



University Courses & Curricula Committee 2018-2019

January 9, 2019
Talley Student Union 5101
12:45pm-2:45pm

Call to Order 12:45pm

- Welcome from Chair Marta Klesath
- Remarks and Updates from OUCCAS/DASA
- OUCCAS Presents Fall 2018 Review
- Approval of UCCC November 28th 2018 Minutes
- Course and Curricular Business

Old Business

College of Agriculture and Life Sciences			
Presenter	Reviewers	Action	Type
Hesling	Planchart, Seracino, Carlson Welch	Mathematics Education(13MTHEDBS) Suplan 13MTHEDCPS	120 credit hour revisions tabled at the November 7, 2018 UCCC Meeting
Hessling	Driscoll, Merrill, Griffin Hillis	Technology, Engineering, & Design Education (BS) Graphic Communications 13TDEBS-13TDEGC	120 credit hour revisions tabled at the November 7, 2018 UCCC Meeting

New Business

Consent Agenda			
Action	Type	Notes	
AFS 343 African Religions	Minor	Revisions: GEP info added	
ANT 254 Language and Culture	Minor	Revisions: GEP info added	
BCH 451 Principles of Biochemistry	Minor	Revisions: Requisites	
BME 315 Biotransport	Minor	Revisions: Requisites	
BME 444/(544) Orthopaedic Biomechanics	Minor	Revisions: Title	
COM 466 Nonprofit Leadership & Development	Minor	Revisions: Description	
CS 210 Lawns and Sports Turf	Minor	Revisions: GEP info added	
CS 312 Grassland Management for Natural Resources Conservation	Minor	Revisions: GEP info added	
CSC/MA 416 Introduction to Combinatorics	Minor	Revisions: Requisites	
CSC/MA 427 Introduction to Numerical Analysis I	Minor	Revisions: Requisites	
CSC/MA 428 Introduction to Numerical Analysis II	Minor	Revisions: Requisites	
EI 331 Interdisciplinary Entrepreneurial Thinking I: Skills and Planning Basics	Minor	Revisions: Description	
ENG 208 Studies in Fiction	Minor	Revisions: GEP info added	
ENG 210 Introduction to Language and Linguistics	Minor	Revisions: GEP info added	
ENG/FL 220 Studies in Great Works of Western Literature	Minor	Revisions: GEP info added	
ENG/FL 221 Literature of the Western World I	Minor	Revisions: GEP info added	
ENG/FL 222 Literature of the Western World II	Minor	Revisions: GEP info added	
ENG 232 Literature and Medicine	Minor	Revisions: GEP info added	
ENG 251 Major British Writers	Minor	Revisions: GEP info added	
ENG 261 English Literature I	Minor	Revisions: GEP info added	
ENG 262 English Literature II	Minor	Revisions: GEP info added	
ENG/FL 275 Literature and War	Minor	Revisions: Requisites	
ENG 282 Intro to Film	Minor	Revisions: GEP info added	
ENG 292 Writing About Film	Minor	Revisions: GEP info added, description	
ENG 342 Literature of Space and Place	Minor	Revisions: Description	
FLG 440 Green Germany: Nature and Environment in German Speaking Cultures	Minor	Revisions: Eval Methods	
FLN 301 Advanced Hindi: Readings in Literature I	Minor	Revisions: GEP info added	
FLN 302 Advanced Hindi: Readings in Literature II	Minor	Revisions: GEP info added	
FOR 472 Forest Soils	Minor	Revisions: Contact/Credit hours	
HI 380 History of Nonprofits, Philanthropy, and Social Change	Minor	Revisions: GEP info added, requisites	
MEA 315 Mathematics Methods in Atmospheric Sciences	Minor	Revisions: Requisites	
MEA 323 Geochemistry of Natural Waters	Minor	Revisions: Requisites	

MIE 432 Labor and Employee Relations	Minor	Revisions: Description
MT 432 Biotextiles Evaluation	Minor	Revisions: Requisites
NR 100 Introduction to Natural Resources	Drop	Drop
PCC 203 Introduction to Polymer Chemistry	Drop	Drop
PHI 494 Research and Writing in Ethics	Minor	Revisions: Requisites
SSC 200 Soil Science	Minor	Revisions: GEP info added, offering
TT 351 Woven Products and Processes	Minor	Revisions: Requisites
TT 371 Woven Textile Design	Drop	Drop
TT 372 Knitted Textile Design	Drop	Drop
TT 406 Bonding Fundamentals in Nonwovens	Drop	Drop
Marnie Science Minor (17MRM)	Minor	Revisions: Adding courses to elective list
Physics BS and BA	Minor	Revisions: IP credit for course

Wilson College of Textiles			
Presenter	Reviewers	Action	Type
Krause	Hergeth, Carlson Welch, Muse	TTM 106 Yarn Formation, Classification and Numbering Systems	New Course
Krause	Planchart, Orphanides, Roise	BS Polymer and Color Chemistry, ACS Certification 18PCCBS-18PCCACS	Revisions 120 credit hours
Krause	Griffin Hillis, Kuzenski, Reynolds	BS Textile Technology 18TEXTCHBS & BS Textile Technology, Technical Textiles 18TEXTCHBS-18TEXTCHTT	Revisions 120 credit hours
Krause	Hergeth, Seracino, Driscoll	BS Textile Technology, Supply Chain Operations 18TEXTCHBS-18TEXTCHSC & BS Textile Technology, Medical Textiles 18TEXTCHBS-18TEXTCHMT	Revisions 120 credit hours
Krause	Rieder, Domingue, Hessling	Fashion and Textile Design Curricula (18FTDBS-18FTDTEX) & (18FTDBS-18FTDFAS)	Revisions 120 credit hours
Krause	Hergeth, Kuzenski, Bruce	Fashion and Textile Management Curricula (18FTMBS-18FTMBMM) & (18FTMBS-18FTMFDP)	Revisions 120 credit hours

College of Agriculture and Life Sciences			
Presenter	Reviewers	Action	Type
Bruce	Despain, Muse, Orphanides	CS 418/(518) Intro to Regulatory Science in Agriculture	Revisions: SLOs, dual level, description
Bruce	Driscoll, Hessling, Reynolds	Agriculture Education BS 11AGEDAGB, 11AGEDAET, 11AGEDAGR, 11AGEDANS,	Revisions: 120 Credit Hours
Merrill	Krause, Orphanides, Domingue	Agriculture Education BS 11AGEDHS, 11AGEDNR, 11AGEDPSC, 11AGESBS	Revisions: 120 Credit Hours

College of Sciences			
Presenter	Reviewers	Action	Type
Muse	Domingue, Hessling, Reynolds	GN 428 Introduction to Machine Learning in Biology	New Course
Muse	Roise, Despain, Rieder	MEA 217 Introduction to Computing in the Geosciences	New Course
Planchart	Griffin Hillis, Roise, Krause	Geology (BS) 17GEOLBS	Revisions

College of Humanities and Social Sciences			
Presenter	Reviewers	Action	Type
Driscoll	Orphanides, Hergeth, Bruce	HI 263 Asian Civilization to 1800	Revisions: SLOs, Eval Methods,
Driscoll	Griffin Hillis, Muse, Roise	HI 351 U.S. Naval History	Revisions: SLOs, Eval Methods,
Driscoll	Krause, Reynolds, Rieder	HI 364 History of North Carolina	Revisions: SLOs, Eval Methods,
Driscoll	Orphanides, Seracino, Hessling	HI 365 The American West	Revisions: SLOs, Eval Methods,
Despain	Krause, Carlson Welch, Seracino	HI 472 Fashion, Food, and Fun: Material Culture in Chinese History	New Course
Despain	Orphanides, Domingue, Roise	SOC 206 Social Deviance	Revisions: SLOs, Eval Methods,
Despain	Griffin Hillis, Hessling, Merrill	SOC 306 Criminology	Revisions: SLOs, Eval Methods,

University College			
Presenter	Reviewers	Action	Type
Carlson Welch	Planchart, Kuzenski, Merrill	USC 250 Global Health In Context	New Course

College of Engineering			
Presenter	Reviewers	Action	Type
Reynolds	Planchart, Hergeth, Domingue	ECE/BME 418/(518) Wearable Biosensors and Microsystems	New Course

College of Natural Resources			
Presenter	Reviewers	Action	Type
Roise	Muse, Orphanides, Domingue	FW 495 Special Topics in Fisheries and Wildlife Science	Revisions: Grading method
Roise	Driscoll, Planchart, Rieder	NR 219 Natural Resource Business and Investment	New Course
Roise	Krause, Planchart, Kuzenski	NR 295 Special Topics in Natural Resources	Revisions: Grading method
Roise	Despain, Hergeth, Griffin Hillis	PRT 200 Health, Wellness and the Pursuit of Happiness	Revisions: Title, SLOs, eval methods

SLO= Student Learning Outcomes

Discussion:

Notes:

- All linked course actions are viewable in CIM.
- To view actions, please click on the hyperlink. You may need to use your Unity ID to log in.
- If you experience issues logging in, please go to <https://next-catalog.ncsu.edu/courseadmin/> and type the course prefix and number into the search bar.

SLO = Student Learning Outcomes



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University Courses and Curricula Committee

November 28, 2018
Talley Student Union 5101
Call to Order: 12:45 pm

Members Present: Chair Marta Klesath, Past Chair Helmut Hergeth, Melissa Merrill, Scott Despain, Catherine Driscoll, Kathleen Rieder, Peter Hessling, Rudi Seracino, Kanton Reynolds, Melissa Merrill, Wendy Krause, Peggy Domingue, Andreas Orphanides, Antonio Planchart, Jackie Bruce, Annie Carlson Welch, Berkley Griffin Hillis, John Kuzenski, Spencer Muse

Members Absent: Joseph Roise, Katy Kilbourne

Guests: Keith Edmisten

Ex-Officio Members Present: Lexi Hergeth, Li Marcus, Tim Petty, Jordan Luzader, Charles Clift, Daniel Monek, Bret Smith

WELCOME AND INTRODUCTIONS

- **Remarks from Chair Elect** - Welcomed the committee members and introduced the guests to the final meeting of the semester. The chair also clarified that the committee has the ability to ask the XONV members for information on some of the more administrative aspects of the approval process as needed.
- **Remarks from OUCCAS/DASA-** Li thanked the committee for their work and informed them that a Fall report will be presented at the first Spring meeting on January 9, 2018. She also reminded the committee that March 13, 2019 is the date for Fall 2019 changes and additions to be complete to be visible to students before Fall enrollment.
- **Approval of the Minutes from November 7th 2018 – Approved Unanimously**
 - Discussion: Member Scott Despain moved to approve.

NEW BUSINESS

➤ **Consent Agenda**

(AES432,443,BAE200,302,361,371,474,EC/ARE301,ECE480,481,ET410,252,470,490,HESD233,HS432,ISE498,24DANM,16ENGLLWR,FrenchStudies,16PCM,14STBS) -

Approved Unanimously

Discussion: Member John Kuzenski moved to approve. Member asked if HS 432/(532) will end up without an instructor, presenter motioned to pull HS 432/(532) from the consent agenda.

➤ **HS 432/(532)- Approved pending**

Member indicated an instructor is needed for this action and the delivery format should also be provided. Li Marcus confirmed that even if a course is taught by multiple instructors, a single faculty member should be listed in these field as the developer/owner of the course.

➤ **Microbiology BS (17MBIOBS) and 3 subplans: 11MBIOMBT; 17BMIOHS; 17MBIOMBR - Approved Unanimously**

Discussion: Member Tony Planchart presented the curricular action.

➤ **FLF 425/(525) Literature, Cinema and Culture of the Francophone World - Approved Pending with Friendly Suggestion**

Discussion: Member Catherine Driscoll presented the course action. Member brought attention to the use of the word "understand" in the course objectives, member reminded the committee that this is fine for the objectives, as only outcomes need to be measurable. Member brought attention to the DRO statement, which is out of date. Li Marcus updated the committee that the policy has almost finished being officially approved. Member indicated there are conflicting statements about tutoring. In the academic integrity section indicates that there should be no tutoring for graded assignments, but the next section directs students to the tutoring center. Pending the DRO statement update and a friendly suggestion for the tutoring clarification. Member asked for confirmation that there should be prerequisites for undergraduate students and none for graduate level, presenter confirmed this is correct.

➤ **HI 251 American History I - Approved with Friendly Suggestions**

Discussion: Member Catherine Driscoll presented the course action as approve pending updating the DRO statement. Member indicated this course is used as transfer credit and mirrors the course taught on campus. Member indicated that we will be pending all the courses on the agenda to update the DRO statement, even though the DRO statement has not yet officially been passed by the policies committee. Members discussed that the DRO statement has the correct location, but an old building name. Member moved make the DRO statement not pending which was approved with one abstention and one nay because the building name has changed and is directing student to a nonexistent building. Member asked why a course is used as a credit for transfer students. Member from the college explained that

this is so the students can receive credit, but the course taught on campus also provides GEP credit, which the transfer students may not fulfill GEP information. Friendly suggestion to communicate to the instructor to update the DRO statement and confirm updates needed to prerequisites for related higher level courses.

- **Discussion-** Members discussed the pending but incomplete editorial changes to the DRO statement. Faculty initiated a number of these actions before office, location, and building names changed and they put in the work that they needed to do at the time; however, students who receive these syllabi and use them as reference will be looking for an office and a building that no longer exist under those names. This will cause major issues if left alone. The committee is also bound by the syllabus regulation for required wording, and since the wording hasn't been updated there it is difficult to enforce. Li clarified that she has been working with the Provost's Office and that the editorial change had been approved by the provost but she is waiting on further workflow and implementation information. Member made a motion to have the Chair send an e-mail in an appropriate amount of time to all Department Heads and appropriate parties informing them of the correct location as approved by the provost of the university. This motion is to indicate that the rest of the course actions today will not address the slightly incorrect Disability Resource Office statements for the remainder of the courses on this agenda. The chair and members confirmed this statement will be sent before the next term begins. -Approved with one nay from Kanton Reynolds.
- **Linguistics Minor (16LIM) - Approved Unanimously**
Discussion: Member Scott Despain presented the curricular action. Member brought attention to the old format of the minor students were required to take a 400-level course and currently seems to allow for students to complete the minor using only 200 and 300-level courses.
- **16ARTSTBA –All Subplans (16ARTSTFLM, 16ARTSTMUS, 16ARTSTTHE,16ARTSTVIS) - Approved with Friendly Suggestions**
Discussion: Member Scott Despain presented the curricular action. Member brought attention to ADN 202 course which is only available to students within the studio major and made the friendly suggestion to change this to ADN 292 or 492, which are not restricted to student.
- **AES 135 Introduction to Precision Agriculture - Approved with Friendly Suggestion**
Discussion: Member Jackie Bruce presented the new course action. Member made the friendly suggestion extending the abbreviated title and to update the DRO statement. Member suggested syncing the first student learning outcome "apply" and "utilize" and choosing one. Member brought attention to the syllabus grading portion indicated assignments more than one week late would not be accepted. Member asked if full participation points are earned through attendance, members clarified that TopHat will record attendance and participation. Members made the friendly suggestion to clarify how participation and attendance will make up 100% of the total participation points.
- **BAE 451 Engineering Design I- Tabled**
Discussion: Member motioned to approve the course action along with BAE 452.
- **BAE 452 Engineering Design II-**
Discussion: Member presented the course action. Member brought attention to the second page of the syllabus, discussing (meeting notes) when common project time is offered but also seems to indicate (should this statement that students shouldn't sign up for other classes as the common practice time. Member indicated it is acceptable to have additional time available but indicating the statement that students should not schedule class time during common practice time is inappropriate. Members discussed that the students in the program are aware they will be required to complete a design project. Members discussed how the contact hours and component type of the contact hours to address the common project times available. Member made the friendly suggestion to include a statement of when the labs will be available for project work. Li Marcus explained that contact hours are defined as instructional time. Member suggested an hour of problem session work should be included, because they technically require students to be at a specific place at a specific time, and suggested XONV member indicated the 110 classroom would not be guaranteed every semester. Members indicated they need clarification of if the time is optional or not and if it's not optional using the 50 minutes of problem session contact hours.
Motion to amend the motion from approved to tabled for both courses until the use of the laboratory room during specific times is clarified. XONV member indicated the outcomes need to be looked at and a friendly suggestion to clean up the language about the lab, updating the DRO statement. Members asked the discussion surrounding the scheduling conflicts be relayed to the instructors.
- **Clarification of votes**
Return Action- rolledback to the beginning through the college and department.
Tabled Action- rolledback to the college level for their decision.
- **HS 420/(520) Green Infrastructure- Approved with Friendly Suggestions**
Discussion: Member Jackie Bruce presented the course action. Member brought attention to the course's dependency

on group work and made the friendly suggestion to provide a statement about how group work will be graded and the expectations of the individual students. Member brought attention to the student learning outcome indicating “discover” and suggested changing it to measurable language. Member clarified the friendly suggestion that the instructor provided information about how the group grade and individual grades are combined.

- **HS 476/(576) Crop Physiology and Production in Controlled Environments- *Approved Pending with Friendly Suggestions***
Discussion: Member Melissa Merrill presented the course action. Member brought attention to the contact hours not calculating correctly and motioned to amend the motion from approved to approved pending the correction of the contact hours. Member brought attention to the second page of the syllabus under 'Instructors', and asked if the instructor's office hours should be specifically listed or should indicate they are “by appointment” in order to ensure that students know that they can contact the instructor for appointments. Member brought attention to the third page of the syllabus indicating the safety and risk assumptions and asked if it is complete. Member brought attention to page four, indicating more clarity is required to identify how 100% participation points are earned, asking how many absences are required to move from 15% or 5%. Member brought attention to page six of the syllabus making the friendly suggestion combining the rubric for attendance and participation and a typo after the professionalism section using the word “breach”. Pending adjustments to the contact hours and clarifying the office hours and clarification of the number of absences acceptable. Friendly suggestion to look at the safety and risk statement, consolidating the participation and attendance statements, and correcting typos.
- **Horticultural Science (BS) Science - *Approved Unanimously***
Discussion: Member Melissa Merrill presented the curricular action (revised concentration title: Plant Breeding and Biotechnology in Horticulture).
- **Horticultural Science (BS) Technology, General Horticulture - *Approved Unanimously***
Discussion: Member Melissa Merrill presented the curricular action (revised concentration title: Production Systems and Entrepreneurship in Horticulture). Members asked if the revised title is “production systems and entrepreneurship in horticulture” or “horticulture production systems and entrepreneurship”, presenter clarified the “production systems and entrepreneurship in horticulture”
- **Horticultural Science (BS) Technology, Landscape Design - *Approved Unanimously***
Discussion: Member Melissa Merrill presented the curricular action (revised concentration title: Landscape Design, Gardens & Urban Environments).
- **CHE 450 Chemical Engineering Design I - *Approved Pending***
Discussion: Member Kanton Reynolds presented the course action. Member indicated the co-requisite in CIM is not in the syllabus, the academic integrity statement needs adjusting because student conduct will provide the repercussions, not the instructor. Pending: co-requisite sync, required for elective or required for curricula, and integrity statement.
- **CSC 415 Software Security- *Approved Unanimously***
Discussion: Member Kanton Reynolds presented the new course action.
- **ISE 352 Fundamentals of Human-Machine Systems Design- *Approved Pending with Friendly Suggestion***
Discussion: Member Rudi Seracino presented the course action. Member moved to amend the motion to approved pending the catalog descriptions need to match as does the grade method (pass fail or graded) which differs in CIM and the syllabus and correcting inconsistency in the grading of the quizzes. Friendly suggestion to adjust the student learning outcome by removing “understand and be able to” and starting with “Apply”.
- **Sustainable Energy Minor Change in ownership from University College to Natural Resources- *Notified***

Mathematics Education Program
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MEMORANDUM

To: University Course and Curriculum Committee

From: Cyndi Edgington, Undergraduate Program Coordinator, Mathematics Education

Date: November 12, 2018

RE: Mathematics Education: Curricular revisions to comply with 120 hour policy

To whom it may concern,

The program has updated the curricula for one Mathematics Education degree option: Mathematics Education (BS): Computer Science. These updates include revisions to comply with the University-wide policy that caps degree programs at 120 hours as well as changes to courses suggested by the Computer Science Department. In addition, we added a course (EMS 495) that will allow our degree programs to be in line with other programs in the STEM Education department. The additional course is an existing course within our department. Our faculty has discussed these changes to agree on adjustments to meet the policy.

Here is an outline of the changes:

1. We added a new course, CSC 110 (3 hours) as an introductory course. This course serves to provide students who may not have previous programming experience an entry point into CS courses. This course also counts as 3 GEP-Interdisciplinary Perspectives credit hours.
2. We removed CSC 236 (3 hours) based on the recommendation from the CS Department that this course is not useful for prospective teachers.
3. We added a course (EMS 495, 2 hours) that will allow our degree programs to be in line with other programs in the STEM Education department. The additional course is an existing course within our department. We adjusted EMS 471 from 12 hours to 10 hours.
4. We updated CSC 216 to 4 hours.
5. We added 2 hours of free electives to comply with the 120 hour requirement.

We believe the revisions meet the 120 hour policy while still providing our students with a rigorous and complete course of study. A record of these revisions is provided as tracked version of the curriculum display.

Sincerely,



Cyndi Edgington

FORMAT A
(SEMESTER-BY-SEMESTER CURRICULUM DISPLAY)

Indicate display status: Current: Proposed: X Proposed Effective Semester: Fall 2019⁹⁸

Degree/Plan Title: Mathematics Education Concentration/Subplan Title: Computer Science Specialization

Plan SIS Code: 13MTHEDBS Subplan SIS Code: 13MTHEDCPS

New Degree Audit required? (Y or N) Y

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses, which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
MA 141 Calculus I ^{A,45} Science^{2,8,4}	4 (CP) 4	MA 241 Calculus II ^{A,45} Science ^{1,2,8,34}	4 (CP) 4
ENG 101 Academic Writing & Research ^H	4	CSC 116 Intro to Computing Java ⁴⁵	3
<u>CSC 110 Computer Science Principles- Beauty and Joy of Computing⁴</u>	<u>3 (CP)</u>	COM 112 Interpersonal Communication ^D	3
E 115 Intro to Computing Environments ¹	1	HES***Health & Exercise Studies Course ^E	1
ED 100 Intro to Education ⁵⁶	2		
HES***Health & Exercise Studies Course^E	1		
Total:15		Total: 15	
SOPHOMORE YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
MA 242 Calculus III ⁴⁵	4 (CP)	CSC 216 Programming Concepts – Java ⁴⁵	4 <u>3 (CP)</u>
ST 311 Introduction to Statistics ⁴⁵	3	CSC 226 Discrete Math for Computer Scientists ⁴⁵	3 <u>3 (CP)</u>
EMS 204 Intro to Mathematics Education ⁵⁶	2 (CP)	EDP 304 Educational Psychology ^{D,56}	3
ED 204 Intro to 21 st Century Teaching ⁵⁶	2 (CP)	ST 312 Intro to Statistics II ⁴⁵	3
<u>Science^{1,8,3}</u>	<u>4</u>	ST 307 Statistical Programming ⁴⁵	1
GEP Interdiscip. Persp. ^{G,I,J}	2	GEP Interdiscip. Persp.^{G,I,H} <u>Humanities Req.^{C,I,J}</u>	3
GEP Humanities Req.^{C,I,H}	2		
Total:1617		Total:176	
JUNIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
MA 405 Linear Algebra and Matrices ⁴⁵	3	CSC 236 Computer Org & Assembly Lang for Comp Sci⁵	3
MA 403 Intro to Modern Algebra ⁴⁵	3	MA 408 Foundations of Euclidean Geometry ⁴⁵	3
<u>CSC 316 Data Structures for Computing Scientists⁴</u>	<u>3</u>	EMS 480 Teaching Math with Technology ⁵⁶	3
ELP 344 School and Society ⁵⁶	3	ED 311 Classroom Assessment Principles & Practices ⁵⁶	2
ECI 416 Teaching Exceptional Students ⁵⁶	3	ED 312 Classroom Assess. Principles & Practices: Prof. Learning Lab ⁵⁶	1
Science^{2,8,4}	3	<u>Science^{1,8,3}</u>	<u>3</u>
Free Elective	2	HES***Health & Exercise Studies Course^E	1
		GEP Add. Breadth Req: HUM/SS/VPA ^{F,I,J}	3
Total:1547		Total:156	
SENIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
EMS 472 Teaching Math Topics in High School ⁵⁶	3	EMS 471 Student Teaching ⁵⁶	10 <u>12</u>
EMS 490 School Math from an Adv. Perspective ⁵⁶	3	<u>EMS 495 Seminar⁵</u>	<u>2</u>
EMS 470 Methods & Materials for Teaching Math ⁵⁴⁰	3		
GEP Humanities Req. ^{C,I,J}	3		
<u>Free Elective</u>	2		

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	Total:14	Total:12
Minimum Credit Hours Required for Graduation*: 120		

Major/Program Footnotes:**1- COS 100 may substitute for E 115**

1-2. To satisfy the science requirement a sequence of two lab-based science courses (CH 101/CH 102 and CH 201/CH 202, or BIO 181 and BIO 183, or PY 205 and PY 208, or PY 201 and PY 202, or PY 211 and PY 212) must be taken. The third science may be selected from the GEP list of approved science courses.

23. Introduction to programming course must be selected from MA 116, CSC 112, CSC 114, or CSC 116.

34. At most one grade below a C- is permitted in the courses satisfying the science requirement.

45. At most one grade below a C is permitted in the mathematics, statistics, and computer science courses.

56. A grade below a B- is not permitted in EMS 204. A grade below a C is not permitted in all other EMS, EDP, ECI, ELP, and ED courses.

7- MA 241 may be taken in place of MA 351.

8- A grade of C or better is required in EMS 470 to continue in school placement full-time.

***General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied.

University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

- 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 141, MA 241**
- 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 101/102 and CH 201/202; or BIO 181/183; or PY 201/202 or PY 205/208 or PY 211/212**
- 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:
- 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: **ED 304, COM 112 – EDP 304, COM 112**
- E. Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)
Choose from the University approved GEP Physical Education/Healthy Living course list.
- F. Additional Breadth** - (3 credit hours to be selected from the following checked University approved GEP course lists)
☒ 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: **CSC 110**
- 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:
- 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:
- K. Foreign Language proficiency** - Proficiency at the FL_102 level is required for graduation.

FORMAT A
(SEMESTER-BY-SEMESTER CURRICULUM DISPLAY)

Indicate display status: Current: Proposed: X Proposed Effective Semester: Fall 2019

Degree/Plan Title: Mathematics Education

Concentration/Subplan Title: Computer Science Specialization

Plan SIS Code: 13MTHEDBS

Subplan SIS Code: 13MTHEDCPS

New Degree Audit required? (Y or N) Y

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses, which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
MA 141 Calculus I ^{A,4}	4 (CP)	MA 241 Calculus II ^{A,4}	4 (CP)
ENG 101 Academic Writing & Research ^H	4	Science ^{1,B,3}	4
CSC 110 Computer Science Principles- Beauty and Joy of Computing ⁴	3 (CP)	CSC 116 Intro to Computing Java ⁴	3
E 115 Intro to Computing Environments ¹	1	COM 112 Interpersonal Communication ^D	3
ED 100 Intro to Education ⁵	2	HES***Health & Exercise Studies Course ^E	1
HES***Health & Exercise Studies Course ^E	1		
	Total:15		Total: 15
SOPHOMORE YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
MA 242 Calculus III ⁴	4 (CP)	CSC 216 Programming Concepts – Java ⁴	4 (CP)
ST 311 Introduction to Statistics ⁴	3	CSC 226 Discrete Math for Computer Scientists ⁴	3 (CP)
EMS 204 Intro to Mathematics Education ⁵	2 (CP)	EDP 304 Educational Psychology ^{D,5}	3
ED 204 Intro to 21 st Century Teaching ⁵	2 (CP)	ST 312 Intro to Statistics II ⁴	3
Science ^{1,B,3}	4	ST 307 Statistical Programming ⁴	1
GEP Interdiscip. Persp. ^{G,I,J}	2	GEP Humanities Req. ^{C,I,J}	3
	Total:17		Total:17
JUNIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
MA 405 Linear Algebra and Matrices ⁴	3	MA 408 Foundations of Euclidean Geometry ⁴	3
MA 403 Intro to Modern Algebra ⁴	3	EMS 480 Teaching Math with Technology ⁵	3
CSC 316 Data Structures for Computing Scientists ⁴	3	ED 311 Classroom Assessment Principles & Practices ⁵	2
ELP 344 School and Society ⁵	3	ED 312 Classroom Assess. Principles & Practices: Prof. Learning Lab ⁵	1
ECI 416 Teaching Exceptional Students ⁵	3	Science ^{1,B,3}	3
		GEP Add. Breadth Req: HUM/SS/VPA ^{F,I,J}	3
	Total:15		Total:15
SENIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
EMS 472 Teaching Math Topics in High School ⁵	3	EMS 471 Student Teaching ⁵	10
EMS 490 School Math from an Adv. Perspective ⁵	3	EMS 495 Seminar ⁵	2
EMS 470 Methods & Materials for Teaching Math ⁵	3		
GEP Humanities Req. ^{C,I,J}	3		
Free Elective	2		
	Total:14		Total:12
Minimum Credit Hours Required for Graduation*: 120			

Major/Program Footnotes:

1. To satisfy the science requirement a sequence of two lab-based science courses (CH 101/CH 102 and CH 201/CH 202, or BIO 181 and

BIO 183, or PY 205 and PY 208, or PY 201 and PY 202, or PY 211 and PY 212) must be taken. The third science may be selected from the GEP list of approved science courses.

2. Introduction to programming course must be selected from MA 116, CSC 112, CSC 114, or CSC 116.

3. At most one grade below a C- is permitted in the courses satisfying the science requirement.

4. At most one grade below a C is permitted in the mathematics, statistics, and computer science courses.

5. A grade below a B- is not permitted in EMS 204. A grade below a C is not permitted in all other EMS, EDP, ECI, ELP, and ED courses.

***General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied.

University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

- 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 141, MA 241**
- 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 101/102 and CH 201/202; or BIO 181/183; or PY 201/202 or PY 205/208 or PY 211/212**
- 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:
- 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: **EDP 304, COM 112**
- E. **Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)
Choose from the University approved GEP Physical Education/Healthy Living 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: **CSC 110**
- 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:
- 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:
- K. **Foreign Language proficiency** - Proficiency at the FL_102 level is required for graduation.

<u>Degree/Plan Title:</u> BS Mathematics Education	<u>Plan SIS Code:</u> 13MTHEDBS
<u>Concentration/Subplan Title:</u> Computer Science Specialization	<u>Subplan SIS Code:</u> 13MTHEDCPS
<u>Indicate requirements status:</u> Current: Proposed: x <u>Proposed</u> Effective Semester: 8.2019	
<u>New Degree Audit required?</u> (Y or N) Y	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
Mathematical Sciences		
<u>Statistics:</u>		
ST 311	3	
ST 312	3	
ST 307	1	
(at most one grade below a C is permitted in required and elective math, statistics, and computer science courses)		
<u>Mathematics:</u>		
MA 141(C or better required)	4 (CP)	GEP MA
MA 241	4 (CP)	GEP MA
MA 242	4 (CP)	
MA 403	3	
MA 405	3	
MA 408	3	
(at most one grade below a C is permitted in required and elective math, statistics, and computer science courses)		
<u>Computer Science:</u>		
E115	1	
CSC 110	3 (CP)	GEP Interdisciplinary Perspectives
CSC 116	3 (CP)	
CSC 216	4 (CP)	
CSC 226	3 (CP)	
CSC 316	3	
(at most one grade below a C is permitted in required and elective math, statistics, and computer science courses)		
<u>Sciences:</u>		
(To satisfy the science requirement, a sequence of two lab-based science courses must be taken. The third science may be selected from the GEP list of approved science courses)	4	GEP Natural Science
Choose from CH 101/102 and CH 201/202 OR BIO 181 and BIO 183	4	GEP Natural Science
OR PY 201 and PY 202 OR PY 204 and PY 208 OR PY 211 and PY 212	3	GEP Natural Science
Science elective		
(At most one grade below a C- is permitted in the courses satisfying the science requirement)		
<u>Communication: COM 112</u>	3	GEP Social Science

Professional Education: EMS 204 (B- or higher) ED 204 (C or higher) (C- not acceptable) EDP 304 (C or higher) (C- not acceptable) ELP 344 (C or higher) (C- not acceptable) EMS 480 (C or higher) (C- not acceptable) ED 311 (C or higher) (C- not acceptable) ED 312 (C or higher) (C- not acceptable) EMS 472 (C or higher) (C- not acceptable) EMS 470 (C or higher) (C- not acceptable) EMS 471 (C or higher) (C- not acceptable) EMS 495 (C or higher) (C- not acceptable) EMS 490 (C or higher) (C- not acceptable) ECI 416 (C or higher) (C- not acceptable)	2 (CP) 2 (CP) 3 3 3 2 1 3 3 10 2 3 3	GEP Social Science
Free Electives:	2	
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>	100 hours	
COLLEGE REQUIREMENTS:		
Orientation Course(s): ED 100- Introduction to Education (Req. for freshmen)	2	
Total credit hours under College Requirements:	2 Hours	

<u>NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS</u> <i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category may not be subset to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i> <i>Specific courses should not be listed in any of the fields below other than ENG 101.</i>		At least one of the following must be listed: 1 Choose course(s) from the University Approved GEP course list for this category. 2 Minimum requirements are satisfied by Major/College course requirements. 3 Major/College course requirement satisfies X credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category. 4 Co-requisite is satisfied by a Major/College course requirement. 5 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts. 6 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.
General Education Program Requirements: <i>Minimum 39-40 hrs</i>	<i>Credit hours</i>	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites. MA 141, MA 241		(Choose statement 1, 2 or 3) 2
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites. CH 101/102, CH 201/202, BIO 181/183, PY 201/202, PY 205/208, PY 211/212		(Choose statement 1, 2 or 3) 2
English 101 (C- or better required) (4 credits)	4	ENG 101
Humanities (6 credits) (Courses from two different disciplines) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	6	(Choose statement 1, 2 or 3) 1
Social Sciences (6 credits) (Courses from two different disciplines) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites. COM 112, EDP 304		(Choose statement 1, 2 or 3) 2

Additional Breadth (3 credits) (Choose approach that is <i>different</i> from the approach of the Major) Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.	3	(Choose statement 5 or 6) 5
Interdisciplinary Perspectives (5 credits) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites. CSC 110 (3 hrs)	2	(Choose statement 1, 2 or 3) 3
Health and Exercise Studies (2 credits) (Including one <i>Fitness and Wellness</i> course)	2	Choose course(s) from the University Approved GEP course list for this category.
Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.	18 hours	
GEP Co-Requisites:		Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.
U.S. Diversity co-requisite (USD)	n/a	(Choose statement 1 or 4) 1
Global Knowledge co-requisite (GK)	n/a	(Choose statement 1 or 4) 1
Foreign Language Proficiency	n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:		Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)	X	Satisfied by College/Program Requirements
Technology Fluency	X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.	120 Total hours	As applicable, indicate here the overall GPA requirement for degree completion including course completion.

