



12 July 2023

RE: Updates to the Biology Major

To Whom It May Concern:

The Center for Life Sciences Education Curriculum Committee has voted to make two changes to the Biology Major and is requesting formal approval.

For all three Specializations of both the BS and BA Plans, we seek to include the combination of Chemistry 1206 + 1208 as an option to fulfill the first general Chemistry requirement in the supporting course category. These two courses were recently approved and together cover the same content as Chem 1210, a course that is already approved for the Biology Major. The addition of this sequence will allow students who do not have the math prerequisite a faster path into biology courses than exists currently.

In the BS & BA Pre-Health Professions Specialization, we have added an additional option in the required pick four courses column. This additional option aligns to the Biology Program objective requiring coverage of ecological principles, but for which we felt the PHP was not adequately advertising. All of the courses now listed as options were already approved electives for the Major. Adding them to the pick four requirement option is an effort to make ecology as a topic more visible as it was not represented in the column of options.

Attached with this proposal are the updated Advising Sheets for the six Biology Major BS and BA Specializations with these proposed changes included and highlighted.

I welcome any questions or concerns you have about the proposed changes.

Sincerely,

Adam Andrews

Assistant Director for Instruction

**Biology Major Checklist**  
**Bachelor of Arts**  
**Life Science Education Specialization**

NAME \_\_\_\_\_  
SEMESTER OF GRADUATION \_\_\_\_\_

DATE \_\_\_\_\_

**General Education Requirements (32-39 credit hours)**

- |                                                                                  |            |
|----------------------------------------------------------------------------------|------------|
| <input type="checkbox"/> GE Launch Seminar (1)                                   | GENED 1201 |
| <input type="checkbox"/> Foundations: Writing and Information Literacy (3)       | _____      |
| <input type="checkbox"/> Foundations: Mathematics & Quantitative Reasoning (3-5) | _____      |
| <input type="checkbox"/> Foundations: Literacy, Visual & performing Arts (3)     | _____      |
| <input type="checkbox"/> Foundations: Historical & Cultural Studies (3)          | _____      |
| <input type="checkbox"/> Foundations: Natural Sciences (4-5)                     | _____      |
| <input type="checkbox"/> Foundations: Social & Behavioral Sciences (3)           | _____      |
| <input type="checkbox"/> Foundations: Race, Ethnicity and Gender Diversity (3)   | _____      |
| <input type="checkbox"/> Theme: Citizenship for a Diverse & Just World (4-6)     | _____      |
| <input type="checkbox"/> Theme: Student Choice (4-6)                             | _____      |
| <input type="checkbox"/> GE Reflection (1)                                       | GENED 4001 |

**Required Arts & Sciences Courses (1-13 Credit Hours)**

- |                                                     |       |
|-----------------------------------------------------|-------|
| <input type="checkbox"/> Arts & Sciences Survey (1) | _____ |
| <input type="checkbox"/> World Language (0-12)      | _____ |

**Required Supporting Courses (32-42 credit hours)**

**Biology (2 courses)**

- Biology 1113.01 (4) or 1113.02 (5)\*
- Biology 1114.01 (4) or 1114.02 (5)\*
- \_\_\_\_\_ Substitution

\* Can be used to fulfill the GEN Foundation: Natural Sciences requirement

**Mathematics/Statistics**

- Math 1148 (4)\*\* – *College Algebra* AND Math 1149 (3) – *Trigonometry*, OR Math 1150 (5)\*\* – *Pre-Calculus*
- \_\_\_\_\_ Substitution

\*\* Can be used to fulfill the GEN Foundation: MQRM requirement

**Physics (1 Course)**

- Physics 1200 (alg) or 1250 (calc) (5)
- \_\_\_\_\_ Substitution

**Chemistry (2 courses)**

- Chemistry 1206 (3) and 1208 (4) or 1210 or 1610 or 1910H (5)
- Chemistry 1220 or 1620 or 1920H (5)
- \_\_\_\_\_ Substitution

**Organic Chemistry**

- Chemistry 2310 (4) OR 2510 AND 2520 (8) OR 2510 AND 2540 (6)
- \_\_\_\_\_ Substitution
- Waived

