Academic Planning Form – Environmental Science Major

Based on 2006-2007 Catalog

Student Name: _____ Student ID Number: _____

Environmental Science Core Requirements (15 hrs)

√	Course Number	Course Name	Credit hours	Prerequisites	Semester Offered	Planned Semester
	EnvSC 101 OR E&PS 101	The Blue Planet OR Physical Geology	3	None	F/S/Su	
	EnvSC 102L OR E&PS 105L	The Blue Planet Lab OR Physical Geology Lab	1	Env SC 101 or E&PS 101 (corequisite)	F/S/Su	
	EnvSC 330	Environmental Systems	3	[EnvSC 101 or E&PS 101] CHEM 121L [MATH 162 or BIOL 123/124L or PHYC 160]	F	
	EnvSC 430	Advanced Environmental Sciences →CAPSTONE COURSE – take this near the end of your time at UNM	3	EnvSC 330 MATH 163 PHYC 160 CHEM 121L BIOL 123/124L	S	
	E&PS 433 OR STATS 345	Statistics and Data Analysis	3	MATH 163	S F/S	
	EPS 401 and EPS 490	Colloquium / Geologic Presentations	2	Pre- or co-requisite 304L (can be waived)	F/S	

Environmental Science Group Selections:

Required: 30 hours total – 26 must be upper division and at least 6 hours from 4 of the 7 groups below:

a) Spatial Analysis:

√	Course Number	Course Name	Credit hours	Prerequisites	Semester Offered	Planned Semester
	Geog 381L	Introduction to Geographic Information Systems	4	None	F/S	
	Geog 487L	Intermediate Geographic Information Systems	4	GEOG 381L	F/S	
	Geog 488L	Advanced GIS	3	GEOG 487L		
	E&PS 300 (GIS)	Special Topics in Geology, GIS	3	None	F	
	E&PS 455L	Computational and GIS Applications in Geomorphology	3	EPS/EnvSc 101 EPS 433 EPS 481L	S	

b) Geochemistry:

√	Course Number	Course Name	Credit hours	Prerequisites	Semester Offered	Planned Semester
	E&PS 203	Earth Resources and Environment	3	EPS/EnvSc 101	O	
	E&PS 410	Fundamentals of Geochemistry	3	None	F	
	E&PS 415	Geochemistry of Natural Waters	3	EPS 304L or CHEM 122L	S	
	CE 437L	Aqueous Environmental Chemistry and Analysis	3	CE 335	O	

c) Geoscience:

√	Course Number	Course Name	Credit hours	Prerequisites	Semester Offered	Planned Semester
	E&PS 201L	Earth History	4	EPS 101&105L or EnvSc 101&102L	F/S	
	E&PS 301, 302L	Mineralogy/Earth and Planetary Minerals	5	CHEM 121L	F	
	E&PS 304L	Sedimentology and stratigraphy	4	EPS 201L CHEM 121L	F	
	E&PS 310L	New Mexico Field Geology	4	EPS 101&105L or EnvSc 101&102L	F/S	
	E&PS 333	Environmental Geology	3	EPS/EnvSc 101 MATH 150 or equiv	S	
	E&PS 467	Environmental Mechanics	3	MATH 163 PHYC 160	O	

d) Surface Processes:

√	Course Number	Course Name	Credit hours	Prerequisites	Semester Offered	Planned Semester
	E&PS 333	Environmental Geology	3	EPS/EnvSc 101 MATH 150 or equiv	S	
	E&PS 481L	Geomorphology and Surficial Geology	4	EPS 101&105L or EnvSc 101/102L	F	
	E&PS 485L	Soil Stratigraphy and Morphology	4	EPS/EnvSc 101	F	

e) Hydroscience:

√	Course Number	Course Name	Credit hours	Prerequisites	Semester Offered	Planned Semester
	E&PS 443	Aquifers and Reservoirs	3	EPS/EnvSc 101	eoS	
	E&PS 462 OR CE 441	Hydrogeology/Groundwater Engineering	3	EPS 101&105L or EnvSc 101/102L MATH 162 CHEM 121 PHYC 160	F	
	E&PS 476	Physical Hydrology	3	MATH 163 PHYC 160	F	

f) Climate:

√	Course Number	Course Name	Credit hours	Prerequisites	Semester Offered	Planned Semester
	E&PS 251	Meteorology	3	None	eoS	
	E&PS 352	Global Climate Change	3	None	eoS	
	E&PS 436	Climate Dynamics	3	MATH 162 PHYC 160	F	
	E&PS 439	Paleoclimatology	3	EPS/EnvSc 101	S	

g) Ecology:

√	Course Number	Course Name	Credit hours	Prerequisites	Semester Offered	Planned Semester
	Biol 203L	Ecology and Evolution	4	BIOL 202 CHEM 122L or 132L MATH 162 or 180 (pre or co)	F/S	
	Biol 310L	Principles of Ecology	4	BIOL 203L and 204L	S	
	Biol 407L	Bosque Biology	3	BIOL 203L and 204L	F	
	Biol 440	The Soil Ecosystem	3	BIOL 201, 202, 203L, 204L CHEM 121L, 122L or 131L, 132L	F	
	Biol 451	Microbial Ecology	3	BIOL 203L and 204L	F	
	Biol 475	Plant Community Ecology	3	BIOL 203L and 204L	S	
	Biol 495/496L	Limnology/ Limnology Laboratory	4	BIOL 203L and 204L [CHEM 122L or PHYC 152 or 161]	S	
	Biol 463L	Flora of New Mexico	4	BIOL 203L and 204L	F/S	

***NOTE: we recommend that students who are interested in ecology minor speak with an advisor.

Summary table for my choices:

Fill in the four groups you are selecting, courses in those groups, and term you will take them:

	Course	Term	Credits
Group 1:			
Group 2:			
Group 3:			
Group 4:			

Supporting Science/Math Requirements:

We recommend you take these as early as possible in your scheduling:

√	Course Number	Course Name	Credit hours	Prerequisites	Semester Offered	Planned Semester
	Chem 121L	General Chemistry	4	See catalog	F/S/Su	
	Math 162	Calculus I for Scientists and Engineers	4	See catalog	F/S/Su	
	Math 163	Calculus II for Scientists and Engineers	4	MATH 162	F/S	
	Physics 160	General Physics	3	(co-req) MATH 162	F/S/Su	
	Biol 123/124L or higher	Biology for Health Related Sciences or Non-Majors	4	None	F/S	

*** NOTES:

- Math 180, 181 not accepted.
- Take Biol 201 instead of 123 if you plan to take more than one semester of biology.

Distributed minor Requirements:

A distributed minor is allowed if you do not have another minor (if you are already minoring in something else, you don't need this). COMPLETION OF THIS MINOR PREPARES YOU FOR GRADUATE STUDY IN THE FUTURE.

Required courses:

√	Course Number	Course Name	Credit hours	Prerequisites	Semester Offered	Planned Semester
	Chem 122L	General Chemistry	4	CHEM 121L	F/S	
	Phyc 161	General Physics	3	PHYC 160 MATH 163	F/S	

Additional courses:

Select an additional 3 credit hours from the following possible choices (see recommended course list below for some suggestions):

- Math higher than Math 163
- Chemistry higher than CHEM 122L
- Physics higher than PHYC 161
- Approved advanced courses (see an advisor) from the following:
  - Anthropology
  - Biology
  - Engineering
  - Geography

Selected course worksheet:

Course	Term	Credits

Recommended courses:

We recommend you take some of these courses, but they aren't required:

√	Course Number	Course Name	Credit hours	Prerequisites	Semester Offered	Planned Semester
	Chem 122L	General Chemistry	4	CHEM 121L	F/S	
	Math 264	Calculus III	4	MATH 163	F/S	
	Math 311	Vector Analysis	3	MATH 264	F/S	
	Math 316	Applied Ordinary Differential Equation	3	MATH 163, 264	F/S	
	Phyc 161/161L	General Physics	4	PHYC 160 MATH 163	F/S	
	CS 259L	Data Structures with C++	5	None	F/S	

Advising record:

Date	Advisor

Environmental Sciences Minor Requirements:

To minor in environmental sciences, the following requirements must be met:

Required courses (7 hrs)

√	Course Number	Course Name	Credit hours	Prerequisites	Semester Offered	Planned Semester
	EnvSC 101 OR E&PS 101	The Blue Planet OR Physical Geology	3	None	F/S/Su	
	EnvSC 102L OR E&PS 105L	The Blue Planet Lab OR Physical Geology Lab	1	Env SC 101 or E&PS 101 (corequisite)	F/S/Su	
	EnvSC 330	Environmental Systems	3	[EnvSC 101 or E&PS 101] CHEM 121L [MATH 162 or BIOL 121/124L or PHYC 160]	F	

Additional courses:

Select an additional 13 credit hours from the following possible choices:

- EnvSC 430 (3): Advanced environmental sciences
- EPS 433 (3): Statistics and Data analysis
- Courses from at least two of the Environmental Science disciplinary groups listed above.

NOTE: Only one course numbered 299 or below may count toward this requirement.

Selected course worksheet:

Course	Term	Credits