I. UNIVERSITY CORE (12 credits)

RC CR GR CAC



### COLLEGE OF LIBERAL ARTS & SCIENCES • BS • ENVIRONMENTAL SCIENCE/CHEMISTRY

Program Code: ULASENVCH Version Number: 2118 Effective Date: 08/29/2011

#### **GENERAL EDUCATION**

RC

CR GR

III. COMPETENCIES ACROSS THE CURRICULUM

A. Oral Communication: COM 010 or above					A. Writing Intensive (WI) (9 credits)			
COURSE:	3				COURSE: ENV 220QLWI	3		WI
B. Written Communication: ENG 023, 024, or 025				_	COURSE: ENV 222WI	3		WI
COURSE:	3				COURSE: CHM 216WI	3		WI
C.Mathematics: MAT 017 or above					B. Quantitative Literacy (QL) (3 credits) OR			
COURSE: ▲MAT 140QL or MAT 150 (Note 1)	3				Computer-Intensive (CP) (3 credits)			<del>1</del>
D.Wellness: Any 3-credit HEA course				<u>-</u> 1	COURSE: ENV 220QLWI  C. Visual Literacy (VL) (3 credits) OR	3		
COURSE:	3				Communication-Intensive (CM) (3 credits)			
	<u> </u>	l		-1	COURSE: CHM 214VL	3		
II. UNIVERSITY DISTRIBUTION (15 credits)	RC	CR	GR	CAC	D.Cultural Diversity (CD) (3 credits)	1		
A. Natural Sciences: Any lab or non-lab course with prefix AST, BIO, CHM, ENV, GEL, MAR, or PHY; or certain GEG courses (see note at right)					COURSE:	3		CD
COURSE: ▲ENV 100	3				E. Critical Thinking (CT) (3 credits)			_
B. Social Sciences: Any course with prefix ANT, CRJ, ECO, HIS, INT, MCS, PSY, POL, SOC, or SWK; or certain GEG courses (see note at right)		ı	1		COURSE:  A Competency Across the Curriculum (CAC) course is not rather an overlay that is "double counted" as fulfilling both			
COURSE:	3				another requirement in either General Education (except for			
C.Humanities: Any course with prefix ENG, HUM, PAG, PHI, WRI, WST, or Modern Language			•		the major, or the minor.  ▲ Indicates the suggested placement in General Education course.	n of a requi	ired majo	or
COURSE:	3				RC = Minimum required number of credits			
D.Arts: Any course with prefix ARC, ARH, ART, CDE, CDH, CFT, DAN, FAR, FAS, MUP, MUS, or THE					CR = Credits earned (fill in number of credits) GR = Grade earned (fill in letter grade) CAC = Competency Across the Curriculum (fill i	n designatic	on)	
COURSE:	3						,	
E. Free Elective: Any course carrying university credit					<b>NOTE:</b> GEG courses with a lab and 040, 322, and in II.A. and GEG courses 040, 204, 274, 305, 322.			
COURSE: ▲ GEG 274CP	3				380, and 394 may NOT be used in II.B.	J20, 02 <del>4</del> , 0-	Τ΄,	
		•	•					

IV. COLLEGE DISTRIBUTION (33 credits)  A. Natural Science, Mathematics, and Computer Science# (6 credits): Choose one	RC	CR	GR	CAC
course in each subcategory.  1. Natural Science with Lab: AST, BIO, CHM, ENV, GEL, PHY, or MAR; or GEG (see note at right)				
COURSE: ▲ENV/BIO 222WI	3			
Elective: MAT, CSC, AST, BIO, CHM, ENV, GEL, PHY, or MAR; or GEG (see note at right)				
COURSE: ▲ENV/CHM 220QLWI	3			
B. Social Science (9 credits): Choose one course in each subcategory.				
1. Elective: HIS, ANT, GEG (see note at right), or POL				
COURSE: ▲GEG 10	3			
2. Elective: PSY, SOC, CRJ, or SWK				
COURSE: ▲ PSY 200QL (Note1)	3			
3. Elective: ANT, HIS, ECO, GEG (see note at right), PSY, POL, SOC, CRJ, or SWK				
COURSE:	3			