MEMORANDUM

To: University Course and Curriculum Committee

From: Nolan Fahrer, Undergraduate Program Coordinator,
Technology, Engineering and Design Education

Date: November 8th, 2018

RE: Technology, Engineering, and Design Education: Graphic Communications Degree
Revision

To whom it may concern,

The program has decided to update the 2011 curriculum for Technology, Engineering, and Design Education: Graphic Communications degree. These revisions include required, critical path, core, and elective courses. These changes are due to faculty discussion on what courses should and should not be required, and what should be considered a major elective. We have also made some content changes within certain courses based on current trends/issues in our field and have made changes regarding pre and co requisites.

Here is an outline of the changes:

1. Removed TDE 101 as option for an orientation course (no longer required or offered).
2. Re-categorized major courses into: Professional Education, Professional TDE or GC Technical Content, TDE or GC Technical Electives, and Management Electives.
3. Decreased the number of required hours for the major content from 30 to 21 and increased the number of required elective hours from 12 to 21.
4. Removed one major elective and added 1 hour of free electives to adjust degree program hours to 120.
5. Updated the 8-semester plan for course changes made in CIM and submitted to the UCCC including which semester the courses are offered.

We believe the revisions will help provide a clearer understanding of the requirements for our major and an eight-semester display that reflects this. A record of these revisions is provided as a tracked version of the curriculum display.

Sincerely,



Nolan E. Fahrer

FORMAT A
(SEMESTER-BY-SEMESTER CURRICULUM DISPLAY)

Indicate display status: Current: Proposed: X

Proposed Effective Semester: 8.2019

Degree/Plan Title: Technology, Engineering, & Design Education

Concentration/Subplan Title: Graphic Communications

Plan SIS Code: 13TDEBS

Subplan SIS Code: 13TDECG

New Degree Audit required? (Y or N) Y

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
ED 100 Intro to Prof. Edu. or E 101 ²	1-2	CH 100 or CH 101 & 102 Chemistry ^B	4
ENG 101 Acad Writing & Research ^H	4	COM 110 Public Speaking	3
GC 120 Found. of Graphic Comm ^{1,3}	3 ^{CP}	MA 121, 131, or 141 Calculus ^{A,5}	3-4
GEP Mathematics ^{A,5}	3	TDE 205 Desk Pub & Imaging Tech ^{1,3}	3 ^{CP}
HESF *** Health & Exercise Studies Course ^E	1	TDE or GC Technical Elective I ⁴	3
TDE 110 Materials & Processes ^{1,3}	3 ^{CP}		
	<i>Total:15-16</i>		<i>Total:16-17</i>
SOPHOMORE YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
EDP 304 Educational Psychology ²	3	BIO 105 Bio in Mod. World ^B	3
GC 250 Architectural Graphic Comm. ³	3	GEP Addtl. Breadth Req.(HUM/SS/VPA) ^{F,I,J}	3
Management Elective I ⁷	3	GEP Humanities Req. ^{C,I,J}	3
PY 131 or PY 201 or PY 205/206 or PY 211 ^B	4	ISE 216 Manuf. Engr. Practicum or D 100 Design Thinking ³	3
TDE 131 Tech Eng & Design I ^{1,3}	3 ^{CP}	TDE or GC Technical Elective II ⁴	3
	<i>Total:16</i>		<i>Total:15</i>
JUNIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
ELP 344 School & Society ²	3	HES_*** Health & Exercise Studies Course ^E	1
GEP Social Sciences Req. ^{D,I,J,6}	3	Management Elective III ⁷	3
Management Elective II ⁷	3	PSY 376 Develop. Psychology ^D	3
TDE or GC Technical Elective III ⁴	3	STS 302 Contemp. Sci. Tech & Hum. Values ^{G,J}	3
TDE or GC Technical Elective IV ⁴	3	TDE or GC Technical Elective V ⁴	3
		TDE 331 Tech Engr & Design II ³	3
	<i>Total:15</i>		<i>Total:16</i>
SENIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
GEP Humanities Req ^{C,I,J}	3	Free Electives ^{I,J,K}	4
GEP Interdiscp. Persp. Req. ^{G,I,J}	2-3	TDE 407 Field Work in TDE ²	6
TDE 481 R&D in Tech. Educ. ²	3	TDE 452 Lab Planning in Tech. Education ²	3
TDE or GC Technical Elective VI ⁴	3		
Management Elective IV ⁷	3		
	<i>Total:14-15</i>		<i>Total:13</i>
Minimum Credit Hours Required for Graduation ^{*,I,K} : 120			

Major/Program Footnotes:

1. **Critical Path (CP):** TDE 110, TDE 131, TDE 205, and GC 120 are required in the first three semesters of TDE and part of the critical path.
2. **Professional Education:** Required courses (16 credit hours) include Intro Professional Education (ED 100 or E 101), ELP 344, EDP 304, TDE 452, TDE 407 (6 credit hours) (a **C (2.0)** or better is required for courses in this category).
3. **Professional TDE or GC Technical Content:** Required courses (24 credit hours) include: D 100 or ISE 216, GC 120, GC 250, TDE 110, TDE 131, TDE 205, TDE 331, and TDE 481 (a **C (2.0)** or better is required for courses in this category).
4. **TDE or GC Technical Electives:** Required courses (18 credit hours) may be selected from the following: GC 320, GC 330, GC 340, GC 350, GC 420, GC 450, TDE 230, TDE 261, TDE 351, TDE 359, TDE 371, or TDE 385 (a **C- or better** is required for courses in this category).
5. **Mathematical Sciences** (Only one course in this category may be passed with a D. The other course must be at least a C-).
6. This course cannot be a Psychology course if using PSY 376 to fulfill 3 hours of GEP Social Science requirement.
7. **Management Electives** (Select 12 credit hours from courses listed in the degree audit) Note: All BUS courses 300 level or higher are restricted to Business majors and minors.

***General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied.

University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

- 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 103, and MA 121, 131, or 141 Calculus.***
- B. **Natural Sciences** (11 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 100 or CH 101 & 102 Chemistry, PY 131 or PY 201 or PY 205/206 or PY 211, and BIO 105***
- C. **Humanities** (6 credit hours selected from two different disciplines/course prefixes)
Choose from the University approved GEP Humanities course list.
- 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: **PSY 376***
- E. **Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)
Choose from the University approved GEP Physical Education/Healthy Living 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
- 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: **STS 302***
- 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.
- 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: **STS 302***
- K. **Foreign Language proficiency** - Proficiency at the FL_102 level is required for graduation.

FORMAT A
(SEMESTER-BY-SEMESTER CURRICULUM DISPLAY)

Indicate display status: Current: Proposed: X Proposed Effective Semester: 8.2018

Degree/Plan Title: Technology, Engineering, & Design Education

Concentration/Subplan Title: Graphic Communications

Plan SIS Code: 13TDEBS

Subplan SIS Code: 13TDECG

New Degree Audit required? (Y or N) Y

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR

FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
TDE 101 , ED 100 <u>Intro to Prof. Edu.</u> , or E 101 ^{4,2}	<u>1-2</u>	CH 100 or CH 101 & 102 Chemistry ^B	4
ENG 101 Acad Writing & Research ^H	4	COM 110 Public Speaking	3
GC 120 Found. of Graphic Comm ^{4,1,3}	3 ^{CP}	MA 121, 131, or 141 Calculus ^{A,5}	3-4
<u>GEP Mathematics</u> ^{A,5}	<u>3</u>	TDE 131 Tech Eng & Design I ⁴	3
HESF *** Health & Exercise Studies Course ^E	1	TDE 205 Desk Pub & Imaging Tech ^{4,1,3}	3 ^{CP}
MA 103 Topics in Cont. Math ^{A,5}	3	<u>TDE or GC Technical Elective I</u> ⁴	<u>3</u>
TDE 110 Materials & Processes ^{4,1,3}	4 ^{CP}		
	<i>Total:</i> <u>15-16</u>		<i>Total:</i> <u>16-17</u>
	-17		

SOPHOMORE YEAR

FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
EDP 304 Educational Psychology ^{4,2}	3	BIO 105 Bio in Mod. World ^B	3
GC 250 Architectural Graphic Comm. ^{4,3}	3	GC Elective ^{3,4}	3
GEP Social Sciences Req. ^{D,I,J}	3	GEP Humanities Req. ^{C,I,J}	3
TDE, GC, or Management Elective I ^{4,4,2}	3	GEP Addtl. Breadth Req.(HUM/SS/VPA) ^{F,I,J}	3
PY 131 or PY 201 or PY 205/206 or PY 211 ^B	4	<u>ISE 216 Manuf. Engr. Practicum or D 100 Design Thinking</u> ³	<u>3</u>
<u>TDE 131 Tech Eng & Design I</u> ^{1,3}	<u>3</u>	TDE or GC <u>Technical</u> Elective II ^{2,4}	3
	<i>Total:</i> <u>16</u>		<i>Total:</i> <u>15</u>

JUNIOR YEAR

FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
GC 350 Applied CAD/D & Geometric Controls ⁴	3	HES_*** Health & Exercise Studies Course ^E	1
<u>GEP Social Sciences Req.</u> ^{D,I,J,6}	<u>3</u>	<u>Management Elective III</u> ⁷	<u>3</u>
ELP 344 School & Society ^{4,2}	3	PSY 376 Develop. Psychology ^D	3
TDE, GC, or Management Elective II ^{4,4,2}	3	STS 302 Contemp. Sci. Tech & Hum. Values ^{G,J}	3
TDE 331 Tech Engr & Design II ^{4,2}	3	<u>TDE 331 Tech Engr & Design II</u> ³	<u>3</u>
TDE or GC <u>Technical</u> Elective III ^{2,3,4}	3	TDE 385 Robotics Education ⁴	3
<u>TDE or GC Technical Elective IV</u> ⁴	<u>3</u>	TDE 386 Robotics Education Lab ⁴	1
		TDE or GC <u>Technical</u> Elective V ^{2,4}	3
	<i>Total:</i> <u>15</u>		<i>Total:</i> <u>16</u>

SENIOR YEAR

FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
GC 420 Visual Thinking ⁴	3	Free Electives ^{I,J,K}	3-4
GEP Humanities Req. ^{C,I,J}	3	GC Elective ³	3
GEP Interdiscp. Persp. Req. ^{G,I,J}	2-3	TDE 452 Lab Planning in Tech. Education ^{4,2}	3
TDE 481 R&D in Tech. Educ. ²	3	TDE 407 Field Work in TDE ^{4,2}	6
<u>TDE or GC Technical Elective VI</u> ⁴	<u>3</u>		
TDE or GC <u>Management</u> Elective IV ^{2,3,4,2}	3		
	<i>Total:</i> <u>14-15</u>		<i>Total:</i> <u>15</u> <u>13</u>

Minimum Credit Hours Required for Graduation^{*,I,K}: ~~122~~120

Major/Program Footnotes:

~~1. Select from Concentration Group I list of courses in the degree audit under concentration requirements (13TDEGC—Spring 2011)~~

~~Note: All BUS courses 300 level or higher are restricted to Business majors and minors.~~

~~1. **Critical Path (CP):** TDE 110, TDE 131, TDE 205, and GC 120 are required in the first year of TDE and part of the critical path.~~

~~2. Select from Concentration Group II list in the degree audit which includes TDE 220, 230, 261, 351, 359, 371, 456.~~

~~2. **Professional Education:** Required courses (16 credit hours) include Intro Professional Education (ED 100 or E 101), ELP 344, EDP 304, TDE 452, TDE 407 (6 credit hours) (a **C (2.0)** or better is required for courses in this category).~~

~~3. Select from Concentration Group III list in the degree audit which includes GC 320, 330, 340, 450.~~

~~3. **Professional TDE or GC Technical Content:** Required courses (24 credit hours) include: D 100 or ISE 216, GC 120, GC250, TDE 110, TDE 131, TDE 205, TDE 331, and TDE 481 (a **C (2.0)** or better is required for courses in this category).~~

~~4. Professional Education and Professional TDE Technical Teaching Content (all courses in this category must have a grade of "C" or higher).~~

~~4. **TDE or GC Technical Electives:** Required courses (18 credit hours) may be selected from the following: GC 320, GC 330, GC 340, GC 350, GC 420, GC 450, TDE 230, TDE 261, TDE 351, TDE 359, TDE 371, or TDE 385(a **C- or better** is required for courses in this category).~~

~~5. **Mathematical Sciences** (Only one course in this category may be passed with a D. The other course must be at least a C-).~~

~~6. This course cannot be a Psychology course if using PSY 376 to fulfill 3 hours of GEP Social Science requirement.~~

~~7. **Management Electives** (Select 12 credit hours from courses listed in the degree audit) Note: All BUS courses 300 level or higher are restricted to Business majors and minors.~~

***General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied.

University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

- 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 103, and MA 121, 131, or 141 Calculus.**
- 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 100 or CH 101 & 102 Chemistry, PY 131 or PY 201 or PY 205/206 or PY 211, and BIO 105**
- C. **Humanities** (6 credit hours selected from two different disciplines/course prefixes)
Choose from the University approved GEP Humanities course list.
- 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: **PSY 376**
- E. **Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)
Choose from the University approved GEP Physical Education/Healthy Living 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
- 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: **STS 302**
- 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.
- 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: **STS 302**
- K. **Foreign Language proficiency** - Proficiency at the FL_102 level is required for graduation.

<u>Degree/Plan Title:</u> Technology, Engineering, & Design Education	<u>Plan SIS Code:</u> 13TDEBS
<u>Concentration/Subplan Title:</u> Graphic Communications	<u>Subplan SIS Code:</u> 13TDECG
<u>Indicate requirements status:</u> Current: Proposed: X	<u>Proposed</u> Effective Semester: 8.2019
<u>New Degree Audit required?</u> (Y or N) Y	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
Required Courses:	Credit Hours	GEP category, if applicable
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
<u>PROFESSIONAL TDE or GC TECHNICAL CONTENT REQUIREMENT</u> NOTE: Course grouping has C-wall (2.0) grade requirement. Choose either D 100 or ISE 216. All other courses are required.	<u>TOTAL = 24</u>	GC120 = Visual & Performing Art (3 hrs)
D 100 - Design Inquiry I: Methods and Processes	3	
ISE 216 - Product Development and rapid Prototyping (Choose 1 course from above)	3	
GC 120 - Foundations of Graphics(CP)	3	
GC 250 - Architectural Graphic Communications	3	
TDE 110 - Materials & Processes Technology (CP)	3	
TDE 131 - Technology through Engineering and Design I(CP)	3	
TDE 205 - Desktop Publishing and Imaging Technology(CP)	3	
TDE 331 - Technology through Engineering and Design II	3	
TDE 481 - Research & Development in Technology Education	3	
<u>TDE or GC TECHNICAL ELECTIVES REQUIREMENT:</u> NOTE: Course grouping has C- or better grade requirement. Select 18 credit hours (6 courses) from the list below:	<u>TOTAL = 18</u>	GC320 = Mathematical Sciences (3 hrs)
GC 320 - 3D Spatial Relations	3	
GC 330 - Basic Technical Animation	3	
GC 340 - Concepts of Website Design	3	
GC 350 - Applied CAD/D and Geometric Controls	3	
GC 420 - Visual Thinking	3	
GC 450 - Advanced Graphics Usage with CAD	3	
TDE 230 - Scientific and Technical Visualization	3	
TDE 261 - Digital Media Education	3	
TDE 351 - Ceramics: The Art and Craft of Clay	3	
TDE 359 - Electronics Technology	3	
TDE 371 - Emerging Issues in Technology	3	
TDE 385 - Robotics Education	3	

MANAGEMENT ELECTIVES REQUIREMENT (12 credit hours) Select 12 credit hours (4 courses) from the list below: ACC 200, 210, 220, 280; AFS 305; ANT 261; ARE 201, 201A, 301, 304, 309, 336; BUS 320, 340, 350, 360, 370; EC 201, 202, 205, 301, 302, 305, 336, 348, 351, 404, 410, 413, 431, 436, 437, 449, 451, 468, 474, 480, 490, 495, 498; ENG 331, 332, 333; MA 105, 231, 241, 242; MIE 201, 330, 335, 432; PHI 214; PS 201, 202, 203, 204, 231, 236, 303, 309, 310, 312, 314, 320, 335, 336, 418; PSY 200, 307, 311, 312, 340, 411; SOC 205, 261, 305; ST 311, 350; STS 214; TDE 456; WGS 418	TOTAL = 12	
Free Electives:	4	
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>	58 Hours	
COLLEGE REQUIREMENTS:		
PROFESSIONAL EDUCATION REQUIREMENT NOTE: Course grouping has C-wall (2.0) grade requirement. Choose either ED 100 (req. for freshman) or E 101. All other courses are required. Orientation Course(s): ED 100 - Introduction to Education (Req. for freshman) E 101 - Introduction to Engineering & Problem Solving <i>(Choose 1 course from above)</i>	2 1	
Other Course(s): ELP 344 - School and Society EDP 304 - Educational Psychology TDE 452 - Lab Planning in Technology Education TDE 407 - Field Work in Technology Education	3 3 3 6	
Total credit hours under College Requirements:	Minimum of 16 Hours	

NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS <i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category <u>may not be subset</u> to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i> <i>Specific courses should not be listed in any of the fields below other than ENG 101.</i>		At least one of the following must be listed: 1 Choose course(s) from the University Approved GEP course list for this category. 2 Minimum requirements are satisfied by Major/College course requirements. 3 Major/College course requirement satisfies X credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category. 4 Co-requisite is satisfied by a Major/College course requirement. 5 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts. 6 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.
General Education Program Requirements: <i>Minimum 39-40 hrs</i>	Credit hours	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites. MA 103, and MA 121, 131, or 141 Calculus.	6	(Choose statement 1, 2 or 3) 1 or 3
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites. CH 100 or CH 101 & 102 Chemistry, PY 131 or PY 201 or PY 205/206 or PY 211, and BIO 105	11	(Choose statement 1, 2 or 3) 1 or 3
English 101 (C- or better required) (4 credits)	4	ENG 101

Humanities (6 credits) (Courses from <i>two different disciplines</i>) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	6	(Choose statement 1, 2 or 3) 1
Social Sciences (6 credits) (Courses from <i>two different disciplines</i>) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i> PSY 376	6	(Choose statement 1, 2 or 3) 1 or 3
Additional Breadth (3 credits) (Choose approach that is <i>different from the approach of the Major</i>) <i>Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.</i>	3	(Choose statement 5 or 6) 5
Interdisciplinary Perspectives (5 credits) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i> STS 302	5	(Choose statement 1, 2 or 3) 1 or 3
Health and Exercise Studies (2 credits) (Including one <i>Fitness and Wellness</i> course)	2	Choose course(s) from the University Approved GEP course list for this category.
Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.	43 hours	
GEP Co-Requisites:		<i>Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.</i>
U.S. Diversity co-requisite (USD)	n/a	(Choose statement 1 or 4) 1
Global Knowledge co-requisite (GK) STS 302	n/a	(Choose statement 1 or 4) 1 or 4
Foreign Language Proficiency	n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:		Place an X in the credit hour box to indicate below that the requirement is " Satisfied by College/Program Requirements "
Communication in the Major (Advanced Communication) COM 110	3	Satisfied by College/Program Requirements
Technology Fluency	X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.	120 Total hours	As applicable, indicate here the overall GPA requirement for degree completion including course completion.

COURSE ACTION FOR 13TDEBS-13TDECG

RECOMMENDED BY:

HEAD, DEPARTMENT/PROGRAM

DATE

ENDORSED BY:

CHAIR, COLLEGE COURSES & CURRICULA COMMITTEE

DATE

COLLEGE DEAN

DATE

APPROVED BY:

CHAIR, UNIVERSITY COURSES & CURRICULA COMMITTEE

DATE

CHAIR, COUNCIL ON UNDERGRADUATE EDUCATION

DATE

DEAN, DIVISION OF ACADEMIC AND STUDENT AFFAIRS (DASA)

DATE

APPROVED EFFECTIVE DATE _____



College of Sciences

Department of Marine, Earth,
and Atmospheric Sciences

Campus Box 8208 / 1125 Jordan Hall
Raleigh, NC 27695-8208

919.515.3711

www.meas.ncsu.edu

Date: October 24, 2018

To: Mike Mullen

Vice Chancellor and Dean, Division of Academic and Student Affairs

From: Carrie Thomas

Director of Undergraduate Programs, Department of Marine, Earth &
Atmospheric Sciences

Re: Revision of the Marine Science minor

Title and SIS code: Minor in Marine Science and 17MRM

List of Revisions and Reasons: Two new marine science courses have been developed as a part of the Semester @ CMAST Program: MEA 252 Biology of Marine Mammals and MEA 350 Marine Conservation Biology. We would like to add them to the minor elective course list. These courses align with the focus of the minor.

Please see the minor information attached with the revision marked in red.

Impact of Revisions on Other Departments: None are expected.

Proposed Effective Date: November 2018

Marine Science (17MRM)

Description

The Department of Marine, Earth and Atmospheric Sciences offers a Minor in Marine Science to majors in any field except marine science or natural resources with a concentration in marine and coastal resources. The minor provides a means of recognition for students who desire a deeper understanding of the world's ocean.

Requirements for Admission and Completion of the Minor

- Students must have completed MEA 200 Introduction to Oceanography with a letter grade of C or better and have a GPA of 2.5 or above to be admitted into the minor.
- For completion, students must complete MEA 200 Introduction to Oceanography (3 credits), MEA 210 Oceanography Lab (1 credit) and MEA 250 introduction to Coastal Environments (3 credits) and at least 9 additional credit hours from the list of minor elective courses. All course work must be letter-graded and completed with a C or better.

Required Courses (7 credit hours)

- MEA 200 Introduction to Oceanography
- MEA 210 – Oceanography Lab
- MEA 250 Introduction to Coastal Environments (pre-requisite MEA 200 & 210)

Minor Elective Courses (9 credit hours)

- MEA 220 – Marine Biology (pre-requisite MEA 200 or BIO 181)
- MEA 251 – Introduction to Coastal Environments Laboratory (pre-requisite MEA 200 & MEA 210)
- MEA 252 – Biology of Marine Mammals (Semester @ CMAST course)
- MEA 323 – Earth System Chemistry (pre-requisite CH 201 & any MEA course)
- MEA 350 – Marine Conservation Biology (Semester @ CMAST course)
- MEA 411 – Marine Sediment Transport (pre-requisite MA 241 + PY 205)
- MEA 449 – Principles of Biological Oceanography

- MEA 454 – Marine Physical-Biological Interactions (pre-requisite MEA 460 & MEA 449)
- MEA 459 – Field Investigation of Coastal Processes (pre-requisite MEA 250)
- MEA 460 – Principles of Physical Oceanography (pre-requisite MA 231 + PY 212)
- MEA 462 – Observational Methods and Data Analysis in Marine Physics (pre-requisite MEA 460)
- MEA 463 – Fluid Physics (pre-requisite MA 341 & PY 208)
- MEA 464 – Ocean Circulation Systems (pre-requisite MEA 460)
- MEA 467 – Marine Meteorology (pre-requisite MEA 460)
- MEA 469 – Ecology of Coastal Resources (pre-requisite MEA 220 or MEA 449)
- MEA 470 – Introduction to Geophysics (pre-requisite PY 212)
- MEA 471 – Exploration and Engineering Geophysics (pre-requisite PY 211)
- MEA 473 – Principles of Chemical Oceanography (pre-requisite CH 201)
- MEA 476 – Worldwide River and Delta Systems: Their Evolution and Human Impacts (pre-requisite senior standing)
- MEA 493 – Special Topics in MEAS*
- MEA 570 – Geological Oceanography

*Enrollment in special topics courses should be approved by the minor coordinator in advance to ensure they are appropriate and relevant to the minor.

Admissions

Students must have completed MEA 200 Introduction to Oceanography with a letter grade of C or better and have a GPA of 2.5 or above to be admitted into the minor. To officially enroll in the Minor program, students should see Dr. Carrie Thomas, 4136 Jordan Hall, 919.515.7839, cjthomas@ncsu.edu.

Contact Person

Carrie Thomas
Room 4136 Jordan Hall
919-515-7839
cjthomas@ncsu.edu

SIS Code: 17MRM

Signature Page
MEAS Curricular Revisions

Endorsed By:

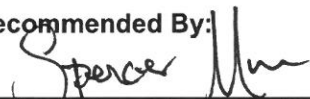


Head, Department/Program

12 November 2018

Date

Recommended By:

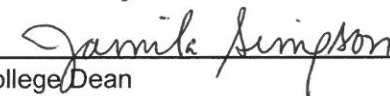


Chair, College Curriculum Committee

11/20/2018

Date

Endorsed By:



College Dean

11/20/18

Date

Recommended By:

Chair, University Courses & Curricula Committee

Date

Approved By:

Dean, (DASA)

Date



November 9, 2018

MEMORANDUM

TO: University Courses and Curricula Committee

FROM: Prof. David Brown, Director of Undergraduate Programs, Department of Physics

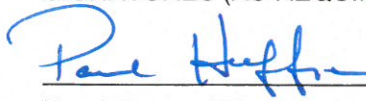
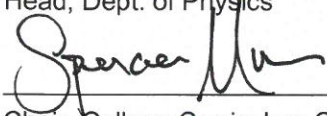
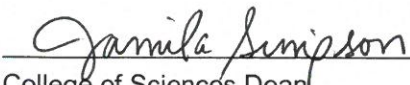
RE: Curriculum Revisions for 17PHYSBS and 17PHYSBA

Currently, in the BA (17PHYSBA, Summer 2 2017) and BS (17PHYSBS, Summer 2 2017) degrees in Physics, there is an orientation requirement that is satisfied solely by the course COS 100 (2 units). This course also counts toward the Interdisciplinary Perspectives GEP requirement. The degree plans show the Interdisciplinary Perspectives GEP requirement as needing 3 units to be fulfilled, as it is assumed that students will satisfy the remaining 2 units by completing COS 100. For students who do not take COS 100 (such as transfer students), there remains the confusing situation of having the Interdisciplinary Perspectives GEP requirement appearing as met on their Degree Audit in SIS even though they may not have actually met it, as they may be missing 2 units.

Proposed Revision: We would like the Orientation requirement for both degree plans to be replaced with a Verify requirement that would be automatically satisfied by COS 100. We would also like the Interdisciplinary Perspectives GEP requirement on both degree plans to show as needing 5 units to be fulfilled. This revision should go into effect during the Summer 1 2019 term. Although the degree key for all students in these programs will be changed, the actual requirements have not, and so there should be no negative impact on these students.

Attached: Degree requirements (Format B) for 17PHYSBS and 17PHYSBA with proposed revisions indicated.

SIGNATURES (AS REQUIRED):

	11/9/2018
Head, Dept. of Physics	Date
	11/19/2018
Chair, College Curriculum Committee	Date
	11/20/18
College of Sciences Dean	Date

Chair, University Courses & Curricula Committee Date

PROPOSED EFFECTIVE DATE: Sum 1 2019

Dean, Academic and Student Affairs Date

APPROVED EFFECTIVE DATE: _____

MAJOR FIELD OF STUDY REQUIREMENTS:		
Required Courses/Groups/ Electives:	Credit Hours	GEP category, if applicable
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
PHYSICS*		
PY201 University Physics I	4 (CP)	Natural Sciences (4 credits)
PY202 University Physics II	4 (CP)	
PY203 University Physics III	4 (CP)	
PY252 Instrumental and Data Analysis	2	
PY401 Quantum Physics I	3	
PY402 Quantum Physics II	3	
PY411 Mechanics I	3 (CP)	
PY412 Mechanics II	3	
PY413 Thermal Physics	3	
PY414 Electromagnetism I	3	
PY415 Electromagnetism II	3	
PY452 Advanced Physics Lab	3	Communication in the Major
Math/Statistics/Computing*		
MA141 Calculus I	4 (CP)	Mathematical Sciences (4 credits)
MA241 Calculus II	4 (CP)	Mathematical Sciences (4 credits)
MA242 Calculus III	4 (CP)	
PY251 Introduction to Scientific Computing	3	Technology Fluency
Statistics (any ST300+ course)	3	
MA341 Applied Differential Equations I	3	
MA401 Applied Differential Equations II	3	
MA405 Linear Algebra	3	
Computing/Numerical Methods (CSC302, CSC427, CSC428, MA402, MA427, MA428, PY525)	3	
Chemistry/Basic Sciences/Technical Electives*		
CH101 Chemistry – A Molecular Science	3	Natural Sciences (3 credits)
CH102 General Chemistry Laboratory	1	
Basic Sciences (BIO165, BIO181, BIO183, BME203, CH201, CH202, CH203, CH204, CH220, CH222, CHE205, GN301, MAE214, MEA101, MEA110, MEA200, MEA210, MEA215, MEA220, MSE200, MSE201, MSE203, NE202, PCC203, TE200)	3	
Technical Electives (Any course at the 300 through 500 levels with prefix:	10	
AA, AES, ANS, AEC, BCH, BIO, BAE, BEC, BMA, BME, BBS, BIT, MBA, BUS, CHE, CH, CE, CBS, CSC, CS, EGR, ECO, EC, ECE, E, EGM, ENT, EA, ES, ET, FIM, FW, FS, FSA, FOR, GN, GIS, ECG, ID, ISE, LOG, MEA, MSE, EMS, MA, MAE, MES, MT, MB, NW, NE, NTR, OR, PSE, PY, PHY, PB,		

PP, PCC, PO, SSC, ST, SMT, TC, TE, TMS, TT, TOX, WPS, ZO , excluding: MA302, MA303, MA305, MA331, MA341, MA401, MA405 , PY401, PY402, PY407, PY411, PY412, PY413, PY414, PY415, PY452, PY501, PY502, PY511, PY512, PY514, PY515, PY581, PY582) *At most one passing grade below C- is allowed in each of the three categories: Physics, Math/Statistics/Computing, and Chemistry/Basic Sciences/Technical Electives. Advanced Writing (ENG331, ENG332, ENG333)	3	
Concentration Courses/Groups/Electives:		
Free Electives:	6	
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>	94 hours	
COLLEGE REQUIREMENTS:		
Orientation Course(s): COS 100 Orientation co-requisite (Verify) : COS 100	2	Interdisciplinary Perspectives (2 hrs)
Other:		
Total credit hours under College Requirements:	20 Hours	

NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS

Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category may not be subset to require a specific course from the category list. Required courses must be listed in the Major/College requirements.

Specific courses should not be listed in any of the fields below other than ENG 101.

At least one of the following must be listed:

- 1 Choose course(s) from the University Approved GEP course list for this category.
- 2 Minimum requirements are satisfied by Major/College course requirements.
- 3 Major/College course requirement satisfies **X** credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category.
- 4 Co-requisite is satisfied by a Major/College course requirement.
- 5 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts.
- 6 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.

General Education Program Requirements: Minimum 39-40 hrs	Credit hours	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.		(Choose statement 1, 2 or 3) 2
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.		(Choose statement 1, 2 or 3) 2
English 101 (C- or better required) (4 credits)	4	ENG 101
Humanities (6 credits) (Courses from two different disciplines) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	6	(Choose statement 1, 2 or 3) 1
Social Sciences (6 credits) (Courses from two different disciplines) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	6	(Choose statement 1, 2 or 3) 1
Additional Breadth (3 credits) (Choose approach that is different from the approach of the Major) Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.	3	(Choose statement 5 or 6) 5
Interdisciplinary Perspectives (5 credits) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	35	(Choose statement 1, 2 or 3) 3, COS 100 (2 cr hrs) 1
Health and Exercise Studies (2 credits) (Including one Fitness and Wellness course)	2	Choose course(s) from the University Approved GEP course list for this category.
Total credit hours needed to complete GEP that are not satisfied as part of the Major/College requirements.	24 26 hours	
GEP Co-Requisites:		Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.
U.S. Diversity co-requisite (USD)	n/a	(Choose statement 1 or 4) 1
Global Knowledge co-requisite (GK)	n/a	(Choose statement 1 or 4) 1
Foreign Language Proficiency	n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:		Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)	X	Satisfied by College/Program Requirements
Technology Fluency	X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.	120 Total hours	As applicable, indicate here the overall GPA requirement for degree completion including course completion.

CURRICULUM REQUIREMENTS**Format B**

<u>Degree/Plan Title:</u> Bachelor of Arts in Physics	<u>Plan SIS Code:</u> 17PHYSBA
<u>Concentration/Subplan Title:</u> N/A	<u>Subplan SIS Code:</u> N/A
<u>Indicate requirements status:</u> Current: Proposed: X	<u>Proposed Effective Semester:</u> Summer 1 2019
<u>New Degree Audit required?</u> (Y or N) Y	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
<u>PHYSICS*</u> PY201 University Physics I PY202 University Physics II PY203 University Physics III PY252 Instrumental and Data Analysis PY401 Quantum Physics I PY411 Mechanics I PY413 Thermal Physics PY414 Electromagnetism I PY452 Advanced Physics Lab	4 (CP) 4 (CP) 4 (CP) 2 3 3 (CP) 3 3 3	Natural Sciences (4 credits) Communication in the Major
<u>Math/Statistics/Computing*</u> MA141 Calculus I MA241 Calculus II MA242 Calculus III PY251 Introduction to Scientific Computing Statistics (any ST300+ course) MA341 Applied Differential Equations I MA405 Linear Algebra Computing/Numerical Methods (CSC302, CSC427, CSC428, MA402, MA427, MA428, PY525)	4 (CP) 4 (CP) 4 (CP) 3 3 3 3 3	Mathematical Sciences (4 credits) Mathematical Sciences (4 credits) Technology Fluency
<u>Chemistry/Basic Sciences/Technical Electives*</u> CH101 Chemistry – A Molecular Science CH102 General Chemistry Laboratory Basic Sciences (BIO165, BIO181, BIO183, BME203, CH201, CH202, CH203, CH204, CH220, CH222, CHE205, GN301, MAE214, MEA101, MEA110, MEA200, MEA210, MEA215, MEA220, MSE200, MSE201, MSE203, NE202, PCC203, TE200) Technical Electives (Any course at the 300 through 500 levels with prefix: AA, AES, ANS, AEC, BCH, BIO, BAE, BEC, BMA, BME, BBS, BIT, MBA, BUS, CHE, CH, CE, CBS, CSC, CS, EGR, ECO, EC, ECE, E, EGM, ENT, EA, ES, ET, FIM, FW, FS, FSA, FOR, GN, GIS, ECG, ID, ISE, LOG, MEA, MSE, EMS, MA, MAE, MES, MT, MB, NW, NE, NTR, OR, PSE, PY, PHY, PB, PP, PCC, PO, SSC, ST, SMT, TC, TE, TMS, TT, TOX, WPS, ZO , excluding: MA302, MA303, MA331, MA341, MA405 , PY401, PY407, PY411, PY413, PY414, PY452, PY501, PY511, PY514, PY581, PY582)	3 1 3 13	Natural Sciences (3 credits)

At most one grade below C- is permitted in each of the above categories.		
*At most one passing grade below C- is allowed in each of the three categories: Physics, Math/Statistics/Computing, and Chemistry/Basic Sciences/Technical Electives.		
Advanced Writing (ENG331, ENG332, ENG333)	3	
Restricted Electives (courses from GEP Humanities GEP Social Science and GEP Visual and Performing Arts lists, and courses at the 200 through 400 levels with prefix: ECD, ECI, ED, EDP, ELM, ELP, EMS, TED, TDE, ACC, BUS, EC, M, MIE)	6	
Concentration Courses/Groups/Electives:		
Free Electives:	9	
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>	94 hours	
COLLEGE REQUIREMENTS:		
Orientation Course(s): COS 100		
Orientation co-requisite (Verify) : COS 100	2	Interdisciplinary Perspectives (2 hrs)
Other:		
Total credit hours under College Requirements:	20 Hours	

NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS

Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category may not be subset to require a specific course from the category list. Required courses must be listed in the Major/College requirements.

