Cleveland State University
College of Sciences and Health Professions
Bachelor of Science in Chemistry
(American Chemical Society Certified Track - Even Year Start)

| First Year |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester | Credits | Major | Gen Ed |
| CHM 261/266 General Chemistry I/Lab | 5 | X | NS | CHM 262/267 General Chemistry II/Lab | 5 | X | NS |
| MTH 181 Calculus I | 4 | x | M/QL | MTH 182 Calculus II | 4 | x | M/QL |
| ENG 101 English I | 3 |  | w/c | ENG 102 English II | 3 |  | w/c |
| ASC 101 Introduction to University Life | 1 |  | INTRO | Arts \& Humanities Elective | 3 to 4 |  | A\&H |
| Social Science Elective | 3 to 4 |  | ss |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Semester Total | 16 to 17 |  |  | Semester Total | 15 to 16 |  |  |


| Second Year |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester | Credits | Major | Gen Ed |
| CHM 331/336 Organic Chemistry 1/Lab | 6 | X |  | CHM 332/337 Organic Chemistry II/Lab | 6 | X |  |
| MTH 281 Multivariable Calculus | 4 | x |  | PHY 242 University Physics II (or PHY 244) | 5 | x | NS |
| PHY 241 University Physics I (or PHY 243) | 5 | X | NS | Arts \& Humanities Elective (outside the US/ALAAME) | 3 to 4 | x | A\&H |
|  |  |  |  | US Diversity Elective | 3 to 4 |  | DIV |
|  |  |  |  |  |  |  |  |
| Semester Total | 15 |  |  | Semester Total | 17 to 19 |  |  |

Third Year

| Third Year |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester | Credits | Major | Gen Ed |
| CHM 441 Adv. Inorganic Chemistry | 4 | x |  | CHM 411 Adv. Instrumental Analysis | 3 | x |  |
| CHM 446 Inorganic Chemistry Lab | 2 | x |  | CHM 416 Adv. Instrumental Analysis Lab | 4 | x | WAC |
| CHM 311/316 Quantitative Analysis/Lab | 6 | x |  | CHM 401 Chemical Information | 2 | x | WAC |
| African American Experience Elective | 3 to 4 |  | DIV | Social Science (outside the US/ALAAME) | 3 to 4 |  | ss |
|  |  |  |  | General Elective* | 3 to 4 |  |  |
|  |  |  |  |  |  |  |  |
| Semester Total | 15 to 16 |  |  | Semester Total | 15 to 17 |  |  |

Fourth Year

| Fourth Year |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester |  | Credits | Major | Gen Ed |
| CHM 321 Physical Chemistry I | 4 | x |  | CHM 322 Physical Chemistry II |  | 4 | x |  |
| CHM 426 Physical Chemistry Lab I | 3 | x | WAC | CHM 427 Physical Chemistry Lab II |  | 3 | x |  |
| CHM 402 Biochemistry I | 3 | x |  | CHM 489 Senior Research |  | 3 | x |  |
| CHM 471 Faculty Colloquium | 1 | x |  | CHM 472 Student Colloquium |  | 1 | x | CAP |
| General Elective* | 3 to 4 |  |  | CHM 431 Adv. Organic Chemistry |  | 2 | X |  |
|  |  |  |  | General Elective* |  | 3 to 4 |  |  |
| Apply for Spring graduation prior to Sep 9th |  |  |  |  |  |  |  |  |
| Semester Total | 14 to 15 |  |  |  | Semester Total | 16 to 17 |  |  |
| Degree Total: 123-132 (128 hours minimum) |  |  |  |  |  |  |  |  |

Assumptions: college-level readiness in MTH \& ENG; no Foreign Language Deficiency

## College/ Program Notes:

The plan above is a suggested guide to ensure that all General Education, College, University, and Major requirements are met within 4 years of study. Students may deviate from the suggested placement of Gen Ed courses, although the M/QL and W/C requirements should be completed during the first year of study.
*Electives ensure that a student accumulates the minimum credit hour totals needed for graduation. Students must have a minimum of $\mathbf{1 2 8}$ total credit hours, of which a minimum of $\mathbf{4 2}$ credit hours must be upper division ( 300 or 400 -level courses). Depending upon other elective choices made ( 3 credit hour vs. 4 credit hour courses), students may not need as many general electives as indicated above, or may need additional electives.