**Core Course (4 credit hours)**

- Biology 3401 (4) – *Integrated Biology*

**Biology Major Checklist**  
**Bachelor of Arts**  
**Life Sciences Education Specialization**

**Life Sciences Education Specialization (21-28 credit hours)**

**Required (5 courses)**

- Biochem 4511 (4), or 5613 AND 5614 (6)
- MolGen 4500 (3) or 4606 (4)
- EEOB 3310 or 3310.01 or 3310.02† (4) – *Evolution*
- Micro 4000† or 4000.01† or 4000.02† (4) or 4100 (5)
- MolGen 3300† (3) – *General Plant Biology*

**Additional Coursework (at least 2)**

- EEOB 2220† (2) – *Biodiversity of Ohio: Birds*
- EEOB 2510† (3) – *Human Anatomy*
- EEOB 2520 (3) – *Human Physiology*
- EEOB 3320 (strongly recommended) † (3) – *Organismal Diversity*
- EEOB 4210 (2) – *Ecology and Evolution: Vertebrates*
- EEOB 4220† (3) – *Ecology and Evolution: Mammals*
- EEOB 4230 (2) – *Ecology and Evolution: Invertebrates*
- EEOB 5430† (3) – *Fish Ecology*  
OR EEOB 5930† (3) – *Ichthyology*
- Entomology 4000 (3) – *General Entomology Lecture*
- MolGen 4591S or equiv. (1) – *DNA Fingerprinting Workshop with Columbus Public Schools*

**Electives**


**Embedded Literacies (no additional credit hours)**

- |                                                  |              |
|--------------------------------------------------|--------------|
| <input type="checkbox"/> Advanced Writing        | Biology 3401 |
| <input type="checkbox"/> Advanced Data Analytics | Biology 3401 |
| <input type="checkbox"/> Technology Literacy     | Biology 3401 |

**TOTAL BioSci HOURS**

**TOTAL SEMESTER UNITS**

**Notes:**

- Core, specialization, and elective courses must total 32 semester units, and must include three laboratory courses.
- At least 25 of the 32 semester units must be courses in Biochemistry, Biology, EEOB, Microbiology, or Molecular Genetics, and courses outside these departments must be pre-approved by a Biology advisor.
- Electives must be at the 2000 level or above, except for Biology which must be at the 3000 level or above.
- Up to 3 credit hours of research, individual study, or internship may be counted toward the major and, with approval of a major advisor, may be counted as a laboratory course.
- Transfer credit allowed - no more than one half of the credit hours required on the major.
- Honors versions of courses substitute freely.

† Courses within the major with a laboratory component

**Biology Major Checklist**  
**Bachelor of Arts**  
**Pre-Health Professions Specialization**

NAME \_\_\_\_\_  
SEMESTER OF GRADUATION \_\_\_\_\_

DATE \_\_\_\_\_

**General Education Requirements (32-39 credit hours)**

- |                                                                                  |            |
|----------------------------------------------------------------------------------|------------|
| <input type="checkbox"/> GE Launch Seminar (1)                                   | GENED 1201 |
| <input type="checkbox"/> Foundations: Writing and Information Literacy (3)       | _____      |
| <input type="checkbox"/> Foundations: Mathematics & Quantitative Reasoning (3-5) | _____      |
| <input type="checkbox"/> Foundations: Literacy, Visual & performing Arts (3)     | _____      |
| <input type="checkbox"/> Foundations: Historical & Cultural Studies (3)          | _____      |
| <input type="checkbox"/> Foundations: Natural Sciences (4-5)                     | _____      |
| <input type="checkbox"/> Foundations: Social & Behavioral Sciences (3)           | _____      |
| <input type="checkbox"/> Foundations: Race, Ethnicity and Gender Diversity (3)   | _____      |
| <input type="checkbox"/> Theme: Citizenship for a Diverse & Just World (4-6)     | _____      |
| <input type="checkbox"/> Theme: Student Choice (4-6)                             | _____      |
| <input type="checkbox"/> World Language (0-12)                                   | _____      |
| <input type="checkbox"/> GE Reflection (1)                                       | GENED 4001 |

**Required Arts & Sciences Courses (1-13 Credit Hours)**

- |                                                     |       |
|-----------------------------------------------------|-------|
| <input type="checkbox"/> Arts & Sciences Survey (1) | _____ |
| <input type="checkbox"/> World Language (0-12)      | _____ |

**Required Supporting Courses (32-42 credit hours)**

**Biology (2 courses)**

- Biology 1113.01 (4) or 1113.02 (5)\*
- Biology 1114.01 (4) or 1114.02 (5)\*
- \_\_\_\_\_ Substitution

