

# BIOMEDICAL SCIENCES(NO CONCENTRATION), BACHELOR OF SCIENCE

## SUMMARY

| Code  | Title   | Hours |
|---|---|-------|
| Core Curriculum Requirements ( <a href="https://catalog.tsu.edu/undergraduate/general-education-core-curriculum/">https://catalog.tsu.edu/undergraduate/general-education-core-curriculum/</a> ) <sup>1</sup> |   | 42    |
| <b>Major Requirements (30 hours)</b>  |   |       |
| BIOM 331  | Principles of Biomedical Research                   | 3     |
| BIOM 332  | Biomedical anatomy & Physiology                     | 3     |
| BIOM 333  | Biomedical Genetics                                 | 3     |
| BIOM 334  | Biomedical Writing                                  | 3     |
| BIOM 335  | Health Disparities                                  | 3     |
| BIOM 430  | Medical Calculations                                | 3     |
| BIOM 410  | Medical Calculations Lab                            | 1     |
| BIOM 420  | Introduction to Pathophysiology                     | 2     |
| BIOM 432  | Biomedical Biochemistry                             | 3     |
| BIOM 411  | Biomedical Biochemistry Lab                         | 1     |
| BIOM 436  | Biostatistics                                       | 3     |
| BIOM 421  | Introduction to Pharmacology                        | 2     |
| <b>Major Elective Requirements (13 hours)</b>   |   |       |
| HSCR 260  | Biomedical Ethics                                   | 3     |
| Major Elective Requirements (13 hours)  |   |       |
| Select 10 hours from the following:   |   | 10    |
| BIOM 433  | Medical Communications                              |       |
| BIOM 434  | Introduction to Pharmacy Practice                   |       |
| BIOM 437  | Drug Discovery and Development                      |       |
| BIOM 431  | Biopharmaceutics                                    |       |
| BIOM 412  | Biopharmaceutics Lab                                |       |
| HSHI 362  | Med Term Word Processing                            |       |
| HSOA 335  | Hlth Pol & US Hlthcare Sys                          |       |
| HSOA 336  | Res Health Professionals                            |       |
| HSOA 332  | Intro Commun & Population Hlth                      |       |
| HSCR 360  | Princ Of Disease                                    |       |
| HSOA 431  | HC Mgmt & Leadership                                |       |
| HSHI 366  | Legal Aspects                                       |       |
| HED 399   | Health Seminar                                      |       |
| <b>Other Requirements (35 hours)</b>  |   |       |
| Biological Science Core (16 hours)  |   |       |
| BIOL 1306 & BIOL 111  | Biological Science I and Biological Science Lab I   | 4     |
| BIOL 1307 & BIOL 112  | Biological Science II and Biological Science Lab II | 4     |
| BIOL 245  | Human Anatomy & Physiology                          | 4     |
| BIOL 347  | Microbiology  | 4     |
| Biochemistry Core (10 hours)  |   |       |
| CHEM 111  | Chemistry I Lab                                     | 1     |
| CHEM 112  | Chemistry II Lab                                    | 1     |
| CHEM 211  | Organic Chem I Lab                                  | 1     |

|                              |  |            |
|------------------------------|--|------------|
| CHEM 212                     | Organic Chem II Lab                                  | 1          |
| CHEM 231                     | Organic Chem I                                       | 3          |
| CHEM 232                     | Organic Chem II                                      | 3          |
| Physics Core (4 hours)       |  |            |
| PHYS 1301                    | College Physics I                                    | 3          |
| PHYS 213                     | College Phys Lab I                                   | 1          |
| MATH 2413                    | Calculus & Analytic Geomtry I                        | 4          |
| First Time Freshman (1 hour) |  |            |
| FS 102                       | Freshman Seminar/ first Year Experience <sup>2</sup> | 1          |
| <b>Total Hours</b>           |  | <b>120</b> |

1  
 Suggestions in the Core Curriculum  
 CHEM 1311 Chemistry I (3 s.h.) and CHEM 1312 Chemistry II  
 Speech Option and MATH 1342 Elementary Statistics