Specific courses should not be listed in any of the fields below other than ENG 101.

At least one of the following must be listed:

- 1 Choose course(s) from the University Approved GEP course list for this category.
- 2 Minimum requirements are satisfied by Major/College course requirements.
- 3 Major/College course requirement satisfies **X** credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category.
- 4 Co-requisite is satisfied by a Major/College course requirement.
- 5 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts.
- 6 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.

General Education Program Requirements: <i>Minimum 39-40 hrs</i>		Credit hours	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>			(Choose statement 1, 2 or 3) 2
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>			(Choose statement 1, 2 or 3) 2
English 101 (C- or better required) (4 credits)	4		ENG 101
Humanities (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	6		(Choose statement 1, 2 or 3) 1
Social Sciences (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	6		(Choose statement 1, 2 or 3) 1
Additional Breadth (3 credits) (Choose approach that is different from the approach of the Major) <i>Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.</i>	3		(Choose statement 5 or 6) 5
Interdisciplinary Perspectives (5 credits) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	3 5		(Choose statement 1, 2 or 3) 3, COS 100 (2 cr hrs) 1
Health and Exercise Studies (2 credits) (Including one Fitness and Wellness course)	2		Choose course(s) from the University Approved GEP course list for this category.
Total credit hours needed to complete GEP that are not satisfied as part of the Major/College requirements.	24 26 hours		
GEP Co-Requisites:			Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.
U.S. Diversity co-requisite (USD)	n/a		(Choose statement 1 or 4) 1
Global Knowledge co-requisite (GK)	n/a		(Choose statement 1 or 4) 1
Foreign Language Proficiency	n/a		Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:			Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)	X		Satisfied by College/Program Requirements
Technology Fluency	X		Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.	120 Total hours		As applicable, indicate here the overall GPA requirement for degree completion including course completion.

<u>Degree/Plan Title:</u> B.S. in Polymer and Color Chemistry		<u>Plan SIS Code:</u> 18PCCBS
<u>Concentration/Subplan Title:</u> ACS Certification		<u>Subplan SIS Code:</u> 18PCCACS
<u>Indicate requirements status:</u> Current:	Proposed: X	<u>Proposed</u> Effective Semester: Fall 2019
<u>New Degree Audit required?</u> (Y or N)		
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.		

[illegible]

Free Electives:	0	
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>	101 99 hours	
COLLEGE REQUIREMENTS:		
Orientation Course(s): T 101	2 1	
Other:	0	
Total credit hours under College Requirements:	102 100 Hours	

<u>NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS</u> <i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category <u>may not be subset</u> to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i> <i>Specific courses should not be listed in any of the fields below other than ENG 101.</i>		<u>At least one of the following must be listed:</u> 1 Choose course(s) from the University Approved GEP course list for this category. 2 Minimum requirements are satisfied by Major/College course requirements. 3 Major/College course requirement satisfies X credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category. 4 Co-requisite is satisfied by a Major/College course requirement. 5 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts. 6 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.
General Education Program Requirements: <i>Minimum 39-40 hrs</i>	Credit hours	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements
English 101 (C- or better required) (4 credits)	4	ENG 101
Humanities (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	6	(Choose statement 1, 2 or 3) Choose course(s) from the University Approved GEP course list for this category.
Social Sciences (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	3	(Choose statement 1, 2 or 3) Major/College course requirement satisfies 3 credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category.
Additional Breadth (3 credits) (Choose approach that is different from the approach of the Major) <i>Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.</i>	3	(Choose statement 5 or 6) Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts.
Interdisciplinary Perspectives (5 credits) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	2	(Choose statement 1, 2 or 3) Choose course(s) from the University Approved GEP course list for this category.
Health and Exercise Studies (2 credits) (Including one Fitness and Wellness course)	2	Choose course(s) from the University Approved GEP course list for this category.

Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.		20 hours	
GEP Co-Requisites:			<i>Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.</i>
U.S. Diversity co-requisite	(USD)	n/a	<i>(Choose statement 1 or 4)</i> Choose course(s) from the University Approved GEP course list for this category.
Global Knowledge co-requisite	(GK)	n/a	<i>(Choose statement 1 or 4)</i> Choose course(s) from the University Approved GEP course list for this category.
Foreign Language Proficiency		n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:			Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)		X	Satisfied by College/Program Requirements
Technology Fluency		X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.		122 120 Total hours	As applicable, indicate here the overall GPA requirement for degree completion including course completion.

(SEMESTER-BY-SEMESTER CURRICULUM DISPLAY)

Indicate display status: Current: Proposed: X ProposedEffective Semester: **Fall 2019**Degree/Plan Title: B.S. Polymer and Color Chemistry
Society CertifiedConcentration/Subplan Title: American ChemicalPlan SIS Code: 18PCCBSSubplan SIS Code: 18PCCACSNew Degree Audit required? (Y or N) **Y**Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR						
FALL SEMESTER			CREDITS	SPRING SEMESTER		CREDITS
T101	Intro. to the College of Textiles		1	PCC106	Polymer Synth. Sustain. & the Env.	3
PCC101	Intro. to Polymer & Color Chem.		2	CH221	Organic Chemistry I ¹	3
PCC104	Intro. to Poly. & Color Chem. Lab.		1	CH222	Organic Chemistry I Lab. ¹	1
MA141	Calculus I ^{1,A}		4	MA241	Calculus II ^{1,A}	4
CH101	Chemistry - A Molecular Sci. ^{1,B}		3	GEP	Humanities Group ^C	3
CH102	General Chemistry Lab. ^{1,B}		1	GEP	Advised Elective Group ^{2,D}	3
ENG101	Academic Writing and Research ^{1,H}		4			
			Total: 16			Total: 17
SOPHOMORE YEAR						
FALL SEMESTER			CREDITS	SPRING SEMESTER		CREDITS
TE200	Intro. to Polymer Science and Eng.		3	TMS211	Intro. to Fiber Science	3
CH223	Organic Chemistry II ¹		3			3
CH224	Organic Chemistry Lab. II ¹		1	CH201	Chemistry - A Quantitative Sci. ^{1,B}	1
MA242	Calculus III ¹		4	CH202	Quantitative Chemistry Lab. ^{1,B}	3
PY205	Phys. for Engr. and Sci. I ^{1,B}		3	PY208	Phys. for Engr. and Sci. II ^{1,B}	1
PY206	Phys. for Engr. and Sci. I Lab.		1	PY209	Phys. for Engr. and Sci. II Lab.	3
HES_***	Health and Exercise Studies Course ^E		1	MA341	Applied Differential Equations	
			Total: 16			Total: 14
JUNIOR YEAR						
FALL SEMESTER			CREDITS	SPRING SEMESTER		CREDITS
PCC461	Fiber Forming Polymers		3	PCC350	Intro to Color Science and Applications	2
PCC464	Fiber Forming Polymers Lab		1	PCC354	Color Science Lab.	1
PCC301	Tech. of Dyeing and Finishing		3	GEP	Humanities Group ^C	3
PCC304	Tech. of Dyeing and Finish. Lab.		1	CH433	Physical Chemistry II ¹	3
CH431	Physical Chemistry I ¹		3	ST 370	Probability and Statistics for Engineers	3
TMS212	Textile Product Formation		2	GEP	Interdisciplinary Perspectives Group ^G	2-3
			Total: 13			Total:14-15
SENIOR YEAR						
FALL SEMESTER			CREDITS	SPRING SEMESTER		CREDITS
PCC442	Phys. Chem. of Poly. & Color.		3	PCC412	Textile Chemical Analysis	2
PCC462	Charact. and Phys. Prop. of Polymers		3	PCC414	Textile Chemical Analysis Lab.	1
PCC4XX	PCC Elective ³		2-3	PCC4XX	PCC Elective ³	3
CH401	Syst. Inorganic Chem.		3	PCC471	Chem. Synth. & Nat. Biopolymers	3
PCC401	Impact of Industry on the Envir. and Soc		3	HES_***	Health and Exercise Studies Course ^E	1
				GEP	Additional Breadth (H/SS/VPA) List ^F	3
				GEP	Social Sciences Group ^D	3
			Total:14-15			Total: 16
Minimum Credit Hours Required for Graduation * : 120						

Major/Program Footnotes:¹ Must be completed with a grade of C- or higher.² Advised Elective – Select one from: ARE201, EC201, EC205³ PCC Elective – Select from: PCC402, PCC407, PCC410, PCC420, PCC466, PCC474, PCC490, PCC492, CH441, T 497.***General Education Program (GEP) requirements and GEP footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied.

University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

- 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 141, MA 241**
 - 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, CH 201, CH 202, PY 205/PY206, PY 208/PY 209**
 - 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:
 - 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: **ARE201, EC201, EC205**
 - E. Health & Exercise Studies** (2 credit hours – at least one 100-level Fitness and Wellness Course)
Choose from the University approved GEP Physical Education/Healthy Living 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 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: **PCC401**
 - H. Introduction to Writing** (4 credit hours satisfied by completing **ENG101** with a C- or better)
- The following Co-Requisites must be satisfied to complete the General Education Program requirements:
- I. U.S. Diversity**
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) if completed as part of the Major requirements may fulfill this requirement: **None**
 - J. Global Knowledge**
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) if 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.

FORMAT A
(SEMESTER-BY-SEMESTER CURRICULUM DISPLAY)

Indicate display status: Current: Proposed: X Proposed Effective Semester: **Fall 2019**

Degree/Plan Title: B.S. Polymer and Color Chemistry
Society Certified

Concentration/Subplan Title: American Chemical

Plan SIS Code: 18PCCBS

Subplan SIS Code: 18PCCACS

New Degree Audit required? (Y or N) **Y**

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR					
FALL SEMESTER		CREDITS	SPRING SEMESTER		CREDITS
T101	Intro. to the College of Textiles	2 1	PCC106	Polymer Synth. Sustain. & the Env.	3
PCC101	Intro. to Polymer & Color Chem.	2	CH221	Organic Chemistry I ¹	3
PCC104	Intro. to Poly. & Color Chem. Lab.	1	CH222	Organic Chemistry I Lab. ¹	1
MA141	Calculus I ^{1,A}	4	MA241	Calculus II ^{1,A}	4
CH101	Chemistry - A Molecular Sci. ^{1,B}	3	GEP	Humanities Group ^c	3
CH102	General Chemistry Lab. ^{1,B}	1	GEP	Advised Elective Group ^{2,D}	3
ENG101	Academic Writing and Research ^{1,H}	4			
		Total: 17 16			Total: 17
SOPHOMORE YEAR					
FALL SEMESTER		CREDITS	SPRING SEMESTER		CREDITS
TE200	Intro. to Polymer Science and Eng.	3	TMS211	Intro. to Fiber Science	3
CH223	Organic Chemistry II ¹	3			3
CH224	Organic Chemistry Lab. II ¹	1	CH201	Chemistry - A Quantitative Sci. ^{1,B}	1
MA242	Calculus III ¹	4	CH202	Quantitative Chemistry Lab. ^{1,B}	3
PY205	Phys. for Engr. and Sci. I ^{1,B}	3	PY208	Phys. for Engr. and Sci. II ^{1,B}	1
PY206	Phys. for Engr. and Sci. I Lab.	1	PY209	Phys. for Engr. and Sci. II Lab.	3
HES_***	Health and Exercise Studies Course ^E	1	MA341	Applied Differential Equations	
		Total: 16			Total: 14
JUNIOR YEAR					
FALL SEMESTER		CREDITS	SPRING SEMESTER		CREDITS
PCC461	Fiber Forming Polymers	3	PCC350	Intro to Color Science and Applications	2
PCC464	Fiber Forming Polymers Lab	1	PCC354	Color Science Lab.	1
PCC301	Tech. of Dyeing and Finishing	3	GEP	Humanities Group ^c	3
PCC304	Tech. of Dyeing and Finish. Lab.	1	CH433	Physical Chemistry II ¹	3
CH431	Physical Chemistry I ¹	3	ST 370	Probability and Statistics for Engineers	3
TMS212	Textile Product Formation	2	GEP	Interdisciplinary Perspectives Group ^G	2-3
TMS 214	Textile Product Formation Lab.	1			
		Total: 14 13			Total: 14-15
SENIOR YEAR					
FALL SEMESTER		CREDITS	SPRING SEMESTER		CREDITS

PCC442	Phys. Chem. of Poly. & Color.	3	PCC412	Textile Chemical Analysis	2
PCC462	Charact. and Phys. Prop. of Polymers	3	PCC414	Textile Chemical Analysis Lab.	1
PCC4XX	PCC Elective ³	2-3	PCC4XX	PCC Elective ³	3
CH401	Syst. Inorganic Chem.	3	PCC471	Chem. Synth. & Nat. Biopolymers	3
PCC401	Impact of Industry on the Envir. and Soc. ^G	3	HES_***	Health and Exercise Studies Course ^E	1
			GEP	Additional Breadth (H/SS/VPA) List ^F	3
			GEP	Social Sciences Group ^D	3
		Total:14-15			Total: 16

Minimum Credit Hours Required for Graduation* : 120

Major/Program Footnotes:

¹ Must be completed with a grade of C- or higher.

² Advised Elective – Select one from: ARE201, EC201, EC205

³ PCC Elective – Select from: PCC402, PCC407, PCC410, PCC420, PCC466, PCC474, PCC490, PCC492, CH441, **T 497**.

***General Education Program (GEP) requirements and GEP footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied.

University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

- 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 141, MA 241**
 - 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, CH 201, CH 202, PY 205/PY206, PY 208/PY 209**
 - 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:
 - 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: **ARE201, EC201, EC205**
 - E. Health & Exercise Studies** (2 credit hours – at least one 100-level Fitness and Wellness Course)
Choose from the University approved GEP Physical Education/Healthy Living 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 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: **PCC401**
 - H. Introduction to Writing** (4 credit hours satisfied by completing **ENG101** with a C- or better)
- The following Co-Requisites must be satisfied to complete the General Education Program requirements:**
- I. U.S. Diversity**
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) if completed as part of the Major requirements may fulfill this requirement: **None**
 - J. Global Knowledge**
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) if 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.

Revisions to Polymer and Color Chemistry Undergraduate Curriculum and Courses

September 2018

1. Curriculum Revision for all concentrations (shown in Format A and Format B)
 - a. Change T 101 from 2 credits to 1 credit (course contact hours and credit hours were reduced).
 - b. Drop TMS 214 (lab is no longer taught and was not thought to be relevant for students earning a BS in PCC).
 - c. Added T 497 to PCC electives list (allows credit for independent study from 1 to 6 credits).
2. Curriculum Revision for Medical Sciences and Science and Operations concentrations
 - a. Added a 2 credit hour PCC elective to bring curricula to 120 credits.
3. Curriculum Revision for ACS Certified concentration
 - a. Reduced one of the two PCC elective from 3 to 2 credit hours to meet the 120 credit hour requirement.

Attachments: Curriculum Displays Format A (proposed), Format A Current vs. Proposed, Format B Current vs. Proposed

18PCCBS Polymer and Color Chemistry: ACS Certified Format A proposed
 18PCCBS Polymer and Color Chemistry: ACS Certified Format A (current vs. proposed)
 18PCCBS Polymer and Color Chemistry: ACS Certified Format B (current vs. proposed)
 18PCCBS Polymer and Color Chemistry: Medical Sciences Format A proposed
 18PCCBS Polymer and Color Chemistry: Medical Sciences Format A (current vs. proposed)
 18PCCBS Polymer and Color Chemistry: Medical Sciences Format B (current vs. proposed)
 18PCCBS Polymer and Color Chemistry: Science and Operations Format A proposed
 18PCCBS Polymer and Color Chemistry: Science and Operations Format A (current vs. proposed)
 18PCCBS Polymer and Color Chemistry: Science and Operations Format B (current vs. proposed)

North Carolina State University

NC State University- Wilson College of Textiles- Textile Engineering, Chemistry and Science Department submitting updates to the following degree programs:

18PCCBS- 18PCCACS

Endorsed By:

Head, Department/Program

Date

Recommended By:

Chair, College Curriculum Committee

Date

Endorsed By:

College Dean

Date

Recommended By:

Vice Provost, DELTA (if DE degree/certificate)

Date

Recommended By:

Chair, University Courses & Curricula Committee

Date

Approved By:

Dean, (DASA or the Graduate School)

Date

Recommended By:

Dean's Council

Date

Approved By:

Executive Vice Chancellor and Provost

Date

Approved By:

Chancellor

Date

Indicate display status: Current: Proposed: X Proposed Effective Semester:

Degree/Plan Title: B.S. Textile Technology

Concentration/Subplan Title:

Plan SIS Code: 18TEXTECHBS

Subplan SIS Code:

New Degree Audit required? (Y or N)

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
CH 101 Chemistry-Molecular Sci ^{B 2}	3	MA 231 Calculus for Life and Mgmt Sci B ^{B 1 2}	3
CH 102 General Chemistry Lab ^{B 2}	1	MA 132 Comp Math for Life & Mgmt ^{A 1}	1
ENG 101 Acad Writing & Research ^H	4	PY 211 College Physics I ^{B 1}	4
MA 131 Calc for Life & Mgmt Sci A ^{A 1 2}	3	TMS 211 Intro to Fiber Science	3
TT 105 Intro to Textile Technology	3	FTM 217 Business of Technical Textiles	3
T 101 Intro to the College of Textiles	1	HES*** Health and Exercise Studies ^E	1
	<i>Total:15</i>		<i>Total:15</i>
SOPHOMORE YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
EC 205 Fund of Economics ^D	3	ST 361 Intro to Statistics ^A	3
PY 212 College Physics II ^{B 1}	4	GEP Humanities Elective ^C	3
TE 200 Poly Sci & Engr	4	TT 351 Woven Fabric Technology	3
TT 327 Yarn Prod & Properties	3	TT 341 Knitted Fabric Technology	3
TT 380 Mgmt & Ctrl Text & App Syst	4	Advised Elective ³	3
	<i>Total:17</i>		<i>Total:15</i>
JUNIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
TT 305 Intro Nonwoven Products & Processes	3	TT 331 Performance Evaluation of Textile Mat	4
TT 481 Design Tech of Technical Textiles	3	MT 336 Biotextile Product Development	3
PCC 302 Technology of Textile Wet Processing	4	TT 405 Advanced Nonwoven Processes	3
GEP Interdisc. Perspectives Elective ^G	3	GEP Additional Breadth Elective ^F	3
Advised Elective ³	3	Advised Elective ³	3
	<i>Total:16</i>		<i>Total:16</i>
SENIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
TT 401 Senior Project I	4	TT 402 Senior Project II	4
GEP Humanities Elective ^C	3	GEP Social Science Elective ^G	3
GEP Interdisc. Perspectives Elective ^G	2-3	TT 431 Quality Management and Control	3
HES_***Health & Exercise Studies Course ^E	1	Advised Elective ³	3
Advised Elective ³	3		
Advised Elective	3		
	<i>Total:16-17</i>		<i>Total:13</i>
Minimum Credit Hours Required for Graduation : 122-123			

Major/Program Footnotes:

1. Acceptable substitutions: MA 141 for MA 131 and 132, MA 241 for MA 231, (PY 205 and PY 206) for PY 211, (PY 208 and PY 209) for PY 212. ST 361 or ST 370 for ST 311.
2. Must be completed with a grade of C- or higher for major requirements: CH 101, CH 102, MA 131, MA 231.
3. Advised Elective: Students are encouraged to select courses that will fulfill an academic minor. Courses should enhance students' career objectives and must be approved by faculty advisor and the TT program director. Listed below are recommended courses: Any, FTM, TT, TE, and MT course at the 300 level, T 497, TE 110, TE 440, CH 220.

*** General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

- 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 131/132 or MA 141, MA 231 or MA 241, ST 311, or ST 361, or ST 370
 - 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, PY 211 or (PY 205 and PY 206), PY 212 or (PY 208 and PY 209)
 - 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:
 - 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: EC 205 fulfills 3 hours of this requirement. Choose 3 hours from the Soc Sci GEP course list in a discipline other than Economics
 - E. **Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)
Choose from the University approved GEP Physical Education/Healthy Living course list.
 - F. **Additional Breadth** - (3 credit hours to be selected from the following checked University approved GEP course lists)
_____ 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:
 - 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:
 - K. **Foreign Language proficiency** - Proficiency at the FL_102 level is required for graduation.

Indicate display status: Current: Proposed: X Proposed Effective Semester: **Fall 2019**

Degree/Plan Title: B.S. Textile Technology

Concentration/Subplan Title:

Plan SIS Code: 18TEXTECHBS

Subplan SIS Code:

New Degree Audit required? (Y or N) **Y**

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
CH 101 Chemistry-Molecular Sci ^{B2}	3	MA 231 Calculus for Life and Mgmt Sci B ^{A1,2}	3
CH 102 General Chemistry Lab ^{B2}	1	MA 132 Comp Math for Life & Mgmt ^{A1}	1
ENG 101 Acad Writing & Research ^H	4	PY 211 College Physics I ^{B1}	4
MA 131 Calc for Life & Mgmt Sci A ^{A1,2}	3	TMS 211 Intro to Fiber Science	3
TT 105 Intro to Textile Technology	3	FTM 217 Business of Technical Textiles	3
T 101 Intro to the College of Textiles	1	HESF*** Health and Exercise Studies Course ^E	1
	<i>Total:15</i>		<i>Total:15</i>
SOPHOMORE YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
EC 205 Fund of Economics ^{B1}	3	ST 311 ST-361 Intro to Statistics ^{A1}	3
PY 212 College Physics II ^{B1}	4	GEP Humanities Elective ^C	3
TE 200 Poly Sci & Engr	3	TT 351 Woven Fabric Technology	3
TT 327 Yarn Prod & Properties	4	TT 341 Knitted Fabric Technology	3
TT 380 Mgmt & Ctrl Text & App Syst	3	Advised Elective ³	3
	<i>Total:17</i>		<i>Total:15</i>
JUNIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
TT 404 TT-305 Intro Nonwoven Products & Processes	3	TT 331 Performance Evaluation of Textile Mat	4
TT 481 Design Tech of Technical Textiles	3	MT 336 Biotextile Product Development	3
PCC 302 Technology of Textile Wet Processing	4	GEP Additional Breadth Elective ^F	3
GEP Interdisc. Perspectives Elective ^G	3	Advised Elective ³	3
Advised Elective ³		TT-405 Advanced Nonwoven Processes	3
		Advised Elective ³	
	<i>Total:16</i>		<i>Total:16</i>
SENIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
TT 401 Senior Design Project I	4	TT 402 Senior Design Project II	4
GEP Humanities Elective ^C	3	GEP Social Science Elective ^G	3
GEP Interdisc. Perspectives Elective ^G	2-3	TT 431 Quality Management and Control	3
HES_***Health & Exercise Studies Course ^E	1	Advised Elective ³	3
Advised Elective ³	3		
Advised Elective³	3		
	<i>Total: -16</i>		<i>Total:13</i>
	13		
Minimum Credit Hours Required for Graduation: 122-123 120			

Major/Program Footnotes:

1. Acceptable substitutions: MA 141 for (MA 131 and 132); MA 241 for MA 231; (PY 205 and PY 206) for PY 211; (PY 208 and PY 209) for PY 212; ~~ST-361~~ or ST 370 for ST 311; (~~EC 201~~ or ARE 201) for EC 205.
2. Must be completed with a grade of C- or higher for major requirements: CH 101, CH 102, MA 131, ~~MA-231~~

3. Advised Electives (18 credit hours) Some course may have prerequisite requirements. Students are encouraged to select courses that will fulfill an academic minor. Courses should enhance students' career objectives and must be approved by faculty advisor and the TT program director. Listed below are recommended courses: ~~Any FTM, TT, TE, and MT course at the 300 level,~~ TT 405, TT 407, TT 408, TT 480, TT 485, TT 486, MT 381, T 497, TE 110, TE 440, TT(TE) 533, TE 550, TE 551, TE 570, CH 220, PCC 401, FTM 310, FTM 481, FTM 484 FTM 487.

General Education Program (GEP) requirements and GEP Footnotes:

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

^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 131/132 or MA 141, MA 231 or MA 241, ~~ST 361~~ or ST 311 or ST 370**

^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, PY 211 or (PY 205 and PY 206), PY 212 or (PY 208 and PY 209)**

^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:

^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: : **EC 205 or EC 201 or ARE 201 fulfills 3 hours of this requirement. Choose 3 hours from the Soc Sci GEP course list in a discipline other than Economics**

^E **Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)

Choose from the University approved GEP Physical Education/Healthy Living course list.

^F **Additional Breadth** - (3 credit hours to be selected from the following checked University approved GEP course lists)

_____ 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:

^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:

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

Revisions to Textile Technology Undergraduate Curriculum and Courses September 2018

1. Curriculum Revision for all concentrations (shown in Format A and Format B)

- a. Remove requirement of “C-” for MA 231 from all concentrations. This requirement was added to the curriculum displays in error. CODA “C-”requirements should match with curriculum “C-”requirements. approved
 - b. Add as an allowable substitution (EC 201 or ARE 201) for EC 205 for all concentrations.
 - c. Delete ST 361 for all concentrations, as the course is not offered.
 - d. In order to meet the 120 credit hour limit for all programs, delete TT 305 and TT 405 as required courses and replace with a new course TT 404.
 - e. Replace general listing of advised electives with listings of specific courses.
- 2. Curriculum Revisions for Supply Chain Operations concentration
 - . No additional changes
 - 3. Curriculum Revision for Medical Textiles concentration
 - . Reduced medical textiles electives from 12 to 11 credit hours.
 - 4. Curriculum Revisions for Technical Textiles concentration
 - . Require calculus I & II and physics for engineers and scientists I & II, as these better prepare students in this concentration.
 - a. Moved required MSE course to list a technical textile electives.
 - b. Expanded the list technical textile electives to include course that may better prepare students for graduate education

Attachments: Curriculum Displays Format A, Format A Current vs. Proposed, Format B

18TXTECHBS Textile Technology: Undesignated Format A
 18TXTECHBS Textile Technology: Undesignated Format B
 18TXTECHBS Textile Technology: Undesignated Current vs Proposed
 18TXTECHBS Textile Technology: Medical Textiles Format A
 18TXTECHBS Textile Technology: Medical Textiles Format B
 18TXTECHBS Textile Technology: Medical Textiles Current vs Proposed
 18TXTECHBS Textile Technology: Supply Chain Operations Format A
 18TXTECHBS Textile Technology: Supply Chain Operations Format B
 18TXTECHBS Textile Technology: Supply Chain Operations Current vs. Proposed
 18TXTECHBS Textile Technology: Technical Textiles Format A
 18TXTECHBS Textile Technology: Technical Textiles Format B
 18TXTECHBS Textile Technology: Technical Textiles Current vs. Proposed

North Carolina State University

NC State University- Wilson College of Textiles- Textile Engineering, Chemistry and Science Department submitting updates to the following degree programs:

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
<u>Math and Statistics</u> MA 131/132 or MA 141 MA 231 or MA 241 ST 311 or ST 361 <u>Sciences</u> CH 101, CH 102 PY 211 or (PY 205 and PY 206) PY 212 or (PY 208 and PY 209) <u>Humanities / Social Sciences</u> EC 205 Textile Technology Core TT 305, TT 331, TT 341, TT 351, TT 380, TT 431, TT 401, TT 402, TT 481, TT 405, MT 366 Textile Technology Foundation MT 105 or TT 105, TT 327, TE 200, PCC 302, TMS 211, FTM 217 CH 101, CH 102, MA 131 or MA 141 must be completed with grade Of C- or higher for matriculation	 <div style="text-align: center;">4</div> <div style="text-align: center;">3</div> <div style="text-align: center;">3</div> <div style="text-align: center;">4</div> <div style="text-align: center;">4</div> <div style="text-align: center;">4</div> <div style="text-align: center;">3</div> <div style="text-align: center;">36</div> <div style="text-align: center;">20</div>	Mathematics (6 hours) Natural Sciences (7 hours) Social Sciences (3 hours)
<u>Concentration Courses/Groups/Electives:</u> Advised Electives: Select 18 credit hours in consultation with the advisor.	18	
<u>Free Electives:</u>	0	
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>	99 hours	

COLLEGE REQUIREMENTS:		
Orientation Course(s): T 101	1	
Other:	0	
Total credit hours under College Requirements:	1 Hours	

NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS		At least one of the following must be listed:
<p><i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category <u>may not be subset</u> to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i></p> <p>Specific courses should not be listed in any of the fields below other than ENG 101.</p>		<ol style="list-style-type: none"> 1 Choose course(s) from the University Approved GEP course list for this category. 2 Minimum requirements are satisfied by Major/College course requirements. 3 Major/College course requirement satisfies <u>X</u> credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category. 4 Co-requisite is satisfied by a Major/College course requirement. 5 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts. 6 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.
General Education Program Requirements: Minimum 39-40 hrs	Credit hours	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements
English 101 (C- or better required) (4 credits)	4	ENG 101
Humanities (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	6	(Choose statement 1, 2 or 3) Choose course(s) from the University Approved GEP course list for this category.
Social Sciences (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	3	(Choose statement 1, 2 or 3) Major/College course requirement satisfies 3 credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category.
Additional Breadth (3 credits) (Choose approach that is different from the approach of the Major) <i>Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.</i>	3	(Choose statement 5 or 6) Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts.
Interdisciplinary Perspectives (5 credits) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	5	(Choose statement 1, 2 or 3) Choose course(s) from the University Approved GEP course list for this category.
Health and Exercise Studies (2 credits) (Including one Fitness and Wellness course)	2	Choose course(s) from the University Approved GEP course list for this category.
Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.	23 hours	
GEP Co-Requisites:		<i>Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.</i>
U.S. Diversity co-requisite (USD)	n/a	(Choose statement 1 or 4)

		Choose course(s) from the University Approved GEP course list for this category.
Global Knowledge co-requisite (GK)	n/a	<i>(Choose statement 1 or 4)</i> Choose course(s) from the University Approved GEP course list for this category.
Foreign Language Proficiency	n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:		Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)	X	Satisfied by College/Program Requirements
Technology Fluency	X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.	123 Total hours	As applicable, indicate here the overall GPA requirement for degree completion including course completion.

FORMAT A
(SEMESTER-BY-SEMESTER CURRICULUM DISPLAY)

Indicate display status: Current: Proposed: X Proposed Effective Semester:

Degree/Plan Title: B.S. Textile Technology

Concentration/Subplan Title: Technical Textiles

Plan SIS Code: 18TEXTECHBS

Subplan SIS Code: 18TEXTECHTT

New Degree Audit required? (Y or N)

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
CH 101 Chemistry-Molecular Sci ^{B 2}	3	MA 231 Calculus for Life and Mgmt Sci B ^{B 1 2}	3
CH 102 General Chemistry Lab ^{B 2}	1	MA 137 Comp Math for Life & Mgmt ^{A 1}	1
ENG 101 Acad Writing & Research ^H	4	PY 211 College Physics I ^{B 1}	4
MA 131 Calc for Life & Mgmt Sci A ^{A 1 2}	3	TMS 211 Intro to Fiber Science	3
TT 105 Intro to Textile Technology	3	FTM 217 Business of Technical Textiles	3
T 101 Intro to the College of Textiles	1	HESF*** Health and Exercise Studies ^E	1
	<i>Total:15</i>		<i>Total:15</i>
SOPHOMORE YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
EC 205 Fund of Economics ^D	3	ST 311 Intro to Statistics ^A	3
PY 212 College Physics II ^{B 1}	4	TE 200 Poly Sci & Engr	3
TT 327 Yarn Prod & Properties	3	TT 351 Woven Fabric Technology	3
TT 380 Mgmt & Ctrl Text & App Syst	4	TT 341 Knitted Fabric Technology	3
GEP Humanities Elective ^C	3	Technical Textiles Elective ³	3
	<i>Total:17</i>		<i>Total:15</i>
JUNIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
TT 305 Intro Nonwoven Products & Processes	3	TT 331 Performance Evaluation of Textile Mat	4
TT 481 Design Tech of Technical Textiles	3	MT 336 Biotextile Product Development	3
PCC 302 Technology of Textile Wet Processing	4	TT 405 Advanced Nonwoven Processes	3
GEP Social Science Elective ^D	3	GEP Additional Breadth Elective ^F	3
MSE 201 Struct & Prop of Engr Mat	3	MSE 255 Exper Methods for Struct Analy of Mat	2
	<i>Total:16</i>		<i>Total:15</i>
SENIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
TT 401 TT Senior Design I	4	TT 402 TT Senior Design II	4
GEP Humanities Elective ^C	3	GEP Interdisc. Perspectives Elective ^G	3
GEP Interdisc. Perspectives Elective ^G	2-3	TT 431 Quality Management and Control	3
HESF***Health & Exercise Studies Course ^E	1	Technical Textile Elective ³	3
Technical Textiles Elective ³	3		
Technical Textiles Elective	3		
	<i>Total:16-17</i>		<i>Total:13</i>
Minimum Credit Hours Required for Graduation * : 121			

Major/Program Footnotes:

1. Acceptable substitutions: MA 141 for MA 131 and 132, MA 241 for MA 231, (PY 205 and PY 206) for PY 211, (PY 208 and PY 209) for PY 212. ST 361 or ST 370 for ST 311.
2. Must be completed with a grade of C- or higher for major requirements: CH 101, CH 102, MA 131, MA 231.

3. Technical Textiles Elective: Select 12 credit hours from the following courses: CH 220, MSE 300, (requires C or better in CH 101), MSE 380, PCC 461 and PCC 464, TT 407, TT 408, TT 504, TT(TE) 533, TE 550, TE 551.

