# A. ENVIRONMENTAL SCIENCE TECHNOLOGY

## FORM FOR REQUEST FOR CHANGE IN UNDERGRADUATE PROGRAM

Program:	Environmental Science Te	echnology		
Formal Op	otion: (if applicable)	or Specialty Field: (if	applicable)	
Departmei	nt: <u>BSN</u> College:			
Degree titl	e: AAS Bulletin pp.:	UK (p 227) LCC (p 53	<u>-54)</u>	
CIP Code:	15.0599.04 UK ID No.:	HEGIS CODE:		
Accreditin	g Agency (if applicable): _			
	I. PROPOSI	ED CHANGE(S) IN PR	OGRAM REQUIREMI	ENTS
1. <u>Partio</u>	cular University Studies R	equirements or Recom	mendations for this pro	<u>gram</u>
		<u>Current</u>		<b>Proposed</b>
English W	riting:	Not Applicable		
Communic	cation:			
Mathemat	ics:			
Area I (Na	tural Science)			
Area II (So	ocial Science)			
Area III (I	<b>Jumanities</b> )			
Area IV (C	Cross-disciplinary compon	ent)		
Area V (N	on-western cultural compo	onent)		
<u>requi</u> throu	ge Depth and Breadth of Some or recommended for to gh 6. involve additional content of the program(s) pertaining	his program) NOTE: Tourses offered in another	To the extent that propo er program, please subn	sed changes in 2.
Curre	<u>ent</u>		<b>Proposed</b>	
Not A	pplicable			

## 3. Premajor or Preprofessional Course Requirements (if applicable)

<u>Current</u>	<b>Proposed</b>
None	EST 150 Introductory Ecology
None	EST 160 Hydrologic Geology
None	MA 109 College Algebra

**Total Hours: 10** 

## 4. Credit Hours Required

Current: <u>66</u> Proposed: <u>No Change</u>

a. Total Required for Graduation: 66 - No Change

b. Required by level:

100 <u>33-48</u> 200 <u>23-38</u> 300 \_\_\_\_\_ 400-500\_\_\_\_

- c. Premajor or Preprofessional (if applicable) <u>EST 150 Introductory Ecology, EST 160 Hydrologic Geology</u> <u>MA 109 College Algebra</u>
  - d. Field of Concentration (if applicable) Not Applicable
  - e. Division of Hours Between Major Subject and Related Field (if applicable) Not Applicable
  - f. Hours Needed for a Particular Option or Specialization (if applicable) Not Applicable
  - g. Technical or Professional Support Electives (if applicable) 6 hours
  - h. Minimum Hours of Free or Supportive Electives [Required] Not Applicable

#### 5. Major or Professional Course Requirements

<b>Current</b> :		<b>Proposed</b>
First Sen	nester/ Fall	
<b>ENG 101</b>	Writing I*	3
MA 109	College Algebra*	3
CIS 105	Introduction to Computing	3
<b>BIO 103</b>	Basic Ideas of Biology	3
<b>BIO 111</b>	Introductory Biology Lab	1
EST 150	Introductory Ecology	4
Second Sem	ester/Spring	
<b>ENG 102</b>	Writing II*	3