	RC	CR	GR	CAC
C. Humanities (9 credits): Choose one course in each subcategory.				
1. Elective: PAG*, ENG, WRI, or HUM				
COURSE: ▲Env. Sci. Restricted Elective (Note 2)	3			
2. Elective: Modern Language (103 or above) or PHI				
COURSE:	3			
3. Elective: PAG*, ENG, WRI, HUM, Modern Language (103 or above), or PHI				
COURSE: ▲Env. Sci. Restricted Elective (Note 2)	3			
D. Free Electives (9 credits): Choose any university courses that count toward graduation.				
COURSE: ▲ENV 210	3			
COURSE:	3			
COURSE:	3			

**NOTE:** GEG courses with a lab and 040, 322, and 323 may be used in IV.A. and GEG courses 040, 204, 274, 305, 322, 323, 324, 347, 380, and 394 may NOT be used in IV.B.

<sup>#</sup> Students in the College of Liberal Arts and Sciences are required to take at least one course in Biological Science (BIO) and at least one course in Physical Science (AST, CHM, ENV, GEL, PHY, MAR, GEG with lab, or GEG 322, or GEG 323), and at least one of which must be a lab (each course may be counted in either sections II.A or IV A)

or IV.A).
\* Excludes PAG 011 and PAG 012

## LIBERAL ARTS AND SCIENCES: BACHELOR OF SCIENCE **ENVIRONMENTAL SCIENCE/CHEMISTRY TRACK**

V. MAJOR PROGRAM: 60 S.H.		
A. Core (12 SH)	Gr.	S.H.
BIO 104 Princ. of Biology (Note 3)		4
CHM 100 General Chemistry I		4
▲ENV 100 Intro. to Env. Sci.		
▲GEG 010 Physical Geography		
GEL 100 Physical Geology		4
B.Common Courses (26 SH)		T
BIO 106 Intro. Zoology <b>OR</b>		4
BIO 108 Intro. Botany		
CHM 102 General Chemistry II		4
CHM 214VL Organic Chemistry I		4
▲ ENV 210 Environmental Geology  ▲ ENV 220QLWI Environmental Analysis		
▲ENV 222@LWI Environmental Biology		
ENV 380 Senior Seminar		2
▲ GEG 274CP Introduction to GIS		
MAT 181 Calculus I		4
▲(Note 1) MAT 140QL Appl. Statistics OR		
MAT 150 Intro. To Biostatistics OR		
PSY 200QL Stat.So.&Be.Sci. (Note 4)		
PHY 100 Physics I		4
PHY 102 Physics II		4
C. Environmental Chemistry Track (22	SH)	
CHM 216WI Organic Chemistry II		4
CHM 2XX or 3XX		4
CHM 3XX Chem Elective		4
CHM 3XX Chem Elective		3
CHM 3XX Chem Elective OR		3
ENV 3XX Env Sci Elective		٥
MAT 182 Calculus II		4
D. Restricted Electives (Note 5)		
<b>A</b>		
<b>A</b>		

▲ Indicates courses required for the major, but used to satisfy requirements of General Education. The units for these courses are counted only under General Education.

VI. GRADUATION CLEARANCE		
A. 2.0 GPA Overall	yes	no
2.0 GPA in Major	yes	no
B. Total Semester Hours (Note 6)		
a. General Education		
b. Major Program c. Concomitant	-	
GRAND TOTAL		
C. Comprehensive Exam Passed	yes	no
Advisor's Signature		
Date		

NOTES
Only one of these courses will be taken.
Depending on the course prefix, it will count in either
category I.C. or IV.B.2.
This elective course will be chosen from
a list maintained by the Env. Sci. Committee
and cross listed with Category V.D.
3. A grade of C or better for BIO 104 is required
to be counted as a prerequisite.
4. PSY 11 is a prerequisite to PSY 200QL.
5. Choice of courses will be made with advisor from a
list maintained by Env. Sci. Committee.
6. A minimum of 120 s.h. are required for graduation.