***General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

- 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 131/132 or MA 141, MA 231 or MA 241, ST 311, or ST 361, or ST 370
- 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, PY 211 or (PY 205 and PY 206), PY 212 or (PY 208 and PY 209)
- 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:
- 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: : EC 205 fulfills 3 hours of this requirement. Choose 3 hours from the Soc Sci GEP course list in a discipline other than Economics
- E. **Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)
Choose from the University approved GEP Physical Education/Healthy Living course list.
- F. **Additional Breadth** - (3 credit hours to be selected from the following checked University approved GEP course lists)
_____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:
- 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:

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

FORMAT A

(SEMESTER-BY-SEMESTER CURRICULUM DISPLAY)

Indicate display status: Current: Proposed: X **Proposed** Effective Semester: **Fall 2019**
 Degree/Plan Title: B.S. Textile Technology Concentration/Subplan Title: Tech
 Plan SIS Code: 18TEXTCHBS Subplan SIS Code: 18TEXTCHTT
 New Degree Audit required? (Y or N)
 Critical Path Courses - Identify using the code (CP) which courses are considered critical major requirements that are predictive of student success in a given program/plan. Place the course.

Current vs Proposed

NOTE: Same- black; Added- blue; Deleted- red

FRESHMAN YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
CH 101 Chemistry-Molecular Sci ^{B2}	3	MA 241 Calculus II ^{A1}	4
CH 102 General Chemistry Lab ^{B2}	1	PY 205 Physics for Engineers and Scientists I ^{B1}	3
ENG 101 Acad Writing & Research ^H	4	PY 206 Physics I Laboratory ^{B1}	1
MA 141 Calculus 1 ^{A12}	4	TMS 211 Intro to Fiber Science	3
TT 105 Intro to Textile Technology	3	FTM 217 Business of Technical Textiles	3
T 101 Intro to the College of Textiles	2 1	HESF*** Health and Exercise Studies ^E	1
MA 131 Calc for Life & Mgmt Sci A^{A12}	3	MA 231 Calculus for life and Mgmt Sci^{B12}	3
		MA 131 Comp Math for Life & Mgmt^{A1}	1
		PY 211 College Physics I^{B1}	4
	Total:- 16		Total:15
SOPHOMORE YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
EC 205 Fund of Economics ^D	3	ST 311 Intro to Statistics ^{A1}	3
PY 208 Physics for Engineers and Scientists II ^{B1}	3	TE 200 Poly Sci & Engr	3
PY 209 Physics II Laboratory ^{B1}	1	TT 351 Woven Fabric Technology	3
TT 327 Yarn Prod & Properties	3 4	TT 341 Knitted Fabric Technology	3
TT 380 Mgmt & Ctrl Text & App Syst	4 3	Technical Textiles elective ³	3
GEP Humanities Elective ^C	3		
PY 212 College Physics II^{B1}	4		
	Total:17		Total:15
JUNIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
TT 404 Intro Nonwoven Products & Processes	3	TT 331 Performance Evaluation of Textile Mat	4
TT 481 Design Tech of Technical Textiles	3	MT 336 Biotextile Product Development	3
PCC 302 Technology of Textile Wet Processing	4	GEP Additional Breadth Elective ^F	3
GEP Social Science Elective ^D	3	Technical Textiles elective ³	3
Technical Textiles elective ³	3	Technical Textiles elective ³	2-3
TT 305 Nonwoven Fabric Formation	3	TT 405 Advanced Nonwoven Processes	3
MSE 201 Struct & Prop of Engr Mat	3	MSE 255 Exper Methods for Struct Analy of Mat	2
	Total:16		Total: 15
SENIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
TT 401 TT Senior Design I	4	TT 402 TT Senior Design II	4
GEP Humanities Elective ^C	3	GEP Interdisc. Perspectives Elective ^G	3
GEP Interdisc. Perspectives Elective ^G	2-3	TT 431 Quality Management and Control	3
HES_***Health & Exercise Studies Course ^E	1	Technical Textiles elective ³	3
Technical Textiles elective ³	3		
Technical Textiles elective³	3		
	Total: 16 13		Total:13
Minimum Credit Hours Required for Graduation : 121 120			

Major/Program Footnotes:

- Acceptable substitutions: (MA 131 and 132) for MA 141; MA 231 for MA 241; PY 211 for (PY 205 and PY 206); PY 212 for (PY 208 and PY 209); ST 370 for ST 311; EC201 or ARE 201 for EC 205.
- Must be completed with a grade of C- or higher for major requirements: CH 101, CH 102, MA ~~131~~ 141.
- Technical Textiles Electives. Some course may have prerequisite requirements. Select ~~12~~ 17 credit hours from the following courses: CH 220, MSE 300, (requires C or better in CH 101), MSE 201, MSE 255 MSE 380, MSE 455, T 497, TT 405, ~~TT 406~~, TT 407, TT 408, TT 504, TE 463, TE 466, TT(TE) 533, TE 550, TE 551, TE 570, PCC 106, PCC 301 and PCC 304, PCC 350, PCC 402, PCC 461 and PCC 464, PCC 466, PCC 471,

<u>Degree/Plan Title:</u> B.S. in Textile Technology	<u>Plan SIS Code:</u> 18TEXTECHBS
<u>Concentration/Subplan Title:</u> Technical Textiles	<u>Subplan SIS Code:</u> 18TEXTECHTT
<u>Indicate requirements status:</u> Current: Proposed: X <u>Proposed</u> Effective Semester:	
<u>New Degree Audit required?</u> (Y or N)	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
<u>Math and Statistics</u> MA 131/132 or MA 141 MA 231 or MA 241 ST 311 or ST 361 <u>Sciences</u> CH 101, CH 102 PY 211 or (PY 205 and PY 206) PY 212 or (PY 208 and PY 209) <u>Humanities / Social Sciences</u> EC 205 Textile Technology Core TT 305, TT 331, TT 341, TT 351, TT 380, TT 431, TT 401, TT 402, TT 481, TT 405, MT 366 Textile Technology Foundation MT 105 or TT 105, TT 327, TE 200, PCC 302, TMS 211, FTM 217 CH 101, CH 102, MA 131 or MA 141 must be completed with grade Of C- or higher for matriculation	4 3 3 4 4 4 3 36 20	Mathematics (6 hours) Natural Sciences (7 hours) Social Sciences (3 hours)
<u>Concentration Courses/Groups/Electives:</u> Technical Textiles Required Courses- MSE 201, MSE 255 Technical Textiles Elective Courses- Select 12 credit hours from the following courses: CH 220, MSE 300, (requires C or better in CH 101), MSE 380, PCC 461 and PCC 464, TT 407, TT 408, TT 504, TT(TE) 533, TE 550, TE 551	5 12	

Free Electives:	0	
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>	98 hours	
COLLEGE REQUIREMENTS:		
Orientation Course(s): T 101	1	
Other:	0	
Total credit hours under College Requirements:	1 Hours	

<u>NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS</u> <i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category <u>may not be subset</u> to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i> <i>Specific courses should not be listed in any of the fields below other than ENG 101.</i>		<u>At least one of the following must be listed:</u> 1 Choose course(s) from the University Approved GEP course list for this category. 2 Minimum requirements are satisfied by Major/College course requirements. 3 Major/College course requirement satisfies X credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category. 4 Co-requisite is satisfied by a Major/College course requirement. 5 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts. 6 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.
General Education Program Requirements: <i>Minimum 39-40 hrs</i>	Credit hours	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements
English 101 (C- or better required) (4 credits)	4	ENG 101
Humanities (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	6	(Choose statement 1, 2 or 3) Choose course(s) from the University Approved GEP course list for this category.
Social Sciences (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	3	(Choose statement 1, 2 or 3) Major/College course requirement satisfies 3 credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category.
Additional Breadth (3 credits) (Choose approach that is different from the approach of the Major) <i>Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.</i>	3	(Choose statement 5 or 6) Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts.
Interdisciplinary Perspectives (5 credits) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	5	(Choose statement 1, 2 or 3) Choose course(s) from the University Approved GEP course list for this category.
Health and Exercise Studies (2 credits) (Including one Fitness and Wellness course)	2	Choose course(s) from the University Approved GEP course list for this category.

Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.		23 hours	
GEP Co-Requisites:			<i>Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.</i>
U.S. Diversity co-requisite	(USD)	n/a	(Choose statement 1 or 4) Choose course(s) from the University Approved GEP course list for this category.
Global Knowledge co-requisite	(GK)	n/a	(Choose statement 1 or 4) Choose course(s) from the University Approved GEP course list for this category.
Foreign Language Proficiency		n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:			Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)		X	Satisfied by College/Program Requirements
Technology Fluency		X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.		122 Total hours	As applicable, indicate here the overall GPA requirement for degree completion including course completion.

FORMAT A
(SEMESTER-BY-SEMESTER CURRICULUM DISPLAY)

Indicate display status: Current: Proposed: X Proposed Effective Semester:

Degree/Plan Title: B.S. Textile Technology

Concentration/Subplan Title: Supply Chain Management

Plan SIS Code: 18TEXTTECHBS

Subplan SIS Code: 18TEXTTECHSC

New Degree Audit required? (Y or N)

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
CH 101 Chemistry-Molecular Sci	3	MA 231 Calculus for Life and Mgmt Sci B	3
CH 102 General Chemistry Lab	1	MA 137 Comp Math for Life & Mgmt	1
ENG 101 Acad Writing & Research	4	PY 211 College Physics I	4
MA 131 Calc for Life & Mgmt Sci A	4	TMS 211 Intro to Fiber Science	3
TT 105 Intro to Textile Technology	3	FTM 217 Business of Technical Textiles	3
T 101 Intro to the College of Textiles	1	HESF*** Health and Exercise Studies	1
	<i>Total:16</i>		<i>Total:15</i>
SOPHOMORE YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
EC 205 Fund of Economics	3	ST 311 Intro to Statistics	3
PY 212 College Physics II	4	TE 200 Poly Sci & Engr	3
TT 327 Yarn Prod & Properties	4	TT 351 Woven Fabric Technology	3
TT 380 Mgmt & Ctrl Text & App Syst	3	TT 341 Knitted Fabric Technology	3
GEP Humanities Elective	3	ACC 210 Concepts of Financial Reporting	3
	<i>Total:17</i>		<i>Total:15</i>
JUNIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
TT 305 Intro Nonwoven Products & Processes	3	TT 331 Performance Evaluation of Textile Mat	4
TT 481 Design Tech of Technical Textiles	3	MT 336 Biotextile Product Development	3
PCC 302 Technology of Textile Wet Processing	4	TT 405 Advanced Nonwoven Processes	3
GEP Social Science Elective	3	GEP Additional Breadth Elective	3
TT 480 Op Mgt Decisions for Textiles	3	TT 486 Supply Chain Mgt in Textile Industry	3
	<i>Total:16</i>		<i>Total:16</i>
SENIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
TT 401 TT Senior Design I	4	TT 402 TT Senior Design II	4
GEP Humanities Elective	3	GEP Interdisc. Perspectives Elective	3
GEP Interdisc. Perspectives Elective	2-3	TT 431 Quality Management and Control	3
HESF***Health & Exercise Studies Course	1	Textile Supply Chain Oper Elective	3
BUS 320 Financial Management	3		
Textile Supply Chain Oper Elective	3		
	<i>Total:16-17</i>		<i>Total:13</i>
Minimum Credit Hours Required for Graduation*: 123			

Major/Program Footnotes:

1. Acceptable substitutions: MA 141 for MA 131 and 132, MA 241 for MA 231, (PY 205 and PY 206) for PY 211, (PY 208 and PY 209) for PY 212. ST 361 or ST 370 for ST 311.

2. Must be completed with a grade of C- or higher for major requirements: CH 101, CH 102, MA 131, MA 231.
 3. Textile Supply Chain Operations Elective: Select 6 credit hours from TT 407, TT 408, TT 485, MT 366, MT 381, PCC 401, TE 110, TE 440, FTM 310, FTM 481, FTM 484, FTM 487, TT(TE) 533, TE 550, TE 551.

General Education Program (GEP) requirements and GEP Footnotes:

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

^{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 131/132 or MA 141, MA 231 or MA 241, ST 311, or ST 361, or ST 370**

^{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, PY 211 or (PY 205 and PY 206), PY 212 or (PY 208 and PY 209)**

^{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: **EC 205**

^{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: : **EC 205 fulfills 3 hours of this requirement. Choose 3 hours from the Soc Sci GEP course list in a discipline other than Economics**

^{E.} **Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)

Choose from the University approved GEP Physical Education/Healthy Living course list.

^{F.} **Additional Breadth** - (3 credit hours to be selected from the following checked University approved GEP course lists)

_____ 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:

^{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:

^{K.} **Foreign Language proficiency** - Proficiency at the FL_102 level is required for graduation.

FORMAT A
(SEMESTER-BY-SEMESTER CURRICULUM DISPLAY)

Indicate display status: Current: Proposed: X Proposed Effective Semester: **Fall 2019**

Degree/Plan Title: B.S. Textile Technology

Concentration/Subplan Title: Supply Chain Management

Plan SIS Code: 18TEXTECHBS

Subplan SIS Code: 18TEXTECHSC

New Degree Audit required? (Y or N) **Y**

Current vs Proposed

NOTE: Same- black; Added- blue; Deleted-

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
CH 101 Chemistry-Molecular Sci ^{B 2}	3	MA 231 Calculus for Life and Mgmt Sci B ^{A 1}	3
CH 102 General Chemistry Lab ^{B 2}	1	MA 132 Comp Math for Life & Mgmt ^{A 1}	1
ENG 101 Acad Writing & Research ^H	4	PY 211 College Physics I ^{B 1}	4
MA 131 Calc for Life & Mgmt Sci A ^{A 1 2}	3	TMS 211 Intro to Fiber Science	3
TT 105 Intro to Textile Technology	3	FTM 217 Business of Technical Textiles	3
T 101 Intro to the College of Textiles	1	HESF*** Health and Exercise Studies ^E	1
	Total:15		Total:15
SOPHOMORE YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
EC 205 Fund of Economics ^{D 1}	3	ST 311 Intro to Statistics ^{A 1}	3
PY 212 College Physics II ^{B 1}	4		3
TT 327 Yarn Prod & Properties	4	TE 200 Poly Sci & Engr	3
TT 380 Mgmt & Ctrl Text & App Syst	3	TT 351 Woven Fabric Technology	3
GEP Humanities Elective ^C	3	TT 341 Knitted Fabric Technology	3
		ACC 210 Concepts of Financial Reporting	
	Total:17		Total:15
JUNIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
TT 404 TT 305 Intro Nonwoven Products & Processes	3	TT 331 Performance Evaluation of Textile Mat	4
	3	MT 336 Biotextile Product Development	3
TT 481 Design Tech of Technical Textiles	4	GEP Additional Breadth Elective ^F	3
PCC 302 Technology of Textile Wet Processing	3	TT 486 Supply Chain Mgt in Textile Industry	3
GEP Social Science Elective ^D	3	GEP Humanities Elective ^C	3
TT 480 Op Mgt Decisions for Textiles		TT 405 Advanced Nonwoven Processes	3
	Total:16		Total:16
SENIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
TT 401 TT Senior Design I	4	TT 402 TT Senior Design II	4
GEP Interdisc. Perspectives Elective ^G	2-3	GEP Interdisc. Perspectives Elective ^G	3
HES_***Health & Exercise Studies Course ^E	1	TT 431 Quality Management and Control	3
BUS 320 Financial Management	3	Textile Supply Chain Oper Elective ³	3
Textile Supply Chain Oper Elective ³	3		
GEP Humanities Elective ^E	3		
	Total:-16-13		Total:13
Minimum Credit Hours Required for Graduation * : 123 120			

Major/Program Footnotes:

1. Acceptable substitutions: MA 141 for (MA 131 and 132); MA 241 for MA 231; (PY 205 and PY 206) for PY 211; (PY 208 and PY 209) for PY 212; ~~ST 361~~ or ST 370 for ST 311; (EC 201 or ARE 201) for EC 205.

2. Must be completed with a grade of C- or higher for major requirements: CH 101, CH 102, MA 131.

3. Textile Supply Chain Operations Electives. *Some course may have prerequisite requirements.* Select 6 credit hours ~~from any MT or TT courses 300 level or higher~~ the following course: TT 405, TT 407, TT 408, TT 485, MT 381, T 497, PCC 401, TE 110, TE 440, TT(Te) 533, TE 550, TE 551, TE 570, FTM 310, FTM 481, FTM 484, FTM 487.

*** General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

- 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 131/132 or MA 141; MA 231 or MA 241; ST 311 or ST 370.
 - 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, PY 211 or (PY 205 and PY 206), PY 212 or (PY 208 and PY 209)
 - 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:
 - 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: : EC 205 or EC 201 or ARE 201 fulfills 3 hours of this requirement. Choose 3 hours from the Soc Sci GEP course list in a discipline other than Economics
 - E. **Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)
Choose from the University approved GEP Physical Education/Healthy Living course list.
 - F. **Additional Breadth** - (3 credit hours to be selected from the following checked University approved GEP course lists)
_____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:
 - 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:
 - K. **Foreign Language proficiency** - Proficiency at the FL_102 level is required for graduation.

<u>Degree/Plan Title:</u> B.S. in Textile Technology	<u>Plan SIS Code:</u> 18TEXTECHBS
<u>Concentration/Subplan Title:</u> Supply Chain Operations	<u>Subplan SIS Code:</u> 18TEXTECHSC
<u>Indicate requirements status:</u> Current: Proposed: X	<u>Proposed</u> Effective Semester:
<u>New Degree Audit required?</u> (Y or N)	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
<u>Math and Statistics</u> MA 131/132 or MA 141 MA 231 or MA 241 ST 311 or ST 361	4 3 3	Mathematics (6 hours)
<u>Sciences</u> CH 101, CH 102 PY 211 or (PY 205 and PY 206) PY 212 or (PY 208 and PY 209)	4 4 4	Natural Sciences (7 hours)
<u>Humanities / Social Sciences</u> EC 205	3	Social Sciences (3 hours)
Textile Technology Core TT 305, TT 331, TT 341, TT 351, TT 380, TT 431, TT 401, TT 402, TT 481, TT 405, MT 366	36	
Textile Technology Foundation MT 105 or TT 105, TT 327, TE 200, PCC 302, TMS 211, FTM 217 CH 101, CH 102, MA 131 or MA 141 must be completed with grade Of C- or higher for matriculation	20	
<u>Concentration Courses/Groups/Electives:</u> Textile Supply Chain Operations Required Courses- TT 480, TT 485, ACC 210, BUS 320 Textile Supply Chain Operations Elective Courses- Select any 2 courses for 6 hours from any MT or TT course at the 300 level or higher, TE 110, TE 440, FTM 310, FTM 481, FTM 484, FTM 487	12 6	

Free Electives:	0	
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>	99 hours	
COLLEGE REQUIREMENTS:		
Orientation Course(s): T 101	1	
Other:	0	
Total credit hours under College Requirements:	1 Hours	

<u>NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS</u> <i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category <u>may not be subset</u> to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i> <i>Specific courses should not be listed in any of the fields below other than ENG 101.</i>		<u>At least one of the following must be listed:</u> 1 Choose course(s) from the University Approved GEP course list for this category. 2 Minimum requirements are satisfied by Major/College course requirements. 3 Major/College course requirement satisfies X credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category. 4 Co-requisite is satisfied by a Major/College course requirement. 5 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts. 6 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.
General Education Program Requirements: <i>Minimum 39-40 hrs</i>	Credit hours	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements
English 101 (C- or better required) (4 credits)	4	ENG 101
Humanities (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	6	(Choose statement 1, 2 or 3) Choose course(s) from the University Approved GEP course list for this category.
Social Sciences (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	3	(Choose statement 1, 2 or 3) Major/College course requirement satisfies 3 credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category.
Additional Breadth (3 credits) (Choose approach that is different from the approach of the Major) <i>Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.</i>	3	(Choose statement 5 or 6) Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts.
Interdisciplinary Perspectives (5 credits) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	5	(Choose statement 1, 2 or 3) Choose course(s) from the University Approved GEP course list for this category.
Health and Exercise Studies (2 credits) (Including one Fitness and Wellness course)	2	Choose course(s) from the University Approved GEP course list for this category.

Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.		23 hours	
GEP Co-Requisites:			<i>Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.</i>
U.S. Diversity co-requisite	(USD)	n/a	(Choose statement 1 or 4) Choose course(s) from the University Approved GEP course list for this category.
Global Knowledge co-requisite	(GK)	n/a	(Choose statement 1 or 4) Choose course(s) from the University Approved GEP course list for this category.
Foreign Language Proficiency		n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:			Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)		X	Satisfied by College/Program Requirements
Technology Fluency		X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.		123 Total hours	As applicable, indicate here the overall GPA requirement for degree completion including course completion.

Indicate display status: Current: Proposed: X Proposed Effective Semester:

Degree/Plan Title: B.S. Textile Technology

Concentration/Subplan Title: Medical Textiles

Plan SIS Code: 18TEXTTECHBS

Subplan SIS Code: 18TEXTTECHMT

New Degree Audit required? (Y or N)

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
CH 101 Chemistry-Molecular Sci ^{B 2}	3	MA 231 Calculus for Life and Mgmt Sci B ^{A 1}	3
CH 102 General Chemistry Lab ^{B 2}	1	MA 132 Comp Math for Life & Mgmt ^{A 1}	1
ENG 101 Acad Writing & Research ^H	4	PY 211 College Physics I ^{B 1}	4
MA 131 Calc for Life & Mgmt Sci A ^{A 1 2}	3	TMS 211 Intro to Fiber Science	3
MT 105 Intro to Medical Textiles	3	FTM 217 Business of Technical Textiles	3
T 101 Intro to the College of Textiles	1	HESF*** Health and Exercise Studies ^E	1
	Total:15		Total:
SOPHOMORE YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
EC 205 Fund of Economics ^D	3	ST 311 Intro to Statistics ^{A 1}	3
PY 212 College Physics II ^{B 1}	4	TE 200 Poly Sci & Engr	3
TT 327 Yarn Prod & Properties	3	TT 351 Woven Fabric Technology	3
TT 380 Mgmt & Ctrl Text & App Syst	4	TT 341 Knitted Fabric Technology	3
GEP Humanities Elective ^C	3	Medical Textiles Elective ³	3
	Total:17		Total:15
JUNIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
TT 305 Intro Nonwoven Products & Processes	3	TT 331 Performance Evaluation of Textile Mat	4
TT 481 Design Tech of Technical Textiles	3	MT 336 Biotextile Product Development	3
PCC 302 Technology of Textile Wet Processing	4	TT 405 Advanced Nonwoven Processes	3
GEP Social Science Elective ^D	3	GEP Additional Breadth Elective ^F	3
BIO 183 Intro Bio: Cell & Molec Bio ^{B 1}	4	GEP Humanities Elective ^C	3
	Total:17		Total:16
SENIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
TT 401 TT Senior Design I	4	TT 402 TT Senior Design II	4
MT 432 Biotextiles Evaluation	3	GEP Interdisc. Perspectives Elective ^G	3
GEP Interdisc. Perspectives Elective ^G	2-3	TT 431 Quality Management and Control	3
HESF***Health & Exercise Studies Course ^E	1	Medical Textiles Elective ³	3
Medical Textiles Elective ³	3		
Medical Textiles Elective	3		
	Total:16-17		Total:13
Minimum Credit Hours Required for Graduation : 124-125			

Major/Program Footnotes:

1. Acceptable substitutions: MA 141 for MA 131 and 132, MA 241 for MA 231, (PY 205 and PY 206) for PY 211, (PY 208 and PY 209) for PY 212. ST 361 or ST 370 for ST 311.
2. Must be completed with a grade of C- or higher for major requirements: CH 101, CH 102, MA 131, MA 231.
3. Medical Textiles Elective: Select 12 credit hours from the following courses: CLA 115, MT 381, PCC 471 (requires prerequisite courses), PHI 325 (cannot be used as a GEP elective and Medical Textiles Elective), TT 486.

***General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied.

University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

- 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 131/132 or MA 141, MA 231 or MA 241, ST 311, or ST 361, or ST 370**
 - 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, PY 211 or (PY 205 and PY 206), PY 212 or (PY 208 and PY 209)**
 - 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:
 - 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: : **EC 205 fulfills 3 hours of this requirement. Choose 3 hours from the Soc Sci GEP course list in a discipline other than Economics**
 - E. **Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)
Choose from the University approved GEP Physical Education/Healthy Living course list.
 - F. **Additional Breadth** - (3 credit hours to be selected from the following checked University approved GEP course lists)
_____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:
 - 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:
 - K. **Foreign Language proficiency** - Proficiency at the FL_102 level is required for graduation.

Indicate display status: Current: Proposed: X **Proposed** Effective Semester: **Fall 2019**Degree/Plan Title: B.S. Textile TechnologyConcentration/Subplan Title: Medical TextilesPlan SIS Code: 18TEXTCHBSSubplan SIS Code: 18TEXTCHMTNew Degree Audit required? (Y or N) **Y****Current vs Proposed****NOTE:** Same- black; Added- blue; Deleted-~~red~~

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
CH 101 Chemistry-Molecular Sci ^{B 2}	3	MA 231 Calculus for Life and Mgmt Sci B ^{A 1}	3
CH 102 General Chemistry Lab ^{B 2}	1	MA 132 Comp Math for Life & Mgmt ^{A 1}	1
ENG 101 Acad Writing & Research ^H	4	PY 211 College Physics I ^{B 1}	4
MA 131 Calc for Life & Mgmt Sci A ^{A 1 2}	3	TMS 211 Intro to Fiber Science	3
MT 105 Intro to Medical Textiles	3	FTM 217 Business of Technical Textiles	3
T 101 Intro to the College of Textiles	1	HESF*** Health and Exercise Studies ^E	1
	Total:15		Total: 15
SOPHOMORE YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
EC 205 Fund of Economics ^{D 1}	3	ST 311 ST-361 Intro to Statistics ^{A 1}	3
PY 212 College Physics II ^{B 1}	4	TE 200 Poly Sci & Engr	3
TT 327 Yarn Prod & Properties	4	TT 351 Woven Fabric Technology	3
TT 380 Mgmt & Ctrl Text & App Syst	3	TT 341 Knitted Fabric Technology	3
GEP Humanities Elective ^C	3	Medical Textiles Elective ³	3
	Total:17		Total:15
JUNIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
TT 404 TT-305 Intro Nonwoven Products & Processes	3	TT 331 Performance Evaluation of Textile Mat	4
	3	MT 336 Biotextile Product Development	3
TT 481 Design Tech of Technical Textiles	4	TT-405 Advanced Nonwoven Processes	3
PCC 302 Technology of Textile Wet Processing	3	GEP Additional Breadth Elective ^F	3
GEP Social Science Elective ^D	4	GEP Humanities Elective ^C	3
BIO 183 Intro Bio: Cell & Molec Bio ^{B+ 1}		Medical Textiles Elective ³	2-3
	Total:17		Total:15 16
SENIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
TT 401 TT Senior Design I	4	TT 402 TT Senior Design II	4
MT 432 Biotextiles Evaluation	3	GEP Interdisc. Perspectives Elective ^G	3
GEP Interdisc. Perspectives Elective ^G	2-3	TT 431 Quality Management and Control	3
HES_***Health & Exercise Studies Course ^E	1	Medical Textiles Elective ³	3
Medical Textiles Elective ³	3		
	Total:-13		Total:13
	16-17		
Minimum Credit Hours Required for Graduation * : 120 124 125			

Major/Program Footnotes:

1. Acceptable substitutions: MA 141 for (MA 131 and 132); MA 241 for MA 231; (PY 205 and PY 206) for PY 211; (PY 208 and PY 209) for PY 212; ST 370 for ST 311; (EC 201 or ARE 201) for EC 205.
2. Must be completed with a grade of C- or higher for major requirements: CH 101, CH 102, MA 131, ~~MA-231~~
3. Medical Textiles Electives. Some course may have prerequisite requirements. Select ~~11~~ ~~12~~ credit hours from the following courses: CLA 115, MT 381, PCC 471, PHI 325 (cannot be used as a GEP elective and Medical Textiles Elective), TT 486, T 497.

*** General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied.

University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

- 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 131/132 or MA 141, MA 231 or MA 241, ST 311 or ST 370**
- 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, PY 211 or (PY 205 and PY 206), PY 212 or (PY 208 and PY 209); BIO 183**
- 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:
- 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: : **EC 205 or EC 201 or ARE 201 fulfills 3 hours of this requirement. Choose 3 hours from the Soc Sci GEP course list in a discipline other than Economics**
- E. **Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)
Choose from the University approved GEP Physical Education/Healthy Living course list.
- F. **Additional Breadth** - (3 credit hours to be selected from the following checked University approved GEP course lists)
_____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:
- 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:
- Foreign Language proficiency** - Proficiency at the FL_102 level is required for graduation.

CURRICULUM REQUIREMENTS

Format B

CURRICULUM REQUIREMENTS

Format B

<u>Degree/Plan Title</u> : B.S. in Textile Technology	<u>Plan SIS Code</u> : 18TEXTECHBS
<u>Concentration/Subplan Title</u> : Medical Textiles	<u>Subplan SIS Code</u> : 18TEXTECHMT
<u>Indicate requirements status</u> : Current: Proposed: X <u>Proposed Effective Semester</u> :	
<u>New Degree Audit required?</u> (Y or N)	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
<u>Math and Statistics</u> MA 131/132 or MA 141 MA 231 or MA 241 ST 311 or ST 361 <u>Sciences</u> CH 101, CH 102 PY 211 or (PY 205 and PY 206) PY 212 or (PY 208 and PY 209) <u>Humanities / Social Sciences</u> EC 205 Textile Technology Core TT 305, TT 331, TT 341, TT 351, TT 380, TT 431, TT 401, TT 402, TT 481, TT 405, MT 366 Textile Technology Foundation MT 105 or TT 105, TT 327, TE 200, PCC 302, TMS 211, FTM 217 CH 101, CH 102, MA 131 or MA 141 must be completed with grade Of C- or higher for matriculation	4 3 3 4 4 4 3 36 20	Mathematics (6 hours) Natural Sciences (7 hours) Social Sciences (3 hours)
<u>Concentration Courses/Groups/Electives:</u> Medical Textiles Required Courses- BIO 183, MT 432 Technical Textiles Elective Courses- Select any 4 courses for 12 credit hours from: CLA 115, MT 381, PCC 471 (requires prerequisites courses), PHI 325 (cannot also be used as a GEP elective), TT 486	7 12	

Free Electives:	0	
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>	100 hours	
COLLEGE REQUIREMENTS:		
Orientation Course(s): T 101	1	
Other:	0	
Total credit hours under College Requirements:	1 Hours	

<u>NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS</u> <i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category may not be subset to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i> <i>Specific courses should not be listed in any of the fields below other than ENG 101.</i>		<u>At least one of the following must be listed:</u> <ol style="list-style-type: none"> 1. Choose course(s) from the University Approved GEP course list for this category. 2. Minimum requirements are satisfied by Major/College course requirements. 3. Major/College course requirement satisfies X credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category. 4. Co-requisite is satisfied by a Major/College course requirement. 5. Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts. 6. Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.
General Education Program Requirements: <i>Minimum 39-40 hrs</i>	Credit hours	How will the GEP requirement be met? <i>(Choose applicable statement from 1-6 listed above)</i>
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	X	<small>(Choose statement 1, 2 or 3)</small> Minimum requirements are satisfied by Major/College course requirements
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	X	<small>(Choose statement 1, 2 or 3)</small> Minimum requirements are satisfied by Major/College course requirements
English 101 (C- or better required) (4 credits)	4	ENG 101
Humanities (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	6	<small>(Choose statement 1, 2 or 3)</small> Choose course(s) from the University Approved GEP course list for this category.
Social Sciences (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	3	<small>(Choose statement 1, 2 or 3)</small> Major/College course requirement satisfies 3 credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category.
Additional Breadth (3 credits) (Choose approach that is different from the approach of the Major) Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.	3	<small>(Choose statement 5 or 6)</small> Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts.
Interdisciplinary Perspectives (5 credits) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	5	<small>(Choose statement 1, 2 or 3)</small> Choose course(s) from the University Approved GEP course list for this category.

Health and Exercise Studies (Including one <i>Fitness and Wellness</i> course)	(2 credits)	2	Choose course(s) from the University Approved GEP course list for this category.
Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.		23 hours	
GEP Co-Requisites:			<i>Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.</i>
U.S. Diversity co-requisite	(USD)	n/a	<small>(Choose statement 1 or 4) Choose course(s) from the University Approved GEP course list for this category.</small>
Global Knowledge co-requisite	(GK)	n/a	<small>(Choose statement 1 or 4) Choose course(s) from the University Approved GEP course list for this category.</small>
Foreign Language Proficiency		n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:			Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)		X	Satisfied by College/Program Requirements
Technology Fluency		X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.		124 Total hours	As applicable, indicate here the overall GPA requirement for degree completion including course completion.

18TXTECHBS- 18TXTECHMT, 18TXTECHBS- 18TXTECHSC,
18TXTECHBS18TXTECHTT, 18TXTECHBS

Endorsed By:

Head, Department/Program

Date

Recommended By:

Chair, College Curriculum Committee

Date

Endorsed By:

College Dean

Date

Recommended By:

Vice Provost, DELTA (if DE degree/certificate)

Date

Recommended By:

Chair, University Courses & Curricula Committee

Date

Approved By:

Dean, (DASA or the Graduate School)

Date

Recommended By:

Dean's Council

Date Approved By:

Executive Vice Chancellor and Provost

Date

Approved By:

Chancellor

Date

Memorandum

To: Dr. Mike Mullen, Vice Chancellor & Dean, Division of Academic & Student Affairs
From: Kristin Thoney & Helmut Hergeth, Co-Chairs, TATM Course & Curriculum Committee
Date: October 26, 2018

We are updating the 8 semester displays and accompanying degree audits for our FTD BS degree to reduce the number of hours required to complete the degree from 124 to 120. The following changes to the 8 semester displays have been made:

18FTDTEX and 18FTDFAS

1. Sophomore Year, Fall Semester: Replace TT 221, 2 credits, with TTM 106, 1 credit, reducing the total number of credits that semester from 18 to 17. FTD students learn a lot about yarn in TT 105 and reducing the amount of yarn that they take after TT 105 by 1 credit will not negatively impact them in subsequent classes.
2. Junior Year, Spring Semester: Eliminate the ST 311 requirement, reducing the total number of credits that semester from 15 to 12. ST 311 is not a prerequisite to any other required courses in FTD. In addition, FTD students already meet the 6 hours of GEP math requirements since they must take MA 131 and MA 231.

Recommended by:

Kristin Thoney-Barletta 11/14/18
..... TATM C&C Committee

A. Seyam
..... TATM Department Head

Approval:

Russell E. Gorge
..... CoT C&C Committee

Jon P. Rust
..... CoT Assoc. Dean

..... NCSU C&C Committee

..... Dean, DASA

<u>Degree/Plan Title:</u> B.S. Fashion and Textile Design		<u>Plan SIS Code:</u> 18FTDBS	
<u>Concentration/Subplan Title:</u> Textile Design		<u>Subplan SIS Code:</u> 18FTDTEX	
<u>Indicate requirements status:</u>	Current:	Proposed: X	<u>Proposed</u> Effective Semester: 7/2019
<u>New Degree Audit required?</u> (Y or N) Y			
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.			