CIC 120	Missassamutas Annlications	2		
CIS 130	Microcomputer Applications	3		
CHE 105	General College Chemistry	3	1	
CHM 105	General College Chemistry Lab	2	1	
EST 160	Hydrologic Geology	3	2	
EST 170	<b>Environmental Sampling</b>		2	
Third Semeste	er/Fall			
COM 181	Basic Public Speaking*		3	
OR	1 8			
<b>COM 252</b>	Intro. To Interpersonal Communications*	(3)		
<b>Social Interac</b>		3		
<b>EST 220</b>	Pollution of Aquatic Ecosystems	3		
EST 230	Aquatic Chemistry Lab		2	
EST 240	Sources and Effects of Air Pollution	4		
<b>Technical Elec</b>	ctive	3		
Fourth Semes		_		
EST 250	Solid and Hazardous Waste Management	3		
EST 260	Environmental Analysis Lab	2		
EST 270	Environmental Law and Regulation	3		
EST 280	<b>Environmental Trends Seminar</b>	1		
Technical Elec		3		
Heritage/Hum	nanities Course*	3		
		Tota	l = 66	
(Current) Tec	hnical Electives	1014	1 – 00	
	milear Electives			
(				
PHY 151	Introduction to Physics			3
,		1	-3	3
PHY 151	Introduction to Physics	_	-3 1-3	3
PHY 151 COE 199	Introduction to Physics Cooperative Education (Internship)	_	-	3
PHY 151 COE 199 EST 299	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn	_	-	
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis	nology	-	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys	nology	1-3	3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications	nology stems	1-3	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing	nology	1-3 3 3	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II	stems	1-3 3 3 3	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II	stems	1-3 3 3 3 3 3 2	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana	nology stems gemen	1-3 3 3 3 3 3 2 2 t 3	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210 GLY 220	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana Principles of Physical Geology	stems	1-3 3 3 3 3 3 2 t 3	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210 GLY 220 ECO 201	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana Principles of Physical Geology Principles of Economics I	stems gemen	1-3 3 3 3 3 4 3	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210 GLY 220 ECO 201 CE 211	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana Principles of Physical Geology Principles of Economics I Surveying	stems	1-3 3 3 3 3 4 3 4	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210 GLY 220 ECO 201	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana Principles of Physical Geology Principles of Economics I	stems	1-3 3 3 3 3 4 3	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210 GLY 220 ECO 201 CE 211	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana Principles of Physical Geology Principles of Economics I Surveying	stems	1-3 3 3 3 3 4 3 4	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210 GLY 220 ECO 201 CE 211 ACH 185	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana Principles of Physical Geology Principles of Economics I Surveying Computer-Aided Drafting I	stems	1-3 3 3 3 3 4 3 4	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210 GLY 220 ECO 201 CE 211 ACH 185 PROPOSED: Pre-major Recommends	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana Principles of Physical Geology Principles of Economics I Surveying Computer-Aided Drafting I	nology stems gemen	1-3 3 3 3 3 4 3 4	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210 GLY 220 ECO 201 CE 211 ACH 185 PROPOSED: Pre-major Recommendation	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana Principles of Physical Geology Principles of Economics I Surveying Computer-Aided Drafting I	nology stems gemen	1-3 3 3 3 3 4 3 4	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210 GLY 220 ECO 201 CE 211 ACH 185 PROPOSED: Pre-major Rec MA 109 EST 150	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana Principles of Physical Geology Principles of Economics I Surveying Computer-Aided Drafting I	atems gemen	1-3 3 3 3 3 4 3 4	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210 GLY 220 ECO 201 CE 211 ACH 185 PROPOSED: Pre-major Recommendation	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana Principles of Physical Geology Principles of Economics I Surveying Computer-Aided Drafting I	nology stems gemen	1-3 3 3 3 3 4 3 4	3 3

First Semester	/ Fall			
ENG 101	Writing I*	3		
CIS 105	Introduction to Computing	3		
BIO 103	Basic Ideas of Biology	3		
	34	3 1		
BIO 111	Introductory Biology Lab	3		
<b>Social Interact</b>	ion Course"	3		
Second Semest	er/Spring			
ENG 102	Writing II*	3		
CIS 130	Microcomputer Applications	3		
CHE 105	General College Chemistry	3		
CHM 105	General College Chemistry Lab	J	1	
EST 170	Environmental Sampling	2	1	
LOT 170	Zivii oiiiientai sampiiig	-		
<b>Third Semeste</b>	r/Fall			
COM 181	Basic Public Speaking*		3	
OR				
COM 252	Intro. To Interpersonal Communications*	(3)		
<b>EST 220</b>	Pollution of Aquatic Ecosystems	3		
<b>EST 230</b>	Aquatic Chemistry Lab		2	
EST 240	Sources and Effects of Air Pollution	4		
<b>Technical Elec</b>	tive	3		
Fourth Comost	or/Saring			
Fourth Semest EST 250		2		
	Solid and Hazardous Waste Management	3 2		
EST 260	Environmental Analysis Lab			
EST 270	Environmental Law and Regulation	3	1	
EST 280	Environmental Trends Seminar	2	1	
Technical Elec		3		
Heritage/Hum	anities Course*	3		
		Total =	= 66	
(Proposed) Tec	chnical Electives			
GIS 110	Spatial Data Analysis		3	
GIS 120	<b>Introduction to Geographic Information Sys</b>	tems	3	
<b>CAD 100</b>	Introduction to Computer-Aided Design OR			3
ACH 185	Computer-Aided Drafting I		3	
<b>CIS 234</b>	Advanced Spreadsheet Applications		3	
BIO 208	Principles of Microbiology		3	
<b>BIO 209</b>	Introductory Microbiology Laboratory		_	2
EST 225	Freshwater Invertebrates		3	
EST 299	Selected Topics in Environmental Sci. Techn	ology	1-3	
STA 200	Statistics: A Force in Human Judgment	81	- <del>-</del>	3
ENG 203	Business Writing		3	
CHE 107	General College Chemistry II		3	
CHM 107	General College Chemistry Laboratory II		2	
	Concrat Conege Chemistry Laboratory II		-	

