**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CCNY email\_\_\_\_\_\_\_\_\_\_ Faculty advisor Date:**

**Last 4 digits of ID \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ signature:**

**BIOLOGY BS/MS REQUIREMENTS**

# REQUIRED CORE COURSES

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Biology 10100 | 4 |  | Bio 10200 | 4 |  |
| Chem 10301 | 4 |  | Chem 10401 | 4 |  |
|  |  |  | Chem 26100 | 3 |  |
| Physics 20300 | 4 |  | Phys 20400 | 4 |  |
| Math 20500 | 4 |  | Math 20900 | 4 |  |
|  |  |  |  |  |  |
| Biology 20600 | 4 |  | Biology 20700 | 4 |  |
| Biology 22800 | 4 |  | Biology 22900 | 4 |  |

**BIOLOGY ELECTIVES**

1. Number of Biology elective credits below + number of credits for required Biology core courses above must equal at least 64

2. Minimum number of **graduate-level + 400-level** credits: 30

(Max. number of 400-level credits of this 30 is eight.)

**(List elective courses taken, # of credits, and grade below)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Undergraudate** | # |  | **Graduate**  | # |  |
| **elcctives** | credits | grade | **electives** | credits | grade |
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**Undergraduate research electives – 9 credits required**

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| --- | --- | --- | --- | --- | --- |
| Bio 30100 | 3 |  | Bio 30300 | 3 |  |
| Bio 30200 | 3 |  | Bio 3100\_ |  |  |
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**Graduate research electives – 12 credits required**

**(no more than 6 credits can be taken per semester)**

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| --- | --- | --- | --- | --- | --- |
| Bio B990x |  |  | Bio V920x |  |  |
| Bio B990x |  |  | Bio V920x |  |  |
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**Biology Dept. Colloquium (must be taken twice)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bio V9100 | 1 |  | Bio V9100 | 1 |  |

***This student has fulfilled all requirements for the BS/MS degree in Biology***

**Head Biology BS/MS
Advisor Signature:**

**Date: OTHER REQUIREMENTS**

1. For general CCNY and Division of Science (B.S.) requirements, see Undergrad Bulletin or visit Science Advising Center (Dr. Roth's office)

2. A 2.0 GPA in Biology Dept. courses is required to remain in the Major and to graduate.

3. 39 of the 64 required Biology Dept. credits must be taken within the CCNY Biology Department.

4. 18 of the 30 required Masters/400-level requirements must be taken within the CCNY Biology Department

5. To enroll in a Biology course, students must pass all Biology course prerequisites with a grade of 'C' or higher.

**COURSE PLAN -- List all courses you've taken at CCNY. Then list all courses you plan to take up through the semester you intend to graduate with the BS/MS.**

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| **Summer 20??** |  |

### Requirements for Biology Major (B.S.)

## REQUIRED COURSES

**BIOLOGY**

BIO 101 Biological Foundations I (4 cr)

BIO 102 Biological Foundations II (4 cr)

BIO 206 Introduction of Genetics (4 cr)

BIO 207 Organismic Biology (4 cr)

BIO 228 Ecology and Evolution (4 cr)

BIO 229 Cell and Molecular Biology (4 cr)

**CHEMISTRY**

CHEM 103 General Chemistry I (4 cr)

CHEM 104 General Chemistry II (4 cr)

CHEM 261 Organic Chemistry I (3 cr)

**MATHEMATICS**

MATH 205 Elements of Calculus (4 cr)

MATH 209 Elements of Calculus & Statistics (4 cr)

OR

MATH 20100, 20200, 17300

OR

MATH 20100, 20900

OR

MATH 20100, 20200, 20300

**PHYSICS**

PHYS 203 General Physics I (4 cr)

PHYS 204 General Physics II (4 cr)

**NOTE: Bio 32100 is not for biology majors**

 **ADVANCED BIOLOGY ELECTIVES**

BIO 31100-32000 Selected Topics in Biology (maximum 4 cr)

BIO 31311 Neuroscience of Motor Control (3 cr)

BIO 31400 Bioethics (3 cr)

BIO 31590 Introduction to Neuroscience (4 cr)

BIO 31612 Biomolecular Systems (3 cr)

BIO 31616 Vertebrate Biology/Women’s Health (3 cr)

BIO 31804 Symbiosis (3 cr)

BIO 31809 Plant Animal Interaction (3 cr)

BIO 31810 Ethnobotany (3 cr)

BIO 330 Natural History of Vertebrates (3 cr)

BIO 340 Biology of Invertebrates (4 cr)

BIO 345 Botany (4 cr)

BIO 350 Microbiology (4 cr)

BIO 354 Introduction to Neurobiology (3 or 4cr)

BIO 355 Analysis of Scientific Literature (4 cr)

BIO 375 Developmental Biology (3 cr)

BIO 379 Developmental Neurobiology (3 cr)

BIO 380 Eukaryotic Genetics (4 cr)

BIO 400 Physiology and Functional Anatomy I (4 cr)

BIO 401 Physiology and Functional Anatomy II (4 cr)

BIO 402 Physiology and Functional Anatomy III (4 cr)

BIO 405 Development and Evolution (3 cr)

BIO 410 Cell Development and Senescence (3 cr)

BIO 420 Virology (4 cr)

BIO 425 Cancer Biology (3 cr)

BIO 443 Insect Ecology (4 cr)

BIO 449 Biology of Birds (4 cr)

BIO 451 Muscle and Movement (3 cr)

BIO 453 Conservation Biology (3 cr)

BIO 454 Sensory Perception (3 cr)

BIO 455 Advanced Ecology (3 cr)

BIO 458 Biogeography (3 cr)

BIO 459 Biological Oceanography (3 cr)

BIO 460 Animal Behavior (3 cr)

BIO 466 Plant Physiology (3 cr)

BIO 468 Comparative Animal Physiology (4 cr)

BIO 483 Laboratory in Biotechnology (5 cr)

BIO 485 Evolution (3 cr)

BIO 301-303 Honors I-III (*maximum 6 cr*)

BIO 310 Independent Study (1-3 cr/semester; *max 6 cr*)

The following can count towards the 39 credits required for the major, but do not count towards the residency requirements (24 credits)

CHEM 45902 Biochemistry (3 cr)

CHEM 31100 Journey to the Center of the Cell (3 cr)

PHILOSOPHY 34905 Bioethics (3 cr)

PHYSICS 42200 Biophysics (3 cr)

SCIENCE 28000 Bioinformatics & Biomolecular Systems (3 cr)