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
<p>Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.</p>		List GEP category and hours satisfied by a Major requirement
<p>FTM 217 The Textile Industry FTM 282 Intro to Textile Brand Mgmt and Mktg FTM 310 Entrepreneurship and NPD TT 105 Introduction to Textile Technology TTM 106 Yarn Form, Class and Number Sys TT 252 Formation & Structure of Textile Fabrics PCC 302 Technology Textile Wet Processing ADN 281 Basic Drawing FTD 104 FTD FY Studio I FTD 105 FTD FY Studio 2 FTD 200 Design Skills Workshop FTD 201 Computer Aided Textile Design & Color Studio FTD Advised Elective [2 courses] (TT 451, TT 341, FTD ***, FTM 220, FTM 3**, FTM 4**or College of Design course, or Study Abroad Approved Elective)</p> <p>Interdisciplinary Perspectives D 100 Design Inquiry I: Methods and Processes D 101 Design Inquiry II: Methods and Processes</p> <p>Math MA 131Calculus for Life and Management Sciences MA 231Calculus for Life and Management Sciences</p> <p>Natural Sciences PY 211 College Physics I or PY 205/206 CH 101 Chemistry- A Molecular Science CH 102 General Chemistry Laboratory TMS 211 Intro Fiber Science</p>	<p>3 3 3 3 1 4 (CP) 4 3 6 (CP) 6 (CP) 3 6 (CP) 6</p> <p>3 3</p> <p>3 3</p> <p>4 3 1 3</p>	<p>Must be completed with a Grade of C or better</p> <p>Must be completed with a Grade of C or better Must be completed with a Grade of C or better</p> <p>Interdisciplinary Perspectives Interdisciplinary Perspectives</p> <p>Mathematical Sciences GEP Mathematical Sciences GEP</p> <p>Natural Sciences GEP Natural Sciences GEP Natural Sciences GEP Natural Sciences GEP</p>
<p><u>Concentration Courses/Groups/Electives:</u> FTD 373 Yarn Design Studio FTD 374 Surface Design and Texture FTD 375 Woven Textile Design Studio I FTD 376 Knitted Textile Design Studio I FTD 475 Woven Textile Design Studio II FTD 476 Knitted Textile Design Studio II FTD 479 Senior Textile Design Studio</p>	<p>3 (CP) 3 (CP) 3 (CP) 3 (CP) 3 3 6</p>	<p>Must be completed with a Grade of C or better</p> <p>Must be completed with a Grade of C or better Must be completed with a Grade of C or better</p>

Free Electives:		
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>	98 hours	
COLLEGE REQUIREMENTS:		
Orientation Course(s): T 101 Introduction to College of Textiles	1	
Other:		
Total credit hours under College Requirements:	1 Hour	

NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS		At least one of the following must be listed:
<p><i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category <u>may not be subset</u> to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i></p> <p>Specific courses should not be listed in any of the fields below other than ENG 101.</p>		<ol style="list-style-type: none"> 1 Choose course(s) from the University Approved GEP course list for this category. 2 Minimum requirements are satisfied by Major/College course requirements. 3 Major/College course requirement satisfies X credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category. 4 Co-requisite is satisfied by a Major/College course requirement. 5 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts. 6 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.
General Education Program Requirements: <i>Minimum 39-40 hrs</i>	Credit hours	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements.
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements.
English 101 (C- or better required) (4 credits)	4	ENG 101
Humanities (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	6	(Choose statement 1, 2 or 3) Choose course(s) from the University Approved GEP course list for this category.
Social Sciences (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	6	(Choose statement 1, 2 or 3) Choose course(s) from the University Approved GEP course list for this category.
Additional Breadth (3 credits) (Choose approach that is different from the approach of the Major) <i>Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.</i>	3	(Choose statement 5 or 6) Choose course(s) from the University Approved GEP course list for this category.
Interdisciplinary Perspectives (5 credits) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements.
Health and Exercise Studies (2 credits) (Including one Fitness and Wellness course)	2	Choose course(s) from the University Approved GEP course list for this category.
Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.	21 hours	
GEP Co-Requisites:		Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.
U.S. Diversity co-requisite (USD)	n/a	(Choose statement 1 or 4) Choose course(s) from the University Approved GEP course list for this category.

Global Knowledge co-requisite	(GK)	n/a	<i>(Choose statement 1 or 4)</i> Choose course(s) from the University Approved GEP course list for this category.
Foreign Language Proficiency		n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:			Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)		X	Satisfied by College/Program Requirements
Technology Fluency		X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.	120 Total hours	As applicable, indicate here the overall GPA requirement for degree completion including course completion.	

FORMAT A
(SEMESTER-BY-SEMESTER CURRICULUM DISPLAY)

Indicate display status: Current: Proposed: X Proposed Effective Semester: 7/2019

Degree/Plan Title: B.S. Fashion and Textile Design Concentration/Subplan Title: Textile Design

Plan SIS Code: 18FTDBS Subplan SIS Code: 18FTDTEX

New Degree Audit required? (Y or N) Y

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
ENG 101 Academic Writing and Research ^H	4	D 101 Design Inquiry II: Methods and Processes ^G	3
TT 105 Introduction to Textile Technology	3	FTD 200 Design Skills Workshop ²	3
D 100 Design Inquiry I: Methods and Processes ^G	3	MA 131 Calculus for Life and Management Sciences ^{A,3}	3
FTD 104 FTD FY Studio I	6 (CP)	FTD 105 FTD FY Studio 2	6 (CP)
T 101 Introduction to College of Textiles	1	HES 1** Health and Exercise Studies Course ^E	1
	<i>Total: 17</i>		<i>Total: 16</i>
SOPHOMORE YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
FTD 201 Computer Aided Textile Design & Color Studio ²	6 (CP)	TMS 211 Intro Fiber Science ^B	3
FTM 217 The Textile Industry	3	TT 252 Formation & Structure of Textile Fabrics ²	4 (CP)
PY 211 College Physics I ^{B,3}	4	FTD 373 Yarn Design Studio ²	3 (CP)
TTM 106 Yarn Form, Class and Number Sys	1	FTD 374 Surface Design and Texture	3 (CP)
ADN 281 Basic Drawing	3	MA 231 Calculus for Life and Management Sciences B ^{A,3}	3
		HES *** Health and Exercise Studies Course ^E	1
	<i>Total: 17</i>		<i>Total: 17</i>
JUNIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
FTM 310 Entrepreneurship and NPD	3	FTM 282 Intro to Textile Brand Mgmt and Mktg	3
FTD 375 Woven Textile Design Studio I ²	3 (CP)	GEP Social Science Elective ^D	3
FTD 376 Knitted Textile Design Studio I ²	3 (CP)	FTD Advised Elective ¹	3
CH 101 Chemistry- A Molecular Science ^B	3	FTD Advised Elective ¹	3
CH 102 General Chemistry Laboratory ^B	1		
GEP Humanities Elective ^C	3		
	<i>Total: 16</i>		<i>Total: 12</i>
SENIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
FTD 475 Woven Textile Design Studio II	3	FTD 479 Senior Textile Design Studio	6
FTD 476 Knitted Textile Design Studio II	3	GEP Social Sciences Elective ^D	3
PCC 302 Technology Textile Wet Processing	4	GEP Humanities Elective ^C	3
GEP Additional Breadth Requirement ^F	3		
	<i>Total: 13</i>		<i>Total: 12</i>
Minimum Credit Hours Required for Graduation* : 120			

Major/Program Footnotes:

- 1.** FTD Advised Elective TT 451, TT 341, FTD ***, FTM 220, FTM 3**, FTM 4** or College of Design course, or Study Abroad Approved Elective
- 2.** Must be completed with a Grade of C or better
- 3.** Acceptable substitutions: MA 141 for MA 131, MA 241 for MA 231, PY 205/206 for PY 211.

***General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

- 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 141 for MA 131; MA 241 for MA 231***
- 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, PY 211 or PY 205/206, TMS 211***
- 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: **None***
- E. Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)
Choose from the University approved GEP Physical Education/Healthy Living 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: **D100, D101***
- 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***

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

CURRICULUM REQUIREMENTS

Format B

<u>Degree/Plan Title:</u> B.S. Fashion and Textile Design	<u>Plan SIS Code:</u> 18FTDBS
<u>Concentration/Subplan Title:</u> Fashion Design	<u>Subplan SIS Code:</u> 18FTDFAS
<u>Indicate requirements status:</u> Current: Proposed: X <u>Proposed</u> Effective Semester: 7/2019	
<u>New Degree Audit required?</u> (Y or N) Y	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
<p>Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.</p> <p>FTM 217 The Textile Industry 3</p> <p>FTM 282 Intro to Textile Brand Mgmt and Mktg 3</p> <p>FTM 310 Entrepreneurship and NPD 3</p> <p>TT 105 Introduction to Textile Technology 3</p> <p>TTM 106 Yarn Form, Class and Number Sys 1</p> <p>TT 252 Formation & Structure of Textile Fabrics 4</p> <p>PCC 302 Technology Textile Wet Processing 4</p> <p>ADN 281 Basic Drawing 3</p> <p>FTD 104 FTD FY Studio I 6 (CP)</p> <p>FTD 105 FTD FY Studio 2 6 (CP)</p> <p>FTD 200 Design Skills Workshop 3</p> <p>FTD 201 Computer Aided Textile Design & Color Studio 6</p> <p>FTD Advised Elective [2 courses] (TT 451, TT 341, FTD ***, FTM 220, FTM 3**, FTM 4**or College of Design course, or Study Abroad Approved Elective) 6</p> <p>Interdisciplinary Perspectives</p> <p>D 100 Design Inquiry I: Methods and Processes 3</p> <p>D 101 Design Inquiry II: Methods and Processes 3</p> <p>Math</p> <p>MA 131Calculus for Life and Management Sciences 3</p> <p>MA 231Calculus for Life and Management Sciences 3</p> <p>Natural Sciences</p> <p>PY 211 College Physics I or PY 205/206 4</p> <p>CH 101 Chemistry- A Molecular Science 3</p> <p>CH 102 General Chemistry Laboratory 1</p> <p>TMS 211 Intro Fiber Science 3</p>		<p>List GEP category and hours satisfied by a Major requirement</p> <p>Must be completed with a Grade of C or better</p> <p>Interdisciplinary Perspectives</p> <p>Interdisciplinary Perspectives</p> <p>Mathematical Sciences GEP</p> <p>Mathematical Sciences GEP</p> <p>Natural Sciences GEP</p> <p>Natural Sciences GEP</p> <p>Natural Sciences GEP</p> <p>Natural Sciences GEP</p>
<p><u>Concentration Courses/Groups/Electives:</u></p> <p>FTD 218 – Fashion Illustration 3</p> <p>FTD 215 – Fashion Design 1 3 (CP)</p> <p>FTD 216 – Fashion Workroom Practices 3 (CP)</p> <p>FTM 317 - Computer aided design for Fashion 3</p> <p>FTD 321 – Fashion Design by Draping 3(CP)</p> <p>FTD 419 – Fashion Design 2 3</p> <p>FTM 497 –Senior Collection Studio 6</p>		<p>Must be completed with a Grade of C or better</p> <p>Must be completed with a Grade of C or better</p> <p>Must be completed with a Grade of C or better</p> <p>Must be completed with a Grade of C or better</p>

Free Electives:		
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>	98 hours	
COLLEGE REQUIREMENTS:		
Orientation Course(s): T 101 Introduction to College of Textiles	1	
Other:		
Total credit hours under College Requirements:	1 hour	

NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS <i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category may not be subset to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i> <i>Specific courses should not be listed in any of the fields below other than ENG 101.</i>		At least one of the following must be listed: 7 Choose course(s) from the University Approved GEP course list for this category. 8 Minimum requirements are satisfied by Major/College course requirements. 9 Major/College course requirement satisfies <u>X</u> credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category. 10 Co-requisite is satisfied by a Major/College course requirement. 11 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts. 12 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.
General Education Program Requirements: <i>Minimum 39-40 hrs</i>	Credit hours	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements.
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements.
English 101 (C- or better required) (4 credits)	4	ENG 101
Humanities (6 credits) (Courses from two different disciplines) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	6	(Choose statement 1, 2 or 3) Choose course(s) from the University Approved GEP course list for this category.
Social Sciences (6 credits) (Courses from two different disciplines) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	6	Choose course(s) from the University Approved GEP course list for this category.
Additional Breadth (3 credits) (Choose approach that is different from the approach of the Major) Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.	3	(Choose statement 5 or 6) Choose course(s) from the University Approved GEP course list for this category.
Interdisciplinary Perspectives (5 credits) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements.
Health and Exercise Studies (2 credits) (Including one Fitness and Wellness course)	2	Choose course(s) from the University Approved GEP course list for this category.
Total credit hours needed to complete GEP that are not satisfied as part of the Major/College requirements.	21	
GEP Co-Requisites:		Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.
U.S. Diversity co-requisite (USD)	n/a	(Choose statement 1 or 4) Choose course(s) from the University Approved GEP course list

		for this category.
Global Knowledge co-requisite (GK)	n/a	<small>(Choose statement 1 or 4)</small> Choose course(s) from the University Approved GEP course list for this category.
Foreign Language Proficiency	n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:		Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)	X	Satisfied by College/Program Requirements
Technology Fluency	X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.	120	As applicable, indicate here the overall GPA requirement for degree completion including course completion.

FORMAT A
(SEMESTER-BY-SEMESTER CURRICULUM DISPLAY)

Indicate display status: Current: Proposed: x Proposed Effective Semester: 7/2019

Degree/Plan Title: B.S. Fashion and Textile Design
Design

Concentration/Subplan Title: Fashion

Plan SIS Code: 18FTDBS

Subplan SIS Code: 18FTDFAS

New Degree Audit required? (Y or N) Y

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
ENG 101 Academic Writing and Research ^H	4	D 101 Design Inquiry II: Methods and	3
TT 105 Introduction to Textile Technology	3	Processes ^G FTD 200 Design Skills Workshop ²	3
D 100 Design Inquiry I: Methods and	3	MA 131 Calculus for Life and Management	3
Processes ^G	6 (CP)	Sciences ^{A,3}	
FTD 104 FTD FY Studio I	1	FTD 105 FTD FY Studio 2	6 (CP)
T 101 Introduction to College of Textiles		HES 1** Health and Exercise Studies Course ^E	1
	<i>Total:17</i>		<i>Total:16</i>
SOPHOMORE YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
FTD 201 Computer Aided Textile Design & Color ²	6	FTD 216 Fashion Workroom Practices ²	3 (CP)
FTD 215 Fashion Design I ²	3 (CP)	FTM 217 The Textile Industry	3
PY 211 College Physics I ^{B,3}	4	TT 252 Formation & Structure of Textile	4
TTM 106 Yarn Form, Class and Number Sys	1	Fabrics	1
ADN 281 Basic Drawing	3	HES *** Health and Exercise Studies Course ^E	3
		FTD 218 Fashion Illustration	3
		FTM 317 Computer-Aided-Design for	
		Fashion ²	
	<i>Total:17</i>		<i>Total:17</i>
JUNIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
CH 101 Chemistry- A Molecular Science ^B	3	GEP Social Science Elective ^D	3
CH 102 General Chemistry Laboratory ^B	1	FTM 282 Intro to Textile Brand Mgmt and	3
MA 231 Calculus for Life & Management	3	Mktg	3
Sciences B ^{A,3}		FTD Advised Elective ¹	3
TMS 211 Intro Fiber Science ^B	3	FTD Advised Elective ¹	
FTD 321 Fashion Design by Draping ²	3 (CP)		
GEP Additional Breadth Requirement ^F	3		
	<i>Total:16</i>		<i>Total:12</i>
SENIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
FTD 419 Fashion Design 2	3	FTM 497 Senior Collection Studio	6
FTM 310 Entrepreneurship and NPD	3	GEP Social Sciences Elective ^D	3
PCC 302 Technology Textile Wet Processing	4	GEP Humanities Elective ^C	3
GEP Humanities Elective ^C	3		
	<i>Total:13</i>		<i>Total:12</i>
Minimum Credit Hours Required for Graduation* : 120			

Major/Program Footnotes:

- 4. FTD Advised Elective: FTD Advised Elective** TT 451, TT 341, FTD ***, FTM 220, FTM 3**, FTM 4**or College of Design course, or Study Abroad Approved Elective

5. Must be completed with a Grade of C or better**6. Acceptable substitutions: MA 141 for MA 131, MA 241 for MA 231, PY 205/206 for PY 211.***** General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

- K. 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 141 for MA 131; MA 241 for MA 231**
- L. 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, PY 211 or PY 205/206, TMS 211**
- M. 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:
- N. 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:
- O. Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)
Choose from the University approved GEP Physical Education/Healthy Living course list.
- P. 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
- Q. 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: **D100, D101**
- R. 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:
- S. 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**
- T. 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**
- U. Foreign Language proficiency** - Proficiency at the FL_102 level is required for graduation.



Department of Textile and Apparel
Technology and Management
www.tx.ncsu.edu/tam/

College of Textiles
1020 Main Campus Drive
Raleigh, NC 27606

919.515.3442 (telephone)

Memorandum

To: Dr. Mike Mullen, Vice Chancellor & Dean, Division of Academic & Student Affairs
From: Kristin Thoney & Helmut Hergeth, Co-Chairs, TATM Course & Curriculum Committee
Date: October 26, 2018

We are updating the 8 semester displays and accompanying degree audits for our FTD BS degree to reduce the number of hours required to complete the degree from 124 to 120. The following changes to the 8 semester displays have been made:

18FTDTEX and 18FTDFAS

1. Sophomore Year, Fall Semester: Replace TT 221, 2 credits, with TTM 106, 1 credit, reducing the total number of credits that semester from 18 to 17. FTD students learn a lot about yarn in TT 105 and reducing the amount of yarn that they take after TT 105 by 1 credit will not negatively impact them in subsequent classes.
2. Junior Year, Spring Semester: Eliminate the ST 311 requirement, reducing the total number of credits that semester from 15 to 12. ST 311 is not a prerequisite to any other required courses in FTD. In addition, FTD students already meet the 6 hours of GEP math requirements since they must take MA 131 and MA 231.

Recommended by:

Kristin Thoney-Barbetta 11/14/18 TATM C&C Committee

A. Seyam TATM Department Head

Approval:

Russell E. Jones CoT C&C Committee

Jon F. Rust CoT Assoc. Dean

..... NCSU C&C Committee

..... Dean, DASA



Department of Textile and Apparel
Technology and Management
www.b.ncsu.edu/tatm/

College of Textiles
1020 Main Campus Drive
Raleigh, NC 27606

919.515.3442 (telephone)

Memorandum

To: Dr. Mike Mullen, Vice Chancellor & Dean, Division of Academic & Student Affairs
From: Kristin Thoney & Helmut Hergeth, Co-Chairs, TATM Course & Curriculum Committee
Date: October 26, 2018

We are updating the 8 semester displays and accompanying degree audits for our FTM BS degree to keep 120 hours as the number of hours required for the degree, while incorporating an important change to the curriculum made to meet the requirement of 120 hours for our FTD degree—replacing TT 221 with TTM 106. The following changes to the 8 semester displays have been made:

18FTMBMM and 18FTMFDP

1. Sophomore Year, Fall Semester: Replace TT 221, 2 credits, with TTM 106, 1 credit, reducing the total number of credits that semester from 16 to 15. FTM students learn a lot about yarn in TT 105 and reducing the amount of yarn that they take after TT 105 by 1 credit will not negatively impact them in subsequent classes.
2. Senior Year, Spring Semester: Add 1 hour of free elective to bring the number of hours required for the degree to 120. This increases the total number of credits to 15-16 for 18FTMBMM and to 12-13 for 18FTMFDP.

Recommended by: *Kristin Thoney-Barlett* 10/24/18 TATM C&C Committee

A. Seyan TATM Department Head

Approval: *Russell E. Gage* CoT C&C Committee

Scott Rust CoT Assoc. Dean

..... NCSU C&C Committee

..... Dean, DASA

<u>Degree/Plan Title:</u> B.S. Fashion and Textile Management	<u>Plan SIS Code:</u> 18FTMBS
<u>Concentration/Subplan Title:</u> Brand Management and Marketing	<u>Subplan SIS Code:</u> 18FTMBMM
<u>Indicate requirements status:</u> Current: Proposed: X <u>Proposed</u> Effective Semester: 7/2019	
<u>New Degree Audit required?</u> (Y or N) Y	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
<u>Math</u> MA 131 or MA 141, MA 231 or MA 114 or MA 241	6	Mathematical Sciences (6 hours)
<u>Sciences</u> CH 101, CH 102 , PY211 or PY 205/PY 206	8	Natural Sciences (7 hours)
<u>Major</u> ACC 210 BUS 320 FTM 217 FTM 220 FTM 282 FTM 310 FTM 382 FTM 385 FTM 416 TMS 211 PCC 302 TT 105 TTM 106 TT 252 EC 201 or ARE 201 EC 202 ST 311 or ST 361 or ST 370 ENG 332	3 3 3 (CP) 3 3 (CP) 3 3 (CP) 3 3 3 4 3 (CP) 1 4 3 3 3 3	Social Sciences (3 hours)
<u>Concentration Courses/Groups/Electives:</u> FTM 384 FTM 387 FTM 460 FTM 482 FTM 483 FTM 487 Brand Electives (3 courses from below):	3 3 3 3 3 3 9	

FTM 219, FTM 271, FTM 320, FTM 380, FTM 400, FTM 420, FTM 481, FTM 484, FTM 485, FTM 486, TT 3xx, TT 4xx, MT 323, MT 366, MT 432, MT 471, PCC 401, PSY 311, SOC 300, FLA 301, FLC 301, FLC 302, FLF 301, FLF 302, FLG 301, FLG 302, FLJ 301, FLJ 302, FLN 301, FLN 302, FLP 401, FLS 331, FLS 332.		
Free Electives:	1	
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>	96 hours	
COLLEGE REQUIREMENTS:		
Orientation Course(s): T101	1	
Other:		
Total credit hours under College Requirements:	1 Hour	

NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS		At least one of the following must be listed:
<p><i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category <u>may not be subset</u> to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i></p> <p><i>Specific courses should not be listed in any of the fields below other than ENG 101.</i></p>		<ol style="list-style-type: none"> 1 Choose course(s) from the University Approved GEP course list for this category. 2 Minimum requirements are satisfied by Major/College course requirements. 3 Major/College course requirement satisfies X credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category. 4 Co-requisite is satisfied by a Major/College course requirement. 5 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts. 6 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.
General Education Program Requirements: <i>Minimum 39-40 hrs</i>	Credit hours	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements.
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements.
English 101 (C- or better required) (4 credits)	4	ENG 101
Humanities (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	6	(Choose statement 1, 2 or 3) Choose course(s) from the University Approved GEP course list for this category
Social Sciences (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	3	(Choose statement 1, 2 or 3) Major/College course requirement satisfies 3 credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category.
Additional Breadth (3 credits) (Choose approach that is different from the approach of the Major) <i>Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.</i>	3	(Choose statement 5 or 6) Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts.
Interdisciplinary Perspectives (5 credits) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	5	(Choose statement 1, 2 or 3) Choose course(s) from the University Approved GEP course list for this category
Health and Exercise Studies (2 credits) (Including one Fitness and Wellness course)	2	Choose course(s) from the University Approved GEP course list for this category.

Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.		23 hours	
GEP Co-Requisites:			<i>Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.</i>
U.S. Diversity co-requisite	(USD)	n/a	<i>(Choose statement 1 or 4)</i> Choose course(s) from the University Approved GEP course list for this category
Global Knowledge co-requisite	(GK)	n/a	<i>(Choose statement 1 or 4)</i> Choose course(s) from the University Approved GEP course list for this category
Foreign Language Proficiency		n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:			Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)		X	Satisfied by College/Program Requirements
Technology Fluency		X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.		120 Total hours	As applicable, indicate here the overall GPA requirement for degree completion including course completion.

FORMAT A
(SEMESTER-BY-SEMESTER CURRICULUM DISPLAY)

Indicate display status: Current: Proposed: X Proposed Effective Semester: 7/2019

Degree/Plan Title: B.S. Fashion and Textile Management
Marketing

Concentration/Subplan Title: Brand Management and

Plan SIS Code: 18FTMBS

Subplan SIS Code: 18FTMBMM

New Degree Audit required? (Y or N) Y

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
EC/ARE 201 Principles of Microeconomics ^D	3	CH 101 Chemistry – A Molecular Science ^B	3
ENG 101 Academic Writing and Research ^H	4	CH 102 General Chemistry Lab ^B	1
MA 131 Calc for Life & Mgmt Science ^{1,A}	3	MA 231 Calc for Life & Mgmt Sci B ^{1,A}	3
TT 105 Intro to Textile Technology	3 (CP)	HES_*** Health & Exercise Studies Course ^E	1
T 101 Introduction to the College of Textiles	1	TMS 211 Intro to Fiber Science	3
		FTM 217 Business of Textiles	3 (CP)
	Total:14		Total:14
SOPHOMORE YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
ACC 210 Concepts of Financial Reporting	3	BUS 320 Financial Management	3
EC 202 Principles of Macroeconomics	3	Textile Management Elective ²	3
PY 211 College Physics I ^{1,B}	4	TT 252 Formation and Structure of Textile	4
TTM 106 Yarn Form, Class and Number Sys	1	Fabrics	3
HES_*** Health & Exercise Studies Course ^E	1	GEP Humanities Requirement ^C	3
FTM 282 Intro to TX Brand Mgmt/Mktg	3 (CP)	FTM 220 Princ of Retailing & Supply Chn Mngmt	
	Total:15		Total:16
JUNIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
FTM 310 Entrepreneurship in Textiles	3	FTM 387 Textile Brand Communication	3
Statistics Elective ³	3	ENG 332 Commun for Bus & Mgmt ¹	3
FTM 385 Fashion and the Consumer	3	FTM 384 Visual Merchandising Textile Products	3
FTM 382 Intermed Tx Brand Mgmt & Mktg	3 (CP)	FTM 460 Textile Market Research	3
PCC 302 Tech Tx Wet Processing	4	GEP Social Science Requirement ^D	3
	Total:16		Total:15
SENIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
GEP Additional Breadth Requirement ^F	3	GEP Humanities Requirement ^C	3
GEP IP Requirement ^G	3	FTM 416 The Fashion Industry	3
FTM 482 Advanced Tx Brand Mgmt/Mktg	3	FTM 487 Textile & Apparel Labor Management	3
Textile Management Elective ²	3	FTM 483 Global Textile Trade & Sourcing	3
Textile Management Elective ²	3	GEP IP Requirement ^G	2-3
		Free Elective	1
	Total:15		Total: 15-16
Minimum Credit Hours Required for Graduation ^{*,J,K} : 120			

Major/Program Footnotes:

1. Acceptable substitutions: MA 141 for MA 131; MA 241 or MA 114 for MA 231; PY 205/PY 206 for PY 211; ENG 331 or 333 for ENG 332.
2. List of Textile Management Electives (Select any 3 courses or 9 credits from below): Please check prerequisites!

FTM 219, FTM 271, FTM 320, FTM 380, FTM 400, FTM 420, FTM 481, FTM 484, FTM 485,
FTM 486, TT 3xx, TT 4xx, MT 323, MT 366, MT 432, MT 471, PCC 401, PSY 311, SOC 300, FLA 301, FLC 301, FLC 302, FLF 301, FLF 302, FLG 301, FLG 302, FLJ 301, FLJ 302, FLN 301, FLN 302, FLP 401, FLS 331, FLS 332.

Other 300/400 classes that emphasize learning a foreign language may be approved by the department as Textile Management Electives.

3. Choose one of the following statistics courses: ST 311, ST 361, or ST 370.

*** General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

- 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: **MA131, MA231***
 - 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: **CH101/102, PY211***
 - 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:
 - 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: **EC/ARE201***
 - E. **Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)
Choose from the University approved GEP Physical Education/Healthy Living 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:
 - 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:
 - K. **Foreign Language proficiency** - Proficiency at the FL_102 level is required for graduation.

<u>Degree/Plan Title:</u> B.S. Fashion and Textile Management	<u>Plan SIS Code:</u> 18FTMBS
<u>Concentration/Subplan Title:</u> Fashion Development and Product Management	<u>Subplan SIS Code:</u> 18FTMFDP
<u>Indicate requirements status:</u> Current: Proposed: X	<u>Proposed</u> Effective Semester: 7/2019
<u>New Degree Audit required?</u> (Y or N) Y	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
<u>Math</u> MA 131 or MA 141, MA 231 or MA114 or MA 241	6	Mathematical Sciences (6 hours)
<u>Sciences</u> CH 101, CH 102 , PY 205 or PY 211	8	Natural Sciences (7 hours)
<u>Major</u> ACC 210 BUS 320 FTM 217 FTM 220 FTM 282 FTM 310 FTM 382 FTM 385 FTM 416 TMS 211 PCC 302 TT 105 TTM 106 TT 252 EC 201 or ARE 201 EC 202 ST 311 or ST 361 or ST 370 ENG 332	3 3 3 (CP) 3 3 (CP) 3 3 3 3 3 4 3 1 4 3 3 3 3	Social Sciences (3 hours)
<u>Concentration Courses/Groups/Electives:</u> FTM 219 FTM 271 FTM 315 FTM 317 FTM 318 FTM 415 Fashion Electives (3 courses from below): FTM 497, ADN 111, ADN 112, ADN 414, TT 331, TT 431, MT 3XX, FTM 320, FTM 380, FTM 387, FTM 420,FTM 480, FTM	3 (CP) 3 3 (CP) 3 (CP) 3 (CP) 3 3 9	

481, FTM 484, FTM 485, FTM 486, FTM 487.		
Free Electives:	1	
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>	96 hours	
COLLEGE REQUIREMENTS:		
Orientation Course(s): T101	1	
Other:		
Total credit hours under College Requirements:	1 Hour	

NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS		At least one of the following must be listed:
<p><i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category <u>may not be subset</u> to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i></p> <p>Specific courses should not be listed in any of the fields below other than ENG 101.</p>		<p>7 Choose course(s) from the University Approved GEP course list for this category.</p> <p>8 Minimum requirements are satisfied by Major/College course requirements.</p> <p>9 Major/College course requirement satisfies X credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category.</p> <p>10 Co-requisite is satisfied by a Major/College course requirement.</p> <p>11 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts.</p> <p>12 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.</p>
General Education Program Requirements: <i>Minimum 39-40 hrs</i>	Credit hours	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements.
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements.
English 101 (C- or better required) (4 credits)	4	ENG 101
Humanities (6 credits) (Courses from two different disciplines) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	6	(Choose statement 1, 2 or 3) Choose course(s) from the University Approved GEP course list for this category
Social Sciences (6 credits) (Courses from two different disciplines) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	3	(Choose statement 1, 2 or 3) Major/College course requirement satisfies 3 credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category.
Additional Breadth (3 credits) (Choose approach that is different from the approach of the Major) Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.	3	(Choose statement 5 or 6) Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts.
Interdisciplinary Perspectives (5 credits) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	5	(Choose statement 1, 2 or 3) Choose course(s) from the University Approved GEP course list for this category
Health and Exercise Studies (2 credits) (Including one Fitness and Wellness course)	2	Choose course(s) from the University Approved GEP course list for this category.
Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.	23 hours	

GEP Co-Requisites:			<i>Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.</i>
U.S. Diversity co-requisite	(USD)	n/a	<i>(Choose statement 1 or 4)</i> Choose course(s) from the University Approved GEP course list for this category
Global Knowledge co-requisite	(GK)	n/a	<i>(Choose statement 1 or 4)</i> Choose course(s) from the University Approved GEP course list for this category
Foreign Language Proficiency		n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:			Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)		X	Satisfied by College/Program Requirements
Technology Fluency		X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.	120 Total hours		As applicable, indicate here the overall GPA requirement for degree completion including course completion.

Indicate display status: Current:

Proposed: X

Proposed Effective Semester: 7/2019Degree/Plan Title: B.S. Fashion and Textile Management ManagementConcentration/Subplan Title: Fashion Development and ProductPlan SIS Code: 18FTMBSSubplan SIS Code: 18FTMFDPNew Degree Audit required? (Y or N) Y

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
EC/ARE 201 Principles of Microeconomics ^D	3	CH 101 Chemistry – A Molecular Science ^B	3
ENG 101 Academic Writing and Research ^H	4	CH 102 General Chemistry Lab ^B	1
MA 131 Calc for Life & Mgmt Science ^{1,A}	3	MA 231 Calc for Life & Mgmt Sci B ^{1,A}	3
TT 105 Intro to Textile Technology	3	FTM 217 The Textile Industry	3 (CP)
T 101 Introduction to the College of Textiles	1	TMS 211 Intro to Fiber Science	3
HES_*** Health & Exercise Studies Course ^E	1	FTM 220 Prin Retl & Supply Chain Tex	3
	<i>Total:15</i>		<i>Total:16</i>
SOPHOMORE YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
ACC 210 Concepts of Financial Reporting	3	BUS 320 Financial Management	3
EC 202 Principles of Macroeconomics	3	TT 252 Formation and Structure of Textile	4
PY 211 College Physics I ^{1,B}	4	Fabrics	3
TTM 106 Yarn Form, Class and Number Sys	1	FTM 271 Computer-Aided Textile Design	3 (CP)
FTM 219 Fashion Product Analysis	3 (CP)	FTM 282 Intro to Textile Brand Mgt/Mkt	3 (CP)
HES_*** Health & Exercise Studies Course ^E	1	FTM 315 Fashion Product Design	
	<i>Total:15</i>		<i>Total:16</i>
JUNIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
PCC 302 Tech Textile Wet Processing	4	GEP Humanities Elective ^C	3
Statistics Elective ³	3	GEP Additional Breadth Requirement ^F	3
FTM 385 Fashion & the Consumer	3	FTM 318 Fashion Development Processes	3 (CP)
FTM 317 CAD for Fashion	3 (CP)	ENG 332 Commun for Bus & Mgt ¹	3
FTM 310 Entrepreneurship in Textiles	3	FTM 382 Intermed Tx Brand Mgmt/Mktg	3
	<i>Total:16</i>		<i>Total:15</i>
SENIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
FTM 416 The Fashion Industry	3	FTM 497 Senior Collection Studio or 2 Options ²	6
FTM 415 Fashion Product Development	3	GEP Social Sciences Elective ^D	3
GEP Interdisciplinary Perspectives	3	GEP Interdisciplinary Perspectives	2-3
Requirement ^G	3	Requirement ^G	1
Option Course (Select 1 from List) ²	3	Free Elective	
GEP Humanities Elective ^C			
	<i>Total:15</i>		<i>Total: 12-13</i>
Minimum Credit Hours Required for Graduation ^{*I,J,K} : 120			

Major/Program Footnotes:

1. Acceptable substitutions: MA 141 for MA 131; MA 241 or MA 114 for MA 231; PY 205/PY 206 for PY 211; ENG 331 or 333 for ENG 332.

