

WORKSHEET FOR THE MAJOR IN CELL BIOLOGY & NEUROSCIENCE (146)

DIVISION OF LIFE SCIENCES – SCHOOL OF ARTS AND SCIENCES

STUDENT NAME _____ ID NUMBER _____

This worksheet outlines the requirements for majoring in Cell Biology and Neuroscience (CBN). It is your responsibility to keep track of your progress towards the completion of the major by updating this worksheet as you complete the required courses. This document should reflect your official academic transcript and will be reviewed prior to your graduation.

We encourage you to consult with CBN Director of Advising, in person or by email, on a regular basis (at least once each semester) to make sure that you are on track to meet these requirements before graduation. Contact information:

Prof. Shu C. Hsu, Nelson Bio Lab room D419; hsu@biology.rutgers.edu

REQUIRED COURSES:

1. BIOLOGY requirements (10 credits)

Course name	Course number	Credits	Date	Grade
General Biology I	01:119:115	4		
General Biology II	01:119:116	4		
Biological Research Lab	01:119:117	2		

2. General Chemistry requirements (9 credits)

Course name	Course number	Credits	Date	Grade
General Chemistry	01:160:161	4		
General Chemistry	01:160:162	4		
Intro to Experimentation	01:160:171	1		

3. Mathematics and Statistics requirements (7-8 credits)

	Course name	Course number	Credits	Date	Grade
Choose 1	Calc I for Life/Soc Sci	01:640:135	4		
	Calc I Math/Phys	01:640:151	4		
Choose 1	Basic Stat for Research	01:960:401	3		
	Basic Prob and Stat	01:960:379	3		
	Statistics II (for students who already have credits for Statistics I 01:940:211)	01:960:212	3		
	Calc II Life/Soc	01:640:136	4		
	Calc II Math/Phys	01:640:152	4		

4. Physics requirements (8 credits)

Course name	Course number	Credits	Date	Grade
General Physics	01:750:203	3		
General Physics	01:750:204	3		
General Physics Lab	01:750:205	1		
General Physics Lab	01:750:206	1		

5. Organic Chemistry requirements (10-10.5 credits)

	Course name	Course number	Credits	Date	Grade
Choose 1	Organic Chemistry	01:160:307	4		
	Honors Org Chem	01:160:315	4		
Choose 1	Organic Chemistry	01:160:308	4		
	Honors Org Chem	01:160:316	4		
Choose 1	Organic Chemistry Lab	01:160:311	2		
	Organic Chemistry Lab	01:160:309	2.5		

6. Genetics requirements (4 credits)

Course name	Course number	Credits	Date	Grade
Genetics	01:447:380	4		

7. Biochemistry requirements (3 credits)

	Course name	Course number	Credits	Date	Grade
Choose 1	Intro Biochem & Mol Bio	01:694:301	3		
	Mol Bio Biochem	01:694:407	3		
	Intro Biochem	11:115:301	3		

8. CBN Introductory requirements (6 credits)

Course name	Course number	Credits	Date	Grade
Fund Neurobiology	01:146:245	3		
Fund Cell and Dev Bio	01:146:270	3		

Declare the major after passing these two CBN introductory courses!

9. CBN Upper level requirements (9-10 credits)

	Course name	Course number	Credits	Date	Grade
Choose 3*	Advanced Neuro I	01:146:445	3		
	Advanced Neuro II	01:146:447	3		
	Advanced Cell I	01:146:470	3		
	Advanced Cell II	01:146:480	3		
	Advanced Development	01:146:472	3		
	Immunology	01:146:474	3		
	Histology	01:146:322	4		

**Current Juniors and Seniors can opt to take 2 CBN Upper Level Courses from the above list + 1 of the following Molecular Biology courses, instead of 3 CBN Upper Level Courses. This option will expire in the Spring 2021.*

	Course name	Course number	Credits	Date	Grade
Choose 1	Molecular Biology	01:146:478	3		
	Molecular Biology and Biochemistry	01:694:408	3		
	Molecular Genetics	11:126:481	3		

10. Elective (3-4 credits per elective) – Choose 2 from Approved Elective List

Course name	Course number	Credits	Date	Grade

11. CBN Lab requirement (1-6 credits)

	Course name	Course number	Credits	Date	Grade	
Choose 1	Advanced Cell Lab	01:146:471	3			
	Immunology Lab	01:146:475	1			
	Parasitology Lab	01:146:329	1			
	Histology	01:146:322	4			
	Approved elective with an associated lab	See Approved electives	4			
	Research in CBN (2 semesters)		01:146:307	1-3		
			01:146:308	1-3		
			01:146:406	1-3		
			01:146:407	1-3		
	Research Thesis in CBN (2 semesters)		01:146:410	3		
		01:146:411	3			

**Adv Cell lab (3 credits) and 6 credits of Junior/Senior research can fulfill both 1 elective AND lab requirements. Research of less than 6 credits will not count toward CBN elective or lab requirement.*

12. CBN Honors Track requirement (9 credits + thesis)

Apply at the beginning of the Senior year!

This track requires a minimum CBN major and cumulative GPA of 3.4, and submission of a [CBN Honors Application Form](#). A written thesis, oral thesis defense and poster presentation are due during the Spring semester of Honors Research.

Course name	Course number	Credits	Date	Grade
Honors Research	01:146:408	3		
Honors Research	01:146:409	3		
	Written thesis	N/A		
	Oral thesis defense	N/A		
Honors Seminar	01:146:405	3		

RESIDENCY REQUIREMENTS FOR THE MAJOR: No more than 16 credits from courses required for completion of the major may be fulfilled by credits transferred from any school outside of Rutgers-New Brunswick. This rule applies to the requirements in the Major Worksheet: Items 1 (Gen Bio), 2 (Gen Chem), 6 (Genetics), 7 (Biochem) and 8 (CBN Intro).

GRADE REQUIREMENTS FOR THE MAJOR: A grade of C or better in ALL courses credited toward the major is required for graduation AND each course may be repeated only once to replace D/F grades. Courses taken on a “pass/fail” basis and courses with non-traditional formats (e.g., Online and Winter Session), whether offered by Rutgers or another university, may be used to satisfy the major requirements only with approval from the CBN director of undergraduate advising.