

# BIOCHEMISTRY (BS) MAJOR

## NATURAL SCIENCES DEPARTMENT

### BIOCHEMISTRY BACHELOR OF SCIENCE MAJOR CHECKLIST 2018-2019

*This checklist aids in placement of students into their major coursework and documents the department evaluation of transferred credit and course waivers, based on coursework listed on the Degree Audit Report (DARs). A student must complete General Education and Liberal Studies (GELS) along with other graduation requirements for graduation – refer to your DARs. All coursework for the major must be completed with the grade of C- or better.*

Student Name	Metro State ID #	Admission Date or Semester
Advisor Name	Evaluation Date	Declaration Date or Semester

### MATH AND PRE-MAJOR FOUNDATION COURSES: 12 CREDITS

*Each foundation science course must include at least one semester credit of professionally supervised, on-ground laboratory experience with standard undergraduate laboratory equipment and materials. Note that Math foundation courses are pre-requisites that do not count toward major credit totals.*

Course #	Title	Transfer Equivalent Details	Grade	Credits	Term
MATH115 OR MATH 120 OR Placement	College Algebra OR Precalculus				
CHEM 111	General Chemistry I				
CHEM 112	General Chemistry II				
BIOL 111	General Biology I				

### CORE REQUIREMENTS FOR MAJOR: 46 CREDITS

*Lower-division core requirements*

Course #	Title	Transfer Equivalent Details	Grade	Credits	Term
CHEM 231/231L	Organic Chemistry I and lab			5	
STAT 201	Statistics I			4	

Course #	Title	Transfer Equivalent Details	Grade	Credits	Term
MATH 208 OR MATH 210 & MATH 211	Applied Calculus OR Calculus I and II			4-8	
PHYS 211	Calculus Based Physics I			5	
PHYS 212	Calculus Based Physics II			5	

*Upper-division core requirements*

Course #	Title	Transfer Equivalent Details	Grade	Credits	Term
BIOL 304	Molecular Biology			5	
CHEM 332/332L	Organic Chemistry II and lab			5	
CHEM 341	Quantitative Analysis			5	
CHEM 325 and CHEM 327	Biochemistry I and Lab			5	
CHEM 429	Biochemistry II			3	

**ELECTIVE COURSE REQUIREMENT: 8 CREDITS**

*Select from the following courses to fulfill the remaining elective requirement. Note: Research (CHEM 488) cannot exceed five credits towards the elective requirement.*

Course #	Title	Grade	Credits	Term	Course #	Title	Grade	Credits	Term
CHEM 351	Physical Chemistry I		5		CHEM 441	Instrumental Analysis		5	
CHEM 407	Biochemistry of Neurological Disorders		3		CHEM 469	Seminars in Chemistry (repeatable 3 semesters)		1	
CHEM 421	Medicinal Chemistry		3		CHEM 488	Research in Biochemistry		1-3	
CHEM 433	Advanced Organic Chemistry		3		BIOL 302	Cell Biology & Histology		5	
CHEM 435L	Advanced Organic Chemistry Lab		2		BIOL 330	Biology of Microorganisms		5	

*OTHER APPROVED TRANSFER OR EVALUATED CREDIT*

Course #	Title	Transfer Equivalent Details	Upper Division	Grade	Credits	Term

**ADDITIONAL NOTES, CREDIT TOTALS OR COMMENTS:**

Academic advisor notes:

**GRADUATION REQUIREMENTS**

*The following is a summary of graduation requirements for this major, reference your DAR's for specific details.*

Major Requirements Checklist	In Progress	Completed
66 Major credits		
25 Metro State Major Credits		
25 Upper Division Major (300 or higher)		

University Requirements Checklist	In Progress	Completed
120 Total Credits (minimum)		
30 Metro State Credits		
40 Upper Division (300 or higher)		
GELS +RIGR		

**NATURAL SCIENCES DEPARTMENT CONTACT INFORMATION**

*For specific questions about this major program or equivalencies of prior coursework at other institutions, contact the Chair of the Natural Sciences Department at:*

*Email: [natural.sciences@metrostate.edu](mailto:natural.sciences@metrostate.edu) Web: [www.metrostate.edu/natural-sciences](http://www.metrostate.edu/natural-sciences) Tel: 651-793-1515*



**College of Sciences**

METROPOLITAN STATE UNIVERSITY  
 College of Sciences  
 700 East Seventh Street  
 Saint Paul, MN 55106-5000  
 Tel: 651-793-1606      Email: [COS@metrostate.edu](mailto:COS@metrostate.edu)

Web: [www.metrostate.edu/COS](http://www.metrostate.edu/COS)



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