## CURRICULUM GUIDE Biomedical Sciences, B.S. (Pre-Physician Associate Concentration) 2023-2024

Website: www.biology.eku.edu Email Contact: biology@eku.edu

The schedule below is an **EXAMPLE** of how you can arrange your class schedule. Please consult your advisor for specific changes that may need to be made. Department of Biological Sciences 521 Lancaster Ave. 3238 Science Building Richmond, KY 40475 859-622-1531

|   | Fall Semester   |              | Spring Semester                              |       | Course Number  | Course Name   |
|---|---|--------------|--|-------|--|---|
|   |   |              |  |       | GENERAL EDUCATIO   | N & UNIVERSITY REQUIREMENTS (37)  |
| Freshman  | SCO 100B  | 1            | BIO 112                                      | 4     | SCO 100B   | Student Success Seminar for Biology (1)   |
| Year  | BIO 111   | 4            | CHE 112                                      | 3     |  |   |
| , cui   | <sup>G</sup> CHE 111 (fulfills Gen. Ed. 4)                              | 3            | CHE 112L                                     | 1     | CORE COURSE REQU   |   |
|   | CHE 111L  | 1            | EMC 105 <u>or</u> HSA 200                    | 1-3   | BIO 111<br>BIO 112   | Cell and Molecular Biology (4)<br>Ecology and Evolution (4)                         |
|   | <sup>G</sup> PSY 200 <u>or</u> PSY 200W (fulfills                       |              | MAT 120 or higher                            | 3-5   | BIO 315  | Genetics (4)  |
|   | Gen. Ed. 5B)  | 3            | Gen. Ed. 1B ( <i>ENG 102</i> )               | 3     | BIO 319  | Zoology (4)   |
|   | Gen. Ed. 1A ( <i>ENG 101</i> )  | 3            |  |       | BIO 320  | Principles of Microbiology (4)  |
|   | ,   | -            |  |       | BIO 331  | Cell Biology (3)  |
|   | TOTAL   | 15           |  | 15-19 | BIO 332  | Careers in Biomedical Sciences (1)  |
|   | IUIAL   | 15           | IUIAL  | 12-19 | BIO 348  | Vertebrate Physiology (3)   |
| Conhomoro   | BIO 307   | 3            | BIO 308                                      | 3     | BIO 495  | Evolution Theory and Application (1)  |
| Sophomore   | CHE 361   | 3            | BIO 332                                      | 1     | PRE-PHYSICIAN ASSI   | STANT CONCENTRATION REQUIREMENTS (1   |
| Year  |   | -            |  |       | 18)  |   |
| . cui   | CHE 361L  | 1            | BIO 320 (ACCT)                               | 4     | BIO 307  | Human Anatomy & Physiology I (3)  |
|   | <sup>6</sup> PHY 131 <u>or</u> 201 (fulfills Gen.                       |              | INF 104                                      | 3     | BIO 308  | Human Anatomy & Physiology II (3)   |
|   | Ed. 4)  | 5            | PSY 280 <u>or</u> PSY 280W                   | 3     | EMC 105 <u>or</u>  | Survey of Medical Terminology (1)   |
|   | ANT 120 or SOC 131  | 3            |  |       | HSA 200  | Medical Terminology (3)   |
|   | _   |              |  |       | *MAT 120 (or higher)                                       | Trigonometry (3) (or higher (3-5))  |
|   |   |              |  |       |  | Selected from the following (restricted elective                                    |
|   | TOTAL   | 15           | TOTAL  | 14    | BIO 527  | Immunology (3)  |
|   |   |              |  |       | BIO 528  | Virology (3)  |
| SUMMER  | Note: While not required, it is si                                      | trongly reco | mmended that students                        | (0-3) | BIO 531  | Principles of Molecular Biology I (4)   |
| JOINNEN   | complete THREE (3) HOURS of BIO 349: Applied Learning in Biology or     |              |  |       | BIO 535<br>BIO 546   | Pathogenic Microbiology (4)<br>Histology (4)  |
|   | 349A: Cooperative Study: Biology in lieu of a marked (۞) free elective. |              |  |       | BIO 546<br>BIO 547   | Comparative Vert. Embryology (4)  |
| • •   | BIO 319   |              | BIO 315                                      | 4     | BIO 549  | Neurobiology (3)  |
| lunior  |   | 4            |  |       | BIO 598  | Special Problems (1-6)  |
| Year  | BIO 331   | 3            | BIO 348                                      | 3     | [ CHE 362  | Organic Chemistry II (3)  |
