

Table 2. Undergraduate Course Comparison Table

| EHAC Academic Guidelines  | Course Designation  | Course Name   | Credit Hours | % Course Time Corresponding to EHAC Guidelines | Principal Instructor |
|---|---|---|--------------|--|----------------------|
| <b>A. Foundational Courses (semester hours x 1.5 = required quarter hours)</b>                        |   |   |              |  |                      |
| <b>1. Natural Sciences (<a href="#">pg. 9 of 21</a>)</b>  |   |   |              |  |                      |
| Biological Sciences with laboratories (Min. 3 semester credits)                                       | BIOB160 <i>or</i> BIOB260                                     | Principles of living systems <i>or</i> Cellular & Molecular Biology   | 4            | 100%   |                      |
| Microbiology with laboratory (Min. 3 semester credits)  | BIOM360   | General Microbiology  | 5            | 100%   |                      |
| General Chemistry with laboratories (Min. 6 semester credits)   | CHMY141, CHMY143  | College Chemistry I and II  | 8            | 100%   |                      |
| Organic Chemistry with laboratory (Min. 3 semester credits)   | CHMY211   | Organic Chemistry   | 5            | 100%   |                      |
| Physics (Min. 3 semester credits)   | PHSX205   | College Physics I   | 4            | 100%   |                      |
| Additional natural science courses and/or credits for a total of 24 semester hours (36 quarter hours) | NRSM101 <i>or</i> NRSM240 <i>or</i> BIOE370 <i>or</i> BIOM415 | Natural Resource Conservation <i>or</i> Natural Resource Ecology <i>or</i> General Ecology <i>or</i> Microbial Diversity, Ecology & Evolution | 3            | 100%   |                      |

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| Additional natural science courses and/or credits for a total of 24 semester hours (36 quarter hours) | KIN221 <i>or</i> BIOH211   | Health Anatomy & Physiology <i>or</i> Anatomy & Physiology II                | 3 - 4        | 100%   |                      |
| <b>Total Natural Science hours</b>  |  |  | 32-33        |  |                      |
| <b>2. Communications (<a href="#">pg. 10 of 21</a>)</b>   |  |  |              |  |                      |
| Demonstrate communication <u>competency</u> covering (a) Information technology/computer skills       | IT/Computer: GPHY284, plus many required courses which require diverse computer skills | Geographic Information Systems   | 3            | 100%   |                      |
| (b) Public speaking   | US101; BIOM494; BIOM210  | University seminar; Capstone seminar; Principles of Environmental Health     | 3<br>1<br>3  | 100%<br>50%<br>15%                             |                      |
| (c) Technical writing   | WRIT101<br>EENV447<br>ENSC407  | College Writing I; Hazardous Waste Management; Environmental Risk Assessment | 3<br>3<br>3  | 100%<br>20%<br>30%                             |                      |
| <b>3. Mathematics (<a href="#">pg. 10 of 21</a>)</b>  |  |  |              |  |                      |
| One course in College Algebra   | M151Q or M161Q or M171   | Pre-calculus <i>or</i> Survey of Calculus <i>or</i> Calculus I               | 4            | 100%   |                      |

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| <b>4. General Education (<a href="#">pg. 10 of 21</a>)</b>                       |          |  |  |              |  |                      |
| Satisfy GE requirements for institution  |          | Humanities, Social Sciences, Diversity, Arts | various  | 3 x 4 = 12   | 100%   | various              |
| <b>5. Optional (electives) (<a href="#">pg. 10 of 21</a>)</b>                    |          |  |  |              |  |                      |
| Solid and Hazardous Materials and Waste Management                               |          | MBEHxxx Rubric not yet assigned              | Hazardous Waste Operations & Emergency Response                  | 2            | 100%   |                      |
| Water and Wastewater *   |          | BIOM430                                      | Applied & Environmental Microbiology                             | 4            | 4%   |                      |
| Technical Writing  |          | WRIT221 or WRIT326                           | Intermediate Technical Writing or Advanced Writing               | 3            | 100%   | various              |
| <b>B. Core Environmental Health Knowledge Areas</b>                              |          |  |  |              |  |                      |
| <b>1. Methodology Core (<a href="#">stand alone courses pg. 10-11 of 21</a>)</b> |          |  |  |              |  |                      |
| Epidemiology   |          | CHTH440                                      | Principals of Epidemiology                                       | 3            | 100%   |                      |
| Statistical Methods  |          | STAT216 or BIOB318 or HDFS271                | Intro to Stats or Biometry or Statistical Measures of Well Being | 3            | 100%   |                      |
| Toxicology   |          | BIOM425                                      | Toxicology   | 3            | 100%   |                      |