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# B.S. Environmental Science/Chemistry Example 4-Year Schedule

This suggested course plan has 115-124 credit hours. Graduation requires 120 total credit hours.

#### Freshman Year

Fall Semester	Cr
CHM 100 - Gen Chem I	4
BIO 104 - Principles of Biology	4
ENV 100 - Intro to Env Sci	3
MAT 105 - College Algebra*	3
Gen Ed Course (optional)	3
Total	14 – 17

Spring Semester	Cr
CHM 102 - Gen Chem II	4
MAT 106 - Trigonometry*	3
GEG 010 - Elem Phys Geography <sup>^</sup>	3
Gen Ed Course	3
Gen Ed Course (optional)	3
Total	13 - 16

## **Sophomore Year**

Fall Semester	Cr
CHM 214VL - Organic Chem I	4
GEL 100 - Physical Geology	4
PHY 100 - Physics I	4
MAT 181 - Calculus I	4
Total	16

Spring Semester	Cr
CHM 216WI - Organic Chem II	4
PHY 102 - Physics II	4
MAT 182 - Calculus II	4
BIO 106 - Intro to Zoology#	4
Total	16

#### **Junior Year**

Fall Semester	Cr
CHM 3XX - Chem Elective	3 - 4
ENV 210 – Env Geology	3
Gen Ed Course OR BIO 108#	3
Gen Ed Course	3
Gen Ed Course	3
Total	15 – 16

Spring Semester	Cr
ENV 220QLWI – Env Analysis	3
ENV 222WI – Env Biology	3
GEG 274CP – Intro to GIS^	3
MAT 140QL – Appl Statistics	3
Gen Ed Course	3
Total	15

#### **Senior Year**

Fall Semester	Cr
CHM 2XX or 3XX – Chem Elective	3 – 4
CHM 3XX or ENV3XX– Chem or Env Sci Elective	3
Restricted Elective^	3
Gen Ed Course	3
Total	12 – 13

Spring Semester	Cr
CHM 3XX – Chem Elective	3 - 4
ENV 380 – Senior Seminar	2
Restricted Elective <sup>^</sup>	3
Gen Ed Course	3
Gen Ed Course	3
Total	14 – 15

PHY 100, PHY 102, ENV210 & ENV222WI are all offered MW(F) at 9 AM. CHM214VL and ENV220QLWI are both offered MW(F) at 11 AM. This example schedule reflects one way to avoid these conflicting times.

In addition, PHY100, BIO 108 & CHM 230QLWI are ONLY offered in the Fall semester.

PHY 102, ENV 222WI, and ENV220QLWI are ONLY offered in the Spring semester.

### **Chemistry Electives**

Course	Cr	
CHM230QLWI – Analytical Chem I	4	
CHM 310 - Biochemistry I	4	
CHM 312 - Biochemistry II	4	
CHM 314 - Physical Chem I	4	
CHM 316 - Physical Chem II	4	
CHM 318 - Adv Biochemistry	3	
CHM 320 - Adv Inorganic Chem	4	
CHM 326 - Adv Organic Chem	3	
CHM 327 - Organometallic Chem	3	
CHM 336 - Adv Physical Chem	3	
CHM 340 - Analytical Chem II	4	
CHM 351 - Selected Topics	1 – 6	
CHM 370 - Research in Chem I	1 – 3	
CHM 371 - Research in Chem II	1 – 3	
CHM 372 - Research in Chem III	1 – 3	
CHM 373 - Research in Chem IV	1 – 3	
CHM 390 - Internship in Chem	1 - 4	

<sup>\*</sup>Instead of MAT 105 and 106, Precalculus (MAT 115) or Calculus I (MAT 181) could be taken.

<sup>\*</sup>Instead of BIO 106; BIO 108 – Intro to Botany could be taken in the Fall of the junior year.

<sup>^</sup>A prerequisite of GEG 10 – Elements of Physical Geography is required for GEG 274CP – Intro to GIS. Also, prerequisites likely exist for the Restricted Electives. (See Restricted Elective Course List.)