\* Can be used to fulfill the GEN Foundation: Natural Sciences requirement

**Mathematics/Statistics**

- Math 1148 (4)\*\* – *College Algebra* AND  
Math 1149 (3) – *Trigonometry*,  
OR Math 1150 (5) \*\*– *Pre-Calculus*
- \_\_\_\_\_ Substitution

\*\* Can be used to fulfill the GEN Foundation: MQRM requirement

**Physics (1 Course)**

- Physics 1200 (alg) or 1250 (calc) (5)
- \_\_\_\_\_ Substitution

**Chemistry (2 courses)**

- Chemistry 1206 (3) and 1208 (4)  
or 1210 or 1610 or 1910H (5)
- Chemistry 1220 or 1620 or 1920H (5)
- \_\_\_\_\_ Substitution

**Organic Chemistry**

- Chemistry 2310 (4),  
OR 2510 AND 2520 (8)  
OR 2510 AND 2540 (6)
- \_\_\_\_\_ Substitution
- Waived

**Core Course (4 credit hours)**

- Biology 3401 (4) – *Integrated Biology*

**Biology Major Checklist  
Bachelor of Arts  
Pre-Health Professions Specialization**

**Pre-Health Professions Specialization (15-25 credit hours)**

**Required**

- MolGen 4500 (3) or 4606 (4)

**Additional Coursework (at least 4)**

- Biochem 4511 (4), or 5613 AND 5614 (6)
- EEOB 3310 or 3310.01 or 3310.02† (4) – *Evolution*
- Micro 4000† or 4000.01† or 4000.02† (4) or 4100 (5)
- EEOB 3510 or MolGen 4700 or MolGen 5607 or MolGen 5608 (3) – *Cell Biology*
- EEOB 3520† (3) – *Microscopic Anatomy / Histology*
- Anatomy 2300.01† (4) or 3300.01† (5) or EEOB 2510† (3) – *Human Anatomy*
- EEOB 4510† (3) – *Comparative Vertebrate Anatomy*
- Physio 3200 (5) or EEOB 2520 (3) – *Human Physiology* or EEOB 4520 (3) *Comparative Physiology*
- EEOB 3270 (3) or 3320 (3) or 3410 (4) or 3420 (4) or 4240 (3) – *Ecology*

**Electives**


**Embedded Literacies (no additional credit hours)**

- |                                                  |              |
|--------------------------------------------------|--------------|
| <input type="checkbox"/> Advanced Writing        | Biology 3401 |
| <input type="checkbox"/> Advanced Data Analytics | Biology 3401 |
| <input type="checkbox"/> Technology Literacy     | Biology 3401 |

**TOTAL BioSci HOURS**

**TOTAL SEMESTER UNITS**

**Notes:**

- Core, specialization, and elective courses must total 32 semester units, and must include three laboratory courses.
- At least 25 of the 32 semester units must be courses in Biochemistry, Biology, EEOB, Microbiology, or Molecular Genetics, and courses outside these departments must be pre-approved by a Biology advisor.
- Electives must be at the 2000 level or above, except for Biology which must be at the 3000 level or above.
- Up to 3 credit hours of research, individual study, or internship may be counted toward the major and, with approval of a major advisor, may be counted as a laboratory course.
- Transfer credit allowed - no more than one half of the credit hours required on the major.
- Honors versions of courses substitute freely.

† Courses within the major with a laboratory component

**Biology Major Checklist**  
**Bachelor of Arts**  
**Forensic Biology Specialization**

NAME \_\_\_\_\_  
SEMESTER OF GRADUATION \_\_\_\_\_

DATE \_\_\_\_\_

**General Education Requirements (32-39 credit hours)**

- |                                                                                  |            |
|----------------------------------------------------------------------------------|------------|
| <input type="checkbox"/> GE Launch Seminar (1)                                   | GENED 1201 |
| <input type="checkbox"/> Foundations: Writing and Information Literacy (3)       | _____      |
| <input type="checkbox"/> Foundations: Mathematics & Quantitative Reasoning (3-5) | _____      |
| <input type="checkbox"/> Foundations: Literacy, Visual & performing Arts (3)     | _____      |
| <input type="checkbox"/> Foundations: Historical & Cultural Studies (3)          | _____      |
| <input type="checkbox"/> Foundations: Natural Sciences (4-5)                     | _____      |
| <input type="checkbox"/> Foundations: Social & Behavioral Sciences (3)           | _____      |
| <input type="checkbox"/> Foundations: Race, Ethnicity and Gender Diversity (3)   | _____      |
| <input type="checkbox"/> Theme: Citizenship for a Diverse & Just World (4-6)     | _____      |
| <input type="checkbox"/> Theme: Student Choice (4-6)                             | _____      |
| <input type="checkbox"/> GE Reflection (1)                                       | GENED 4001 |