<b>GEO 210</b>	Pollution, Hazards, & Environmental Management	3	
<b>GLY 220</b>	Principles of Physical Geology	4	
ECO 201	Principles of Economics I	3	
PHY 151	Introduction to Physics		3
<b>COE 199</b>	Cooperative Education (Internship)	1-3	

6.	Minor	Requirements	(if	app	lical	ole	)
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<b>Current</b> :	Proposed
Not Applicable	
Total Hours:	

- 7. <u>Rationale for Change(s)</u>: (If rationale involves accreditation requirements, please include specific references to those requirements.)
- 1. The Environmental Science Technology (EST) Program has adopted an admissions requirement. As part of the new process, EST 150, EST 160, and MA 109 now will be considered Premajor courses. Thus the program and catalog must be updated to reflect this change.
- 2. Additions, Deletions and Changes to the EST Technical Electives list:
- A. Adding EST 225 Freshwater Invertebrates to the list. This course has been added to the EST Program curriculum and therefore must be added to the list.
- B. Adding BIO 208 Principles of Microbiology and BIO 209 Introductory Microbiology to the list. The purpose of the technical electives is to give students an opportunity to focus on an area that may be of special interest to their career plans. The current list does not provide the opportunity to take more biology courses. Since microorganisms play such an important role in many types of environmental applications, these courses are being added to the list.
- C. Deleting CE 211 Surveying from the list. This course is not taught at LCC (only at UK) and it has two prerequisites that are not part of the EST curriculum. Therefore, it is not practical for EST students to take this course as a technical elective.
- D. The way the current Technical Electives list reads, an EST student could take both ACH 185 Computer-Aided Drafting I and CAD 100 Introduction to Computer-Aided Design as technical electives. This is not appropriate since both courses are introductory CAD courses. The list should be changed to read: ACH 185 OR CAD 100.

#### 8. List below the typical semester by semester program for a major.

<u>Current</u>		<b>Proposed</b>
First Sem	ester/ Fall	
ENG 101	Writing I*	3
MA 109	College Algebra*	3
CIS 105	Introduction to Computing	3
BIO 103	<b>Basic Ideas of Biology</b>	3
BIO 111	Introductory Biology Lab	1
EST 150	Introductory Ecology	4
CIS 105 BIO 103 BIO 111	Introduction to Computing Basic Ideas of Biology Introductory Biology Lab	3

**Second Semester/Spring** 

		_		
ENG 102	Writing II*	3		
CIS 130	Microcomputer Applications	3		
CHE 105	General College Chemistry	3		
CHM 105	General College Chemistry Lab	_	1	
EST 160	Hydrologic Geology	3	_	
EST 170	<b>Environmental Sampling</b>		2	
Third Semest	or/Fall			
COM 181	Basic Public Speaking*		3	
OR		(2)	3	
COM 252	Intro. To Interpersonal Communications*	(3)		
Social Interac		3		
EST 220	Pollution of Aquatic Ecosystems	3	_	
EST 230	Aquatic Chemistry Lab		2	
EST 240	Sources and Effects of Air Pollution	4		
Technical Ele	ective	3		
Founth Comes	stou/Spuing			
Fourth Semes EST 250		3		
	Solid and Hazardous Waste Management	3 2		
EST 260	Environmental Analysis Lab	3		
EST 270	Environmental Law and Regulation Environmental Trends Seminar	3 1		
EST 280 Technical Ele		3		
		3		
neritage/nui	nanities Course*	3		
	Total	= 66		
(Current) Tea		00		
(Current) Teo	chnical Electives	00		
,	chnical Electives	00		3
(Current) Tec PHY 151 COE 199	chnical Electives  Introduction to Physics		-3	3
PHY 151	chnical Electives Introduction to Physics Cooperative Education (Internship)	1	-3 1-3	3
PHY 151 COE 199	chnical Electives  Introduction to Physics	1		3
PHY 151 COE 199 EST 299	chnical Electives  Introduction to Physics  Cooperative Education (Internship)  Selected Topics in Environmental Sci. Techn	1		
PHY 151 COE 199 EST 299 STA 200	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment	1	1-3	3
PHY 151 COE 199 EST 299 STA 200 CAD 100	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techr Statistics: A Force in Human Judgment Introduction to Computer-Aided Design	1 nology	1-3	3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techr Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis	1 nology	1-3	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techr Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys	1 nology stems	1-3 3 3	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications	1 nology stems	1-3 3 3	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing	1 nology stems	1-3 3 3 3 3	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techr Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II	1 nology stems	1-3 3 3 3 3 3 2	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techr Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II	1 nology stems	1-3 3 3 3 3 3 2	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techr Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana Principles of Physical Geology Principles of Economics I	1 nology stems	1-3 3 3 3 3 3 2 t 3	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210 GLY 220	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana Principles of Physical Geology	1 nology stems	1-3 3 3 3 3 4 3 4	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210 GLY 220 ECO 201	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techr Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana Principles of Physical Geology Principles of Economics I	1 and a stems	1-3 3 3 3 3 3 4 4	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210 GLY 220 ECO 201 CE 211 ACH 185	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana Principles of Physical Geology Principles of Economics I Surveying Computer-Aided Drafting I	atems	1-3 3 3 3 3 3 4 4	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210 GLY 220 ECO 201 CE 211	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana Principles of Physical Geology Principles of Economics I Surveying Computer-Aided Drafting I	atems	1-3 3 3 3 3 3 4 4	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210 GLY 220 ECO 201 CE 211 ACH 185	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techr Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana Principles of Physical Geology Principles of Economics I Surveying Computer-Aided Drafting I	atems	1-3 3 3 3 3 3 4 4	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210 GLY 220 ECO 201 CE 211 ACH 185 PROPOSED:	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techn Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana Principles of Physical Geology Principles of Economics I Surveying Computer-Aided Drafting I	anology stems gemen	1-3 3 3 3 3 3 4 4	3 3
PHY 151 COE 199 EST 299 STA 200 CAD 100 GIS 110 GIS 120 CIS 234 ENG 203 CHE 107 CHM 107 GEO 210 GLY 220 ECO 201 CE 211 ACH 185 PROPOSED:	Introduction to Physics Cooperative Education (Internship) Selected Topics in Environmental Sci. Techr Statistics: A Force in Human Judgment Introduction to Computer-Aided Design Spatial Data Analysis Introduction to Geographic Information Sys Advanced Spreadsheet Applications Business Writing General College Chemistry II General College Chemistry Laboratory II Pollution, Hazards, & Environmental Mana Principles of Physical Geology Principles of Economics I Surveying Computer-Aided Drafting I	atems	1-3 3 3 3 3 3 4 4	3 3

