LEHMAN COLLEGE
OF THE
CITY UNIVERSITY OF NEW YORK

DEPARTMENT OF BIOLOGICAL SCIENCES

Curriculum Change

Name Of Program and Degree Award: Biology, B.A.
Hegis Number: 0401.00
Program Code: 25940
Effective Term: Fall 2025

1. **Type Of Change:** Degree Requirements

2. **From:**
Biology, BIMHSE-BA

This major sequence in Biology is appropriate only for students planning to teach in middle and high school. The required education sequence in middle and high school education must be completed for all students selecting this major in Biology.

Major Requirements-Overall
Type-Completion requirement
Earn at least 55 credits

Major Requirements – Required Courses
Type; Completion requirement

Fulfill ALL of the following requirements:

Biology
Earn at least 12 credits from the following:

		Credits
BIO 166	Principles of Biology: Cells and Genes	4
BIO 167	Principles of Biology: Organisms	4
BIO 238	Genetics	2

BIO 166 and BIO 167: Both courses count towards pathways general education requirements. Both are prerequisites to all other biology courses at the 200-level or higher.

Physics
~~Earn at least~~ 5 credits ~~from the following:~~

		Credits
PHY 166	General Physics I	5

Chemistry
Complete ALL of the following Courses:

		Credits
CHE 166	General Chemistry I	4
CHE 167	General Chemistry Laboratory I	1.5
CHE 168	General Chemistry II	4
CHE 169	General Chemistry Laboratory II	1.5
CHE 232	Organic Chemistry Lecture I	4
CHE 233	Organic Chemistry Laboratory I	2

Mathematics:
Earn at least 3 credits from the following:

		Credits
MAT 128	Foundations of Data Science	3

At least 18 credits in advanced biology courses from 3 Areas:

Cellular Biology
Complete at least 1 of the following Courses:

		Credits
BIO 268	Vertebrate Embryology	4
BIO 311	Parasitology	3
BIO 312	Parasitology Lab	2

BIO 320	Neural Development: From Genes and Cells to Brains	3
BIO 321	Neural Development Laboratory	2
BIO 331	Experimental Microbiology	4
BIO 338	Human Genetics	4
BIO 350	Introduction to Immunology	2
BIO 400	Biological Chemistry	4
BIO 406	Cancer and Cellular Differentiation	3
BIO 415	Medical Microbiology	2
BIO 420	Molecular Biology	4
~~BIO 465~~	~~Microbial Physiology and Genetics~~	~~4~~

Organismic Biology
Complete at least 1 of the following Courses:

		Credits
BIO 228	Mammalian Physiology	4
BIO 267	Comparative Anatomy of Vertebrates	4
~~BIO 270~~	~~Invertebrate Zoology~~	~~3~~
BIO 330	Plant Physiology	4
BIO 333	Endocrine Physiology	4
BIO 340	Human Body and Brain	3
BIO 341	Human Body and Brain Laboratory	2
BIO 431	Comparative Animal Physiology	4

BIO 435	Neurophysiology	3

Population Biology
Complete at least 1 of the following Courses:

		Credits
BIO 241	Evolution, Species, and Biogeography	3
~~BIO 251~~	~~Introduction to Ecological Environmentalism~~	~~2~~
BIO 336	Marine Biology Lectures	3
BIO 339	Ecology	4
~~BIO 425~~	~~Ichthyology~~	3
~~BIO 426~~	~~Ichthyology Laboratory~~	2

3. **To:**
Biology, BIMHSE-BA

This major sequence in Biology is appropriate only for students planning to teach in middle and high school. The required education sequence in middle and high school education must be completed for all students selecting this major in Biology. As part of their overall training students in science, students will be required to take ESC 419.

Major Requirements-Overall
Type: Completion requirement
Earn at least 55 credits

Major Requirements – Required Courses
Type: Completion requirement

Fulfill ALL of the following requirements:

Biology
Earn at least 12 credits from the following:

		Credits
BIO 166	Principles of Biology: Cells and Genes	4
BIO 167	Principles of Biology: Organisms	4

BIO 238	Genetics	2
BIO 239	Genetics Laboratory	2

BIO 166 and BIO 167: Both courses count towards pathways general education requirements. Both are prerequisites to all other biology courses at the 200-level or higher.