**Required Arts & Sciences Courses (1-13 Credit Hours)**

- |                                                     |       |
|-----------------------------------------------------|-------|
| <input type="checkbox"/> Arts & Sciences Survey (1) | _____ |
| <input type="checkbox"/> World Language (0-12)      | _____ |

**Required Supporting Courses (32-46 credit hours)**

**Biology (2 courses)**

- Biology 1113.01 (4) or 1113.02 (5)\*
- Biology 1114.01 (4) or 1114.02 (5)\*
- \_\_\_\_\_ Substitution

\* Can be used to fulfill the GEN Foundation: Natural Sciences requirement

**Mathematics/Statistics**

- Math 1148 (4)\*\* – *College Algebra* AND Math 1149 (3) – *Trigonometry*, OR Math 1150 (5)\*\* – *Pre-Calculus*
- \_\_\_\_\_ Substitution

\*\* Can be used to fulfill the GEN Foundation: MQRM requirement

**Physics (1 Course)**

- Physics 1200 (alg) or 1250 (calc) (5)
- \_\_\_\_\_ Substitution

**Chemistry (2 courses)**

- Chemistry 1206 (3) AND 1208 (4) or 1210 or 1610 or 1910H (5)
- Chemistry 1220 or 1620 or 1920H (5)
- \_\_\_\_\_ Substitution

**Organic Chemistry**

- Chemistry 2310 (4) OR 2510 AND 2520 (8) OR 2510 AND 2540 (6)
- \_\_\_\_\_ Substitution
- Waived

**Anthropology (1 course)**

- Anthro 2200 (4)  
*(optional, necessary for Anthro prereqs)*

**Core Course (4 credit hours)**

- Biology 3401 (4) – *Integrated Biology*

**Biology Major Checklist  
Bachelor of Arts  
Forensic Biology Specialization**

**Forensic Biology Specialization (14-22 credit hours)**

**Required**

- Biochem 4511 (4), or 5613 AND 5614 (6)
- MolGen 4500 (3) or 4606 (4)

**Additional Coursework (at least 3)\*\*\***

- Anthro 5607 (3) – *Human Osteology*
- Anthro 5608 (3) – *Skeletal Biology*
- Anthro 5609 (3) – *Dental Anthropology*
- Anthro 5610 (3) – *Bioarchaeology*
- Anthro 5644 (3) – *Forensic Anthropology*
- BioChem 5615 (3) – *Biochemistry and Molecular Biology III*
- MolGen 5601† (3-4) – *Eukaryotic Molecular Genetics Lab*
- MolGen 5607 (3) – *Cell Biology*
- MolGen 5701 (3) – *DNA Transactions and Gene Regulation*
- Micro 4000† or 4000.01† or 4000.02† (4) or 4100 (5)
- MolGen 4591S or equiv. (1) – *DNA Fingerprinting Workshop in Columbus Public Schools*

**Electives**


**Embedded Literacies (no additional credit hours)**

- |                                                  |              |
|--------------------------------------------------|--------------|
| <input type="checkbox"/> Advanced Writing        | Biology 3401 |
| <input type="checkbox"/> Advanced Data Analytics | Biology 3401 |
| <input type="checkbox"/> Technology Literacy     | Biology 3401 |

**TOTAL BioSci HOURS**

**TOTAL SEMESTER UNITS**

**Notes:**

- Core, specialization, and elective courses must total 32 semester units, and must include three laboratory courses.
- At least 25 of the 32 semester units must be courses in Biochemistry, Biology, EEOB, Microbiology, or Molecular Genetics, and courses outside these departments must be pre-approved by a Biology advisor. At most 7 credit hours from Anthropology may be counted toward the Biology major.
- Electives must be at the 2000 level or above, except for Biology which must be at the 3000 level or above.
- Up to 3 credit hours of research, individual study, or internship may be counted toward the major and, with approval of a major advisor, may be counted as a laboratory course.
- Transfer credit allowed - no more than one half of the credit hours required on the major.
- Honors versions of courses substitute freely.