## University Notes:

| Gen Ed Key: | SS = Social Sciences (two courses, one of which must be focused outside the US**) |
| :---: | :---: |
| INTRO = Introduction to University Life (one course) | A\&H = Arts \& Humanities (two courses, one must be focused outside the US**) |
| $\mathrm{W} / \mathrm{C}=$ Writing/Composition (two courses; C or better required) | DIV = Social Diversity (two courses; one US Diversity and one African American Experience) |
| M/QL = Mathematics/Quantitative Literacy (two courses) | WAC/SPAC = Writing/Speaking Across the Curriculum (three courses, one in the major; C or better required) |
| NS = Natural Sciences (two courses, one of which must have a lab) | CAP = Capstone |

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Cleveland State University
College of Sciences and Health Professions
Bachelor of Science in Chemistry (American Chemical Society Certified Track - Odd Year Start)

| First Year |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester | Credits | Major | Gen Ed |
| CHM 261/266 General Chemistry I/Lab | 5 | X | NS | CHM 262/267 General Chemistry II/Lab | 5 | X | NS |
| MTH 181 Calculus I | 4 | x | M/QL | MTH 182 Calculus II | 4 | x | M/QL |
| ENG 101 English I | 3 |  | w/c | ENG 102 English II | 3 |  | w/c |
| ASC 101 Introduction to University Life | 1 |  | INTRO | Arts \& Humanities Elective | 3 to 4 |  | A\&H |
| Social Science Elective | 3 to 4 |  | ss |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Semester Total | 16 to 17 |  |  | Semester Total | 15 to 16 |  |  |


| Second Year |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester | Credits | Major | Gen Ed |
| CHM 331/336 Organic Chemistry 1/Lab | 6 | X |  | CHM 332/337 Organic Chemistry II/Lab | 6 | X |  |
| MTH 281 Multivariable Calculus | 4 | x |  | PHY 242 University Physics II (or PHY 244) | 5 | x | NS |
| PHY 241 University Physics I (or PHY 243) | 5 | X | NS | CHM 401 Chemical Information | 2 | X | WAC |
|  |  |  |  | US Diversity Elective | 3 to 4 |  | DIV |
|  |  |  |  |  |  |  |  |
| Semester Total | 15 |  |  | Semester Total | 16 to 17 |  |  |

Third Year

| Third Year |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester | Credits | Major | Gen Ed |
| CHM 321 Physical Chemistry 1 | 4 | x |  | CHM 322 Physical Chemistry II | 4 | x |  |
| CHM 426 Physical Chemistry Lab I | 3 | x | WAC | CHM 427 Physical Chemistry Lab II | 3 | x |  |
| CHM 311/316 Quantitative Analysis/Lab | 6 | X |  | CHM 411 Adv. Instrumental Analysis | 3 | X |  |
| African American Experience Elective | 3 to 4 |  | DIV | CHM 416 Adv. Instrumental Analysis Lab | 4 | x | WAC |
|  |  |  |  | CHM 431 Adv. Organic Chemistry | 2 | x |  |
|  |  |  |  |  |  |  |  |
| Semester Total | 16 to 17 |  |  | Semester Total | 16 |  |  |

Fourth Year

| Fourth Year |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester |  | Credits | Major | Gen Ed |
| CHM 441 Adv. Inorganic Chemistry | 4 | x |  | CHM 489 Senior Research |  | 3 | x |  |
| CHM 446 Inorganic Chemistry Lab | 2 | x |  | CHM 472 Student Colloquium |  | 1 | x | CAP |
| CHM 402 Biochemistry I | 3 | x |  | Social Science (outside the US/ALAAME) |  | 3 to 4 |  | SS |
| CHM 471 Faculty Colloquium | 1 | x |  | General Elective* |  | 3 to 4 |  |  |
| Arts \& Humanities (outside the US/ALAAME) | 3 to 4 |  | A\&H | General Elective* |  | 3 to 4 |  |  |
| General Elective* | 3 to 4 |  |  |  |  |  |  |  |
| Apply for Spring graduation prior to Sep 9th |  |  |  |  |  |  |  |  |
| Semester Total | 16 to 18 |  |  |  | Semester Total | 13 to 16 |  |  |
| Degree Total: 123-132 (128 hours minimum) |  |  |  |  |  |  |  |  |