2. List of Options (take FTM 497 and one (1) course from the list below or select 3 courses or 9 cr from the list below):

Note: Prerequisites may be required for many of the courses in the options below.

ADN 111, ADN 112, ADN 414, TT 331, TT 431, MT 3XX, FTM 320, FTM 380, FTM 387, FTM 420, FTM 480, FTM

481, FTM 484, FTM 485, FTM 486, FTM 487.

3. Choose one of the following statistics courses: ST 311, ST 361, or ST 370.

*** General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

- 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: MA131, MA231
 - 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: CH101/102, PY211
 - 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:
 - 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: EC/ARE201
 - E. **Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)
Choose from the University approved GEP Physical Education/Healthy Living 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:
 - 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:
 - K. **Foreign Language proficiency** - Proficiency at the FL_102 level is required for graduation.

NC STATE UNIVERSITY

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Memorandum

To: Dr. Michael D. Mullen, Vice Chancellor and Dean of the Division of Academic and Student Affairs
From: Travis Park, Department of Agricultural and Human Sciences, Undergraduate Teaching Coordinator
Date: October 26, 2018
Subject: Reducing credit hours from 126 to 120 for Agricultural Education

Proposed Effective Date: January 1, 2019

Justification: As requested by UNC-GA, we are reducing the total number of credit hours in the seven concentrations of the Agricultural Education major from 126 to 120 credit hours. We will accomplish this by the following amendments:

11AGEDAGB(1) reducing 1 credit hour in semester 3 for **AES 201 Shop Processes & Management/TDE 110 Materials & Processes Technology** from 4 to 3 credits, because TDE 110 changed to 3 credits
(2) meeting the social science GEP requirement with **EDP 304 Educational Psychology** and the economics elective, thus eliminating the social science elective requirement in semester 4
(3) eliminating 3 credits of free electives in semester 7

11AGEDAET(1) eliminating 1 credit of agriculture elective in semester 4
(2) eliminating 5 credits of free electives in semester 7

11AGEDAGR(1) reducing 1 credit hour in semester 3 for **AES 201 Shop Processes & Management/TDE 110 Materials & Processes Technology** from 4 to 3 credits, because TDE 110 changed to 3 credits
(2) meeting the social science GEP requirement with **EDP 304 Educational Psychology** and the economics elective, thus eliminating the social science elective requirement in semester 4
(3) meeting 3 credits of the Interdisciplinary GEP requirement with **CS 230 Introduction to Agroecology**.
(4) adding **PB 321 Introduction to Whole Plant Physiology** or **PB 421 Plant Physiology** in semester 4 as a prerequisite to **CS 411 Crop Ecology**

(5) eliminating 2 credits of free electives in semester 7 and moving free electives to semester 5

11AGEDANS(1) reducing 1 credit hour in semester 3 for **AES 201 Shop Processes & Management/TDE 110 Materials & Processes Technology** from 4 to 3 credits, because TDE 110 changed to 3 credits
(2) meeting the social science GEP requirement with **EDP 304 Educational Psychology** and the economics elective, thus eliminating the social science elective requirement in semester 2
(3) amending ANS animal science selection elective to be only 2 credits in semester 6
(4) moving ED 311 and ED 312 from semester 6 to semester 7 to balance semester loads
(5) eliminating 2 credits of free electives in semester 7

11AGEDHS(1) reducing 1 credit hour in semester 3 for **AES 201 Shop Processes & Management/TDE 110 Materials & Processes Technology** from 4 to 3 credits, because TDE 110 changed to 3 credits
(2) meeting the social science GEP requirement with **EDP 304 Educational Psychology** and the economics elective, thus eliminating the social science elective requirement in semester 2
(3) eliminating 1 credit of horticulture elective in semester 6
(4) eliminating 3 credits of free electives in semester 7

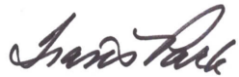
11AGEDNR(1) reducing 1 credit hour in semester 3 for **AES 201 Shop Processes & Management/TDE 110 Materials & Processes Technology** from 4 to 3 credits, because TDE 110 changed to 3 credits
(2) meeting the social science GEP requirement with **EDP 304 Educational Psychology** and the economics elective, thus eliminating the social science elective requirement in semester 4
(3) meeting the interdisciplinary perspectives GEP requirements with **ARE 336 Introduction to Resource and Environmental Economics**, **CS 230 Introduction to Agroecology**, **FW 221 Conservation of Natural Resources**, and **SSC 185 Land and Life**
(4) adding 5 credits of agricultural science electives in semester 5

11AGEDPSC(1) reducing 1 credit hour in semester 3 for **AES 201 Shop Processes & Management/TDE 110 Materials & Processes Technology** from 4 to 3 credits, because TDE 110 changed to 3 credits
(2) eliminating 3 credits of free electives in semesters 5 and 7

11AGESBS(1) reducing 1 credit hour in semester 4 for **CS 213 Crop Science/HS 201 Principles of Horticulture** from 4 to 3 credits
(2) meeting 3 credits of the social science GEP requirement with the economics elective, thus eliminating the social science elective requirement in semester 6
(3) adding a free elective for 3 credits in semester 6
(3) eliminating 1 credits of free electives in semester 5

The current and proposed 8-semester displays (Format A) are attached with the changes highlighted in yellow.

Sincerely,

A handwritten signature in dark ink, appearing to read "Travis Park", written in a cursive style.

Travis Park
Associate Professor

Bachelor of Science in Agricultural EducationCONCENTRATION TITLE: **Agricultural Engineering Technology**DEGREE CODE: **11AGEDAET**

FRESHMAN YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 101 Into to Career & Technical Education ⁴	1	_____	AEE 226 Computer Appl & Info Tech ⁴	3	_____
AEE 103 Fundamentals of AEE ¹	1	_____	ANS 150 Introduction to Animal Science	3	_____
BIO 181 Intro Biology-Ecol, Evol, & Biodiv ^B	4	_____	ANS 151 Animal Science Lab	1	_____
COM 110 Public Speaking	3	_____	CH 101 Chemistry–A Molecular Science ^B	3	_____
ENG 101 Academic Writing & Research ^H	4	_____	CH 102 General Chemistry Lab ^B	1	_____
MA 107 Precalculus I or	3	_____	_____ Math Elective ^A	3	_____
MA 111 Precalculus Algebra & Trigonometry ^A		_____	HES _____ Hlth Exer Studies Elective ^E	1	_____
HESF 1 _____ PE Fitness Elective ^F	1	_____			
Total	17		Total	15	
SOPHOMORE YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 206 Introduction to Teaching Agriculture ⁴	3	_____	_____ Agriculture Elective	2	_____
AES 201 Shop Processes and Management	3	_____	SSC 200 Soil Science	3	_____
BAE 325 Geomatics	3	_____	SSC 201 Soil Science Lab	1	_____
PY 211 College Physics I	4	_____	_____ Economics Elective ^{2 D}	3	_____
_____ Humanities Elective ^C	3	_____	_____ Plant Science Elective ³	3	_____
			_____ Interdisciplinary Elective ^G	3	_____
Total	16		Total	15	
JUNIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 322 Experiential Learning in Agriculture ⁴	3	_____	AEE 303 Admin & Super of Student Org ⁴	3	_____
EDP 304 Educational Psychology ^{4 D}	3	_____	AEE 326 Teach Diverse Learn in Agric ⁴	3	_____
AES 343 Agricultural Electrification	4	_____	AES 332 Mgmt of Animal Environments	4	_____
_____ Humanities Elective ^C	3	_____	AES 411 Agric Machinery/Power Units	4	_____
_____ Add Breadth- Math/Nat Sci ^F	3	_____	ED 311 Classroom Assessment ⁴	2	_____
			ED 312 Classroom Assessment Lab ⁴	1	_____
Total	16		Total	17	
SENIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 327 Conducting Summer Programs in AED	1	_____	AEE 424 Planning Agric Educ Programs ⁴	3	_____
AEE 426 Methods of Teaching Agriculture ⁴	3	_____	AEE 427 Student Teaching in Agric ⁴	8	_____
AES 432 Agric & Environ Safety & Health	3	_____	AEE 491 Seminar in AEE	1	_____
ELP 344 School and Society ⁴	3	_____			
_____ Interdisciplinary Elective ^G	2	_____			
Total	12		Total	12	
Minimum Credit Hours Required for Graduation ^{UK} : 120					

Corequisite Requirements: (May be met by completing courses listed above. List courses below that meet these requirements)^KForeign Language Proficiency _____^JGlobal Knowledge _____.^IUS Diversity _____.

Major/Program Footnotes:

- ¹ Incoming freshmen complete AEE 103. Transfer students may complete ALS 103 or ALS 303.
- ² Select from ARE 201, EC 201, or EC 205.
- ³ Select from courses in Crop Science, Horticultural Science, or Forestry.
- ⁴ Minimum grade of C- required for graduation. Minimum grade of C is required for teacher licensure.

General Education Program (GEP) requirements and GEP Footnotes:

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

^AMathematical 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 107 or MA 111**

^BNatural 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: **BIO 181, CH 101, CH 102, PY 211, PY 212**

^CHumanities (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. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^DSocial 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: **EDP 304 and ARE 201 or EC 201 or EC 205**

^EPhysical Education/Healthy Living - (2 credit hours – at least one 100-level Fitness and Wellness Course from the HESF course list) The second course may be from the following Health and Exercise Studies Lists: HESA, HESD, HESF, HESO, HESR, HESS, HEST

^FAdditional Breadth - (3 credit hours to be selected from the following checked University approved GEP course lists)

_____ Humanities/Social Sciences/Visual and Performing Arts or **x** Mathematical Sciences/Natural Sciences/Engineering

^GInterdisciplinary 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: **none**

^HIntroduction 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:****^IU.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**

^JGlobal 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**

^KForeign Language proficiency - Proficiency at the FL_102 level is required for graduation.

Fall 2008 for GEP revisions to curricula

Bachelor of Science in Agricultural Education
CONCENTRATION TITLE: Agricultural Engineering Technology
DEGREE CODE: 11AGEDAET

FRESHMAN YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 101 Into to Career & Technical Education ⁴	1	_____	AEE 226 Computer Appl & Infor Tech. ⁴	3	_____
AEE 103 Fundamentals of AEE ¹	1	_____	ANS 150 Introduction to Animal Science	3	_____
BIO 181, Introductory Biology ECO/DIV ^B	4	_____	ANS 151 Animal Science Lab	1	_____
COM 110, Public Speaking	3	_____	CH 101 Chemistry–A Molecular	3	_____
ENG 101, Academic Writing and Research ^H	4	_____	Science ^B	1	_____
MA 107 Precalculus I or			CH 102 General Chemistry Lab ^B	3	_____
MA 111 Precalculus Algebra and	3	_____	_____ Math Elective ^A	1	_____
Trigonometry ^A	1	_____	HES _____ Hlth Exer Studies		
HESF 1 _____ PE Fitness Elective ^E			Elective ^E		
Total	17		Total	15	
SOPHOMORE YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 206 Introduction to Teaching Agriculture ⁴	3	_____	_____ Agriculture Elective	3	_____
AES 201 Shop Processes and Management	3	_____	SSC 200 Soil Science	3	_____
BAE 325 Introductory Geomatics	3	_____	SSC 201 Soil Science Lab	1	_____
PY 211 College Physics I	4	_____	_____ Economics Elective ^{2, D}	3	_____
_____ Humanities Elective ^C	3	_____	_____ Plant Science Elective ³	3	_____
			_____ Interdisciplinary Elective ^G	3	_____
Total	16		Total	16	
JUNIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 322 Experiential Learning in Agriculture ⁴	3	_____	AEE 303 Admin & Super of Student Org ⁴	3	_____
EDP 304 Educational Psychology ^{4, D}	3	_____	AEE 326 Teach Diverse Learn in Agric ⁴	3	_____
AES 343 Agricultural Electrification	4	_____	AES 332 Animal Facilities & Envir	4	_____
_____ Humanities Elective ^C	3	_____	Mgmt	4	_____
_____ Add Breadth- Math/Nat Sci ^F	3	_____	AES 411 Agric Machinery/Power Units	2	_____
			ED 311 Classroom Assessment ⁴	1	_____
			ED 312 Classroom Assessment Lab ⁴		
Total	16		Total	17	
SENIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 327 Conducting Summer Programs in AEE	1	_____	AEE 424 Planning Agric Educ Programs ⁴	3	_____
AEE 426 Methods of Teaching Agriculture ⁴	3	_____	AEE 427 Student Teaching in Agric ⁴	8	_____
AES 432 Agric & Environ. Safety & Health	3	_____	AEE 491 Seminar in AEE	1	_____
ELP 344 Schools and Society ⁴	3	_____			
_____ Interdisciplinary Elective ^G	2	_____			
_____ Free Electives⁵	3	_____			
_____ Free Electives⁵	2	_____			
Total	17		Total	12	
Minimum Credit Hours Required for Graduation ^{I,J,K} : 126					

Corequisite Requirements: (May be met by completing courses listed above. List courses below that meet these requirements)

^KForeign Language Proficiency _____

^JGlobal Knowledge _____.

^IUS Diversity _____.

Fall 2008 for GEP revisions to curricula

Major/Program Footnotes:

- ¹ Incoming freshmen complete AEE 103. Transfer students may complete ALS 103 or ALS 303.
- ² Select from ARE 201, EC 201, or EC 205.
- ³ Select from courses in Crop Science, Horticultural Science, or Forestry.
- ⁴ Minimum grade of C- required for graduation. Minimum grade of C is required for teacher licensure.
- ⁵ Total hours of free electives vary in order to allow the minimum hours required for the degree to equal 126 credit hrs.

General Education Program (GEP) requirements and GEP Footnotes:

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

^AMathematical 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 107 or MA 111***

^BNatural 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: **BIO 181, CH 101, CH 102, PY 211, PY 212***

^CHumanities (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. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.***

^DSocial 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: **EDP 304 and ARE 201 or EC 201 or EC 205***

^EPhysical Education/Healthy Living - (2 credit hours – at least one 100-level Fitness and Wellness Course from the HESF course list) The second course may be from the following Health and Exercise Studies Lists: HESA, HESD, HESF, HESO, HESR, HESS, HEST

^FAdditional Breadth - (3 credit hours to be selected from the following checked University approved GEP course lists)

Humanities/Social Sciences/Visual and Performing Arts or x Mathematical Sciences/Natural Sciences/Engineering

^GInterdisciplinary 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: **none***

^HIntroduction 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:

^IU.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***

^JGlobal 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***

^KForeign Language proficiency - Proficiency at the FL_102 level is required for graduation.

CURRICULUM REQUIREMENTS

Format B

<u>Degree/Plan Title:</u> Agricultural Education-BS	<u>Plan SIS Code:</u> 11AGEDBS
<u>Concentration/Subplan Title:</u> Agricultural Engineering Technology Concentration	<u>Subplan SIS Code:</u> 11AGEDAET
<u>Indicate requirements status:</u> Current: XXX Proposed: _____ <u>Proposed Effective Semester:</u> January 2019	
<u>New Degree Audit required?</u> (Y or N) Yes	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
COM 110 Public Speaking	3	Communication in the Major
<u>Agricultural Education Courses</u>		
AEE 101 Introduction to Career and Technical Education (CP)	1	
AEE 206 Introduction to Teaching Agriculture (CP)	3	
AEE 226 Computer Applications and Information Technology in Agricultural and Extension Education (CP)	3	
AEE 303 Administration and Supervision of Student Organizations (CP)	3	
AEE 322 Experiential Learning in Agriculture (CP)	3	
AEE 326 Teaching Diverse Learners in Agriculture (CP)	3	
AEE 327 Conducting Summer Programs in Agricultural Education (CP)	1	
AEE 424 Planning Agricultural Education Programs (CP)	3	
AEE 426 Methods of Teaching Agriculture (CP)	3	
AEE 427 Student Teaching in Agriculture (CP)	8	
AEE 491 Seminar in Agricultural Education (CP)	1	
<u>Professional Education Courses</u>		
EDP 304 Educational Psychology (CP)	3	Social Sciences
ED 311 Classroom Assessment (CP)	2	
ED 312 Classroom Assessment Lab (CP)	1	
ELP 344 School and Society (CP)	3	
<u>Teaching Content Courses</u>		
AES 201 Shop Processes and Management <i>or</i> TDE 110 Materials and Processes Technology	3	
ANS 150 Introduction to Animal Science	3	
ANS 151 Introduction to Animal Science Lab	1	
ARE 201 Introduction to Agricultural and Resource Economics <i>or</i> EC 201 Principles of Microeconomics <i>or</i> EC 205 Fundamentals of Economics	3	Social Sciences
SSC 200 Soil Science	3	Social Sciences
SSC 201 Soil Science Lab	1	Natural Sciences

Math and Science Courses		
MA 107 Precalculus I or MA 111 Precalculus Algebra and Trigonometry (CP)	3	Mathematical Sciences Mathematical Sciences
BIO 181 Introductory Biology: Ecology, Evolution, and Biodiversity	4	Natural Sciences
CH 101 Chemistry – A Molecular Science	3	Natural Sciences
CH 102 General Chemistry Laboratory	1	Natural Sciences
Agricultural Engineering/Technology Concentration Courses		
BAE 325 Introductory Geomatics	3	
AES 343 Agricultural Electrification	4	
AES 332 Management of Animal Environments	4	
AES 411 Agricultural Machinery and Power Units	4	
AES 432 Agricultural and Environmental Safety and Health	3	
PY 211 College Physics I	4	Natural Sciences
Concentration Courses/Groups/Electives:		
Plant Science Elective Select any HS, SSC, or CS course.	3	
Agricultural Elective Select any CALS departmental course.	2	
Free Electives:	0	
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>	96 hours	
COLLEGE REQUIREMENTS:		
Orientation Course(s): AEE 103 Foundations of Agricultural and Extension Education or ALS 103 Freshman Transitions and Diversity in Agricultural and Life Sciences or ALS 303 Transfer Transitions and Diversity in Agricultural and Life Sciences	1	Diversity Diversity
Other:	0	
Total credit hours under College Requirements:	1 Hours	

NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS		
<p><i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category <u>may not be subset</u> to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i></p> <p><i>Specific courses should not be listed in any of the fields below other than ENG 101.</i></p>		
At least one of the following must be listed:		
<ol style="list-style-type: none"> Choose course(s) from the University Approved GEP course list for this category. Minimum requirements are satisfied by Major/College course requirements. Major/College course requirement satisfies X credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category. Co-requisite is satisfied by a Major/College course requirement. Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts. Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences. 		
General Education Program Requirements: <i>Minimum 39-40 hrs</i>	Credit hours	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)
Mathematical Sciences (At least 1 course with MA or ST prefix) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	(6 credits) 3	(Choose statement 1, 2 or 3) 1

Natural Sciences (At least 1 <i>lab</i> course or course with a <i>lab</i>) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	(7 credits)	0	(Choose statement 1, 2 or 3) 2
English 101 (C- or better required)	(4 credits)	4	ENG 101
Humanities (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	(6 credits)	6	(Choose statement 1, 2 or 3) 1
Social Sciences (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	(6 credits)	0	(Choose statement 1, 2 or 3) 2
Additional Breadth (Choose approach that is <i>different</i> from the approach of the Major) <i>Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.</i>	(3 credits)	3	(Choose statement 5 or 6) 1
Interdisciplinary Perspectives <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	(5 credits)	5	(Choose statement 1, 2 or 3) 1
Health and Exercise Studies (Including one <i>Fitness and Wellness</i> course)	(2 credits)	2	Choose course(s) from the University Approved GEP course list for this category.
Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.		23 hours	
GEP Co-Requisites:			<i>Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.</i>
U.S. Diversity co-requisite	(USD)	n/a	(Choose statement 1 or 4) 1
Global Knowledge co-requisite	(GK)	n/a	(Choose statement 1 or 4) 1
Foreign Language Proficiency		n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:			Place an X in the credit hour box to indicate below that the requirement is " Satisfied by College/Program Requirements "
Communication in the Major (Advanced Communication)		X	Satisfied by College/Program Requirements
Technology Fluency		X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.	120 Total hours		As applicable, indicate here the overall GPA requirement for degree completion including course completion.

Bachelor of Science in Agricultural EducationCONCENTRATION TITLE: **Agricultural Business**DEGREE SUBPLAN: **11AGEDAGB**

FRESHMAN YEAR					
FALL SEMESTER	Cred	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 101 Intro to CTE ⁵	1	_____	AEE 226 Computer Appl & Info Tech ⁵	3	_____
AEE 103 Foundations of AEE ¹	1	_____	BIO 183 Intro Biology-Cell/Molecular ^B	4	_____
BIO 181 Intro Biology-Ecol, Evol, & Biodiv ^B	4	_____	COM 110 Public Speaking	3	_____
ENG 101 Academic Writing & Research ^H			_____ Economics Elective ^{2 D}	3	_____
MA _____ Math Elective ^A	4	_____	_____ Math Elective ^A	3	_____
HESF 1_____ Elective ^E	3	_____	HESx _____ Hlth Exerc Studies Elective ^E	1	_____
	1	_____			
Total	14		Total	17	
SOPHOMORE YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 206 Intro to Teaching Agriculture ⁵	3	_____	ANS 150 Intro to Animal Science	3	_____
ARE 215 Small Business Accounting or			ANS 151 Animal Science Lab	1	_____
BUS 225 Personal Finance	3	_____	ARE 311 Agricultural Markets or	3	_____
AES 201 Shop Processes & Mgmt or			ARE 312 Agribusiness Marketing		
TDE 110 Materials & Processes Tech	3	_____	CH 101 Chemistry-A Molecular Sci ^B	3	_____
_____ Humanities Elective ^C	3	_____	CH 102 General Chemistry Lab ^B	1	_____
_____ Plant Science Elective ³	3	_____	_____ Add Breadth: Math/Nat. Sci ^F	3	_____
Total	15		Total	14	
JUNIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 322 Experiential Learning in Agric ⁵	3	_____	AEE 303 Adm and Sup of Student Org ⁵	3	_____
ARE 306 Agricultural Law or	3	_____	AEE 326 Teach Diverse Learn Agric ⁵	3	_____
ARE 309 Environ Law & Econ Policy			ARE 303 Farm Management or	3	_____
EDP 304 Educational Psychology ⁵	3	_____	ARE 304 Agribusiness Management		
SSC 200 Soil Science	3	_____	ED 311 Classroom Assessment ⁵	2	_____
SSC 201 Soil Science Lab	1	_____	ED 312 Classroom Assessment Lab ⁵	1	_____
_____ Interdisciplinary Elective ^G	3	_____	ELP 344 School and Society ⁵	3	_____
			_____ Ag Business Elective ⁴	3	_____
Total	16		Total	18	
SENIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 327 Conduct Summer Prog in AED	1	_____	AEE 424 Plan Agric Educ. Program ⁵	3	_____
AEE 426 Methods of Teaching Agric ⁵	3	_____	AEE 427 Student Teaching in Agric ⁵	8	_____
ARE 321 Agricultural Financial Mgmt or	3	_____	AEE 491 Seminar in AEE	1	_____
ARE 332 Human Res Mgmt for Agribus					
_____ Humanities Elective ^C	3	_____			
_____ Interdisciplinary Elective ^G	2	_____			
_____ Free Electives ⁶	2	_____			
Total	14		Total	12	
Minimum Credit Hours Required for Graduation ^{UK} : 120					

Corequisite Requirements: (May be met by completing courses listed above. List courses below that meet these requirements)^KForeign Language Proficiency _____^JGlobal Knowledge _____.^IUS Diversity _____.

Major/Program Footnotes:

- ¹ Incoming freshmen complete AEE 103. Transfer students may complete ALS 103 or ALS 303.
- ² Select from ARE 201, EC 201, or EC 205. Satisfies 3 credit hours of the Social Science GEP requirement.
- ³ Select from courses in Crop Science, Forestry, or Horticultural Science.
- ⁴ Select from courses in ARE, BUS, or EC.
- ⁵ Minimum grade of C- required for graduation. A grade of C is required for teacher licensure.
- ⁶ Total hours of free electives vary in order to allow the minimum hours required for the degree to equal 120 credit hrs.

***General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

^AMathematical 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: **none**

^BNatural 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: **BIO 181 BIO 183 CH 101 CH 102**

^CHumanities (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. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^DSocial 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 or EC 201 or EC 205. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^EPhysical Education/Healthy Living-(2 credit hours – at least one 100-level Fitness and Wellness Course from the HESF course list) The second course may be from the following Health and Exercise Studies Lists: HESA HESD HESF HESO HESR HESS HEST.**^FAdditional Breadth** - (3 credit hours to be selected from the following checked University approved GEP course lists)

Humanities/Social Sciences/Visual and Performing Arts or **x** Mathematical Sciences/Natural Sciences/Engineering

^GInterdisciplinary 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: **none**

^HIntroduction 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:****^IU.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**

^JGlobal 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**

^KForeign Language proficiency - Proficiency at the FL_102 level is required for graduation.

Name _____

Created for use Fall 2008 for GEP revisions to curricula

Bachelor of Science in Agricultural Education

CONCENTRATION TITLE: Agricultural Business

DEGREE SUBPLAN: 11AGEDAGB

FRESHMAN YEAR					
FALL SEMESTER	Cred	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 101, Intro to CTE ⁵	1	_____	AEE 226, Comp. Appl. & Info Tech ⁵	3	_____
AEE 103, Foundations of AEE ¹	1	_____	BIO 183, Intro Biology-Cell/Molecular ^B	4	_____
BIO 181, Intro Biology ECO/DIV ^B	4	_____	COM 110, Public Speaking	3	_____
ENG 101, Academic Writing & Research ^H	4	_____	_____ Economics Elective ^{2, D}	3	_____
MA _____ Math Elective ^A	3	_____	_____ Math Elective ^A	3	_____
HESF 1 _____ Elective ^E	1	_____	HESx _____ Hlth Exerc Studies Elective ^E	1	_____
Total	14		Total	17	
SOPHOMORE YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 206, Intro to Teaching Agriculture ⁵	3	_____	ANS 150, Intro to Animal Science	3	_____
ARE 215, Small Business Accounting or			ANS 151, Animal Science Lab	1	_____
BUS 225, Personal Finance	3	_____	ARE 311, Agricultural Markets or		
AES 201, Shop Processes & Mgmt or			ARE 312, Agribusiness Marketing	3	_____
TDE 110, Materials & Processes Tech	3-4	_____	CH 101, Chemistry-A Molecular Sci ^B	3	_____
_____ Humanities Elective ^C	3	_____	CH 102, General Chemistry Lab ^B	1	_____
_____ Plant Science Elective ³	3	_____	_____ Add Breadth: Math/Nat. Sci ^F	3	_____
			_____ Social Science Elective ^D	3	_____
Total	15-16		Total	17	
JUNIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 322, Experiential Learning in Agric ⁵	3	_____	AEE 303, Adm and Sup of Student Org. ⁵	3	_____
ARE 306, Agricultural Law or			AEE 326, Teach Diverse Learn Agric. ⁵	3	_____
ARE 309, Environ Law & Econ. Policy	3	_____	ARE 303, Farm Management or		
EDP 304, Educational Psychology ⁵	3	_____	ARE 304, Agribusiness Management	3	_____
SSC 200, Soil Science	3	_____	ED 311, Classroom Assessment ⁵	2	_____
SSC 201, Soil Science Lab	1	_____	ED 312, Classroom Assessment Lab ⁵	1	_____
_____ Interdisciplinary Elective ^G	3	_____	ELP 344 School and Society ⁵	3	_____
			_____ Ag Business Elective ⁴	3	_____
Total	16		Total	18	
SENIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 327, Conduct Summer Prog in AED	1	_____	AEE 424, Plan Agric Educ. Program ⁵	3	_____
AEE 426, Methods of Teaching Agric ⁵	3	_____	AEE 427, Student Teaching in Agric ⁵	8	_____
ARE 321, Agricultural Financial Mgmt or			AEE 491, Seminar in AEE	1	_____
ARE 332, Human Res Mgmt for Agribus.	3	_____			
_____ Humanities Elective ^C	3	_____			
_____ Interdisciplinary Elective ^G	2	_____			
_____ Free Electives ⁶	3	_____			
_____ Free Electives ⁶	1-2	_____			
Total	16-17		Total	12	
Minimum Credit Hours Required for Graduation ^{I,J,K} : 126					

Corequisite Requirements: (May be met by completing courses listed above. List courses below that meet these requirements)

^KForeign Language Proficiency _____^JGlobal Knowledge _____.^IUS Diversity _____.

Major/Program Footnotes:

- ¹ Incoming freshmen complete AEE 103. Transfer students may complete ALS 103 or ALS 303.
- ² Select from ARE 201, EC 201, or EC 205. Satisfies 3 credit hours of the Social Science GEP requirement.
- ³ Select from courses in Crop Science, Forestry, or Horticultural Science.
- ⁴ Select from courses in ARE, BUS, or EC.
- ⁵ Minimum grade of C- required for graduation. A grade of C is required for teacher licensure..
- ⁶ Total hours of free electives vary in order to allow the minimum hours required for the degree to equal 126 credit hrs.

***General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

^AMathematical 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: **none***

^BNatural 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: **BIO 181, BIO 183, CH 101, CH 102***

^CHumanities (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. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.***

^DSocial 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 or EC 201 or EC 205. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.***

^EPhysical Education/Healthy Living-(2 credit hours – at least one 100-level Fitness and Wellness Course from the HESF course list) The second course may be from the following Health and Exercise Studies Lists: HESA, HESD, HESF, HESO, HESR, HESS, HEST.**^FAdditional Breadth** - (3 credit hours to be selected from the following checked University approved GEP course lists)

_____ Humanities/Social Sciences/Visual and Performing Arts or x Mathematical Sciences/Natural Sciences/Engineering

^GInterdisciplinary 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: **none***

^HIntroduction 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:

^IU.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***

^JGlobal 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***

^KForeign Language proficiency - Proficiency at the FL_102 level is required for graduation.

CURRICULUM REQUIREMENTS

Format B

<u>Degree/Plan Title:</u> Agricultural Education-BS	<u>Plan SIS Code:</u> 11AGEDBS
<u>Concentration/Subplan Title:</u> Agricultural Business Concentration	<u>Subplan SIS Code:</u> 11AGEDAGB
<u>Indicate requirements status:</u> Current: XXX Proposed: <u>Proposed</u> Effective Semester: January 2019	
<u>New Degree Audit required?</u> (Y or N) Yes	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
COM 110 Public Speaking	3	Communication in the Major
<u>Agricultural Education Courses</u>		
AEE 101 Introduction to Career and Technical Education (CP)	1	
AEE 206 Introduction to Teaching Agriculture (CP)	3	
AEE 226 Computer Applications and Information Technology in Agricultural and Extension Education (CP)	3	
AEE 303 Administration and Supervision of Student Organizations (CP)	3	
AEE 322 Experiential Learning in Agriculture (CP)	3	
AEE 326 Teaching Diverse Learners in Agriculture (CP)	3	
AEE 327 Conducting Summer Programs in Agricultural Education (CP)	1	
AEE 424 Planning Agricultural Education Programs (CP)	3	
AEE 426 Methods of Teaching Agriculture (CP)	3	
AEE 427 Student Teaching in Agriculture (CP)	8	
AEE 491 Seminar in Agricultural Education (CP)	1	
<u>Professional Education Courses</u>		
EDP 304 Educational Psychology (CP)	3	Social Sciences
ED 311 Classroom Assessment (CP)	2	
ED 312 Classroom Assessment Lab (CP)	1	
ELP 344 School and Society (CP)	3	
<u>Teaching Content Courses</u>		
AES 201 Shop Processes and Management <i>or</i> TDE 110 Materials and Processes Technology	3	
ANS 150 Introduction to Animal Science	3	
ANS 151 Introduction to Animal Science Lab	1	
ARE 201 Introduction to Agricultural and Resource Economics <i>or</i> EC 201 Principles of Microeconomics <i>or</i> EC 205 Fundamentals of Economics	3	Social Sciences
SSC 200 Soil Science	3	Social Sciences
SSC 201 Soil Science Lab	1	Natural Sciences

<u>Math and Science Courses</u>		
BIO 181	Introductory Biology: Ecology, Evolution, and Biodiversity	4
BIO 183	Introductory Biology: Cellular and Molecular Biology	4
CH 101	Chemistry – A Molecular Science	3
CH 102	General Chemistry Laboratory	1
<u>Agricultural Business Concentration Courses</u>		
ARE 215	Small Business Accounting or BUS 225 Personal Finance	3
ARE 303	Farm Management or ARE 304 Agribusiness Management	3
ARE 306	Agricultural Law or ARE 309 Environmental Law and Economic Policy	3
ARE 311	Agricultural Markets or ARE 312 Agribusiness Marketing	3
ARE 321	Agricultural Financial Management or ARE 332 Human Resource Management for Agribusiness	3
<u>Concentration Courses/Groups/Electives:</u>		
<u>Plant Science Elective</u> Select any FOR, HS, or SSC course.		3
<u>Agricultural Business Elective</u> Select any ARE, BUS, or EC course.		3
<u>Free Electives:</u>		2
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>		93 hours
COLLEGE REQUIREMENTS:		
<u>Orientation Course(s):</u>		
AEE 103	Foundations of Agricultural and Extension Education or ALS 103 Freshman Transitions and Diversity in Agricultural and Life Sciences or ALS 303 Transfer Transitions and Diversity in Agricultural and Life Sciences	1
<u>Other:</u>		0
Total credit hours under College Requirements:		1 Hours

NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS <i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category <u>may not be subset</u> to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i> Specific courses should not be listed in any of the fields below other than ENG 101.		At least one of the following must be listed: 1 Choose course(s) from the University Approved GEP course list for this category. 2 Minimum requirements are satisfied by Major/College course requirements. 3 Major/College course requirement satisfies X credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category. 4 Co-requisite is satisfied by a Major/College course requirement. 5 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts. 6 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.	
General Education Program Requirements: <i>Minimum 39-40 hrs</i>		Credit hours	How will the GEP requirement be met? <i>(Choose applicable statement from 1-6 listed above)</i>
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	6	1	(Choose statement 1, 2 or 3)
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	0	2	(Choose statement 1, 2 or 3)
English 101 (C- or better required) (4 credits)	4		ENG 101
Humanities (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	6	1	(Choose statement 1, 2 or 3)
Social Sciences (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	0	2	(Choose statement 1, 2 or 3)
Additional Breadth (3 credits) (Choose approach that is different from the approach of the Major) <i>Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.</i>	3	1	(Choose statement 5 or 6)
Interdisciplinary Perspectives (5 credits) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	5	1	(Choose statement 1, 2 or 3)
Health and Exercise Studies (2 credits) (Including one Fitness and Wellness course)	2		Choose course(s) from the University Approved GEP course list for this category.
Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.	26 hours		
GEP Co-Requisites:			<i>Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.</i>
U.S. Diversity co-requisite (USD)	n/a	1	(Choose statement 1 or 4)
Global Knowledge co-requisite (GK)	n/a	1	(Choose statement 1 or 4)
Foreign Language Proficiency	n/a		Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:			Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)	X		Satisfied by College/Program Requirements
Technology Fluency	X		Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.	120 Total hours		As applicable, indicate here the overall GPA requirement for degree completion including course completion.