† Courses within the major with a laboratory component

**Biology Major Checklist  
Bachelor of Science  
Life Science Education Specialization**

NAME \_\_\_\_\_  
SEMESTER OF GRADUATION \_\_\_\_\_

DATE \_\_\_\_\_

**General Education Requirements (32-39 credit hours)**

- |                                                                                  |            |
|----------------------------------------------------------------------------------|------------|
| <input type="checkbox"/> GE Launch Seminar (1)                                   | GENED 1201 |
| <input type="checkbox"/> Foundations: Writing and Information Literacy (3)       | _____      |
| <input type="checkbox"/> Foundations: Mathematics & Quantitative Reasoning (3-5) | _____      |
| <input type="checkbox"/> Foundations: Literacy, Visual & performing Arts (3)     | _____      |
| <input type="checkbox"/> Foundations: Historical & Cultural Studies (3)          | _____      |
| <input type="checkbox"/> Foundations: Natural Sciences (4-5)                     | _____      |
| <input type="checkbox"/> Foundations: Social & Behavioral Sciences (3)           | _____      |
| <input type="checkbox"/> Foundations: Race, Ethnic and Gender Diversity (3)      | _____      |
| <input type="checkbox"/> Theme: Citizenship for a Diverse & Just World (4-6)     | _____      |
| <input type="checkbox"/> Theme: Student Choice (4-6)                             | _____      |
| <input type="checkbox"/> GE Reflection (1)                                       | GENED 4001 |

**Required Arts & Sciences Courses (1-13 Credit Hours)**

- |                                                     |       |
|-----------------------------------------------------|-------|
| <input type="checkbox"/> Arts & Sciences Survey (1) | _____ |
| <input type="checkbox"/> World Language (0-12)      | _____ |

**Required Supporting Courses (48-54 credit hours)**

**Biology (2 courses)**

- Biology 1113.01 (4) or 1113.02 (5)\*
- Biology 1114.01 (4) or 1114.02 (5)\*
- \_\_\_\_\_ Substitution

\* Can be used to fulfill the GEN Foundation: Natural Sciences requirement

**Mathematics/Statistics (2 courses)**

- Math 1151 or 1156 (5)\*\*
- Math 1152 (5) or Stat 2480 (3) or Stat 2450 (3)
- \_\_\_\_\_ Substitution

\*\* Can be used to fulfill the GEN Foundation; MQRM requirement

**Physics (2 Courses)**

- Physics 1200 (alg) or 1250 (calc) (5)
- Physics 1201 (alg) or 1251 (calc) (5)
- \_\_\_\_\_ Substitution

**Chemistry (2 courses)**

- Chemistry 1206 (3) and 1208 (4) or 1210 or 1610 or 1910H (5)
- Chemistry 1220 or 1620 or 1920H (5)
- \_\_\_\_\_ Substitution

**Organic Chemistry (2 lectures + 2 labs)**

- Chemistry 2510 or 2610 or 2910H (4) – Lecture 1
- Chemistry 2520 or 2620 or 2920H (4) – Lecture 2
- Chemistry 2540 or 2940H (2) – Lab 1
- Chemistry 2550 or 2950H (2) – Lab 2
- \_\_\_\_\_ Substitution

**Core Course (4 credit hours)**

- Biology 3401 (4) – *Integrated Biology*



**Biology Major Checklist**  
**Bachelor of Science**  
**Life Science Education Specialization**

**Life Science Education Specialization (21-28 credit hours)**

**Required (5 courses)**

- Biochem 4511 (4), or 5613 AND 5614 (6)
- MolGen 4500 (3) or 4606 (4)
- EEOB 3310 or 3310.01 or 3310.02† (4) – *Evolution*
- Micro 4000† or 4000.01† or 4000.02† (4) or 4100 (5)
- MolGen 3300† (3) – *General Plant Biology*