Assumptions: college-level readiness in MTH \& ENG; no Foreign Language Deficiency

## College/ Program Notes:

The plan above is a suggested guide to ensure that all General Education, College, University, and Major requirements are met within 4 years of study. Students may deviate from the suggested placement of Gen Ed courses, although the M/QL and W/C requirements should be completed during the first year of study.
*Electives ensure that a student accumulates the minimum credit hour totals needed for graduation. Students must have a minimum of $\mathbf{1 2 8}$ total credit hours, of which a minimum of $\mathbf{4 2}$ credit hours must be upper division ( 300 or 400 -level courses). Depending upon other elective choices made ( 3 credit hour vs. 4 credit hour courses), students may not need as many general electives as indicated above, or may need additional electives.

## University Notes:

| Gen Ed Key: | SS = Social Sciences (two courses, one of which must be focused outside the US**) |
| :---: | :---: |
| INTRO = Introduction to University Life (one course) | A\&H = Arts \& Humanities (two courses, one must be focused outside the US**) |
| $\mathrm{W} / \mathrm{C}=$ Writing/Composition (two courses; C or better required) | DIV = Social Diversity (two courses; one US Diversity and one African American Experience) |
| M/QL = Mathematics/Quantitative Literacy (two courses) | WAC/SPAC = Writing/Speaking Across the Curriculum (three courses, one in the major; C or better required) |
| NS = Natural Sciences (two courses, one of which must have a lab) | CAP = Capstone |

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Cleveland State University
College of Sciences and Health Professions
Bachelor of Science in Chemistry
(Pre-Professional Track)

| First Year |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester | Credits | Major | Gen Ed |
| CHM 261/266 General Chemistry I/Lab | 5 | X | NS | CHM 262/267 General Chemistry II/Lab | 5 | X | NS |
| BIO 200/201 Introductory Biology 1/Lab | 4 | x | NS | BIO 202/203 Introductory Biology II/Lab | 4 | x | NS |
| ENG 101 English I | 3 |  | w/c | ENG 102 English II | 3 |  | w/c |
| ASC 101 Introduction to University Life | 1 |  | INTRO | Arts \& Humanities Elective | 3 to 4 |  | A\&H |
| Social Science Elective | 3 to 4 |  | SS |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Semester Total | 16 to 17 |  |  | Semester Total | 15 to 16 |  |  |


| Second Year |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester |  | Credits | Major | Gen Ed |
| CHM 331/336 Organic Chemistry 1/Lab | 6 | X |  | CHM 332/337 Organic Chemistry II/Lab |  | 6 | X |  |
| MTH 181 Calculus I | 4 | X | M/QL | MTH 182 Calculus II |  | 4 | x | M/QL |
| PHY 221 College Physics I | 5 | X | NS | PHY 222 College Physics II |  | 5 | X | NS |
|  |  |  |  | US Diversity Elective |  | 3 to 4 |  | DIV |
|  |  |  |  |  |  |  |  |  |
| Semester Total | 15 |  |  |  | Semester Total | 18 to 19 |  |  |

Third Year

| Third Year |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester | Credits | Major | Gen Ed |
| CHM 320 Survey of Physical Chemistry | 4 | x |  | BIO 302/302 Animal Biology/Lab | 4 | x |  |
| CHM 310 Survey of Analytical Chemistry | 2 | x |  | BIO 310/311 Genetics \& Recitation | 4 | x |  |
| CHM 315 Survey of Analytical Chemistry Lab | 2 | x | WAC | African American Experience Elective | 3 to 4 |  | DIV |
| CHM 402 Biochemistry | 3 | x |  | Arts \& Humanities Elective (outside the US/ALAAME) | 3 to 4 | x | A\&H |
| BIO 308/309 Cell Biology/Lab | 4 | x |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Semester Total | 15 |  |  | Semester Total | 14 to 16 |  |  |