EST 160	Hydrologic Geology	3		
First Semester	·/ Fall			
ENG 101	Writing I*	3		
CIS 105	Introduction to Computing	3		
BIO 103	Basic Ideas of Biology	3		
BIO 111	Introductory Biology Lab	1		
Social Interact		3		
		-		
Coond Comos	tou/Snying			
Second Semest ENG 102	Writing II*	2		
CIS 130	_	3 3		
	Microcomputer Applications	3		
CHE 105	General College Chemistry General College Chemistry Lab	3	1	
CHM 105 EST 170		2	1	
EST 1/0	<b>Environmental Sampling</b>	2		
Third Semeste	er/Fall			
<b>COM 181</b>	Basic Public Speaking*		3	
OR				
<b>COM 252</b>	Intro. To Interpersonal Communications*	(3)		
EST 220	Pollution of Aquatic Ecosystems	3		
EST 230	Aquatic Chemistry Lab		2	
<b>EST 240</b>	Sources and Effects of Air Pollution	4		
Technical Elec	etive	3		
Fourth Semest				
EST 250	Solid and Hazardous Waste Management	3		
EST 260	Environmental Analysis Lab	2		
EST 270	Environmental Law and Regulation	3		
EST 280	<b>Environmental Trends Seminar</b>		1	
<b>Technical Elec</b>	etive	3		
Heritage/Hum	anities Course*	3		
	Total	= 66		
(Proposed) Te	chnical Electives			
GIS 110	Spatial Data Analysis		3	
<b>GIS 120</b>	Introduction to Geographic Information Sys	stems	3	
CAD 100	<b>Introduction to Computer-Aided Design</b>			3
	OR			
ACH 185	Computer-Aided Drafting I		3	
<b>CIS 234</b>	Advanced Spreadsheet Applications		3	
<b>BIO 208</b>	Principles of Microbiology		3	
<b>BIO 209</b>	Introductory Microbiology Laboratory			2
EST 225	Freshwater Invertebrates		3	
EST 299	Selected Topics in Environmental Sci. Techn	nologv	1-3	
STA 200	Statistics: A Force in Human Judgment	<i>0</i> ,	-	3
ENG 203	Business Writing		3	-
CHE 107	General College Chemistry II		3	
	g v			

CHM 107	General College Chemistry Laboratory II	2	
<b>GEO 210</b>	Pollution, Hazards, & Environmental Management	3	
<b>GLY 220</b>	Principles of Physical Geology	4	
ECO 201	Principles of Economics I	3	
PHY 151	Introduction to Physics		3
<b>COE 199</b>	Cooperative Education (Internship)	1-3	

Will this program be printed in the Bulletin? Yes  $\boxtimes$  No  $\square$