

Biological and Agricultural Engineering Technology (BS): Environmental Systems Management (11AGEVTBS-11AGEVTESM)

Freshman Year

Fall Semester	Credit	Spring Semester	Credit
ALS 103 Freshman Transitions and Diversity in Agriculture and Life Sciences	1	CH 101 Chem - A Molecular Science ^B	3
BIO 181 Intro Biol: Ecol, Evol, & Biodiversity ^B	4	CH 102 General Chemistry I Lab ^B	1
CSC 200 Intro. To Computers & Uses or AEE 226 Comp. Apps in Ag and Ext. Ed. ¹	3	MA 131 Calc. for Life & Mgt. Sc. A ^A	3
ENG 101 Academic Writing & Research ^H	4	GEP Humanities Requirement ^C	3
MA 114 Intro. Finite Math ^A	3	GC 120 Found. of Graphics	3
		HES_*** Health & Exercise Studies Course ^E	1
		BAE 100 Intro to Bio Eng	1
	15		15

Sophomore Year

Fall Semester	Credit	Spring Semester	Credit
AES 201 Shop Processes & Mgmt	3	GEP Interdisc. Persp. Elective ⁶	3
PY 211 College Physics I ^B	4	Physical Science Elective ²	4
ARE 201 Intro. Agri. Res. Econ. ^D	3	Group A, B, or C Elective ³	3
SSC 200 Soil Science ^B	3	GEP Social Science Elective ^D	3
SSC 201 Soil Science Lab	1	HES_*** Health & Exercise Studies Course ^E	1
	14		14

Junior Year

Fall Semester	Credit	Spring Semester	Credit
AES 323 Water Management	3	AES 332 Mgmt of Animal Environments	4
BAE 325 Introductory Geomatics	3	GIS 410 Intro to GIS	3
AES 343 Electrical Systems	4	ST 350 Econ. & Bus. Stat ^A	3
Agri. and Resou. Econ. Elective ⁴	3	Agri. and Resou. Econ. Elective ⁴	3
Group A, B, or C Elective ³	3	Group A, B, and C Elective ³	3
	16		16

Senior Year

Fall Semester	Credit	Spring Semester	Credit
AES 432 Agric. & Envr. Safety & Health	3	Ag Systems Elective	3-4
AES 443 Environ. Restor. Implementation	3	Group A, B, and C Elective ³	3
AEE 323 Leadership Dev. Agric.	3	Group A, B, and C Elective ³	3
GEP Humanities Req ^t . ^C	3	GEP Interdiscp. Persp. Elective ^G	2-3
Communications Elective ⁵	3	GEP Additional Breadth Req ^t . ^F	3
		Free Elective	0-1
	15		15-16

Minimum Credit Hours Required for Graduation:^{*I,J,K}

120

Major/Program requirements and footnotes

1 Choose between CSC 200 and AEE 226.

2 Choose between (CH 201 and 202) or PY 212.

3 Group A, B and C electives can emphasize agricultural, environmental or business areas and effectively used for a minor.

4 Choose from ARE 303, ARE 304, ARE 306, ARE 309, ARE 311, ARE 312, ARE 321 and ARE(EC 336).

5 Choose between AES 333, 411, and BAE 435

6 Choose from ENG 331, ENG 332 and ENG 333.* **General Education Program (GEP) requirements**

To complete the requirements for graduation and the General Education Program, the following credit hours and co-requisites must be satisfied. University approved GEP course lists for each category can be found at <http://oucc.dasa.ncsu.edu/general-education-program/>.

A. Mathematical Sciences (6 credit hours; one course with MA or ST prefix)

Choose from the University approved GEP Mathematical Sciences course list or the following course(s) if completed as part of the Major requirements may fulfill part or all of this requirement: MA 114, MA 131, ST 350

B. Natural Sciences (7 credit hours; include one laboratory course or course with a lab)

Choose from the University approved GEP Natural Sciences course list or the following course(s) if completed as part of the Major requirements may fulfill part or all of this requirement: CH 101, CH 102, BIO 181, PY 211, SSC 200

C. Humanities (6 credit hours selected from two different disciplines/course prefixes)

Choose from the University approved GEP Humanities course list or the following course(s) if completed as part of the Major requirements may fulfill part or all of this requirement: none

D. Social Sciences (6 credit hours selected from two different disciplines/course prefixes)

Choose from the University approved GEP Social Sciences course list or the following course(s) if completed as part of the Major requirements may fulfill part or all of this requirement: ARE 201

E. Health & Exercise Studies (2 credit hours – at least one 100-level Health & Exercise Course)

Choose from the University approved GEP Health & Exercise Studies course list.

F. Additional Breadth (3 credit hours to be selected from the following checked University approved GEP course lists) X Humanities/Social Sciences/Visual and Performing Arts or Mathematical Sciences/Natural Sciences/Engineering

G. Interdisciplinary Perspectives (5-6 credit hours)

Choose from the University approved GEP Interdisciplinary Perspectives course list or the following course(s) if completed as part of the Major requirements may fulfill part or all of this requirement:

H. Introduction to Writing (4 credit hours satisfied by completing ENG 101 with a C- or better)

The following **Co-Requisites** must be satisfied to complete the General Education Program requirements

I. U.S. Diversity (USD)

Choose from the University approved GEP U.S. Diversity course list or choose a course identified on the approved GEP course lists as meeting the U.S. Diversity (USD) co-requisite. The following course(s) completed as part of the Major requirements may fulfill this requirement: none

J. Global Knowledge (GK)

Choose from the University approved GEP Global Knowledge course list or choose a course identified on the approved GEP course lists as meeting the Global Knowledge (GK) co-requisite. The following course(s) completed as part of the Major requirements may fulfill this requirement: none

K. Foreign Language proficiency Proficiency at the FL_102 level is required for graduation.