Fourth Year

| Fourth Year |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester |  | Credits | Major | Gen Ed |
| CHM 471 Faculty Colloquium | 1 | x |  | CHM 472 Student Colloquium |  | 1 | X | CAP |
| BIO 416/417 Microbiology/Lab | 5 | X |  | BIO Elective |  | 3 to 4 | X |  |
| CHM Elective | 3 to 4 | X |  | CHM Elective |  | 3 to 4 | X |  |
| Social Science (outside the US/ALAAME) | 3 to 4 |  | Ss | Writing Across the Curriculum Elective |  | 3 to 4 |  | WAC |
| Writing Across the Curriculum Elective | 3 to 4 |  | WAC | General Elective* |  | 3 to 4 |  |  |
|  |  |  |  |  |  |  |  |  |
| Apply for Spring graduation prior to Sep 9th |  |  |  |  |  |  |  |  |
| Semester Total | 15 to 18 |  |  |  | Semester Total | 13 to 17 |  |  |
| Degree Total: 121-133 (128 hours minimum) |  |  |  |  |  |  |  |  |

Assumptions: college-level readiness in MTH \& ENG; no Foreign Language Deficiency

## College/ Program Notes:

The plan above is a suggested guide to ensure that all General Education, College, University, and Major requirements are met within 4 years of study. Students may deviate from the suggested placement of Gen Ed courses, although the M/QL and W/C requirements should be completed during the first year of study.
*Electives ensure that a student accumulates the minimum credit hour totals needed for graduation. Students must have aminimum of $\mathbf{1 2 8}$ total credit hours, of which a minimum of $\mathbf{4 2}$ credit hours must be upper
 electives.

## University Notes:

University Notes:

| Gen Ed Key: | SS = Social Sciences (two courses, one of which must be focused outside the US**) |
| :--- | :--- |
| INTRO = Introduction to University Life (one course) | A\&H = Arts \& Humanities (two courses, one must be focused outside the US**) |
| W/C = Writing/Composition (two courses; C or better required) | DIV = Social Diversity (two courses; one US Diversity and one African American Experience) |
| M/QL = Mathematics/Quantitative Literacy (two courses) | WAC/SPAC = Writing/Speaking Across the Curriculum (three courses, one in the major; C or better required) |
| NS = Natural Sciences (two courses, one of which must have a lab) |  |
|  |  |
|  |  |
|  |  |
|  | CA of the SS and A\&H courses focused outside the US, one must be focused on Africa, Latin America, Asia or the Middle East (ALAAME) |

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Cleveland State University
College of Sciences and Health Professions
Bachelor of Science in Chemistry
(Pre-Professional Track with Concentration in Pharmaceutical Science)

| First Year |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester |  | Credits | Major | Gen Ed |
| CHM 261/266 General Chemistry I/Lab | 5 | X | NS | CHM 262/267 General Chemistry II/Lab |  | 5 | X | NS |
| BIO 200/201 Introductory Biology 1/Lab | 4 | X | NS | BIO 202/203 Introductory Biology 11/Lab |  | 4 | X | NS |
| ENG 101 English I | 3 |  | w/c | ENG 102 English II |  | 3 |  | w/c |
| ASC 101 Introduction to University Life | 1 |  | INTRO | Arts \& Humanities Elective |  | 3 to 4 |  | A\&H |
| Social Science Elective | 3 to 4 |  | ss |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Semester Total | 16 to 17 |  |  |  | Semester Total | 15 to 16 |  |  |


| Second Year |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester |  | Credits | Major | Gen Ed |
| CHM 331/336 Organic Chemistry 1/Lab | 6 | X |  | CHM 332/337 Organic Chemistry II/Lab |  | 6 | X |  |
| MTH 181 Calculus I | 4 | X | M/QL | MTH 182 Calculus II |  | 4 | x | M/QL |
| PHY 221 College Physics I | 5 | X | NS | PHY 222 College Physics II |  | 5 | x | NS |
| US Diversity Elective | 3 to 4 |  | DIV | African American Experience Elective |  | 3 to 4 |  | DIV |
|  |  |  |  |  |  |  |  |  |
| Semester Total | 18 to 19 |  |  |  | Semester Total | 18 to 19 |  |  |

