|  | PHYS | 211 | 4 units | Gen. Physics I ( non - Calc) |
|  | PHYS | 212 | 4 units | Gen Physics II ( non – Calc ) |
|  | **OR** |  |
|  | PHYS | 241 | 4 units | Gen. Physics I ( Calc ) |
|  | PHYS | 242 | 4 units | Gen. Physics II ( Calc )  |

*It is recommended to take PHYS 241 and 242, as two semesters of calculus-based physics is required for the ACS certification of degree*

**General Graduation Requirements**

**120 Units Required**

Total units to date including current semester: \_\_\_\_\_\_ units.

**32 Units Upper Division Required**

Total Upper Division units to date including current semester: \_\_\_\_\_\_ units

Current GPA: ­\_\_\_\_\_\_

Expected Graduation Date: \_\_\_\_\_\_

**Advisor Notes:**