**Additional Coursework (at least 2)**

- EEOB 2220† (2) – *Biodiversity of Ohio: Birds*
- EEOB 2510† (3) – *Human Anatomy*
- EEOB 2520 (3) – *Human Physiology*
- EEOB 3320 (strongly recommended) † (3) – *Organismal Diversity*
- EEOB 4210 (2) – *Ecology and Evolution: Vertebrates*
- EEOB 4220† (3) – *Ecology and Evolution: Mammals*
- EEOB 4230 (2) – *Ecology and Evolution: Invertebrates*
- EEOB 5430† (3) – *Fish Ecology*  
OR EEOB 5930† (3) – *Ichthyology*
- Entomology 4000 (3) – *General Entomology Lecture*
- MolGen 4591S or equiv. (1) – *DNA Fingerprinting Workshop with Columbus Public Schools*

**Electives**


**Embedded Literacies (no additional credit hours)**

- |                                                  |              |
|--------------------------------------------------|--------------|
| <input type="checkbox"/> Advanced Writing        | Biology 3401 |
| <input type="checkbox"/> Advanced Data Analytics | Biology 3401 |
| <input type="checkbox"/> Technology Literacy     | Biology 3401 |

**TOTAL BioSci HOURS**

**TOTAL SEMESTER UNITS**

**Notes:**

- Core, specialization, and elective courses must total 32 semester units, and must include three laboratory courses.
- At least 25 of the 32 semester units must be courses in Biochemistry, Biology, EEOB, Microbiology, or Molecular Genetics, and courses outside these departments must be pre-approved by a Biology advisor.
- Electives must be at the 2000 level or above, except for Biology which must be at the 3000 level or above.
- Up to 3 credit hours of research, individual study, or internship may be counted toward the major and, with approval of a major advisor, may be counted as a laboratory course.
- Transfer credit allowed - no more than one half of the credit hours required on the major.
- Honors versions of courses substitute freely.

† Courses within the major with a laboratory component

**Biology Major Checklist**  
**Bachelor of Science**  
**Pre-Health Professions Specialization**

NAME \_\_\_\_\_  
SEMESTER OF GRADUATION \_\_\_\_\_

DATE \_\_\_\_\_

**General Education Requirements (32-39 credit hours)**

- |                                                                                  |            |
|----------------------------------------------------------------------------------|------------|
| <input type="checkbox"/> GE Launch Seminar (1)                                   | GENED 1201 |
| <input type="checkbox"/> Foundations: Writing and Information Literacy (3)       | _____      |
| <input type="checkbox"/> Foundations: Mathematics & Quantitative Reasoning (3-5) | _____      |
| <input type="checkbox"/> Foundations: Literacy, Visual & performing Arts (3)     | _____      |
| <input type="checkbox"/> Foundations: Historical & Cultural Studies (3)          | _____      |
| <input type="checkbox"/> Foundations: Natural Sciences (4-5)                     | _____      |
| <input type="checkbox"/> Foundations: Social & Behavioral Sciences (3)           | _____      |
| <input type="checkbox"/> Foundations: Race, Ethnic and Gender Diversity (3)      | _____      |
| <input type="checkbox"/> Theme: Citizenship for a Diverse & Just World (4-6)     | _____      |
| <input type="checkbox"/> Theme: Student Choice (4-6)                             | _____      |
| <input type="checkbox"/> GE Reflection (1)                                       | GENED 4001 |

**Required Arts & Sciences Courses (1-13 Credit Hours)**

- |                                                     |       |
|-----------------------------------------------------|-------|
| <input type="checkbox"/> Arts & Sciences Survey (1) | _____ |
| <input type="checkbox"/> World Language (0-12)      | _____ |

**Required Supporting Courses (48-54 credit hours)**

**Biology (2 courses)**

- Biology 1113.01 (4) or 1113.02 (5)\*
- Biology 1114.01 (4) or 1114.02 (5)\*
- \_\_\_\_\_ Substitution

\* Can be used to fulfill the GEN Foundation: Natural Sciences requirement

**Mathematics/Statistics (2 courses)**

- Math 1151 or 1156 (5)\*\*
- Math 1152 (5) or Stat 2480 (3) or Stat 2450 (3)
- \_\_\_\_\_ Substitution

\*\* Can be used to fulfill the GEN Foundation; MQRM requirement

**Physics (2 Courses)**

- Physics 1200 (alg) or 1250 (calc) (5)
- Physics 1201 (alg) or 1251 (calc) (5)
- \_\_\_\_\_ Substitution