Third Year

| Third Year |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester |  | Credits | Major | Gen Ed |
| CHM 341 Pharmacology I | 3 | X |  | CHM 342 Pharmacology II |  | 3 | x |  |
| CHM 351 Medicinal Chemistry I | 3 | x |  | CHM 352 Medicinal Chemistry II |  | 3 | x |  |
| CHM 310 Survey of Analytical Chemistry | 2 | x |  | BIO 310/311 Genetics and Recitation |  | 4 | x |  |
| CHM 315 Survey of Analytical Chemistry Lab | 2 | x | WAC | CHM/BIO Elective (300/400 level) |  | 3 to 4 | x |  |
| Social Science (outside the US/ALAAME) | 3 to 4 |  | SS | Writing Across the Curriculum Elective |  | 3 to 4 |  | WAC |
|  |  |  |  |  |  |  |  |  |
| Semester Total | 13 to 14 |  |  |  | Semester Total | 16 to 18 |  |  |


| Fourth Year |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester |  | Credits | Major | Gen Ed |
| CHM 471 Faculty Colloquium | 1 | X |  | CHM 472 Student Colloquium |  | 1 | X | CAP |
| BIO 416/417 Microbiology/Lab | 5 | x |  | CHM 455 Biotechnology Techniques |  | 4 | x |  |
| CHM 402 Biochemistry | 3 | X |  | CHM/BIO Elective (300/400 level) |  | 3 to 4 | X |  |
| CHM/BIO Elective (300/400 level) | 3 to 4 | x |  | CHM/BIO Elective ( $300 / 400$ level) |  | 3 to 4 | x |  |
| Arts \& Humanities Elective (outside the US/ALAAME) | 3 to 4 | x | A\&H | Writing Across the Curriculum Elective |  | 3 to 4 |  | WAC |
|  |  |  |  |  |  |  |  |  |
| Apply for Spring graduation prior to Sep 9th |  |  |  |  |  |  |  |  |
| Semester Total | 15 to 17 |  |  |  | Semester Total | 14 to 17 |  |  |
| Degree Total: 125-137 (128 hours minimum) |  |  |  |  |  |  |  |  |

Assumptions: college-level readiness in MTH \& ENG; no Foreign Language Deficiency

## College/ Program Notes:

The plan above is a suggested guide to ensure that all General Education, College, University, and Major requirements are met within 4 years of study. Students may deviate from the suggested placement of Gen Ed courses, although the M/QL and W/C requirements should be completed during the first year of study.
*Electives ensure that a student accumulates the minimum credit hour totals needed for graduation. Students must have a minimum of 128 total credit hours, of which a minimum of 42 credit hours must be upper division ( 300 or 400 -level courses). Depending upon other elective choices made ( 3 credit hour vs. 4 credit hour courses), students may not need as many general electives as indicated above, or may need additional electives.

## University Notes:

Gen Ed Key: $\quad$ SS = Social Sciences (two courses, one of which must be focused outside the US**)
INTRO = Introduction to University Life (one course) A\&H = Arts \& Humanities (two courses, one must be focused outside the US**)
$\mathrm{W} / \mathrm{C}=$ Writing/Composition (two courses; C or better required) $\quad$ DIV $=$ Social Diversity (two courses; one US Diversity and one African American Experience)
M/QL = Mathematics/Quartitive iteracy (two course M/QL = Mathematics/Quantitative Literacy (two courses)
NS = Natural Sciences (two courses, one of which must have a lab)
${ }^{* *}$ of the SS and A\&H courses focused outside the US, one must be focused on Africa, Latin America, Asia or the Middle East (ALAAME)
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Cleveland State University

## College of Sciences and Health Professions

Bachelor of Science in Chemistry
CSUTeach Dual Field Licensure in Chemistry and Physics, Grades 7-12
Minor in Physics, Minor in Education

| First Year |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester | Credits | Major | Gen Ed | Summer Semester | Credits | Major | Gen Ed |
| ENG 101 English I | 3 |  | w/c | ENG 102 English II | 3 |  | w/c | African Amer Exp Elective | 3 to 4 |  | DIV |
| MTH 181 Calculus I | 4 | x | M/QL | MTH 182 Calculus II | 4 | X | M/QL |  |  |  |  |
| PSY 221 Adolescent Psychology | 3 | x | ss | CHM 262/267 General Chemistry/Lab II | 5 | x | NS |  |  |  |  |
| ASC 101 Introduction to University Life | 1 |  | INTRO | EVS 206 Intro to Environmental Science | 4 | x | NS |  |  |  |  |
| CHM 261/266 General Chemistry/Lab I | 5 | x | NS | EUT 201 Inquiry Approaches to Teaching | 1 | x |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Semester Total | 16 |  |  | Semester Total | 17 |  |  | Semester Total | 3 to 4 |  |  |

