

CHEMISTRY (BS) MAJOR

NATURAL SCIENCES DEPARTMENT

MAJOR CHECKLIST FALL 2020 – SUMMER 2021

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 & PRE-MAJOR FOUNDATION COURSES: 8 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. One of the following courses or math assessment placement score above college algebra is required. This prerequisite does not count toward total credits for this major.

Course #	Title	Transfer Equivalent Details	Grade	Credits	Term
MATH 115 OR MATH 120 OR Placement	College Algebra OR Precalculus				
CHEM 111	General Chemistry I				
CHEM 112	General Chemistry II				

CORE REQUIREMENTS FOR MAJOR: 38 CREDITS

Lower-division core requirements

Course #	Title	Transfer Equivalent Details	Grade	Credits	Term
MATH 210	Calculus I			4	
MATH 211	Calculus II			4	
CHEM 231/231L	Organic Chemistry I and lab			5	

Course #	Title	Transfer Equivalent Details	Grade	Credits	Term
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
CHEM 332/332L	Organic Chemistry II and lab			5	
CHEM 341	Quantitative Analysis			5	
CHEM 351	Physical Chemistry I			5	

ELECTIVE COURSE REQUIREMENT: 18 CREDITS

A total of 18 credits fulfills the elective requirement and consists of three category areas. A minimum of six credits must be specified as lab credits.

CATEGORY 1: BIOCHEMISTRY, MEDICINAL, AND ORGANIC CHEMISTRY

Select a minimum of 5 credits from this category.

Course #	Title	Transfer Equivalent Details	Grade	Credits	Term
CHEM 325	Biochemistry I: Biomolecule Structure and Function			3	
CHEM 327	Biochemistry Laboratory			2	
CHEM 421	Medicinal Chemistry			3	
CHEM 433	Advanced Organic Chemistry			3	
CHEM 435	Advanced Organic Chemistry Lab			2	

CATEGORY 2: ANALYTICAL, ENVIRONMENTAL AND INORGANIC CHEMISTRY

Select a minimum of 5 credits from this category.

Course #	Title	Transfer Equivalent Details	Grade	Credits	Term
CHEM 311	Environmental Chemistry			3	
CHEM 311L	Environmental Chemistry Lab			2	
CHEM 355	Physical Chemistry II			3	
CHEM 357	Physical Chemistry II Lab			2	
CHEM 361	Inorganic Chemistry Lec/Lab			5	
CHEM 441	Instrumental Analysis			5	

CATEGORY 3: OTHER COURSE OFFERINGS

Select from the following courses and any course not otherwise taken to fulfill the other two categories to fulfill the remaining elective requirement. Note: Research (CHEM 489) and internship (CHEM 350I) combined cannot exceed five credits toward the elective requirement.

Course #	Title	Transfer Equivalent Details	Grade	Credits	Term
CHEM 350I	Chemistry Internship			1-4	
CHEM 407	Biochemistry of Neurological Disorders			3	
CHEM 425	Polymer Chemistry and Dynamics			3	
CHEM 429	Biochemistry II			3	
CHEM 437L	Research Methods			3	
CHEM 469	Seminars in Chemistry (may repeat up to 3 credits)			1	
CHEM 479	Special Topics in Chemistry			2-3	
CHEM 479L	Special Topics in Chemistry Lab			1-4	
CHEM 489	Directed Research in Chemistry			1-5	

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
64 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 requirement		

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:

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