**Chemistry (2 courses)**

- Chemistry 1206 (3) and 1208 (4) or 1210 or 1610 or 1910H (5)
- Chemistry 1220 or 1620 or 1920H (5)
- \_\_\_\_\_ Substitution

**Organic Chemistry (2 lectures + 2 labs)**

- Chemistry 2510 or 2610 or 2910H (4) – Lecture 1
- Chemistry 2520 or 2620 or 2920H (4) – Lecture 2
- Chemistry 2540 or 2940H (2) – Lab 1
- Chemistry 2550 or 2950H (2) – Lab 2
- \_\_\_\_\_ Substitution

**Core Course (4 credit hours)**

- Biology 3401 (4) – *Integrated Biology*

† Courses within the major with a laboratory component

**Biology Major Checklist  
Bachelor of Science  
Pre-Health Professions Specialization**

**Pre-Health Professions Specialization (15-25 credit hours)**

**Required**

- MolGen 4500 (3) or 4606 (4)

**Additional Coursework (at least 4)**

- Biochem 4511 (4), or 5613 AND 5614 (6)
- EEOB 3310 or 3310.01 or 3310.02† (4) – *Evolution*
- Micro 4000† or 4000.01† or 4000.02† (4) or 4100 (5)
- EEOB 3510 or MolGen 4700 or MolGen 5607 or MolGen 5608 (3) – *Cell Biology*
- EEOB 3520† (3) – *Microscopic Anatomy / Histology*
- Anatomy 2300.01† (4) or 3300.01† (5) or EEOB 2510† (3) – *Human Anatomy*
- EEOB 4510† (3) – *Comparative Vertebrate Anatomy*
- Physio 3200 (5) or EEOB 2520 (3) – *Human Physiology* or EEOB 4520 (3) *Comparative Physiology*
- EEOB 3270 (3) or 3320 (3) or 3410 (4) or 3420 (4) or 4240 (3) – *Ecology*

**Electives**


**Embedded Literacies (no additional credit hours)**

- |                                                  |              |
|--------------------------------------------------|--------------|
| <input type="checkbox"/> Advanced Writing        | Biology 3401 |
| <input type="checkbox"/> Advanced Data Analytics | Biology 3401 |
| <input type="checkbox"/> Technology Literacy     | Biology 3401 |

**TOTAL BioSci HOURS**

**TOTAL SEMESTER UNITS**

**Notes:**

- Core, specialization, and elective courses must total 32 semester units, and must include three laboratory courses.
- At least 25 of the 32 semester units must be courses in Biochemistry, Biology, EEOB, Microbiology, or Molecular Genetics, and courses outside these departments must be pre-approved by a Biology advisor.
- Electives must be at the 2000 level or above, except for Biology which must be at the 3000 level or above.
- Up to 3 credit hours of research, individual study, or internship may be counted toward the major and, with approval of a major advisor, may be counted as a laboratory course.
- Transfer credit allowed - no more than one half of the credit hours required on the major.
- Honors versions of courses substitute freely.

† Courses within the major with a laboratory component

**Biology Major Checklist**  
**Bachelor of Science**  
**Forensics Biology Specialization**

NAME \_\_\_\_\_  
 SEMESTER OF GRADUATION \_\_\_\_\_

DATE \_\_\_\_\_

**General Education Requirements (32-39 credit hours)**

- |                                                                                  |            |
|----------------------------------------------------------------------------------|------------|
| <input type="checkbox"/> GE Launch Seminar (1)                                   | GENED 1201 |
| <input type="checkbox"/> Foundations: Writing and Information Literacy (3)       | _____      |
| <input type="checkbox"/> Foundations: Mathematics & Quantitative Reasoning (3-5) | _____      |
| <input type="checkbox"/> Foundations: Literacy, Visual & performing Arts (3)     | _____      |
| <input type="checkbox"/> Foundations: Historical & Cultural Studies (3)          | _____      |
| <input type="checkbox"/> Foundations: Natural Sciences (4-5)                     | _____      |
| <input type="checkbox"/> Foundations: Social & Behavioral Sciences (3)           | _____      |
| <input type="checkbox"/> Foundations: Race, Ethnic and Gender Diversity (3)      | _____      |
| <input type="checkbox"/> Theme: Citizenship for a Diverse & Just World (4-6)     | _____      |
| <input type="checkbox"/> Theme: Student Choice (4-6)                             | _____      |
| <input type="checkbox"/> GE Reflection (1)                                       | GENED 4001 |