Second Year

| Fall Semester | Credits | Major | Gen Ed | Spring Semester | Credits | Major | Gen Ed | Summer Semester | Credits | Major | Gen Ed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CHM 331/336 Organic Chemistry/Lab I | 6 | x |  | CHM 332/337 Organic Chemistry/Lab II | 6 | x |  | BIO 380 Biology Content | 5 | x |  |
| PHY 243 University Physics I | 5 | x | NS; WAC | PHY 244 University Physics II | 5 | x | NS;WAC |  |  |  |  |
| MTH 281 Multivariable Calculus | 4 | x |  | EDC 300 Diversity in Educational Settings | 3 | x | DIV |  |  |  |  |
| EUT 217 Inquiry in Science | 1 | x |  | Social Sci Elective (outside US/ALAAME) | 3 to 4 |  | SS |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Semester Total | 16 |  |  | Semester Total | 17 to18 |  |  | Semester Total | 5 |  |  |


| Third Year |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester | Credits | Major | Gen Ed | Spring Semester | Credits | Major | Gen Ed | Summer Semester | Credits | Major | Gen Ed |
| CHM 310/315 Analytical Chemistry/Lab | 4 | X |  | CHM 320 Survey of Physcial Chemistry** | 4 | x |  | EDL 305 Content Area Lit | 3 | x |  |
| CHM 403 Biochemistry II | 3 | X |  | CHM 404 Environmental Chemistry | 3 | x |  |  |  |  |  |
| PHY 330 Intro to Modern Physics | 4 | x |  | PHY 350 Electricity and Magnetism** | 4 | x |  |  |  |  |  |
| PHY 470 Environmental Physics | 4 | x |  | EUT 305 Classroom Interactions | 3 | X |  |  |  |  |  |
| EUT 302 Knowing \& Learning | 3 | X |  | Arts \& Hum Elective (outside US/ALAAME) | 3 to 4 |  | A\&H |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Semester Total | 18 |  |  | Semester Total | 17 to 18 |  |  | Semester Total | 3 |  |  |

## Fourth Year

| Fall Semester | Credits | Major | Gen Ed | Spring Semester | Credits | Major | Gen Ed | Summer Semester | Credits | Major | Gen Ed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CHM Elective (300/400 level) | 3 to 4 | x |  | EST 499 STEM Student Teaching | 6 | x |  |  |  |  |  |
| PHY 340 Mechanics and Vibrations** | 4 | x |  | EUT 210 Perspectives in Math \& Science | 3 | x | A\&H |  |  |  |  |
| PHY 474 Thermal Physics | 4 | x |  | CHM 471 Faculty Colloquium | 1 | x |  |  |  |  |  |
| PHY 301 Research Methods | 3 | x | WAC | CHM 401 Chemical Information** | 2 | x | WAC |  |  |  |  |
| EUT 317 Project-Based Instruction | 3 | x |  | HPR 101 Wellness | 1 | x |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Apply for Spring graduation prior to Sep 9th |  |  |  |  |  |  |  |  |  |  |  |
| Semester Total | 17 to18 |  |  | Semester Total | 13 |  |  | Semester Total | 0 |  |  |
| Degree Total: 142-145 |  |  |  |  |  |  |  |  |  |  |  |

Assumptions: college-level readiness in MTH \& ENG; no Foreign Language Deficiency

## College/ Program Notes:

 courses, although the M/QL and W/C requirements should be completed during the first year of study.
*Electives ensure that a student accumulates the minimum credit hour totals needed for graduation. Students must have aminimum of $\mathbf{1 2 8}$ total credit hours, of which a minimum of $\mathbf{4 2}$ credit hours must be upper
 electives.
**Not offered every semester. Check with department for availability

## University Notes:

## Gen Ed Key: <br> SS = Social Sciences (two courses, one of which must be focused outside the US**)

INTRO = Introduction to University Life (one course)
W/C = Writing/Composition (two courses; C or better required) M/QL = Mathematics/Quantitative Literacy (two courses)

A\&H = Arts \& Humanities (two courses, one must be focused outside the US**)
DIV = Social Diversity (two courses; one US Diversity and one African American Experience)
NS = Natural Sciences (two courses, one of which must have a lab)
WAC/SPAC = Writing/Speaking Across the Curriculum (three courses, one in the major; C or better required
CAP = Capstone
** of the SS and A\&H courses focused outside the US, one must be focused on Africa, Latin America, Asia or the Middle East (ALAAME)

 or any other subject addressed herein.