2  
 FS 102 can be substituted with a free elective for transfer students only.

| Course                | Title                                   | Hours     |
|-----------------------|---|-----------|
| <b>First Year</b>     |   |           |
| <b>First Semester</b> |   |           |
| CHEM 1311             | Chemistry I                             | 3         |
| CHEM 111              | Chemistry I Lab                         | 1         |
| BIOL 1306             | Biological Science I                    | 3         |
| BIOL 111              | Biological Science Lab I                | 1         |
| MATH 2312             | Precalculus Math                        | 3         |
| ENGL 1301             | Freshman English I                      | 3         |
| FS 102                | Freshman Seminar/ first Year Experience | 1         |
| <b>Hours</b>          |   | <b>15</b> |

|                                     |                           |           |
|-------------------------------------|---------------------------|-----------|
| <b>Second Semester</b>              |                           |           |
| BIOL 1307                           | Biological Science II     | 3         |
| BIOL 112                            | Biological Science Lab II | 1         |
| CHEM 1312                           | Chemistry II              | 3         |
| CHEM 112                            | Chemistry II Lab          | 1         |
| ENGL 1302                           | Freshman English II       | 3         |
| Social/Behavioral Science Elective  |                           | 3         |
| Visual and Performing Arts Elective |                           | 3         |
| <b>Hours</b>                        |                           | <b>17</b> |

|                       |                               |           |
|-----------------------|-------------------------------|-----------|
| <b>Second Year</b>    |                               |           |
| <b>Third Semester</b> |                               |           |
| BIOL 245              | Human Anatomy & Physiology    | 4         |
| BIOL 245L             | Human Anat & Phys Lab         | 0         |
| MATH 2413             | Calculus & Analytic Geomtry I | 4         |
| CHEM 231              | Organic Chem I                | 3         |
| CHEM 211              | Organic Chem I Lab            | 1         |
| POLS 2305             | American Government           | 3         |
| HIST 1301             | Soc & Pol Hist US to 1877     | 3         |
| <b>Hours</b>          |                               | <b>18</b> |

|                        |                     |   |
|------------------------|---------------------|---|
| <b>Fourth Semester</b> |                     |   |
| English 2XX            |                     | 3 |
| CHEM 232               | Organic Chem II     | 3 |
| CHEM 212               | Organic Chem II Lab | 1 |

|                           |   |   |
|---------------------------|---|---|
| COMM 1321<br>or COMM 1315 | Business & Professional Comm<br>or Public Address | 3 |
| HIST 1302                 | Soc & Pol Hist US Since 1877                      | 3 |
| POLS 2306                 | Texas Government                                  | 3 |

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**Hours** **16**

**Third Year****Fifth Semester**

|           |                       |   |
|-----------|-----------------------|---|
| BIOL 347  | Microbiology          | 4 |
| BIOL 347L | Microbiology Lab      | 0 |
| PHYS 1301 | College Physics I     | 3 |
| PHYS 213  | College Phys Lab I    | 1 |
| MATH 1342 | Elementary Statistics | 3 |
| HSCR 260  | Biomedical Ethics     | 3 |

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**Hours** **14**

**Sixth Semester**

|          |                                   |   |
|----------|-----------------------------------|---|
| BIOM 331 | Principles of Biomedical Research | 3 |
| BIOM 332 | Biomedical anatomy & Physiology   | 3 |
| BIOM 333 | Biomedical Genetics               | 3 |
| BIOM 334 | Biomedical Writing                | 3 |
| BIOM 335 | Health Disparities                | 3 |

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**Hours** **15**

**Fourth Year****Seventh Semester**

|           |                                 |   |
|-----------|---------------------------------|---|
| BIOM 430  | Medical Calculations            | 3 |
| BIOM 410  | Medical Calculations Lab        | 1 |
| BIOM 420  | Introduction to Pathophysiology | 2 |
| BIOM 432  | Biomedical Biochemistry         | 3 |
| BIOM 411  | Biomedical Biochemistry Lab     | 1 |
| Electives |                                 | 3 |

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**Hours** **13**

**Eighth Semester**

|           |                              |   |
|-----------|------------------------------|---|
| BIOM 436  | Biostatistics                | 3 |
| BIOM 421  | Introduction to Pharmacology | 2 |
| Electives |                              | 7 |

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**Hours** **12**

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**Total Hours** **120**