Physics
5 credits

		Credits
PHY 166	General Physics I	5

Chemistry
Complete ALL of the following Courses:

		Credits
CHE 166	General Chemistry I	4
CHE 167	General Chemistry Laboratory I	1.5
CHE 168	General Chemistry II	4
CHE 169	General Chemistry Laboratory II	1.5
CHE 232	Organic Chemistry Lecture I	4
CHE 233	Organic Chemistry Laboratory I	2

Mathematics:
Earn at least 3 credits from the following:

		Credits
MAT 128	Foundations of Data Science	3

At least 18 credits in advanced biology courses from 3 Areas:

Cellular Biology
Complete at least 1 of the following Courses:

		Credits

BIO 268	Vertebrate Embryology	4
BIO 311	Parasitology	3
BIO 312	Parasitology Lab	2
BIO 320	Neural Development: From Genes and Cells to Brains	3
BIO 321	Neural Development Laboratory	2
BIO 331	Experimental Microbiology	4
BIO 338	Human Genetics	4
BIO 350	Introduction to Immunology	2
BIO 351	Immunology Laboratory	2
BIO 400	Biological Chemistry	4
BIO 406	Cancer and Cellular Differentiation	3
BIO 415	Medical Microbiology	2
BIO 420	Molecular Biology	4
BIO 438	Genomics and Human Health	4

Organismic Biology
Complete at least 1 of the following Courses:

		Credits
BIO 228	Mammalian Physiology	4
BIO 229	Astrobiology: Life and Health Beyond Earth	4
BIO 267	Comparative Anatomy of Vertebrates	4
BIO 317	Drugs, Brain and Behavior	3
BIO 330	Plant Physiology	4

BIO 333	Endocrine Physiology	4
BIO 340	Human Body and Brain	3
BIO 341	Human Body and Brain Laboratory	2
BIO 431	Comparative Animal Physiology	4
BIO 435	Neurophysiology	3

Population Biology
Complete at least 1 of the following Courses:

		Credits
BIO 241	Evolution, Species, and Biogeography	3
BIO 242	Flowering Plants	4
BIO 336	Marine Biology Lectures	3
BIO 339	Ecology	4

4. **Rationale (Explain How This Change Will Impact Learning Outcomes Of The. Department And Major/Program):**
1) Added Genetics lab to the Foundation courses; 2) Revised the electives for each of the Advanced Biology Areas to add new courses and remove those that are not regularly offered.

5. **Date Of Departmental Approval:** 04/02/25

LEHMAN COLLEGE
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DEPARTMENT OF BIOLOGICAL SCIENCES

CURRICULUM CHANGE

Name of Program and Degree Award: Biology B.S.
Hegis number: 0401.00
Program code: 34022
Effective term: Spring 2026

1. **TYPE OF CHANGE:** Degree Requirements

2. **FROM:**
Biology, BIO-BS

Major Requirements - Overall
Type: Completion requirement

Earn at least 33 credits

Additional Comments:
BS To M.S. Dual Credit Opportunity
Undergraduate students majoring in biology with 90 or more credits and A minimum (3.0) cumulative index and (3.5) index in the major may be permitted to enroll in up to 8 credits of graduate coursework in preparation for the M.S. Degree in biology. The student must receive permission from the department to take graduate courses prior to registration.

Major Requirements – Core Courses
Type: Completion requirement
Prerequisites *
Earn at least ~~33~~ credits from the following:

		Credits
BIO 166	Principles Of Biology: Cells And Genes	4
BIO 167	Principles Of Biology: Organisms	4
CHE 166	General Chemistry I	4
CHE 167	General Chemistry Laboratory I	1.5

CHE 168	General Chemistry II	4
CHE 169	General Chemistry Laboratory II	1.5
PHY 166	General Physics I	5
PHY 167	General Physics II	5

*BIO 166 and BIO 167 can be used to fulfill general education requirements. Both are prerequisites to all other biology courses.