Bachelor of Science in Agricultural EducationCONCENTRATION TITLE: **Agronomy**DEGREE KEY: **11AGEDAGR**

FRESHMAN YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 101 Intro to CTE ⁶	1	_____	AEE 226 Computer Appl & Info Technology ⁶	3	_____
AEE 103 Foundations of AEE ¹	1	_____	BIO 183 Intro Biology-Cell/Molecular ^B	4	_____
BIO 181 Intro Biology-Ecol, Evol, & Biodiv ^B	4	_____	CS 213 Crop Science	3	_____
COM 110 Public Speaking	3	_____	_____ Math Elective ^A	3	_____
ENG 101 Academic Writing & Research ^H	4	_____	HESx _____ Hlth Exerc Studies Elective ^E	1	_____
MA _____ Math Elective ^A	3	_____			
HESF 1 _____ Elective ^E	1	_____			
Total	17		Total	14	
SOPHOMORE YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 206 Intro to Teaching Agriculture ⁶	3	_____	ANS 150 Intro to Animal Science	3	_____
CS 230 Intro to Agroecology	3	_____	ANS 151 Animal Science Lab	1	_____
AES 201 Shop Processes & Mgmt or	3	_____	CH 101 Chemistry—A Molecular Sci ^B	3	_____
TDE 110 Materials and Processes Tech			CH 102 General Chemistry Lab ^B	1	_____
_____ Economics Elective ²	3	_____	_____ Agronomy Elective	3	_____
_____ Interdisciplinary Elective ^G	2	_____	PB 321 Intro to Whole Plant Physiology or	3	_____
			PB 421 Plant Physiology		
			_____ Humanities Elective ^C	3	_____
Total	14		Total	17	
JUNIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 322 Experiential Learning in Agric ⁶	3	_____	AEE 303 Admin and Super of Student Org ⁶	3	_____
CS 411 Crop Ecology	3	_____	AEE 326 Teach Diverse Learners in Agric ⁶	3	_____
EDP 304 Educational Psychology ⁶	3	_____	ELP 344 School and Society ⁵	3	_____
SSC 200 Soil Science	3	_____	_____ Add'l Breadth: Math/Nat Sci	3	_____
SSC 201 Soil Science Lab	1	_____	Elect ^F		
_____ Free Elective ⁵	4	_____	_____ Agriculture Electives ⁴	3	_____
Total	13		Total	15	
SENIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 327 Conducting Summer Prog in AEE	1	_____	AEE 424 Planning Agricultural Educ Prog ⁶	3	_____
AEE 426 Meth of Teaching Agriculture ⁶	3	_____	AEE 427 Student Teaching in Agriculture ⁶	8	_____
SSC 341 Soil Fertility & Nutrient Mgt	3	_____	AEE 491 Seminar in AEE ⁶	1	_____
SSC 342 Soil and Plant Nutrient Analysis	1	_____			
_____ Humanities Elective ^C	3	_____			
ED 311 Classroom Assessment ⁶	2	_____			
ED 312 Classroom Assessment Lab ⁶	1	_____			
Total	14		Total	12	
Minimum Credit Hours Required for Graduation: 120					

Corequisite Requirements: (May be met by completing courses listed above. List courses below that meet these requirements)Foreign Language Proficiency^K _____Global Knowledge^I _____.US Diversity^I _____.**Major/Program Footnotes:**

- ¹ Incoming freshmen complete AEE 103. Transfer students may complete ALS 103 or ALS 303.
- ² Select from ARE 201, EC 201, or EC 205. Satisfies 3 credit hours of the Social Science GEP requirement.
- ³ Select from courses in Crop Science, Soil Science, or Plant Pathology.
- ⁴ Select from Group C electives in Agriculture or ARE courses.
- ⁵ Total hours of free electives vary in order to allow the minimum hours required for the degree to equal 120 credit hrs.
- ⁶ A minimum grade of C- is required for graduation. A minimum grade of C is required for teacher licensure.

***General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

^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: **none**

^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: **BIO 181, BIO 183, CH 101, CH 102**

^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. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^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 or EC 201 or EC 205. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^E Physical Education/Healthy Living - (2 credit hours – at least one 100-level Fitness and Wellness Course from the HESF course list) The second course may be from the following Health and Exercise Studies Lists: HESA, HESD, HESF, HESO, HESR, HESS, HEST

^F Additional Breadth - (3 credit hours to be selected from the following checked University approved GEP course lists)

_____ Humanities/Social Sciences/Visual and Performing Arts or **x** 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: **none**

^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.

Bachelor of Science in Agricultural EducationCONCENTRATION TITLE: **Agronomy**

DEGREE KEY: 11AGEDAGR

FRESHMAN YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 101 Intro to CTE ⁶	1	_____	AEE 226 Comp. Appl. & Info Technology ⁶	3	_____
AEE 103 Foundations of AEE ¹	1	_____	BIO 183 Intro Biology-Cell/Molecular ^B	4	_____
BIO 181 Intro Biology – ECO/DIV ^B	4	_____	CS 213 Crops: Adaptation & Production	4	_____
COM 110 Public Speaking	3	_____	_____ Math Elective ^A	3	_____
ENG 101 Acad Writing & Research ^{6H}	4	_____	HESx _____ Hlth Exerc Studies Elective ^E	1	_____
MA _____ Math Elective ^A	3	_____			
HESF 1 _____ Elective ^E	1	_____			
Total	17		Total	15	
SOPHOMORE YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 206 Intro to Teaching Agriculture ⁶	3	_____	ANS 150 Intro to Animal Science	3	_____
CS 230 Intro to Agronomy	3	_____	ANS 151 Animal Science Lab	1	_____
AES 201 Shop Processes & Mgmt or			CH 101 Chemistry—A Molecular Sci ^B	3	_____
TDE 110 Materials and Processes Tech	3-4	_____	CH 102 General Chemistry Lab ^B	1	_____
_____ Economics Elective ²	3	_____	_____ Agronomy	3	_____
_____ Interdisciplinary Elective ^G	2	_____	_____ Social Science Elective^D	3	_____
			_____ Humanities Elective ^C	3	_____
Total	14-15		Total	17	
JUNIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 322 Experiential Learning in Agric ⁸	3	_____	AEE 303 Admin and Super of Student Org. ⁶	3	_____
CS 411 Crop Ecology	3	_____	AEE 326 Teach Diverse Learners in Agric. ⁶	3	_____
EDP 304 Educational Psychology ⁶	3	_____	ED 311 Classroom Assessment⁶	2	_____
SSC 200/201 Soil Science	4	_____	ED 312 Classroom Assessment Lab⁶	1	_____
_____ Interdisciplinary Elective^G	3	_____	ELP 344 School and Society ⁶	3	_____
			_____ Add Breadth: Math/Nat SciElect ^F	3	_____
			_____ Agriculture Electives ⁴	3	_____
Total	16		Total	18	
SENIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 327 Conducting Summer Prog in AED	1	_____	AEE 424 Planning Agricultural Educ. Prog. ⁶	3	_____
AEE 426 Meth. of Teaching Agriculture ⁶	3	_____	AEE 427 Student Teaching in Agriculture ⁶	8	_____
SSC 341/342 Soil Fertility and Fertilizers	4	_____	AEE 491 Seminar in AEE	1	_____
_____ Humanities Elective ^C	3	_____			
_____ Free Electives⁵	5-6	_____			
Total	16-17		Total	12	
Minimum Credit Hours Required for Graduation: 126					

Corequisite Requirements: (May be met by completing courses listed above. List courses below that meet these requirements)Foreign Language Proficiency^K _____Global Knowledge^J _____.US Diversity^I _____.**Major/Program Footnotes:**¹ Incoming freshmen complete AEE 103. Transfer students may complete ALS 103 or ALS 303.² Select from ARE 201, EC 201, or EC 205. Satisfies 3 credit hours of the Social Science GEP requirement.³ Select from courses in Crop Science, Soil Science, or Plant Pathology.⁴ Select from Group C electives in Agriculture or ARE courses.⁵ Total hours of free electives vary in order to allow the minimum hours required for the degree to equal 126 credit hrs.⁶ A minimum grade of C- is required for graduation. A minimum grade of C is required for teacher licensure.

***General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

^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: **none**

^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: **BIO 181, BIO 183, CH 101, CH 102**

^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. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^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 or EC 201 or EC 205. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^E **Physical Education/Healthy Living** - (2 credit hours – at least one 100-level Fitness and Wellness Course from the HESF course list) The second course may be from the following Health and Exercise Studies Lists: HESA, HESD, HESF, HESO, HESR, HESS, HEST^F **Additional Breadth** - (3 credit hours to be selected from the following checked University approved GEP course lists)

_____ Humanities/Social Sciences/Visual and Performing Arts or x 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: **none**

^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.

CURRICULUM REQUIREMENTS

Format B

<u>Degree/Plan Title:</u> Agricultural Education-BS	<u>Plan SIS Code:</u> 11AGEDBS
<u>Concentration/Subplan Title:</u> Agronomy Concentration	<u>Subplan SIS Code:</u> 11AGEDAGR
<u>Indicate requirements status:</u> Current: XXX Proposed: <u>Proposed</u> Effective Semester: January 2019	
<u>New Degree Audit required?</u> (Y or N) Yes	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
COM 110 Public Speaking	3	Communication in the Major
<u>Agricultural Education Courses</u>		
AEE 101 Introduction to Career and Technical Education (CP)	1	
AEE 206 Introduction to Teaching Agriculture (CP)	3	
AEE 226 Computer Applications and Information Technology in Agricultural and Extension Education (CP)	3	
AEE 303 Administration and Supervision of Student Organizations (CP)	3	
AEE 322 Experiential Learning in Agriculture (CP)	3	
AEE 326 Teaching Diverse Learners in Agriculture (CP)	3	
AEE 327 Conducting Summer Programs in Agricultural Education (CP)	1	
AEE 424 Planning Agricultural Education Programs (CP)	3	
AEE 426 Methods of Teaching Agriculture (CP)	3	
AEE 427 Student Teaching in Agriculture (CP)	8	
AEE 491 Seminar in Agricultural Education (CP)	1	
<u>Professional Education Courses</u>		
EDP 304 Educational Psychology (CP)	3	Social Sciences
ED 311 Classroom Assessment (CP)	2	
ED 312 Classroom Assessment Lab (CP)	1	
ELP 344 School and Society (CP)	3	
<u>Teaching Content Courses</u>		
AES 201 Shop Processes and Management <i>or</i> TDE 110 Materials and Processes Technology	3	
ANS 150 Introduction to Animal Science	3	
ANS 151 Introduction to Animal Science Lab	1	
ARE 201 Introduction to Agricultural and Resource Economics <i>or</i> EC 201 Principles of Microeconomics <i>or</i> EC 205 Fundamentals of Economics	3	Social Sciences
SSC 200 Soil Science	3	Social Sciences
SSC 201 Soil Science Lab	1	Natural Sciences

Math and Science Courses		
BIO 181	Introductory Biology: Ecology, Evolution, and Biodiversity	4
BIO 183	Introductory Biology: Cellular and Molecular Biology	4
CH 101	Chemistry – A Molecular Science	3
CH 102	General Chemistry Laboratory	1
Agronomy Concentration Courses		
CS 213	Crop Science	3
CS 230	Introduction to Agroecology	3
CS 411	Crop Ecology	3
PB 321	Introduction to Whole Plant Physiology <i>or</i> PB 421 Plant Physiology	3
SSC 341	Soil Fertility and Nutrient Management	3
SSC 342	Soil and Plant Nutrient Analysis	1
Concentration Courses/Groups/Electives:		
Agronomy Elective Select any CS, PP, or SSC course.		3
Agricultural Elective Select any CALS departmental course.		3
Free Electives:		4
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>		96 hours
COLLEGE REQUIREMENTS:		
Orientation Course(s):		
AEE 103	Foundations of Agricultural and Extension Education <i>or</i> ALS 103 Freshman Transitions and Diversity in Agricultural and Life Sciences <i>or</i> ALS 303 Transfer Transitions and Diversity in Agricultural and Life Sciences	1
Other:		0
Total credit hours under College Requirements:		1 Hours

NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS		
<p><i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category <u>may not be subset</u> to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i></p> <p>Specific courses should not be listed in any of the fields below other than ENG 101.</p>		
At least one of the following must be listed:		
<ol style="list-style-type: none"> Choose course(s) from the University Approved GEP course list for this category. Minimum requirements are satisfied by Major/College course requirements. Major/College course requirement satisfies X credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category. Co-requisite is satisfied by a Major/College course requirement. Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts. Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences. 		
General Education Program Requirements: <i>Minimum 39-40 hrs</i>	Credit hours	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)
Mathematical Sciences (At least 1 course with MA or ST prefix) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	(6 credits) 6	(Choose statement 1, 2 or 3) 1

Natural Sciences (At least 1 <i>lab</i> course or course with a <i>lab</i>) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	(7 credits)	0	(Choose statement 1, 2 or 3) 2
English 101 (C- or better required)	(4 credits)	4	ENG 101
Humanities (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	(6 credits)	6	(Choose statement 1, 2 or 3) 1
Social Sciences (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	(6 credits)	0	(Choose statement 1, 2 or 3) 2
Additional Breadth (Choose approach that is <i>different</i> from the approach of the Major) <i>Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.</i>	(3 credits)	3	(Choose statement 5 or 6) 1
Interdisciplinary Perspectives <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	(5 credits)	2	(Choose statement 1, 2 or 3) 1
Health and Exercise Studies (Including one <i>Fitness and Wellness</i> course)	(2 credits)	2	Choose course(s) from the University Approved GEP course list for this category.
Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.		23 hours	
GEP Co-Requisites:			<i>Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.</i>
U.S. Diversity co-requisite	(USD)	n/a	(Choose statement 1 or 4) 1
Global Knowledge co-requisite	(GK)	n/a	(Choose statement 1 or 4) 1
Foreign Language Proficiency		n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:			Place an X in the credit hour box to indicate below that the requirement is " Satisfied by College/Program Requirements "
Communication in the Major (Advanced Communication)		X	Satisfied by College/Program Requirements
Technology Fluency		X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.	120 Total hours		As applicable, indicate here the overall GPA requirement for degree completion including course completion.

Bachelor of Science in Agricultural EducationCONCENTRATION TITLE: **Animal Science**DEGREE KEY: **11AGEDANS**

FRESHMAN YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 101 Intro to CTE ⁸	1	_____	AEE 226 Computer Appl & Info Tech ⁸	3	_____
AEE 103 Foundations of AEE ¹	1	_____	ANS 150 Intro to Animal Science	3	_____
BIO 181 Intro Biology-Ecol, Evol, & Biodiv ^B	4	_____	ANS 151 Animal Science Lab	1	_____
COM 110 Public Speaking	3	_____	BIO 183 Intro Biology-Cell/Molecular*	4	_____
ENG 101 Academic Writing & Research ^H	4	_____	_____ Math Elective ^A	3	_____
MA _____ Math Elective ^A	3	_____	HESx _____ Hlth Exerc Studies Elective ^E	1	_____
HESF 1 _____ Elective ^E	1	_____			
Total	17		Total	15	
SOPHOMORE YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 206 Intro to Teaching Agriculture ⁸	3	_____	CH 101 Chemistry—A Molecular Sci ^B	3	_____
ANS 225 Principles of Animal Nutrition or			CH 102 General Chemistry Lab ^B	1	_____
ANS 230 Nutrition of Domestic Animals	3	_____	ANS _____ Animal Science Elective	3	_____
AES 201 Shop Processes & Mgmt <i>or</i>			_____ Add Breadth: Math/Nat Sci	3	_____
TDE 110 Materials and Processes Tech	3	_____	_____ Elect ^F		
_____ Economics Elective ²	3	_____	_____ Plant Science Elective ³	3	_____
_____ Humanities Elective ^C	3	_____	_____ Humanities Elective ^C	3	_____
Total	15		Total	16	
JUNIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 322 Experiential Learning in Agric ⁸	3	_____	AEE 303 Admin and Super of Student Org ⁸	3	_____
ANS 215 Basic Agricultural Genetics <i>or</i>	3	_____	AEE 326 Teach Diverse Learners in Agric ⁸	3	_____
GN 301 Genetics in Human Affairs			ELP 344 School and Society ⁸	3	_____
EDP 304 Educational Psychology ⁸	3	_____	ANS _____ Animal Science Mgmt Elect ⁵	3	_____
SSC 200 Soil Science	3	_____	ANS _____ Animal Science Selection Elect ⁶	2	_____
SSC 201 Soil Science Lab	1	_____			
_____ Interdisciplinary Elective ^G	2	_____			
Total	15		Total	14	
SENIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 327 Conduct. Summer Prog in AED	1	_____	AEE 424 Planning Agri Educ Prog ⁸	3	_____
AEE 426 Meth. of Teaching Agriculture ⁸	3	_____	AEE 427 Student Teaching in Agriculture ⁸	8	_____
ANS _____ Animal Science Mgmt Elect ⁵	3	_____	AEE 491 Seminar in AEE ⁸	1	_____
_____ Interdisciplinary Elective ^G	3	_____			
ED 311 Classroom Assessment ⁸	2	_____			
ED 312 Classroom Assessment Lab ⁸	1	_____			
_____ Free Electives ⁷	3	_____			
Total	16		Total	12	
Minimum Credit Hours Required for Graduation*: 120					

Corequisite Requirements: (May be met by completing courses listed above. List courses below that meet these requirements)^KForeign Language Proficiency _____^JGlobal Knowledge _____.^IUS Diversity _____.

Major/Program Footnotes:

- ¹ Incoming freshmen complete AEE 103. Transfer students may complete ALS 103 or ALS 303.
- ² Select from ARE 201, EC 201, or EC 205. Satisfies 3 credit hours of the Social Science GEP requirement.
- ³ Select from courses in Crop Science, Forestry, or Horticultural Science.
- ⁴ Select from Group C electives in Agriculture or ARE courses
- ⁵ Select from ANS 400, ANS 402, ANS 403, ANS 404, ANS 408, and ANS 410.
- ⁶ Select from ANS 205, ANS 303, ANS 304, ANS 309.
- ⁷ Total hours of free electives vary in order to allow the minimum hours required for the degree to equal 120 credit hrs.
- ⁸ Minimum grade for graduation is a C-. The minimum grade for teacher licensure is C.

General Education Program (GEP) requirements and GEP Footnotes:

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

^AMathematical 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: **none**

^BNatural 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: **BIO 181, BIO 183, CH 101, CH 102**

^CHumanities (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. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^DSocial 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 or EC 201 or EC 205. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^EPhysical Education/Healthy Living - (2 credit hours – at least one 100-level Fitness and Wellness Course from the HESF course list) The second course may be from the following Health and Exercise Studies Lists: HESA, HESD, HESF, HESO, HESR, HESS, HEST

^FAdditional Breadth - (3 credit hours to be selected from the following checked University approved GEP course lists)

_____ Humanities/Social Sciences/Visual and Performing Arts or **x** _____ Mathematical Sciences/Natural Sciences/Engineering

^GInterdisciplinary 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: **none**

^HIntroduction 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:****^IU.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**

^JGlobal 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**

^KForeign Language proficiency - Proficiency at the FL_102 level is required for graduation.

Bachelor of Science in Agricultural EducationCONCENTRATION TITLE: **Animal Science**

DEGREE KEY: 11 AGEDANS

FRESHMAN YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 101, Intro to CTE ⁸	1	_____	AEE 226, Comp. Appl. & Info Technology ⁸	3	_____
AEE 103, Foundations of AEE ¹	1	_____	ANS 150, Intro to Animal Science	3	_____
BIO 181, Intro Biology – ECO/DIV ^B	4	_____	ANS 151, Animal Science Lab	1	_____
COM 110, Public Speaking	3	_____	BIO 183, Intro Biology-Cell/Molecular*	4	_____
ENG 101, Academic Writing & Research ^H	4	_____	_____ Math Elective ^A	3	_____
MA _____ Math Elective ^A	3	_____	_____ Social Science Elective ^D	3	_____
HESF 1 _____ Elective ^E	1	_____	HESx _____ Hlth Exerc Studies Elective ^E	1	_____
Total	17		Total	18	
SOPHOMORE YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 206, Intro to Teaching Agriculture ⁸	3	_____	CH 101 Chemistry—A Molecular Sci ^B	3	_____
ANS 225, Principles of Animal Nutrition or			CH 102 General Chemistry Lab ^B	1	_____
ANS 230, Nutrition of Domestic Animals	3	_____	ANS _____ Animal Science Elective	3	_____
AES 201, Shop Processes & Mgmt or			_____ Add Breadth: Math/Nat SciElect ^F	3	_____
TDE 110, Materials and Processes Tech	3-4	_____	_____ Plant Science Elective ³	3	_____
_____ Economics Elective ²	3	_____	_____ Humanities Elective ^C	3	_____
_____ Humanities Elective ^C	3	_____			
Total	15-16		Total	16	
JUNIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 322 Experiential Learning in Agric ⁸	3	_____	AEE 303 Admin and Super of Student Org. ⁸	3	_____
ANS 215 Basic Agricultural Genetics or			AEE 326 Teach Diverse Learners in Agric. ⁸	3	_____
GN 301 Genetics in Human Affairs	3	_____	ED 311 Classroom Assessment ⁸	2	_____
EDP 304 Educational Psychology ⁸	3	_____	ED 312 Classroom Assessment Lab ⁸	1	_____
SSC 200 Soil Science	3	_____	ELP 344 School and Society ⁸	3	_____
SSC 201 Soil Science Lab	1	_____	ANS _____ Animal Science Mgmt. Elect ⁵	3	_____
_____ Interdisciplinary Elective ^G	2	_____	ANS _____ Animal Science Selection Elect ⁶	2-3	_____
Total	15		Total	17-18	
SENIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 327 Conducting Summer Prog in AED	1	_____	AEE 424 Planning Agricultural Educ. Prog. ⁸	3	_____
AEE 426 Meth. of Teaching Agriculture ⁸	3	_____	AEE 427 Student Teaching in Agriculture ⁸	8	_____
ANS _____ Animal Science Mgmt. Elect. ⁵	3	_____	AEE 491 Seminar in AEE	1	_____
_____ Interdisciplinary Elective ^G	3	_____			
_____ Free Electives ⁷	3-5	_____			
Total	13-15		Total	12	
Minimum Credit Hours Required for Graduation*: 126					

Corequisite Requirements: (May be met by completing courses listed above. List courses below that meet these requirements)

^KForeign Language Proficiency _____^JGlobal Knowledge _____.^IUS Diversity _____.

Major/Program Footnotes:

- ¹ Incoming freshmen complete AEE 103. Transfer students may complete ALS 103 or ALS 303.
- ² Select from ARE 201, EC 201, or EC 205. Satisfies 3 credit hours of the Social Science GEP requirement.
- ³ Select from courses in Crop Science, Forestry, or Horticultural Science.
- ⁴ Select from Group C electives in Agriculture or ARE courses
- ⁵ Select from ANS 400, ANS 402, ANS 403, ANS 404, ANS 408, and ANS 410.
- ⁶ Select from ANS 205, ANS 303, ANS 304, ANS 309.
- ⁷ Total hours of free electives vary in order to allow the minimum hours required for the degree to equal 126 credit hrs.
- ⁸ Minimum grade for graduation is a C-. The minimum grade for teacher licensure is C.

General Education Program (GEP) requirements and GEP Footnotes:

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

^AMathematical 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: **none**

^BNatural 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: **BIO 181, BIO 183, CH 101, CH 102**

^CHumanities (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. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^DSocial 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 or EC 201 or EC 205. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^EPhysical Education/Healthy Living - (2 credit hours – at least one 100-level Fitness and Wellness Course from the HESF course list) The second course may be from the following Health and Exercise Studies Lists: HESA, HESD, HESF, HESO, HESR, HESS, HEST**^FAdditional Breadth** - (3 credit hours to be selected from the following checked University approved GEP course lists)

Humanities/Social Sciences/Visual and Performing Arts or **x** Mathematical Sciences/Natural Sciences/Engineering

^GInterdisciplinary 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: **none**

^HIntroduction 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:****^IU.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**

^JGlobal 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**

^KForeign Language proficiency - Proficiency at the FL_102 level is required for graduation.

CURRICULUM REQUIREMENTS

Format B

<u>Degree/Plan Title:</u> Agricultural Education-BS	<u>Plan SIS Code:</u> 11AGEDBS
<u>Concentration/Subplan Title:</u> Animal Science Concentration	<u>Subplan SIS Code:</u> 11AGEDANS
<u>Indicate requirements status:</u> Current: XXX Proposed: <u>Proposed</u> Effective Semester: January 2019	
<u>New Degree Audit required?</u> (Y or N) Yes	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
COM 110 Public Speaking	3	Communication in the Major
<u>Agricultural Education Courses</u>		
AEE 101 Introduction to Career and Technical Education (CP)	1	
AEE 206 Introduction to Teaching Agriculture (CP)	3	
AEE 226 Computer Applications and Information Technology in Agricultural and Extension Education (CP)	3	
AEE 303 Administration and Supervision of Student Organizations (CP)	3	
AEE 322 Experiential Learning in Agriculture (CP)	3	
AEE 326 Teaching Diverse Learners in Agriculture (CP)	3	
AEE 327 Conducting Summer Programs in Agricultural Education (CP)	1	
AEE 424 Planning Agricultural Education Programs (CP)	3	
AEE 426 Methods of Teaching Agriculture (CP)	3	
AEE 427 Student Teaching in Agriculture (CP)	8	
AEE 491 Seminar in Agricultural Education (CP)	1	
<u>Professional Education Courses</u>		
EDP 304 Educational Psychology (CP)	3	Social Sciences
ED 311 Classroom Assessment (CP)	2	
ED 312 Classroom Assessment Lab (CP)	1	
ELP 344 School and Society (CP)	3	
<u>Teaching Content Courses</u>		
AES 201 Shop Processes and Management <i>or</i> TDE 110 Materials and Processes Technology	3	
ANS 150 Introduction to Animal Science	3	
ANS 151 Introduction to Animal Science Lab	1	
ARE 201 Introduction to Agricultural and Resource Economics <i>or</i> EC 201 Principles of Microeconomics <i>or</i> EC 205 Fundamentals of Economics	3	Social Sciences
SSC 200 Soil Science	3	Social Sciences
SSC 201 Soil Science Lab	1	Natural Sciences

<u>Math and Science Courses</u>			
BIO 181	Introductory Biology: Ecology, Evolution, and Biodiversity	4	Natural Sciences
BIO 183	Introductory Biology: Cellular and Molecular Biology	4	Natural Sciences
CH 101	Chemistry – A Molecular Science	3	Natural Sciences
CH 102	General Chemistry Laboratory	1	Natural Sciences
<u>Animal Science Concentration Courses</u>			
ANS 225	Principles of Animal Nutrition or ANS 230 Nutrition of Domestic Animals	3	
ANS 215	Basic Agricultural Genetics or GN 301 Genetics in Human Affairs or HS 215 Basic Agricultural Genetics	3	Natural Sciences Natural Sciences Natural Sciences
<u>Concentration Courses/Groups/Electives:</u>			
<u>Animal Science Management Elective</u> ANS 400 Companion Animal Management or ANS 402 Beef Cattle Management or ANS 403 Swine Management or ANS 404 Dairy Cattle Management or ANS 408 Small Ruminant Management or ANS 411 Management of Growing and Performance Horses		6	
<u>Animal Science Selection Elective</u> ANS 205 Physiology of Domestic Animals or ANS 303 Principles of Equine Evaluation or ANS 304 Dairy Cattle Evaluation or ANS 309 Livestock Evaluation		3	
<u>Animal Science Elective</u> Select any ANS course.		3	
<u>Plant Science Elective</u> Select any HS, SSC, or CS course.		3	
<u>Free Electives:</u>		3	
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>		93 hours	
COLLEGE REQUIREMENTS:			
<u>Orientation Course(s):</u> AEE 103 Foundations of Agricultural and Extension Education or ALS 103 Freshman Transitions and Diversity in Agricultural and Life Sciences or ALS 303 Transfer Transitions and Diversity in Agricultural and Life Sciences		1	Diversity Diversity
<u>Other:</u>		0	
Total credit hours under College Requirements:		1 Hours	

NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS <i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category <u>may not be subset</u> to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i> Specific courses should not be listed in any of the fields below other than ENG 101.		At least one of the following must be listed: 1 Choose course(s) from the University Approved GEP course list for this category. 2 Minimum requirements are satisfied by Major/College course requirements. 3 Major/College course requirement satisfies X credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category. 4 Co-requisite is satisfied by a Major/College course requirement. 5 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts. 6 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.
General Education Program Requirements: <i>Minimum 39-40 hrs</i>	Credit hours	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	6	(Choose statement 1, 2 or 3) 1
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	0	(Choose statement 1, 2 or 3) 2
English 101 (C- or better required) (4 credits)	4	ENG 101
Humanities (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	6	(Choose statement 1, 2 or 3) 1
Social Sciences (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	0	(Choose statement 1, 2 or 3) 2
Additional Breadth (3 credits) (Choose approach that is different from the approach of the Major) <i>Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.</i>	3	(Choose statement 5 or 6) 1
Interdisciplinary Perspectives (5 credits) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	5	(Choose statement 1, 2 or 3) 1
Health and Exercise Studies (2 credits) (Including one Fitness and Wellness course)	2	Choose course(s) from the University Approved GEP course list for this category.
Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.	26 hours	
GEP Co-Requisites:		Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.
U.S. Diversity co-requisite (USD)	n/a	(Choose statement 1 or 4) 1
Global Knowledge co-requisite (GK)	n/a	(Choose statement 1 or 4) 1
Foreign Language Proficiency	n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:		Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)	X	Satisfied by College/Program Requirements
Technology Fluency	X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.	120 Total hours	As applicable, indicate here the overall GPA requirement for degree completion including course completion.

Bachelor of Science in Agricultural EducationCONCENTRATION TITLE: **Horticultural Science**DEGREE KEY: **11AGEDHS**

FRESHMAN YEAR					
FALL SEMESTER	Cred	Sem.	SPRING SEMESTER	Cred	Sem.
AEE 101 Intro to CTE ⁴	1	_____	AEE 226 Computer Appl & Info Tech ⁴	3	_____
AEE 103 Foundations of AEE ¹	1	_____	ANS 150 Intro to Animal Science	3	_____
BIO 181 Intro Biology-Ecol Evol & Biodiv ^B	4	_____	ANS 151 Animal Science Lab	1	_____
COM 110 Public Speaking	3	_____	BIO 183 Intro Biology-Cell/Molecular ^B	4	_____
ENG 101 Academic Writing & Research ^H	4	_____	_____ Math Elective ^A	3	_____
MA _____ Math Elective ^A	3	_____	HES _____ Hlth Exerc Studies Elective ^E	1	_____
HESF 1 _____ Elective ^E	1	_____			
Total	17		Total	15	
SOPHOMORE YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 206 Intro to Teaching Agriculture ⁴	3	_____	CH 101 Chemistry-A Molecular Science ^B	3	_____
HS 201 World of Hort: Principles & Prac	3	_____	CH 102 Chemistry Lab ^B	1	_____
AES 201 Shop Processes & Mgmt or	3	_____	_____ CS 211 or HS 215 or ANS 215	3	_____
TDE 110 Materials and Processes Tech			HS _____ Horticulture Elective	3	_____
_____ Humanities Elective ^C	3	_____	_____ Add Brdth: Math/Nat. Sci Elect ^F	3	_____
_____ Economics Elective ^{2D}	3	_____			
Total	15		Total	13	
JUNIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 322 Experiential Learning in Agri ⁴	3	_____	AEE 303 Admin & Sup of Student Org ⁴	3	_____
HS 301 Plant Propagation	4	_____	AEE 326 Teach Diverse Learners Agric ⁴	3	_____
EDP 304 Educational Psychology ⁴	3	_____	ED 311 Classroom Assessment ⁴	2	_____
SSC 200 Soil Science	3	_____	ED 312 Classroom Assessment Lab ⁴	1	_____
SSC 201 Soil Science Lab	1	_____	ELP 344 School and Society ⁴	3	_____
_____ Interdisciplinary Elective ^G	3	_____	HS _____ Horticultural Production Elective ³	3	_____
Total	17		Total	15	
SENIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 327 Conduct Summer Prog in AED	1	_____	AEE 424 Planning Agric Educ Prog ⁴	3	_____
AEE 426 Methods of Teaching Agric ⁴	3	_____	AEE 427 Student Teach in Agriculture ⁴	8	_____
HS 411 Nursery Management or	3	_____	AEE 491 Seminar in AEE	1	_____
HS 440 Greenhouse Management					
_____ Humanities Elective ^C	3	_____			
_____ Interdisciplinary Elective ^G	2	_____			
_____ Free Electives ⁵	4	_____			
Total	16		Total	12	
Minimum Credit Hours Required for Graduation: 120					

Corequisite Requirements: (May be met by completing courses listed above. List courses below that meet these requirements)^KForeign Language Proficiency _____^JGlobal Knowledge _____.^IUS Diversity _____.

Major/Program Footnotes:

¹ Incoming freshmen complete AEE 103. Transfer students may complete ALS 103 or ALS 303.

² Select from ARE 201, EC 201, or EC 205. Satisfies 3 credit hours of the Social Science GEP requirement.

³ Select from HS 421, HS 422, or HS 431.

⁴ Minimum grade of C- required for graduation. Minimum grade of C required for teacher licensure.

⁵ Total hours of free electives vary in order to allow the minimum hours required for the degree to equal 120 credit hrs.

General Education Program (GEP) requirements and GEP Footnotes:

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied.

University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/counselists/index.html>.

^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: **none**

^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: **BIO 181, BIO 183, CH 101, CH 102**

^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. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^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 or EC 201 or EC 205. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^E**Physical Education/Healthy Living** - (2 credit hours – at least one 100-level Fitness and Wellness Course from the HESF course list) The second course may be from the following Health and Exercise Studies Lists: HESA, HESD, HESF, HESO, HESR, HESS, HEST.

^F**Additional Breadth** - (3 credit hours to be selected from the following checked University approved GEP course lists)

_____ Humanities/Social Sciences/Visual and Performing Arts or **x** 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: **none**

^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.

