

B.S. Degree in Chemistry Education

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
ED	205/ 205E	Intro. Educ./Tech. Early Field Exper.	3	
BIOL	115	Organismal Biology	4	
ENGL	101	English Composition ²	4	1B
Hlth	122	Personal Health/Wellness	1	
Total Credits			16	

SPRING				DC
Chem	210	Gen Chem II (+ lab)	4	
ED	294	Educ. Psychology	3	
BIOL	111	Cell Biology	4	
CMST	100	Speech Communication ²	3	1A
Phil	110	Practical Reasoning ²	3	2
Total Credits			17	

FALL		SOPHOMORE YEAR		
Chem	350/355	Organic Chem I + Lab	4	
PHYS	200	Physics I	4	4I
GEOS	115	Physical Geology	4	4M
Elective (DC area 5)			3	5
Elective (DC area 6)			3	6
Total Credits			18	

SPRING				
MATH	261	Calculus I	4	3
PHYS	201	Physics II	4	
GEOS	116	Historical Geology	3	
ED	310	Soc. Found. of Educ.	3	
Elective (DC area 5-7)			3	5-7
Total Credits			17	

FALL		JUNIOR YEAR		
Chem	400/405	Biochemistry I + Lab	4	W
Chem	300	Inorganic Chem I	3	
GEOS	360	Planetary Science ³	3	
ED	398	Field Exper. Sec.	2	
AMCS	233	Educ./Multicult. Am.	3	7
Total Credits			15	

SPRING				
Chem	440	Sec. Sci. Methods	4	W
Chem	380	Analytical Chem (lab)	4	
ED	443S	Class Man./Consult.	3	
SPED	320	Educ. Services	3	
WI Elective (DC area 8-10)			3	8-10W
Total Credits			17	

FALL		SENIOR YEARS		
Chem	450/455	Physical Chem I + Lab ⁵	3	
Elective (DC area 8-10)			3	8-10
Chem	497	Research	1	
EECE	448	Reading Skills	3	
MATH		Calc II (262) or Stats (234)	4	3
Elective (DC area 8-10)			3	8-10
Total Credits			17	

SPRING				
ED	461 S	Student Teaching	10	
Total Credits			10	

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 GEOS 360 is offered in fall of odd-numbered years.



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Curriculum Planning

Dragon Core Checksheet			
Foundation Four			
	Grade	Credits	W?
1A Oral Communication (CMST 100)		3*	
1B Written Communication (Engl 101)		4	W
2 Critical Thinking		3	
3 Mathematics/Symbolic, Math 261		4*	
Total "elective"		7	
Inner Cluster Electives & Middle Cluster – Competency Areas 3-7, seven courses total			
	Grade	Credits	W?
3 Mathematical/Symbolic Systems (optional) 3I or 3M (Math 234))		4*	
4 Natural Sciences (One Lab Class Required) 4I or 4M Bio 115 4I 4I or 4M Geo 115 4M		4*	
5 History and the Social Sciences 5I or 5M		3	
5I or 5M		3?	
6 Humanities 6I or 6M	} 3 classes	3	
6I or 6M		3?	
7 Human Diversity 7M (AMCS 233)		3*	W
7I or 7M		3?	
Total "elective"		9+	
Outer Cluster – Competency Areas 8-10, three courses total			
	Grade	Credits	W?
8 Global Perspective		3	
9 Ethical and Civic Responsibility		3	
10 People and the Environment		3	
Total elective (must include at least 1 W)		9+	
Total Dragon Core Credits:			
(Minimum 14 courses and 42 credits)			
Writing Intensive Requirements			
W 1 (1B)	Engl 101	3*	
W 2 (MC or OC)	AMCS 233	3*	
W 3 (MC or OC, 300-400 level)	OC elective	3*	
W 4 (Major, 300-400 level)	Chem 405	1	
W 5 (any W course, 200-400 level)	Chem 440	3*	
Total WI electives		1	
Grand total of credits:			
Secondary Ed: 36			
Related Req: 26			
Restricted El: 8			
Chemistry: 30			
Inner DC: 7			
Middle DC: 9			
Outer DC: 9			
WI: 1			
<u>Health 122</u> 1			
Total Credits: 127 for a calc enabled student.			

Requirements	30 credits 22 ≥300	When Offered	Credits	Grade
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 380/380L	Analytical Chem I	Sp	4	
CHEM 400	Biochemistry I	F	3	
CHEM 440	Sec. Sci. Methods	Sp	3	
CHEM 450	Physical Chem I	F	3	
CHEM 455	Physical Chem Lab I	F	1	
CHEM 497	Research	F/Sp	1	
Restricted Electives	8 credits			
PHYS 200/200L or 160+160L	Physics I	F	4	
PHYS 201/201L or 161+161L	Physics II	Sp	4	
Related Requirements	26 credits 3 ≥300			
BIOL 111	Cell Biology	Sp	4	
BIOL 115	Organismal Biology	F	4	
GEOS 115	Physical Geology	F	4	
GEOS 116	Historical Geology	Sp	3	
GEOS 360	Planetary Science	F (odd yr)	3	
MATH 261	Calculus I	F/Sp	4	
MATH 262 or MATH 234	Calculus II or Probability/Statistics	F/Sp	4	
Secondary Education Teaching Lic.	36 credits 24 ≥300			
AMCS 233	Educ./Multicult. Am.	F	3	
CMST 100	Speech Comm.	F/Sp	3	
ED 205	Intro. Educ./Tech.	F/Sp	2	
ED 205E	Early Field Exper.	F/Sp	1	
ED 294	Educ. Psychology	F/Sp	3	
ED 310	Soc. Found. of Educ.	F/Sp	3	
ED 398	Field Exper. Sec.	F/Sp	2	
ED 443S	Class Man./Consult.	F/Sp	3	
EECE 448	Reading Skills	F	3	
SPED 320	Educ. Services	F/Sp	3	
ED 461 S	Student Teaching	F/Sp	10	