**Required Arts & Sciences Courses (1-13 Credit Hours)**

- |                                                     |       |
|-----------------------------------------------------|-------|
| <input type="checkbox"/> Arts & Sciences Survey (1) | _____ |
| <input type="checkbox"/> World Language (0-12)      | _____ |

**Required Supporting Courses (48-58 credit hours)**

**Biology (2 courses)**

- Biology 1113.01 (4) or 1113.02 (5)\*
- Biology 1114.01 (4) or 1114.02 (5)\*
- \_\_\_\_\_ Substitution

\* Can be used to fulfill the GEN Foundation: Natural Sciences requirement

**Mathematics/Statistics (2 courses)**

- Math 1151 or 1156 (5)\*\*
- Math 1152 (5) or Stat 2480 (3) or Stat 2450 (3)
- \_\_\_\_\_ Substitution

\*\* Can be used to fulfill the GEN Foundation; MQRM requirement

**Physics (2 Courses)**

- Physics 1200 (alg) or 1250 (calc) (5)
- Physics 1201 (alg) or 1251 (calc) (5)
- \_\_\_\_\_ Substitution

**Chemistry (2 courses)**

- Chemistry 1206 (3) and 1208 (4) or 1210 or 1610 or 1910H (5)
- Chemistry 1220 or 1620 or 1920H (5)
- \_\_\_\_\_ Substitution

**Organic Chemistry (2 lectures + 2 labs)**

- Chemistry 2510 or 2610 or 2910H (4) – Lecture 1
- Chemistry 2520 or 2620 or 2920H (4) – Lecture 2
- Chemistry 2540 or 2940H (2) – Lab 1
- Chemistry 2550 or 2950H (2) – Lab 2
- \_\_\_\_\_ Substitution

**Anthropology (1 course)**

- Anthro 2200 (4) (optional, necessary for Anthro prereqs)

**Core Course (4 credit hours)**

- Biology 3401 (4) – *Integrated Biology*

† Courses within the major with a laboratory component

**Biology Major Checklist  
Bachelor of Science  
Forensics Biology Specialization**

**Forensic Biology (14-22 credit hours)**

**Required**

- Biochem 4511 (4), or 5613 AND 5614 (6)
- MolGen 4500 (3) or 4606 (4)

**Additional Coursework (at least 3)\*\*\***

- Anthro 5607 (3) – *Human Osteology*
- Anthro 5608 (3) – *Skeletal Biology*
- Anthro 5609 (3) – *Dental Anthropology*
- Anthro 5610 (3) – *Bioarchaeology*
- Anthro 5644 (3) – *Forensic Anthropology*
- BioChem 5615 (3) – *Biochemistry and Molecular Biology III*
- MolGen 5601† (3-4) – *Eukaryotic Molecular Genetics Lab*
- MolGen 5607 (3) – *Cell Biology*
- MolGen 5701 (3) – *DNA Transactions and Gene Regulation*
- Micro 4000† or 4000.01† or 4000.02† (4) or 4100 (5)
- MolGen 4591S or equiv. (1) – *DNA Fingerprinting Workshop in Columbus Public Schools*

**Electives**


**Embedded Literacies (no additional credit hours)**

- |                                                  |              |
|--------------------------------------------------|--------------|
| <input type="checkbox"/> Advanced Writing        | Biology 3401 |
| <input type="checkbox"/> Advanced Data Analytics | Biology 3401 |
| <input type="checkbox"/> Technology Literacy     | Biology 3401 |

**TOTAL BioSci HOURS**

**TOTAL SEMESTER UNITS**

**Notes:**

- Core, specialization, and elective courses must total 32 semester units, and must include three laboratory courses.
- At least 25 of the 32 semester units must be courses in Biochemistry, Biology, EEOB, Microbiology, or Molecular Genetics, and courses outside these departments must be pre-approved by a Biology advisor. At most 7 credit hours from Anthropology may be counted toward the Biology major.
- Electives must be at the 2000 level or above, except for Biology which must be at the 3000 level or above.
- Up to 3 credit hours of research, individual study, or internship may be counted toward the major and, with approval of a major advisor, may be counted as a laboratory course.
- Transfer credit allowed - no more than one half of the credit hours required on the major.
- Honors versions of courses substitute freely.

† Courses within the major with a laboratory component