

# ENVIRONMENTAL AND OCCUPATIONAL HEALTH SCIENCE, BACHELOR OF SCIENCE (548P, 548)

## Program Coordinator

Jacqueline R. Basham, jacqueline.basham@wku.edu, (270) 745-3981

The undergraduate degree program in environmental and occupational health science prepares the graduating student for entry level careers of environmental compliance and protection, occupational safety and health, environmental health and safety, and environmental science. Numerous jobs are available with government agencies, environmental consulting firms, industries, local governments, and non-profit organizations. Courses in the program are focused on basic sciences, environmental science, occupational safety and health, and environmental health. Requirements of the program develop the application of basic scientific principles to the solution of environmental and occupational problems that prepare students for diverse career opportunities.

## Program Requirements (70 hours)

A baccalaureate degree requires a minimum of 120 unduplicated semester hours. More information can be found at [www.wku.edu/registrar/degree\\_certification.php](http://www.wku.edu/registrar/degree_certification.php). ([https://www.wku.edu/registrar/degree\\_certification.php](https://www.wku.edu/registrar/degree_certification.php))

Students who began WKU in the Fall 2014 and thereafter should review the Colonnade requirements located at: <https://www.wku.edu/colonnade/colonnaderequirements.php>. (<https://www.wku.edu/colonnade/colonnaderequirements.php>)

## Required Courses

| Code    | Title                                               | Hours |
|---------|-----------------------------------------------------|-------|
| ENV 120 | Introduction to Occupational Safety and Health      | 3     |
| ENV 221 | Safety and Health Standards, Codes, and Regulations | 3     |
| ENV 280 | Introduction to Environmental Science               | 3     |
| ENV 321 | Fundamentals of Industrial Hygiene                  | 3     |
| ENV 323 | Fundamentals of Industrial Hygiene Laboratory       | 1     |
| ENV 360 | Air Pollution Control                               | 3     |
| ENV 365 | Air Pollution Control Laboratory                    | 1     |
| ENV 380 | Principles of Environmental Toxicology              | 3     |
| ENV 410 | Water Treatment Processes                           | 3     |
| ENV 411 | Water Treatment Processes Laboratory                | 1     |
| ENV 423 | Safety Program Management                           | 3     |
| ENV 460 | Environmental Management                            | 3     |
| ENV 474 | Environmental Risk Assessment                       | 3     |

|                                                                         |                                                                        |   |
|-------------------------------------------------------------------------|------------------------------------------------------------------------|---|
| ENV 480                                                                 | Hazardous and Solid Waste Management                                   | 3 |
| ENV 486                                                                 | Senior Environmental Health Seminar                                    | 1 |
| ENV 491                                                                 | Internship in Environmental, Health, and Safety                        | 3 |
| PH 383                                                                  | Biostatistics in the Health Sciences                                   | 3 |
| PH 384                                                                  | Introduction to Epidemiology                                           | 3 |
| PH 385                                                                  | Environmental Health                                                   | 3 |
| CHEM 107                                                                | Fundamentals of Organic Chemistry                                      | 3 |
| CHEM 108                                                                | Fundamentals of Organic Chemistry Laboratory                           | 1 |
| BIOL 207                                                                | General Microbiology                                                   | 3 |
| BIOL 208                                                                | General Microbiology Laboratory                                        | 1 |
| PHYS 231                                                                | Introduction to Physics and Biophysics I                               | 3 |
| PHYS 232                                                                | Laboratory for Physics and Biophysics I                                | 1 |
| Select nine hours of advisor consent electives from the following list: |                                                                        | 9 |
| ENV 322                                                                 | Physical Hazards Recognition and Control I                             |   |
| ENV 375                                                                 | Introduction to Water Resources                                        |   |
| ENV 475                                                                 | Selected Topics in Env                                                 |   |
| ENV 485                                                                 | Practical Experiences in Environmental and Occupational Health Science |   |
| ENV 495                                                                 | Environmental Measurement                                              |   |
| ENV 402                                                                 | Worksite Health Promotion                                              |   |
| PH 456                                                                  | Independent Study in Health and Safety                                 |   |
| MFGE 310                                                                | Safety in Industry                                                     |   |

