

B.S. Degree in Chemistry

ACS Certified Degree

The following is a sample schedule to help students plan their coursework. These are suggestions and the schedule is flexible. In addition to fulfilling the courses specifically required for this chemistry degree, it is important that students also fulfill Dragon Core requirements and normal graduation requirements (at least 120 total credits, at least 40 upper/division credits [300/400 level], and a GPA of at least 2.0.)

FALL		FRESHMAN YEAR		DC
Chem	150	Gen Chem I (+ lab)	4	4IL
MATH	261	Calculus I ¹	4	
ENGL	101	English Composition ²	4	1B
CMST	100	Speech Communication ²	3	1A
Hlth	122	Personal Health/Wellness	1	
Total Credits			16	

SPRING				DC
Chem	210	Gen Chem II (+ lab)	4	
MATH	262	Calculus II	4	
Phil	110	Practical Reasoning ²	3	2
Elective			3	
Total Credits			14	

FALL		SOPHOMORE YEAR		
Chem	350	Organic Chem I	3	
Chem	355	Organic Chem Lab I	1	
Chem	300	Inorganic Chem I	3	
PHYS	200	Physics I ³	4	4I
Elective			3	
Total Credits			14	

SPRING				
Chem	360	Organic Chem II	3	
Chem	365	Organic Chem Lab II	1	
Chem	380	Analytical Chem (lab)	4	
PHYS	201	Physics II	4	
Elective			3	
Chem	497	Research ⁴	1	
Total Credits			16	

FALL		JUNIOR/SENIOR YEARS		
Chem	450	Physical Chem I ⁵	3	
Chem	455	Physical Chem Lab I	1	
Chem	400	Biochemistry I ⁶	3	
Chem	405	Biochemistry I Lab	1	
Chem	480	Analytical Chem II (odd yrs) ⁷	4	
ENGL	387	Tech Report Writing	4	
Electives			14	
Total Credits			30	

SPRING		JUNIOR/SENIOR YEARS		
Chem	460	Physical Chem II (even yrs) ⁵	3	
Chem	465	Physical Chem Lab II ⁵	1	
Chem	420	Inorganic Chem II (odd yrs) ⁸	3	
Chem	425	Inorganic Chem II Lab ⁸	1	
Chem	497	Research	2	
Chem	498	Chemistry Seminar	1	
Electives			19	
Total Credits			30	

¹ ACS math scores or a mathematics placement exam is needed to inform whether a student should begin directly in calculus or a different math class.

² These are standard Dragon Core courses, but others can be taken in their place.

³ Physics 200/201 should not be taken before calculus. Physics 160/161 can be used instead of Physics 200/201.

⁴ When research gets taken is very flexible.

⁵ Physical Chemistry I is offered every fall, but Physical Chemistry II is only offered during the spring of even-numbered years.

⁶ Biochemistry II is not required but is frequently taken as an elective during the spring semester of the year in which Biochem I is taken.

⁷ Analytical Chemistry II is only offered during the fall of odd-numbered years.

⁸ Inorganic Chemistry II is only offered during the spring of odd-numbered years. In a given year, one or the other but not both of PChem II and Inorganic II are offered.



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Curriculum Planning

Dragon Core Checksheet			
Foundation Four			
		Grade	Credits W?
1A	Oral Communication	_____	
1B	Written Communication (W)	_____	
2	Critical Thinking	_____	
3	Mathematics/Symbolic	_____	
Inner Cluster Electives & Middle Cluster – Competency Areas 3-7, seven courses total			
		Grade	Credits W?
3	Mathematical/Symbolic Systems (optional)		
3I or 3M		_____	
4	Natural Sciences (One Lab Class Required)		
4I or 4M		_____	
4I or 4M		_____	
5	History and the Social Sciences		
5I or 5M		_____	
5I or 5M		_____	
6	Humanities		
6I or 6M		_____	
6I or 6M		_____	
7	Human Diversity		
7I or 7M		_____	
7I or 7M		_____	
Outer Cluster – Competency Areas 8-10, three courses total			
		Grade	Credits W?
8	Global Perspective	_____	
9	Ethical and Civic Responsibility	_____	
10	People and the Environment	_____	
Total Dragon Core Credits:			
(Minimum 14 courses and 42 credits)			
Writing Intensive Requirements			
W 1 (1B)		_____	
W 2 (MC or OC)		_____	
W 3 (MC or OC, 300-400 level)		_____	
W 4 (Major, 300-400 level)		Chem 405	
W 5 (any W course, 200-400 level)		Engl 387	

Chemistry Requirements		When Offered	Credits	Grade
47 credits				
39 ≥300				
CHEM 150/150L	General Chemistry I	F/Sp/Sum	4	
CHEM 210/210L	General Chemistry II	F/Sum	4	
CHEM300	Inorganic Chem I	F	3	
CHEM 350	Organic Chem I	F	3	
CHEM 355	Organic Chem Lab I	F	1	
CHEM 360	Organic Chem II	Sp	3	
CHEM 365	Organic Chem Lab II	Sp	1	
CHEM 380/380L	Analytical Chem I	Sp	4	
CHEM 400	Biochemistry I	F	3	
CHEM 405	Biochemistry Lab I	F	1	
CHEM 420	Inorganic Chem II	Sp odd yrs	3	
CHEM 425	Inorganic Lab II	Sp odd yrs	1	
CHEM 450	Physical Chem I	F	3	
CHEM 455	Physical Chem Lab I	F	1	
CHEM 460	Physical Chem II	Sp even yrs	3	
CHEM 465	Physical Chem Lab II	Sp even yrs	1	
CHEM 480	Analytical Chem II	F odd yrs	4	
CHEM 497	Research	F/Sp/S	3	
CHEM 498	Seminar	Sp	1	
Related Requirements				
20 credits				
4 ≥300				
ENGL 387	Tech Report Writing	F/Sp	4	
MATH 261	Calculus I	F/Sp	4	
MATH 262	Calculus II	F/Sp	4	
PHYS 200/200L or 160/160L	Physics I (Physics 200 strongly preferred)	F	4	
PHYS 201/201L or 161/161L	Physics II (Physics 201 strongly preferred)	Sp	4	