Students can complete MAT 172, 4 credits or the combined substitute (MAT 171 (4) and MAT 108) (2)

** BIO 240 has MAT 175 and MAT 155 as prerequisites. MAT 328 has MAT 128 as a prerequisite.

Students who complete BIO 181 and BIO 182 can use those courses in place of BIO 228.

Students who complete any or all of the pre-requisite courses before declaring the major may complete the major in less than 77 credits.

A grade of C or higher is recommended for all courses in the prerequisite list.

Complete at least 1 of the Following:
Complete All of the Following Courses:
MAT 172 - Precalculus

Complete All of the Following Courses:
MAT 171 - Elements Of Precalculus
MAT 108 – Trigonometry

Foundation**
Complete ALL of the following Courses:

		Credits
BIO 238	Genetics	2
BIO 240	Biostatistics	3
OR		
MAT 328	Techniques in Data Science	4

** BIO 240 has MAT 175 (4) and MAT 155 (1) as prerequisites. MAT 328 has MAT 128 (3) as a prerequisite.

Organic Chemistry (12 Credits):
Complete ALL of the following Courses:

		Credits
CHE 232	Organic Chemistry Lecture I	4
CHE 233	Organic Chemistry Laboratory I	2
CHE 234	Organic Chemistry Lecture II	4
CHE 235	Organic Chemistry Laboratory II	2

Major Requirements – Biomedical Sciences Track
Type: Completion requirement

At least 21-22 credits in one of the following tracks:

Select courses from lists: A, B, And C

List A
Earn at least 12 credits from the following:

		Credits
BIO 228	Mammalian Physiology	4
BIO 267	Comparative Anatomy of Vertebrates	4
BIO 303	Data Mining and Bioinformatics	4

BIO 331	Experimental Microbiology	4
BIO 333	Endocrine Physiology	4
BIO 350	Introduction to Immunology	2
BIO 351	Immunology Laboratory	2
BIO 400	Biological Chemistry	4
BIO 410	Cell Physiology and Biochemistry	4
BIO 411	Principles of Virology	2
BIO 415	Medical Microbiology	4
BIO 420	Molecular Biology	4
BIO 431	Comparative Animal Physiology	4

List B

Earn at least 8 credits from the following:

		Credits
BIO 229	Astrobiology: Life and Health Beyond Earth	4
BIO 241	Evolution, Species, and Biogeography	3
BIO 268	Vertebrate Embryology	4
BIO 311	Parasitology	3
BIO 312	Parasitology Laboratory	2
BIO 317	Drugs, Brain and Behavior	3
BIO 320	Neural Development: From Genes and Cells to Brains	3

BIO 321	Neural Development Laboratory	2
BIO 330	Plant Physiology	4
BIO 336	Marine Biology Lectures	3
BIO 338	Human Genetics	4
BIO 339	Ecology	4
BIO 340	Human Body and Brain	3
BIO 341	Human Body and Brain Laboratory	2
BIO 406	Cancer and Cellular Differentiation	3
BIO 425	Ichthyology	3
BIO 426	Ichthyology Laboratory	2
BIO 435	Neurophysiology	3
BIO 465	Microbial Physiology and Genetics	4

List C
Earn at least 1 credit from the following:

		Credits
BIO 440	Biology Journal Review	2
BIO 450	Biology Seminar	1
BIO 471	Research in Molecular Microbiology	2
BIO 489	Introduction to Experimental Biology	1 (May Be Repeated For A Maximum 3 Credits).
BIO 490	Honors in Biological Sciences	3

Major Requirements - Organismic Sciences Track
Type: Completion requirement

Select courses from lists A, B, And C
List A
Earn at least 12 credits from the following:

		Credits
BIO 229	Astrobiology: Life and Health Beyond Earth	4
BIO 241	Evolution, Species, and Biogeography	3
BIO 268	Vertebrate Embryology	4
BIO 317	Drugs, Brain and Behavior	3
BIO 311	Parasitology	3
BIO 312	Parasitology Laboratory	2
BIO 320	Neural Development: From Genes and Cells to Brains	3
BIO 321	Neural Development Laboratory	2
BIO 330	Plant Physiology	4
BIO 336	Marine Biology Lectures	3
BIO 338	Human Genetics	4
BIO 339	Ecology	4
BIO 340	Human Body and Brain	3
BIO 341	Human Body and Brain Laboratory	2
BIO 406	Cancer and Cellular Differentiation	3
BIO 425	Ichthyology	3

BIO 426	Ichthyology Laboratory	2
BIO 435	Neurophysiology	3
BIO 465	Microbial Physiology and Genetics	4

List B
Earn at least 8 credits from the following:

		Credits
BIO 228	Mammalian Physiology	4
BIO 267	Comparative Anatomy of Vertebrates	4
BIO 303	Data Mining and Bioinformatics	4
BIO 331	Experimental Microbiology	4
BIO 333	Endocrine Physiology	4
BIO 350	Introduction to Immunology	2
BIO 351	Immunology Laboratory	2
BIO 400	Biological Chemistry	4
BIO 410	Cell Physiology and Biochemistry	4
BIO 411	Principles of Virology	2
BIO 415	Medical Microbiology	4
BIO 420	Molecular Biology	4
BIO 431	Comparative Animal Physiology	4

List C
Earn at least 1 credit from the following:

		Credits
BIO 440	Biology Journal Review	2
BIO 450	Biology Seminar	1
BIO 471	Research in Molecular Microbiology	2
BIO 489	Introduction to Experimental Biology	1 (May Be Repeated For A Maximum 3 Credits).
BIO 490	Honors in Biological Sciences	3

Major Requirements – Brain Sciences Track
Type: Completion requirement

Brain Sciences At Least 21 Credits

Select courses from lists: A, B, And C

List A
Earn at least 14 credits from the following:

		Credits
BIO 228	Mammalian Physiology	4
BIO 317	Drugs, Brain and Behavior	3
BIO 320	Neural Development: From Genes and Cells to Brains	3
BIO 321	Neural Development Laboratory	2
BIO 340	Human Body and Brain	3
BIO 341	Human Body and Brain Laboratory	2
BIO 400	Biological Chemistry	4
BIO 420	Molecular Biology	4

BIO 435	Neurophysiology	3

List B
Earn at least 1 credit from the following:

		Credits
BIO 440	Biology Journal Review	2
BIO 450	Biology Seminar	1
BIO 471	Research in Molecular Microbiology	2
BIO 489	Introduction to Experimental Biology	1 (May Be Repeated For A Maximum 3 Credits).
BIO 490	Honors in Biological Sciences	3

List C
Earn at least 6 credits from the following:

		Credits
PSY 166	General Psychology	3
PSY 308	Motivation and Emotion	3
PSY 310	Psychology of Learning	3
PSY 312	Psychology of Memory	3
PSY 314	Cognitive Psychology	3
PSY 317	Psychology of Sensation and Perception	3
PSY 366	Clinical Neuropsychology	3

PSY 166 can be used to fulfill general education requirements and is A prerequisite to all other PSY courses. Students who complete PSY 166 before declaring the major only need to complete 6 credits in this area.

Major Requirements – Bio-Data Sciences Track

Bio-Data Sciences At Least 22 Credits

Select courses from lists: A, B, And C
List A
Earn at least 12 credits from the following:

		Credits
BIO 241	Evolution, Species, and Biogeography	3
BIO 242	Flowering Plants	4
BIO 270	Invertebrate Zoology	3
BIO 271	Invertebrate Zoology Laboratory	2
BIO 303	Data Mining and Bioinformatics	4
BIO 330	Plant Physiology	4
BIO 331	Experimental Microbiology	4
BIO 336	Marine Biology Lectures	3
BIO 339	Ecology	4
BIO 400	Biological Chemistry	4
BIO 420	Molecular Biology	4
BIO 425	Ichthyology	3
BIO 426	Ichthyology Laboratory	2
BIO 503	Topics in Urban Ecology	4

List B
Earn at least 1 credit from the following:

		Credits
BIO 440	Biology Journal Review	2
BIO 450	Biology Seminar	1
BIO 471	Research in Molecular Microbiology	2
BIO 489	Introduction to Experimental Biology	1 (May Be Repeated For

		A Maximum 3 Credits).
BIO 490	Honors in Biological Sciences	3

9 Credits in Geospatial, Environmental and Data Science from List C:

Fulfill ALL of the following requirements:
List C
Earn at least 3 credits from the following:

GEP 205	Principles of Geographic Information Science	3
GEP 3060	Raster Applications	3
GEP 375	Data Acquistion Gis	3
GEO 340	Natural Hazards and Disasters: A Multidisciplinary Approach	3
ENV 235	Conservation of the Environment	3

Earn at least 6 credits from the following:

GEH 245	Introduction to Quantitative Methods of Geography	3
SOC 348	Reasoning with Data	3
DAT 310	Data Visualization	3

Additional Comments:
Students that take MAT 128, MAT 328 to satisfy the math requirement and take GEH 245, SOC 348, and DAT 310 to satisfy List C for the Bio-Data Sciences track would earn a minor in Data Science.

3. **TO:**
Biology, BIO-BS

Major Requirements - Overall
Type: Completion requirement

Earn at least 33 credits

Additional Comments:
BS To M.S. Dual Credit Opportunity
Undergraduate students majoring in biology with 90 or more credits and A minimum (3.0) cumulative index and (3.5) index in the major may be permitted to enroll in up to 8 credits of graduate coursework in preparation for the M.S. Degree in biology. The

student must receive permission from the department to take graduate courses prior to registration.

Type: Completion requirement
Prerequisites * (33 - 35 Credits):
Earn at least 29 credits from the following:

		Credits
BIO 166	Principles Of Biology: Cells And Genes	4
BIO 167	Principles Of Biology: Organisms	4
CHE 166	General Chemistry I	4
CHE 167	General Chemistry Laboratory I	1.5
CHE 168	General Chemistry II	4
CHE 169	General Chemistry Laboratory II	1.5
PHY 166	General Physics I	5
PHY 167	General Physics II	5

*BIO 166 and BIO 167 can be used to fulfill general education requirements. Both are prerequisites to all other biology courses.

Students can complete MAT 172, 4 credits or the combined substitute (MAT 171 (4) and MAT 108) (2)

** BIO 240 has MAT 175 and MAT 155 as prerequisites. MAT 328 has MAT 128 as a prerequisite.

Students who complete BIO 181 and BIO 182 can use those courses in place of BIO 228.

Students who complete any or all of the pre-requisite courses before declaring the major may complete the major in less than 77 credits.

A grade of C or higher is recommended for all courses in the prerequisite list.

Complete at least 1 of the Following:
Complete All of the Following Courses:
MAT 172 - Precalculus

Complete All of the Following Courses:
MAT 171 - Elements Of Precalculus
MAT 108 – Trigonometry

Foundation
Complete ALL of the following Courses:

		Credits
BIO 238	Genetics	2
BIO 239	Genetics Laboratory	2
BIO 240	Biostatistics	3
OR		
MAT 328	Techniques in Data Science	4

** BIO 240 has MAT 175 (4) and MAT 155 (1) as prerequisites. MAT 328 has MAT 128 (3) as a prerequisite.

Organic Chemistry (12 Credits):
Complete ALL of the following Courses:

		Credits
CHE 232	Organic Chemistry Lecture I	4
CHE 233	Organic Chemistry Laboratory I	2
CHE 234	Organic Chemistry Lecture II	4
CHE 235	Organic Chemistry Laboratory II	2

At least 21-22 credits in one of the following tracks:

Major Requirements – Biomedical Sciences Track
Biomedical Sciences at least 21 credits
Type: Completion requirement

Select courses from lists: A, B, And C
List A
Earn at least 12 credits from the following:

		Credits
BIO 228	Mammalian Physiology	4
BIO 267	Comparative Anatomy of Vertebrates	4
BIO 303	Data Mining and Bioinformatics	4
BIO 331	Experimental Microbiology	4
BIO 333	Endocrine Physiology	4
BIO 350	Introduction to Immunology	2
BIO 351	Immunology Laboratory	2
BIO 400	Biological Chemistry	4
BIO 410	Cell Physiology and Biochemistry	4
BIO 411	Principles of Virology	2
BIO 415	Medical Microbiology	4
BIO 420	Molecular Biology	4
BIO 431	Comparative Animal Physiology	4

List B
Earn at least 8 credits from the following:

		Credits
BIO 229	Astrobiology: Life and Health Beyond Earth	4

BIO 241	Evolution, Species, and Biogeography	3
BIO 242	Flowering Plants	4
BIO 268	Vertebrate Embryology	4
BIO 311	Parasitology	3
BIO 312	Parasitology Laboratory	2
BIO 317	Drugs, Brain and Behavior	3
BIO 320	Neural Development: From Genes and Cells to Brains	3
BIO 321	Neural Development Laboratory	2
BIO 330	Plant Physiology	4
BIO 336	Marine Biology Lectures	3
BIO 338	Human Genetics	4
BIO 339	Ecology	4
BIO 340	Human Body and Brain	3
BIO 341	Human Body and Brain Laboratory	2
BIO 403	Medicinal Plants	4
BIO 406	Cancer and Cellular Differentiation	3
BIO 425	Ichthyology	3
BIO 426	Ichthyology Laboratory	2
BIO 435	Neurophysiology	3
BIO 438	Genomics and Human Health	4

BIO 465	Microbial Physiology and Genetics	4

List C
Earn at least 1 credit from the following:

		Credits
BIO 440	Biology Journal Review	2
BIO 450	Biology Seminar	1
BIO 471	Research in Molecular Microbiology	2
BIO 489	Introduction to Experimental Biology	1 (May Be Repeated For A Maximum 3 Credits).
BIO 490	Honors in Biological Sciences	3

Major Requirements – Organismic Sciences Track
Organismic Sciences at least 21 credits
Type: Completion requirement

Select courses from lists A, B, And C
List A
Earn at least 12 credits from the following:

		Credits
BIO 229	Astrobiology: Life and Health Beyond Earth	4
BIO 241	Evolution, Species, and Biogeography	3
BIO 242	Flowering Plants	4
BIO 268	Vertebrate Embryology	4
BIO 317	Drugs, Brain and Behavior	3
BIO 311	Parasitology	3
BIO 312	Parasitology Laboratory	2

BIO 320	Neural Development: From Genes and Cells to Brains	3
BIO 321	Neural Development Laboratory	2
BIO 330	Plant Physiology	4
BIO 336	Marine Biology Lectures	3
BIO 338	Human Genetics	4
BIO 339	Ecology	4
BIO 340	Human Body and Brain	3
BIO 341	Human Body and Brain Laboratory	2
BIO 403	Medicinal Plants	4
BIO 406	Cancer and Cellular Differentiation	3
BIO 425	Ichthyology	3
BIO 426	Ichthyology Laboratory	2
BIO 435	Neurophysiology	3
BIO 438	Genomics and Human Health	4
BIO 465	Microbial Physiology and Genetics	4

List B

Earn at least 8 credits from the following:

		Credits
BIO 228	Mammalian Physiology	4
BIO 267	Comparative Anatomy of Vertebrates	4

BIO 303	Data Mining and Bioinformatics	4
BIO 331	Experimental Microbiology	4
BIO 333	Endocrine Physiology	4
BIO 350	Introduction to Immunology	2
BIO 351	Immunology Laboratory	2
BIO 400	Biological Chemistry	4
BIO 410	Cell Physiology and Biochemistry	4
BIO 411	Principles of Virology	2
BIO 415	Medical Microbiology	4
BIO 420	Molecular Biology	4
BIO 431	Comparative Animal Physiology	4

List C
Earn at least 1 credit from the following:

		Credits
BIO 440	Biology Journal Review	2
BIO 450	Biology Seminar	1
BIO 471	Research in Molecular Microbiology	2
BIO 489	Introduction to Experimental Biology	1 (May Be Repeated For A Maximum 3 Credits).
BIO 490	Honors in Biological Sciences	3