**Total Hours** 70

## Additional Courses

| Code                | Title                                                                                                           | Hours     |
|---------------------|-----------------------------------------------------------------------------------------------------------------|-----------|
| COMM 145            | Fundamentals of Public Speaking and Communication                                                               | 3         |
| ECON 202            | Principles of Economics (Micro)                                                                                 | 3         |
| BIOL 120 & BIOL 121 | Biological Concepts: Cells Metabolism and Genetics and Biological Concepts: Cells, Metabolism, and Genetics Lab | 4         |
| CHEM 105            | Fundamentals of General Chemistry                                                                               | 3         |
| CHEM 106            | Fundamentals of General Chemistry Laboratory                                                                    | 1         |
| CHEM 116            | Introduction to College Chemistry                                                                               | 3         |
| MATH 116            | College Algebra                                                                                                 | 3         |
| MATH 117            | Trigonometry                                                                                                    | 3         |
| GEOL 111            | The Earth                                                                                                       | 3         |
| <b>Total Hours</b>  |                                                                                                                 | <b>26</b> |

Some of these required courses also fulfill the Colonnade subject area requirements.

All courses listed above require a minimum grade of “C.”

## Finish in Four Plan

### First Year

| Fall     | Hours | Spring                   | Hours     |
|----------|-------|--------------------------|-----------|
| COMM 145 |       | 3 ENG 100                | 3         |
| MATH 116 |       | 3 HIST 101 or HIST 102   | 3         |
| ENV 280  |       | 3 ENV 120                | 3         |
| CHEM 116 |       | 3 CHEM 105<br>& CHEM 106 | 4         |
| GEOL 111 |       | 3 ECON 202               | 3         |
|          |       | <b>15</b>                | <b>16</b> |

### Second Year

| Fall                                 | Hours | Spring                                              | Hours     |
|--------------------------------------|-------|-----------------------------------------------------|-----------|
| ENG 200                              |       | 3 Colonnade -<br>Connections (Local to<br>Global)   | 3         |
| Colonnade -<br>Connections (Systems) |       | 3 World Language (if<br>needed)                     | 3         |
| Colonnade - Arts &<br>Humanities     |       | 3 BIOL 207<br>& BIOL 208                            | 4         |
| MATH 117                             |       | 3 Colonnade -<br>Connections (Social &<br>Cultural) | 3         |
| BIOL 120<br>& BIOL 121               |       | 4 CHEM 107<br>& CHEM 108                            | 4         |
|                                      |       | <b>16</b>                                           | <b>14</b> |

### Third Year

| Fall                   | Hours | Spring                 | Hours     |
|------------------------|-------|------------------------|-----------|
| PHYS 231<br>& PHYS 232 |       | 4 ENV Major Elective   | 3         |
| ENG 300                |       | 3 ENV 321<br>& ENV 323 | 4         |
| ENV 221                |       | 3 ENV 380              | 3         |
| PH 383                 |       | 3 PH 384               | 3         |
| PH 385                 |       | 3 ENV 322              | 3         |
|                        |       | <b>16</b>              | <b>16</b> |

### Fourth Year

| Fall                 | Hours | Spring                 | Hours     |
|----------------------|-------|------------------------|-----------|
| ENV 410<br>& ENV 411 |       | 4 ENV 474              | 3         |
| ENV 423              |       | 3 ENV 360<br>& ENV 365 | 4         |
| ENV 460              |       | 3 ENV 491              | 3         |
| ENV 480              |       | 3 ENV Major Elective   | 3         |
|                      |       | ENV 486                | 1         |
|                      |       | <b>13</b>              | <b>14</b> |

**Total Hours 120**