**Chemistry, Biotechnology 2019-2020**

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| **Freshman Year** | | | | | | | |
| **Fall** | | | | **Spring** | | | |
|  | Course Number | Course Title | Credits |  | Course Number | Course Title | Credits |
|  | UNV 1000 | Freshman Seminar | 1 |  | ENG 1060 | Composition II | 3 |
|  | ENG 1050 | Composition I | 3 |  | MAT 1080 (or University wide elective) | Plane Trigonometry | 3 |
|  | MAT 1070 (or 1090) | College Algebra | 3-4 |  | CHM 1310 | General Chemistry II | 3 |
|  | General Education | Fine Art | 3 |  | CHM 1110 | General Chemistry Laboratory II | 1 |
|  | CHM 1300 | General Chemistry I | 3 |  | General Education | History | 3 |
|  | CHM 1100 | General Chemistry Laboratory I | 1 |  | BIO 1000 | Principles of Biology | 3 |
| **Total Credits** | | | 14-15 |  | **Total Credits** | | 16 |

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| **Sophomore Year** | | | | | | | |
| **Fall** | | | | **Spring** | | | |
|  | Course Number | Course Title | Credits |  | Course Number | Course Title | Credits |
|  | General Education | Social Science | 3 |  | General Education | Literature | 3 |
|  | MAT 2210 | Calculus I | 4 |  | BIO 3150 | Microbiology | 4 |
|  | CHM 2500 | Organic Chemistry I | 3 |  | MAT 2220 | Calculus II | 3 |
|  | CHM 2520 | Organic Chemistry I Lab | 1 |  | CHM2510 | Organic Chemistry II | 3 |
|  | General Education | Elective | 3 |  | CHM 2530 | Organic Chemistry II Lab | 1 |
|  | General Education | Physical Education | 1 |  | General Education | Physical Education | 1 |
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| **Total Credits** | | | 15 |  | **Total Credits** | | 15 |

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| **Junior Year** | | | | | | | |
| Fall | | | | Spring | | | |
|  | Course Number | Course Title | Credits |  | Course Number | Course Title | Credits |
|  | CHM 2260 | Elementary Inorganic Chemistry | 4 |  | CHM 2270 | Analytical Chemistry | 4 |
|  | PHY 2000 or PHY 1500 | University Physics I or College Physics I | 3 |  | PHY 2010 or PHY 1510 | University Physics II or College Physics II | 3 |
|  | PHY 2060 or PHY 1560 | University Physics I Lab or College Physics I Lab | 1 |  | PHY 2070 or PHY 1570 | University Physics II Lab or College Physics II Lab | 1 |
|  | CHM 3980 | Scientific Literature | 2 |  | BIO 3170 | Cell Biology | 4 |
|  | General Education | Social Science | 3 |  | BTEC 3220 | Biotechnology I | 3 |
|  | University Wide | Elective | 2 |  |  |  |  |
| **Total Credits** | | | 15 | **Total Credits** | | | 15 |

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| **Senior Year** | | | | | | | |
| **Fall** | | | | **Spring** | | | |
|  | Course Number | Course Title | Credits |  | Course Number | Course Title | Credits |
|  | CHM 4100 | Physical Chemistry I | 4 |  | CHM 3210 | Biochemistry II | 3 |
|  | General Education | Social Science | 3 |  | CHM 3240 | DNA Analysis Lab | 1 |
|  | CHM 3110 | Biochemistry | 3 |  | CHM 4270 | Instrumental Analysis | 4 |
|  | CHM 3120 | Experimental Methods in Biochemistry | 1 |  | General Education | Philosophy/Religion | 3 |
|  | CHM 3990 | Research in Chemistry | 2 |  | BTEC 3510 | Bioprocessing | 3 |
|  | PHY 3410 | Biophysics | 3 |  |  |  |  |
| **Total Credits** | | | 16 | **Total Credits** | | | 14 |