| . cui   | PHI 383 <u>or</u> PHI 383W  | 3            | Gen. Ed. 1C ( <i>CMS 100 <u>or</u> 210</i> ) | 3     | CHE 362L   | Organic Chemistry II Laboratory (1)   |
|   | <sup>G</sup> STA 215 <u>or</u> STA 270 (fulfills                        |              | Gen Ed. 3B (Humanities)                      | 3     | *CHE 430   | Biochemistry of Macromolecules (3)  |
|   | Gen. Ed. 2) (STA 270  |              | Gen. Ed. 5A ( <i>History</i> )               | 3     | *CHE 431   | Metabolic Biochemistry (3)  |
|   | recommended)  | 3-4          |  |       | *CHE 432   | Biochemistry Laboratory (1)   |
|   | Free Elective   | 3            |  |       | SUPPORTING COURS   | SE REQUIREMENTS (23-24)   |
|   |   | 0            |  |       | ANT 120 or   | Intro to Cultural Anthropology (3)  |
|   | TOTAL   | 10 17        | TOTAL  | 10    | SOC 131  | Introductory Sociology (3)  |
|   | IUIAL   | 16-17        | TOTAL  | 16    | [°CHE 111  | General Chemistry I (3)   |
| Senior  | *Restricted Elective  | 3-4          | BIO 495                                      | 1     | *CHE 111L  | General Chemistry Lab I (1)   |
|   | Gen. Ed. 3A (Arts)  | 3            | *Restricted Elective                         | 3-4   | * CHE 112  | General Chemistry II (3)  |
| Year  | Gen. Ed. 6 (Diversity)  | 3            | Gen Ed. 6 ( <i>Diversity</i> )               | 3     | <b>l * CHE 112L</b>  | General Chemistry Lab II (1)  |
|   |   |              |  |       | ∫ * CHE 361  | Organic Chemistry I (3)   |
|   | Free Elective   | 4            | Free Elective                                | 3     | L * CHE 361L   | Organic Chemistry Lab I (1)   |
|   | Free Elective   | 0-3          | °Free Elective                               | 3     | INF 104  | Computer Literacy with Software Apps. (3)   |
|   |   |              | Free Elective                                | 0-3   | PHI 383 <u>or</u>  | Health & Biomedical Ethics (3)  |
|   |   |              |  |       | PHI 383W<br><sup>G</sup> * PHY 131 <u>or</u>               | Health & Biomedical Ethics (writing intensive) (3                                   |
|   | TOTAL   | 16-17        | TOTAL  | 13-17 | <sup>6</sup> * PHY 131 <u>or</u><br><sup>6</sup> * PHY 201 | College Physics I (5)<br>University Physics I (5)                                   |
|   |   |              |  |       | <sup>6</sup> PSY 200 <i>or</i>                             | Introduction to Psychology (3)  |
|   |   |              |  |       | <sup>6</sup> PSY 200W                                      | Introduction to Psychology (3)<br>Introduction to Psychology (writing intensive) (3 |
|   |   | TOTAL        | HOURS TO DEGREE COMPLETION                   | 120   | PSY 280 or   | Lifespan Developmental Psychology (3)   |
|   |   | -            |  |       | PSY 280W   | Lifespan Developmental Psychology (writing  |
|   |   |              | regarding prerequisites for upper divis      |       |  | intensive) (3)  |
| IO courses. CHE 111/111L, 112/112L, 361/361L, 362/362L, 366, 430, and/or 366: MAT 112, 114 or higher: PHY 131 |   |              |  |       | 1  |   |

\* PREREQUISITES: Consult with your advisor and/or the University catalog regarding prerequisites for upper division BIO courses. CHE 111/111L, 112/112L, 361/361L, 362/362L, 366, 430, and/or 366; MAT 112, 114 or higher; PHY 131 and/or 201.

 Due to variable course hour choices for MAT requirement and concentration requirements, marked free electives may also be variable. Consult with your advisor to ensure you have a minimum of 120 total credit hours for graduation.

**Upper division courses**: All students are required to have a minimum of 42 hrs. upper division (300-level or above) courses distributed throughout Major/Supporting/Gen Ed/Free Electives categories.

Refer to the University Catalog at <u>http://www.catalogs.eku.edu/</u>regarding University and General Education Requirements.

FREE ELECTIVES (10-16)

<sup>G</sup>STA 215 <u>or</u>

\* STA 270

Denotes that 3 credit hours from this course are/can be applied to fulfill a Gen. Ed. requirement.

Intro. to Statistical Reasoning (3)

Applied Statistics I (4)

Bracketed items must be taken concurrently.