Major Requirements – Brain Sciences Track
Brain Sciences At Least 21 Credits

Type: Completion requirement

Select courses from lists: A, B, And C

List A
Earn at least 14 credits from the following:

		Credits
BIO 228	Mammalian Physiology	4
BIO 317	Drugs, Brain and Behavior	3
BIO 320	Neural Development: From Genes and Cells to Brains	3
BIO 321	Neural Development Laboratory	2
BIO 340	Human Body and Brain	3
BIO 341	Human Body and Brain Laboratory	2
BIO 400	Biological Chemistry	4
BIO 420	Molecular Biology	4
BIO 435	Neurophysiology	3

List B
Earn at least 1 credit from the following:

		Credits
BIO 440	Biology Journal Review	2
BIO 450	Biology Seminar	1
BIO 471	Research in Molecular Microbiology	2
BIO 489	Introduction to Experimental Biology	1 (May Be Repeated For A Maximum 3 Credits).

BIO 490	Honors in Biological Sciences	3

List C
Earn at least 6 credits from the following:

		Credits
PSY 166	General Psychology	3
PSY 308	Motivation and Emotion	3
PSY 310	Psychology of Learning	3
PSY 312	Psychology of Memory	3
PSY 314	Cognitive Psychology	3
PSY 317	Psychology of Sensation and Perception	3
PSY 366	Clinical Neuropsychology	3

PSY 166 can be used to fulfill general education requirements and is A prerequisite to all other PSY courses. Students who complete PSY 166 before declaring the major only need to complete 6 credits in this area.

Major Requirements – Bio-Data Sciences Track

Bio-Data Sciences At Least 22 Credits

Type: Completion requirement

Select courses from lists: A, B, And C

List A
Earn at least 12 credits from the following:

		Credits
BIO 241	Evolution, Species, and Biogeography	3
BIO 242	Flowering Plants	4
BIO 270	Invertebrate Zoology	3
BIO 271	Invertebrate Zoology Laboratory	2

BIO 303	Data Mining and Bioinformatics	4
BIO 330	Plant Physiology	4
BIO 331	Experimental Microbiology	4
BIO 336	Marine Biology Lectures	3
BIO 339	Ecology	4
BIO 400	Biological Chemistry	4
BIO 403	Medicinal Plants	4
BIO 420	Molecular Biology	4
BIO 425	Ichthyology	3
BIO 426	Ichthyology Laboratory	2
BIO 503	Topics in Urban Ecology	4

List B

Earn at least 1 credit from the following:

		Credits
BIO 440	Biology Journal Review	2
BIO 450	Biology Seminar	1
BIO 471	Research in Molecular Microbiology	2
BIO 489	Introduction to Experimental Biology	1 (May Be Repeated For A Maximum 3 Credits).
BIO 490	Honors in Biological Sciences	3

9 Credits in Geospatial, Environmental and Data Science from List C:

Fulfill ALL of the following requirements:

List C

Earn at least 3 credits from the following:

GEP 205	Principles of Geographic Information Science	3
GEP 3060	Raster Applications	3
GEP 375	Data Acquistion Gis	3
GEO 340	Natural Hazards and Disasters: A Multidisciplinary Approach	3
ENV 235	Conservation of the Environment	3

Earn at least 6 credits from the following: t

GEH 245	Introduction to Quantitative Methods of Geography	3
SOC 348	Reasoning with Data	3
DAT 310	Data Visualization	3

Additional Comments:
Students that take MAT 128, MAT 328 to satisfy the math requirement and take GEH 245, SOC 348, and DAT 310 to satisfy List C for the Bio-Data Sciences track would earn a minor in Data Science.

4. **Rationale (Explain how this change will impact learning outcomes of the department and major/program):**
1) Added the genetics lab to the Foundation courses as genetics was recently split into lecture and lab components. 2) Added Bio 242, Bio 403, and Bio 438 as new electives to the tracks.

5. **Date of Departmental Approval:** 04/02/25