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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Degree Title** | | | | | | | | |
| **Arkansas State University - Jonesboro** | | | | | | | | |
| **Bachelor of Science** | | | | | | | | |
| **Major:  Biotechnology 2017-2018** | | | | | | | | |
|  | | | | | | | | |
| Students requiring developmental course work based on low entrance exam scores (ACT, SAT, ASSET, COMPASS) may not be able to complete this program of study in eight (8) semesters.  Developmental courses do not count toward total degree hours.  **Students having completed college level courses prior to enrollment will be assisted by their advisor in making appropriate substitutions.   In most cases, general education courses may be interchanged between semesters.**    A minimum of 45 hours of upper division credit (3000-4000 level) is required for this degree.  Mandatory state and institutional assessment exams will be required during your degree program.  ***Failure to participate in required assessments may delay graduation.*** | | | | | | | | |
| **Year 1** | | | |  | **Year 1** | | | |
| **Fall Semester** | | | |  | **Spring Semester** | | | |
| **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |  | **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |
| BIO 1013 | Biology Making Connections | 3 |  |  | BIO 2013 | Biology of the Cell | 3 |  |
| BIO 1303 or 1503 | Biology of Animals or Biology of Plants | 3 | X |  | BIO 2011 | Biology of Cell Lab | 1 |  |
| BIO 1301 or 1501 | Biology of Animals or Biology of Plants Lab | 1 | X |  | CHEM 1023 | General Chemistry II | 3 | X |
| ENG 1003 | Composition I | 3 | X |  | CHEM 1021 | General Chemistry II Lab | 1 | X |
| CHEM 1013 | Chemistry I | 4 | X |  | ENG 1013 | Composition II | 3 | X |
| CHEM 1011 | Chemistry I Lab | 1 | X |  | MATH 2194 | Survey of Calculus | 4 | X |
| **Total Hours** |  | 15 |  |  | **Total Hours** |  | 15 |  |
| **Year 2** | | | |  | **Year 2** | | | |
| **Fall Semester** | | | |  | **Spring Semester** | | | |
| **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |  | **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |
| BIO 4041 | Introduction to Biotechnology | 1 |  |  | BIO 3013 | Genetics | 3 |  |
| BIO 4063 | Biosafety and Ethics in Research | 3 |  |  | BIO 3011 | Lab for Genetics | 1 |  |
| CHEM 3103 | Organic Chemistry I | 3 |  |  | CHEM 3113 | Organic Chemistry II | 3 |  |
| CHEM 1021 | Organic Chemistry I Lab | 1 |  |  | CHEM 3111 | Organic Chemistry II Lab | 1 |  |
| PHYS 2054 | General Physics I | 4 |  |  | PHYS 2064 | General Physics II | 4 | X |
|  | Social Science | 3 | X |  |  | Social Science | 3 |  |
| **Total Hours** |  | 15 |  |  | **Total Hours** |  | 15 |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year 3** | | | |  | **Year 3** | | | |
| **Fall Semester** | | | |  | **Spring Semester** | | | |
| **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |  | **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |
| BIO 4104 | Microbiology | 4 |  |  | BIO 4152 | Laboratory in Biotechniques I | 2 |  |
| BIO 4164 | Molecular Biology | 4 |  |  | BIO 4053 | Genetic Engineering | 3 |  |
| CHEM 4243 | Biochemistry | 3 |  |  | BIO | Bioinformatics and Applications | 3 |  |
| STAT 3233 | Applied Statistics I | 3 |  |  | BIO 4133 | Cell Biology | 3 |  |
| SCOM 1203 | Oral Communication | 3 |  |  | BIO 4133 | Cell Biology Lab | 1 |  |
|  |  |  |  |  |  | Humanities | 3 | X |
| **Total Hours** |  | 17 |  |  | **Total Hours** |  | 15 |  |
|  |  |  |  |  |  |  |  |  |
| **Year 4** | | | |  | **Year 4** | | | |
| **Fall Semester** | | | |  | **Spring Semester** | | | |
| **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |  | **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |
| BIO 4154 | Laboratory in Biotechniques | 4 |  |  | BIO 4073 | Entrepreneurship in Biotechnology | 3 |  |
|  | Upper-Level Biology Elective | 3 |  |  | BIO 403V | Special Problems in Biology | 3 |  |
| SCOM 1203 | Oral Communication | 3 | x |  |  | Upper-Level Biology Elective | 3 |  |
|  | US History (to or since 1876) or American Government | 3 | x |  |  | Fine Arts Elective | 3 |  |
|  | Elective | 3 |  |  |  |  |  |  |
| **Total Hours** |  | 16 |  |  | **Total Hours** |  | 12 |  |
|  |  |  |  |  |  |  |  |  |
| **Total Jr/Sr Hours** | | 55 |  |  | **Total Degree Hours** | | 120 | |
|  |  |  |  |  |  |  |  |  |