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| <b>2. Cross Cutting Knowledge Areas</b> ( <a href="#">Basic understanding pg. 10-11 of 21</a> )  |                                 |   |              |  |                      |
| Analysis and reduction of environmental risks (i.e., risk assessment, communication & management)  | ENSC407<br>EENV 447             | Environmental Risk Assessment;<br>Hazardous Waste Management            | 3<br>3       | 100%<br>13%                                    |                      |
| EH Mgmt (policy analysis, emergency management systems & program administration)   | BIOM494                         | Environmental Health Management Capstone                                | 1            | 100%   |                      |
| Administrative Law and Process   | BIOM494<br>EENV447              | Env Health Management Capstone; Hazardous Waste Management              | 1<br>3       | 25%<br>60%                                     |                      |
| <b>C. Environmental Health Technical Areas</b>   |                                 |   |              |  |                      |
| <i>Students shall have been exposed to the foundational principles of environmental health (all six * starred topic areas) and in-depth study shall have been received in at least <u>four</u> of the topic areas listed below. (<a href="#">pg 11-12 of 21</a>)</i> |                                 |   |              |  |                      |
| Air Quality Control *  | BIOM210RN<br>and EENV447        | Principles of Env Health Science <i>and</i> Hazardous Waste Management  | 3<br>3       | 7%<br>7%                                       |                      |
| All-hazard Preparedness  | BIOM210RN                       | Principles of Env Health Science  | 3            | 5%   |                      |
| Built Environment (if chosen)  | ARCH231CS                       | Issues in Sustainability  | 3            | 100%   |                      |
| Global Climate Change and Human Health   | BIOM210RN;<br>LS191 (if chosen) | Principles of Env Health Science;<br>Intro to Global Health (if chosen) | 3<br>3       | 5%<br>2.5%                                     |                      |

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| Disease Prevention                      | BIOM250 <i>or</i> BIOM460 | Microbiology for Health Sciences: Infectious Diseases <i>or</i> Infectious Diseases Ecology & Spillover | 3<br>3       | 100%   |                      |
| Environmental Health Planning           | BIOM494                   | Capstone in EH Management   | 1            | 7%   |                      |
| Food Protection *                       | BIOM210RN; BIOM360        | Principles of Env Health Science; General Microbiology  | 3 or 5       | 8%<br>2.5%                                     |                      |
|   | CULA 105 (if chosen)      | Food safety & sanitation  | 2            | 100%   |                      |
| GIS                                     | GPHY284                   | Introduction to GIS   | 3            | 100%   |                      |
| Global Environmental Health (if chosen) | LS191                     | Introduction to Global Health   | 3            | 25%  |                      |
| Hydrogeology (if chosen)                | ENSC 272<br>ENSC 444      | Water Resources; Watershed Hydrology  | 3<br>3       | 25%<br>50%                                     |                      |
| Injury & Violence Prevention            | BIOM210 RN                | Principles of Env Health Science  | 3            | 10%  |                      |
| Institutional Health                    | Not covered               |   |              | 0%   |                      |
| Occupational Health and Safety *        | BIOM210 RN                | Principles of Environmental Health Science  | 3            | 15%  |                      |
| Radiation Health                        | BIOM210 RN                | Principles of Environmental Health Science  | 3            | 2.5%   |                      |
| Recreational Envir. Health              | BIOM210 RN                | Principles of Environmental Health Science  | 3            | 2.5%   |                      |
| Risk Analysis                           | ENSC407                   | Environmental Risk Analysis   | 3            | 100%   |                      |

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| Soils (if chosen)  | ENSC245  | Soil Science   | 3                                     | 100%   |                      |
| Solid and Hazardous Materials and Waste Management *                   | BIOM210RN<br><i>and</i><br>EENV 447  | Principles of Environmental Health Science <i>and</i> Hazardous Waste Management   | 3<br>3                                | 10%<br>25%                                     |                      |
| Water and Wastewater *   | BIOM210 RN<br><i>and</i><br>EENV 447;<br>BIOM 430 (if chosen);<br>ENSC 272 (if chosen);<br>MBEH498 (if W/WW focus) | Principles of Environmental Health Science <i>and</i> Hazardous Waste Management;<br>Applied & Environmental Microbiology (if chosen);<br>Water Resources (if chosen);<br>Internship (if water/wastewater focus) | 3<br>3<br>3<br>3<br>3                 | 10%<br>7%<br>18%<br>100%<br>50-100%            | ;<br>;<br>;          |
| Zoonotic and Vectorborne Diseases and Their Control *                  | BIOM210 RN (required);<br>BIOM460 (if chosen)  | Principles of Environmental Health Science.<br>If chosen: Infectious Diseases Ecology & Spillover  | 3<br>3                                | 5%<br>100%                                     |                      |
| <b>D. Environmental Health Practice</b> <a href="#">(pg. 12 of 21)</a> |  |  |                                       |  |                      |
| Field Experience: (min. 180-clock hours total)                         | MBEH498;<br>MBEH475;<br>MBEH 490R  | Internship in Env Health;<br>Field Project in Env Health; Research in Env Health (community-based)   | 3 cr. (but must clock another 80 hrs) | 100%   |                      |