Bachelor of Science in Agricultural Education

CONCENTRATION TITLE: Horticultural Science

DEGREE KEY: 11AGEDHS

FRESHMAN YEAR					
FALL SEMESTER	Cred	Sem.	SPRING SEMESTER	Cred	Sem.
AEE 101, Intro to CTE ⁴	1	_____	AEE 226, Comp. Appl. & Info Tech ⁴	3	_____
AEE 103, Foundations of AEE ¹	1	_____	ANS 150, Intro to Animal Science	3	_____
BIO 181, Intro Biology-ECO/DIV ^B	4	_____	ANS 151, Animal Science Lab	1	_____
COM 110, Public Speaking	3	_____	BIO 183 Intro Biology-Cell/Molecular ^B	4	_____
ENG 101, Academic Writing & Research ^H	4	_____	_____ Math Elective ^A	3	_____
MA _____ Math Elective ^A	3	_____	_____ Social Science Elective ^D	3	_____
HESF 1 _____ Elective ^E	1	_____	HES _____ Hlth Exerc Studies Elective ^E	1	_____
Total	17		Total	18	
SOPHOMORE YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 206, Intro to Teaching Agriculture ⁴	3	_____	CH 101, Chemistry-A Molecular Science ^B	3	_____
HS 201, World of Hort: Principles & Prac	3	_____	CH 102, Chemistry Lab ^B	1	_____
AES 201, Shop Processes & Mgmt or		_____	_____ CS 211 or HS 215	3	_____
TDE 110, Materials and Processes Tech	3-4	_____	HS _____ Horticultural Science Elective	3	_____
_____ Humanities Elective ^C	3	_____	_____ Add Brdth: Math/Nat. SciElect ^F	3	_____
_____ Economics Elective ^{2, D}	3	_____	_____ Free Elective ⁵	3	_____
Total	15-16		Total	16	
JUNIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 322, Experiential Learning in Agri ⁴	3	_____	AEE 303 Admin & Sup of Student Org. ⁴	3	_____
HS 301, Plant Propagation	4	_____	AEE 326 Teach Diverse Learners Agric ⁴	3	_____
EDP 304, Educational Psychology ⁴	3	_____	ED 311 Classroom Assessment ⁴	2	_____
SSC 200, Soil Science	3	_____	ED 312 Classroom Assessment Lab ⁴	1	_____
SSC 201, Soil Science Lab	1	_____	ELP 344 School and Society ⁴	3	_____
_____ Interdisciplinary Elective ^G	3	_____	HS _____ Horticulture Elective ³	3-4	_____
Total	17		Total	15-16	
SENIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 327, Conduct Summer Prog in AED	1	_____	AEE 424, Planning Agric Educ. Prog. ⁴	3	_____
AEE 426, Methods of Teaching Agric ⁴	3	_____	AEE 427, Student Teach in Agriculture ⁴	8	_____
HS 411 Nursery Management or		_____	AEE 491, Seminar in AEE	1	_____
HS 440 Greenhouse Management	3	_____			
_____ Humanities Elective ^C	3	_____			
_____ Interdisciplinary Elective ^G	2	_____			
_____ Free Electives ⁵	2-3	_____			
Total	14-15		Total	12	
Minimum Credit Hours Required for Graduation: 126					

Corequisite Requirements: (May be met by completing courses listed above. List courses below that meet these requirements)^KForeign Language Proficiency _____^JGlobal Knowledge _____.^IUS Diversity _____.

Major/Program Footnotes:

¹ Incoming freshmen complete AEE 103. Transfer students may complete ALS 103 or ALS 303.

² Select from ARE 201, EC 201, or EC 205. Satisfies 3 credit hours of the Social Science GEP requirement.

³ Select from HS 421, HS 422, or HS 431.

⁴ Minimum grade of C- required for graduation. Minimum grade of C required for teacher licensure.

⁵ Total hours of free electives vary in order to allow the minimum hours required for the degree to equal 126 credit hrs.

General Education Program (GEP) requirements and GEP Footnotes:

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied.

University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

^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: **none***

^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: **BIO 181, BIO 183, CH 101, CH 102***

^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. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.***

^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 or EC 201 or EC 205. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.***

^E**Physical Education/Healthy Living** - (2 credit hours – at least one 100-level Fitness and Wellness Course from the HESF course list) The second course may be from the following Health and Exercise Studies Lists: HESA, HESD, HESF, HESO, HESR, HESS, HEST.

^F**Additional Breadth** - (3 credit hours to be selected from the following checked University approved GEP course lists)

Humanities/Social Sciences/Visual and Performing Arts or x 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: **none***

^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.

CURRICULUM REQUIREMENTS

Format B

<u>Degree/Plan Title:</u> Agricultural Education-BS	<u>Plan SIS Code:</u> 11AGEDBS
<u>Concentration/Subplan Title:</u> Horticulture Concentration	<u>Subplan SIS Code:</u> 11AGEDHS
<u>Indicate requirements status:</u> Current: XXX Proposed: <u>Proposed</u> Effective Semester: January 2019	
<u>New Degree Audit required?</u> (Y or N) Yes	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
COM 110 Public Speaking	3	Communication in the Major
<u>Agricultural Education Courses</u>		
AEE 101 Introduction to Career and Technical Education (CP)	1	
AEE 206 Introduction to Teaching Agriculture (CP)	3	
AEE 226 Computer Applications and Information Technology in Agricultural and Extension Education (CP)	3	
AEE 303 Administration and Supervision of Student Organizations (CP)	3	
AEE 322 Experiential Learning in Agriculture (CP)	3	
AEE 326 Teaching Diverse Learners in Agriculture (CP)	3	
AEE 327 Conducting Summer Programs in Agricultural Education (CP)	1	
AEE 424 Planning Agricultural Education Programs (CP)	3	
AEE 426 Methods of Teaching Agriculture (CP)	3	
AEE 427 Student Teaching in Agriculture (CP)	8	
AEE 491 Seminar in Agricultural Education (CP)	1	
<u>Professional Education Courses</u>		
EDP 304 Educational Psychology (CP)	3	Social Sciences
ED 311 Classroom Assessment (CP)	2	
ED 312 Classroom Assessment Lab (CP)	1	
ELP 344 School and Society (CP)	3	
<u>Teaching Content Courses</u>		
AES 201 Shop Processes and Management <i>or</i> TDE 110 Materials and Processes Technology	3	
ANS 150 Introduction to Animal Science	3	
ANS 151 Introduction to Animal Science Lab	1	
ARE 201 Introduction to Agricultural and Resource Economics <i>or</i> EC 201 Principles of Microeconomics <i>or</i> EC 205 Fundamentals of Economics	3	Social Sciences
SSC 200 Soil Science	3	Social Sciences
SSC 201 Soil Science Lab	1	Natural Sciences

Math and Science Courses		
BIO 181	Introductory Biology: Ecology, Evolution, and Biodiversity	4
BIO 183	Introductory Biology: Cellular and Molecular Biology	4
CH 101	Chemistry – A Molecular Science	3
CH 102	General Chemistry Laboratory	1
Horticultural Science Concentration Courses		
CS 211	Plant Genetics or ANS 215 Basic Agricultural Genetics or HS 215 Basic Agricultural Genetics	3
HS 201	The World of Horticulture: Principles and Practices	3
HS 301	Plant Propagation	4
HS 411	Nursery Management or HS 440 Greenhouse Management	3
Concentration Courses/Groups/Electives:		
Horticultural Production Elective		
HS 421	Temperate-Zone Tree Fruits: Physiology and Culture or	3
HS 422	Small Fruit Production or	
HS 431	Vegetable Production	
Horticulture Elective Select any HS course.		
		3
Free Electives:		
		4
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>		
	93 hours	
COLLEGE REQUIREMENTS:		
Orientation Course(s):		
AEE 103	Foundations of Agricultural and Extension Education or ALS 103 Freshman Transitions and Diversity in Agricultural and Life Sciences or ALS 303 Transfer Transitions and Diversity in Agricultural and Life Sciences	1
		Diversity
		Diversity
Other:		
		0
Total credit hours under College Requirements:		
	1 Hours	

<u>NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS</u>		At least one of the following must be listed:
<i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category <u>may not be subset</u> to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i>		1 Choose course(s) from the University Approved GEP course list for this category.
		2 Minimum requirements are satisfied by Major/College course requirements.
		3 Major/College course requirement satisfies X credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category.
		4 Co-requisite is satisfied by a Major/College course requirement.
		5 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts.
		6 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.
General Education Program Requirements: <i>Minimum 39-40 hrs</i>	Credit hours	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)

Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	6	(Choose statement 1, 2 or 3) 1
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	0	(Choose statement 1, 2 or 3) 2
English 101 (C- or better required) (4 credits)	4	ENG 101
Humanities (6 credits) (Courses from two different disciplines) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	6	(Choose statement 1, 2 or 3) 1
Social Sciences (6 credits) (Courses from two different disciplines) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	0	(Choose statement 1, 2 or 3) 2
Additional Breadth (3 credits) (Choose approach that is different from the approach of the Major) Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.	3	(Choose statement 5 or 6) 1
Interdisciplinary Perspectives (5 credits) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	5	(Choose statement 1, 2 or 3) 1
Health and Exercise Studies (2 credits) (Including one Fitness and Wellness course)	2	Choose course(s) from the University Approved GEP course list for this category.
Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.	26 hours	
GEP Co-Requisites:		Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.
U.S. Diversity co-requisite (USD)	n/a	(Choose statement 1 or 4) 1
Global Knowledge co-requisite (GK)	n/a	(Choose statement 1 or 4) 1
Foreign Language Proficiency	n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:		Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)	X	Satisfied by College/Program Requirements
Technology Fluency	X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.	120 Total hours	As applicable, indicate here the overall GPA requirement for degree completion including course completion.

Bachelor of Science in Agricultural EducationCONCENTRATION TITLE: **Natural Resources**DEGREE KEY: **11AEDNR**

FRESHMAN YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 101 Intro to CTE ⁵	1	_____	AEE 226 Computer Appl & Info Tech ⁵	3	_____
AEE 103 Foundations of AEE ¹	1	_____	ANS 150 Intro to Animal Science	3	_____
BIO 181 Intro Biology-Ecol, Evol, & Biodiv ^B	4	_____	ANS 151 Animal Science Lab	1	_____
COM 110 Public Speaking	3	_____	BIO 183 Intro Biology-Cell/Molecular ^B	4	_____
ENG 101 Academic Writing and Research ^H	4	_____	_____ Math Elective ^A	3	_____
MA _____ Math Elective ^A	3	_____	HESx _____ Hlth Exercise Studies Elective ^E	1	_____
HESF 1 _____ Elective ^E	1	_____			
Total	17		Total	15	
SOPHOMORE YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 206 Intro to Teaching Agriculture ⁵	3	_____	CH 101 Chemistry—A Molecular Science ^B	3	_____
CS 230 Intro to Agroecology	3	_____	CH 102 General Chemistry Lab ^B	1	_____
AES 201 Shop Processes & Mgmt <i>or</i>	3	_____	SSC 185 Land and Life	3	_____
TDE 110 Materials & Processes Tech		_____	FOR 252 Introduction to Forest Science	3	_____
FW 221 Conservation of Natural Resources	3	_____	_____ Nat Sci Elective—Add Breadth ^F	3	_____
_____ Economics Elective ²	3	_____			
Total	15		Total	13	
JUNIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 322 Experiential Learning in Agric ⁵	3	_____	AEE 303 Admin and Super of Student Org ⁵	3	_____
ARE 336 Intro to Resource & Environ Econ	3	_____	AEE 326 Teach Diverse Learners in Agric ⁵	3	_____
EDP 304 Educational Psychology ⁵	3	_____	ED 311 Classroom Assessment ⁵	2	_____
SSC 200 Soil Science	3	_____	ED 312 Classroom Assessment Lab ⁵	1	_____
SSC 201 Soil Science Lab	1	_____	ELP 344 School and Society ⁵	3	_____
_____ Agriculture Elective ³	5	_____	_____ Humanities Elective ^C	3	_____
Total	18		Total	15	
SENIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 327 Conduct Summer Programs AED	1	_____	AEE 424 Planning Agricultural Educ Prog ⁵	3	_____
AEE 426 Methods of Teaching Agriculture ⁵	3	_____	AEE 427 Student Teaching in Agriculture ⁵	8	_____
FW 353 Wildlife Management	3	_____	AEE 491 Seminar in AEE ⁵	1	_____
_____ Humanities Elective ^C	3	_____			
_____ Free Electives ⁴	5	_____			
Total	15		Total	12	
Minimum Credit Hours Required for Graduation: 120					

Corequisite Requirements: (May be met by completing courses listed above. List courses below that meet these requirements)^KForeign Language Proficiency _____^JGlobal Knowledge _____.^IUS Diversity _____.

Major/Program Footnotes:

- ¹Incoming freshmen complete AEE 103. Transfer students may complete ALS 103 or ALS 303.
²Select from ARE 201, EC 201, or EC 205. Satisfies 3 credit hours of the Social Science GEP requirement.
³Select from Group C electives in Agriculture or ARE courses.
⁴Total hours of free electives vary in order to allow the minimum hours required for the degree to equal 120 credit hrs.
⁵A minimum grade of C- is required for graduation. A minimum grade of C is required for teacher licensure.

General Education Program (GEP) requirements and GEP Footnotes:

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

^AMathematical 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: **none**

^BNatural 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: **BIO 181, BIO 183, CH 101, CH 102**

^CHumanities (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. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^EPhysical Education/Healthy Living - (2 credit hours – at least one 100-level Fitness and Wellness Course from the HESF course list) The second course may be from the following Health and Exercise Studies Lists: HESA, HESD, HESF, HESO, HESR, HESS, HEST

^FAdditional Breadth - (3 credit hours to be selected from the following checked University approved GEP course lists)

_____ Humanities/Social Sciences/Visual and Performing Arts or **x** _____ Mathematical Sciences/Natural Sciences/Engineering

^GInterdisciplinary 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: **none**

^HIntroduction 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:

^IU.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**

^JGlobal 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**

^KForeign Language proficiency - Proficiency at the FL_102 level is required for graduation.

Bachelor of Science in Agricultural Education

CONCENTRATION TITLE: Natural Resources

DEGREE KEY: 11 AEDNR

FRESHMAN YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 101, Intro to CTE ⁵	1	_____	AEE 226, Comp. Appl. & Info Technology ⁵	3	_____
AEE 103, Foundations of AEE ¹	1	_____	ANS 150, Intro to Animal Science	3	_____
BIO 181, Introductory Biology ECO/DIV ^B	4	_____	ANS 151, Animal Science Lab	1	_____
COM 110, Public Speaking	3	_____	BIO 183, Intro Biology-Cell/Molecular ^B	4	_____
ENG 101, Academic Writing and Research ^H	4	_____	_____ Math Elective ^A	3	_____
MA _____ Math Elective ^A	3	_____	HESx _____ Hlth Exercise Studies Elective ^E	1	_____
HESF 1 _____ Elective ^E	1	_____			
Total	17		Total	15	
SOPHOMORE YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 206, Intro to Teaching Agriculture ⁵	3	_____	CH 101, Chemistry—A Molecular Science ^B	3	_____
CS 230, Intro to Agroecology	3	_____	CH 102, General Chemistry Lab ^B	1	_____
AES 201, Shop Processes & Management or			SSC 185, Land and Life	3	_____
TDE 110, Materials and Proc Technology	3-4	_____	FOR 252, Introduction to Forestry	3	_____
FW 221, Conservation of Natural Resources	3	_____	_____ Nat Sci Elective—Add Breadth ^F	3	_____
_____ Economics Elective ²	3	_____	_____ Social Science Elective ^D	3	_____
Total	15-16		Total	16	
JUNIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 322, Experiential Learning in Agric ⁵	3	_____	AEE 303, Admin and Super of Student Org. ⁵	3	_____
ARE 336, Intro to Resource & Environ. Econ	3	_____	AEE 326, Teach Diverse Learners in Agric. ⁵	3	_____
EDP 304, Educational Psychology ⁵	3	_____	ED 311 Classroom Assessment ⁵	2	_____
SSC 200, Soil Science	3	_____	ED 312 Classroom Assessment Lab ⁵	1	_____
SSC 201, Soil Science Lab	1	_____	ELP 344, School and Society ⁵	3	_____
_____ Interdisciplinary Elective ^G	3	_____	_____ Humanities Elective ^C	3	_____
			_____ Agriculture Elective ³	8	_____
Total	16		Total	18	
SENIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 327, Conduct Summer Programs AED	1	_____	AEE 424, Planning Agricultural Educ. Prog ⁵	3	_____
AEE 426, Methods of Teaching Agriculture ⁵	3	_____	AEE 427, Student Teaching in Agriculture ⁵	8	_____
FW 353, Wildlife Management	3	_____	AEE 491, Seminar in AEE	1	_____
_____ Humanities Elective ^C	3	_____			
_____ Interdisciplinary Elective ^G	2	_____			
_____ Free Electives ⁴	4-5	_____			
Total	16-17		Total	12	
Minimum Credit Hours Required for Graduation: 126					

Corequisite Requirements: (May be met by completing courses listed above. List courses below that meet these requirements)

^KForeign Language Proficiency _____^JGlobal Knowledge _____.^IUS Diversity _____.

Major/Program Footnotes:

- ¹ Incoming freshmen complete AEE 103. Transfer students may complete ALS 103 or ALS 303.
² Select from ARE 201, EC 201, or EC 205. Satisfies 3 credit hours of the Social Science GEP requirement.
³ Select from Group C electives in Agriculture or ARE courses.
⁴ Total hours of free electives vary in order to allow the minimum hours required for the degree to equal 126 credit hrs.
⁵ A minimum grade of C- is required for graduation. A minimum grade of C is required for teacher licensure.

General Education Program (GEP) requirements and GEP Footnotes:

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

^AMathematical 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: **none***

^BNatural 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: **BIO 181, BIO 183, CH 101, CH 102***

^CHumanities (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. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.***

^DSocial 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 or EC 201 or EC 205. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.***

^EPhysical Education/Healthy Living - (2 credit hours – at least one 100-level Fitness and Wellness Course from the HESF course list) The second course may be from the following Health and Exercise Studies Lists: HESA, HESD, HESF, HESO, HESR, HESS, HEST**^FAdditional Breadth** - (3 credit hours to be selected from the following checked University approved GEP course lists)

_____ Humanities/Social Sciences/Visual and Performing Arts or x Mathematical Sciences/Natural Sciences/Engineering

^GInterdisciplinary 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: **none***

^HIntroduction 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:

^IU.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***

^JGlobal 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***

^KForeign Language proficiency - Proficiency at the FL_102 level is required for graduation.

CURRICULUM REQUIREMENTS

Format B

<u>Degree/Plan Title:</u> Agricultural Education-BS	<u>Plan SIS Code:</u> 11AGEDBS
<u>Concentration/Subplan Title:</u> Natural Resources Concentration	<u>Subplan SIS Code:</u> 11AGEDNR
<u>Indicate requirements status:</u> Current: XXX Proposed: <u>Proposed</u> Effective Semester: January 2019	
<u>New Degree Audit required?</u> (Y or N) Yes	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
COM 110 Public Speaking	3	Communication in the Major
<u>Agricultural Education Courses</u>		
AEE 101 Introduction to Career and Technical Education (CP)	1	
AEE 206 Introduction to Teaching Agriculture (CP)	3	
AEE 226 Computer Applications and Information Technology in Agricultural and Extension Education (CP)	3	
AEE 303 Administration and Supervision of Student Organizations (CP)	3	
AEE 322 Experiential Learning in Agriculture (CP)	3	
AEE 326 Teaching Diverse Learners in Agriculture (CP)	3	
AEE 327 Conducting Summer Programs in Agricultural Education (CP)	1	
AEE 424 Planning Agricultural Education Programs (CP)	3	
AEE 426 Methods of Teaching Agriculture (CP)	3	
AEE 427 Student Teaching in Agriculture (CP)	8	
AEE 491 Seminar in Agricultural Education (CP)	1	
<u>Professional Education Courses</u>		
EDP 304 Educational Psychology (CP)	3	Social Sciences
ED 311 Classroom Assessment (CP)	2	
ED 312 Classroom Assessment Lab (CP)	1	
ELP 344 School and Society (CP)	3	
<u>Teaching Content Courses</u>		
AES 201 Shop Processes and Management <i>or</i> TDE 110 Materials and Processes Technology	3	
ANS 150 Introduction to Animal Science	3	
ANS 151 Introduction to Animal Science Lab	1	
ARE 201 Introduction to Agricultural and Resource Economics <i>or</i> EC 201 Principles of Microeconomics <i>or</i> EC 205 Fundamentals of Economics	3	Social Sciences
SSC 200 Soil Science	3	Social Sciences
SSC 201 Soil Science Lab	1	Natural Sciences

Math and Science Courses		
BIO 181	Introductory Biology: Ecology, Evolution, and Biodiversity	4
BIO 183	Introductory Biology: Cellular and Molecular Biology	4
CH 101	Chemistry – A Molecular Science	3
CH 102	General Chemistry Laboratory	1
Natural Resources Concentration Courses		
ARE 336	Introduction to Resource and Environmental Economics	3
CS 230	Introduction to Agroecology	3
FOR 252	Introduction to Forest Science	3
FW 221	Conservation of Natural Resources	3
FW 353	Wildlife Management	3
SSC 185	Land and Life	3
Concentration Courses/Groups/Electives:		
Agricultural Sciences Elective Choose any ANS, ARE, CS, HS, PO, or SSC course.		5
Free Electives:		5
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>		98 hours
COLLEGE REQUIREMENTS:		
Orientation Course(s):		
AEE 103	Foundations of Agricultural and Extension Education or ALS 103 Freshman Transitions and Diversity in Agricultural and Life Sciences or ALS 303 Transfer Transitions and Diversity in Agricultural and Life Sciences	1
Other:		0
Total credit hours under College Requirements:		1 Hours

<u>NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS</u>		
<i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category may not be subset to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i>		
<i>Specific courses should not be listed in any of the fields below other than ENG 101.</i>		
At least one of the following must be listed:		
1 Choose course(s) from the University Approved GEP course list for this category. 2 Minimum requirements are satisfied by Major/College course requirements. 3 Major/College course requirement satisfies <u>X</u> credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category. 4 Co-requisite is satisfied by a Major/College course requirement. 5 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts. 6 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.		
General Education Program Requirements: <i>Minimum 39-40 hrs</i>	Credit hours	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)
Mathematical Sciences (At least 1 course with MA or ST prefix) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	(6 credits) 6	(Choose statement 1, 2 or 3) 1
Natural Sciences (At least 1 lab course or course with a lab)	(7 credits) 0	(Choose statement 1, 2 or 3) 2

Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.			
English 101 (C- or better required) (4 credits)	4	ENG 101	
Humanities (6 credits) (Courses from two different disciplines) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	6	(Choose statement 1, 2 or 3) 1	
Social Sciences (6 credits) (Courses from two different disciplines) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	0	(Choose statement 1, 2 or 3) 2	
Additional Breadth (3 credits) (Choose approach that is different from the approach of the Major) Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.	3	(Choose statement 5 or 6) 1	
Interdisciplinary Perspectives (5 credits) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	0	(Choose statement 1, 2 or 3) 2	
Health and Exercise Studies (2 credits) (Including one Fitness and Wellness course)	2	Choose course(s) from the University Approved GEP course list for this category.	
Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.	21 hours		
GEP Co-Requisites:		Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.	
U.S. Diversity co-requisite (USD)	n/a	(Choose statement 1 or 4) 1	
Global Knowledge co-requisite (GK)	n/a	(Choose statement 1 or 4) 2	
Foreign Language Proficiency	n/a	Proficiency at the FL_102 level required.	
The following requirements must be satisfied within the College/Program:		Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"	
Communication in the Major (Advanced Communication)	X	Satisfied by College/Program Requirements	
Technology Fluency	X	Satisfied by College/Program Requirements	
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.	120 Total hours	As applicable, indicate here the overall GPA requirement for degree completion including course completion.	

Bachelor of Science in Agricultural EducationCONCENTRATION TITLE: **Poultry Science**DEGREE SUBPLAN: **11AGEDPSC**

FRESHMAN YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 101 Intro to CTE ⁴	1	_____	AEE 226 Computer Appl & Info Technology ⁴	3	_____
AEE 103 Foundations of AEE ¹	1	_____	PO 201 Poultry Science and Production	3	_____
BIO 181 Intro Biology-Ecol, Evol, & Biodiv ^B	4	_____	PO 202 Poultry Science and Production Lab	1	_____
COM 110 Public Speaking	3	_____	BIO 183 Intro Biology-Cell/Molecular ^B	4	_____
ENG 101 Academic Writing and Research ^H	4	_____	_____ Math Elective ^A	3	_____
MA _____ Math Elective ^A	3	_____	HESx _____ Hlth Exer Studies Elective ^E	1	_____
HESF 1 _____ Elective ^E	1	_____			
Total	17		Total	15	
SOPHOMORE YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 206 Intro to Teaching Agriculture ⁴	3	_____	ANS 150 Intro to Animal Science	3	_____
CH 101 Chemistry—A Molecular Science ^B	3	_____	ANS 151 Animal Science Lab	1	_____
CH 102 General Chemistry Lab ^B	1	_____	PO 424 Poultry Meat Production	3	_____
AES 201 Shop Processes & Mgmt or	3	_____	_____ Humanities Elective ^C	3	_____
TDE 110 Materials & Processes Tech			_____ Plant Science Elective ³	3	_____
_____ Economics Elective ²	3	_____	_____ Interdisciplinary Elective ^G	3	_____
PO 290 Poultry Science Seminar	1	_____			
PO 340 Live Poultry & Poultry Prod. Eval.	3	_____			
Total	17		Total	16	
JUNIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 322 Experiential Learn in Agriculture ⁴	3	_____	AEE 303 Admin and Sup of Student Org ⁴	3	_____
EDP 304 Educational Psychology ⁴	3	_____	AEE 326 Teach Diverse Learners in Agric ⁴	3	_____
PO _____ Poultry Science Elective ⁵	3	_____	ELP 344. School and Society ⁴	3	_____
PO 421 Commercial Egg Production	2	_____	PO 435 Poultry Incubation and Breeding	4	_____
SSC 200 Soil Science	3	_____	ED 311 Classroom Assessment ⁴	2	_____
SSC 201 Soil Science Lab	1	_____	ED 312 Classroom Assessment Lab ⁴	1	_____
Total	15		Total	16	
SENIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 327 Conduct Summer Prog in AED	1	_____	AEE 424 Planning Agricultural Educ. Prog ⁴	3	_____
AEE 426 Methods of Teaching Agriculture ⁴	3	_____	AEE 427 Student Teaching in Agriculture ⁴	8	_____
_____ Humanities Elective ^C	3	_____	AEE 491 Seminar in AEE	1	_____
_____ Interdisciplinary Elective ^G	2	_____			
_____ Add Breadth – Math/Nat Sci Elect ^F	3	_____			
Total	12		Total	12	
Minimum Credit Hours Required for Graduation: 120					

Corequisite Requirements: (May be met by completing courses listed above. List courses below that meet these requirements)^KForeign Language Proficiency _____^JGlobal Knowledge _____.^IUS Diversity _____.

Major/Program Footnotes:

¹ Incoming freshmen complete AEE 103. Transfer students may complete ALS 103 or ALS 303.

² Select from ARE 201, EC 201, or EC 205. Satisfies 3 credit hours of the Social Science GEP requirement.

³ Select from courses in Crop Science, Forestry, or Horticultural Science.

⁴ A minimum grade of C- is required for graduation. A minimum grade of C is required for teacher licensure.

⁵ Select from PO 406, PO 410, PO 411, PO 425

***General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied.

University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

^AMathematical 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: **none**

^BNatural 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: **BIO 181, BIO 183, CH 101, CH 102**

^CHumanities (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. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^DSocial 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 or EC 201 or EC 205 and EDP 304.**

^EPhysical Education/Healthy Living (2 credit hours – at least one 100-level Fitness and Wellness Course from the HESF course list) The second course may be from the following Health and Exercise Studies Lists: HESA, HESD, HESF, HESO, HESR, HESS, HEST

^FAdditional Breadth - (3 credit hours to be selected from the following checked University approved GEP course lists)

_____ Humanities/Social Sciences/Visual and Performing Arts or **x** Mathematical Sciences/Natural Sciences/Engineering

^GInterdisciplinary 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: **none**

^HIntroduction 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:

^IU.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**

^JGlobal 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**

^KForeign Language proficiency - Proficiency at the FL_102 level is required for graduation.

Bachelor of Science in Agricultural Education

CONCENTRATION TITLE: Poultry Science

SUBPLAN: 11AGEDPSC

FRESHMAN YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 101, Intro to CTE ⁴	1	_____	AEE 226, Comp. Appl. & Info Technology ⁴	3	_____
AEE 103, Foundations of AEE ¹	1	_____	PO 201, Poultry Science and Production	3	_____
BIO 181, Introductory Biology ECO/DIV ^B	4	_____	PO 202, Poultry Science and Production Lab	1	_____
COM 110, Public Speaking	3	_____	BIO 183, Intro Biology-Cell/Molecular ^B	4	_____
ENG 101, Academic Writing and Research ^H	4	_____	_____ Math Elective ^A	3	_____
MA _____ Math Elective ^A	3	_____	HESx _____ Hlth Exer Studies Elective ^E	1	_____
HESF 1 _____ Elective ^E	1	_____			
Total	17		Total	15	
SOPHOMORE YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 206, Intro to Teaching Agriculture ⁴	3	_____	ANS 150, Intro to Animal Science	3	_____
CH 101, Chemistry—A Molecular Science ^B	3	_____	ANS 151, Animal Science Lab	1	_____
CH 102, General Chemistry Lab ^B	1	_____	PO 424, Poultry Meat Production	3	_____
AES 201, Shop Processes & Management or			_____ Humanities Elective ^C	3	_____
TDE 110, Materials and Proc Technology	3-4	_____	_____ Plant Science Elective ³	3	_____
_____ Economics Elective ²	3	_____	_____ Interdisciplinary Elective ^G	3	_____
PO 290, Poultry Science Seminar	1	_____			
PO 340, Live Poultry & Poultry Prod. Eval.	3	_____			
Total	17-18		Total	16	
JUNIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 322, Experiential Learn in Agriculture ⁴	3	_____	AEE 303, Admin and Sup of Student Org. ⁴	3	_____
EDP 304, Educational Psychology ⁴	3	_____	AEE 326, Teach Diverse Learners in Agric. ⁴	3	_____
PO _____, Poultry Science Elective ⁶	3	_____	ELP 344, School and Society ⁴	3	_____
PO 421, Commercial Egg Production	2	_____	PO 435, Poultry Incubation and Breeding	4	_____
SSC 200, Soil Science	3	_____	ED 311 Classroom Assessment ⁴	2	_____
SSC 201, Soil Science Lab	1	_____	ED 312 Classroom Assessment Lab ⁴	1	_____
_____ Free Elective	3	_____			
Total	18		Total	16	
SENIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 327, Conduct Summer Prog in AED	1	_____	AEE 424, Planning Agricultural Educ. Prog ⁴	3	_____
AEE 426, Methods of Teaching Agriculture ⁴	3	_____	AEE 427, Student Teaching in Agriculture ⁴	8	_____
_____ Humanities Elective ^C	3	_____	AEE 491, Seminar in AEE	1	_____
_____ Interdisciplinary Elective ^G	2	_____			
_____ Add Breadth—Math/Nat Sci Elect ^F	3	_____			
_____ Free Electives ⁵	2-3	_____			
Total	14-15		Total	12	
Minimum Credit Hours Required for Graduation: 126					

Corequisite Requirements: (May be met by completing courses listed above. List courses below that meet these requirements)

^KForeign Language Proficiency _____^JGlobal Knowledge _____.^IUS Diversity _____.

Major/Program Footnotes:

¹ Incoming freshmen complete AEE 103. Transfer students may complete ALS 103 or ALS 303.

² Select from ARE 201, EC 201, or EC 205. Satisfies 3 credit hours of the Social Science GEP requirement.

³ Select from courses in Crop Science, Forestry, or Horticultural Science.

⁴ A minimum grade of C- is required for graduation. A minimum grade of C is required for teacher licensure.

⁵ Total hours of free electives vary in order to allow the minimum hours required for the degree to equal 126 credit hrs.

⁶ Select from PO 406, PO 410, PO 411, PO 425

***General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied.

University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

^AMathematical 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: **none**

^BNatural 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: **BIO 181, BIO 183, CH 101, CH 102**

^CHumanities (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. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^DSocial 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 or EC 201 or EC 205 and EDP 304.**

^EPhysical Education/Healthy Living (2 credit hours – at least one 100-level Fitness and Wellness Course from the HESF course list) The second course may be from the following Health and Exercise Studies Lists: HESA, HESD, HESF, HESO, HESR, HESS, HEST

^FAdditional Breadth - (3 credit hours to be selected from the following checked University approved GEP course lists)

Humanities/Social Sciences/Visual and Performing Arts or **x** Mathematical Sciences/Natural Sciences/Engineering

^GInterdisciplinary 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: **none**

^HIntroduction 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:

^IU.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**

^JGlobal 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**

^KForeign Language proficiency - Proficiency at the FL_102 level is required for graduation.

CURRICULUM REQUIREMENTS

Format B

<u>Degree/Plan Title:</u> Agricultural Education-BS	<u>Plan SIS Code:</u> 11AGEDBS
Concentration/Subplan Title: Poultry Science Concentration	Subplan SIS Code: 11AGEDPSC
<u>Indicate requirements status:</u> Current: XXX Proposed: <u>Proposed</u> Effective Semester: January 2019	
<u>New Degree Audit required?</u> (Y or N) Yes	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
COM 110 Public Speaking	3	Communication in the Major
<u>Agricultural Education Courses</u>		
AEE 101 Introduction to Career and Technical Education (CP)	1	
AEE 206 Introduction to Teaching Agriculture (CP)	3	
AEE 226 Computer Applications and Information Technology in Agricultural and Extension Education (CP)	3	
AEE 303 Administration and Supervision of Student Organizations (CP)	3	
AEE 322 Experiential Learning in Agriculture (CP)	3	
AEE 326 Teaching Diverse Learners in Agriculture (CP)	3	
AEE 327 Conducting Summer Programs in Agricultural Education (CP)	1	
AEE 424 Planning Agricultural Education Programs (CP)	3	
AEE 426 Methods of Teaching Agriculture (CP)	3	
AEE 427 Student Teaching in Agriculture (CP)	8	
AEE 491 Seminar in Agricultural Education (CP)	1	
<u>Professional Education Courses</u>		
EDP 304 Educational Psychology (CP)	3	Social Sciences
ED 311 Classroom Assessment (CP)	2	
ED 312 Classroom Assessment Lab (CP)	1	
ELP 344 School and Society (CP)	3	
<u>Teaching Content Courses</u>		
AES 201 Shop Processes and Management <i>or</i> TDE 110 Materials and Processes Technology	3	
ANS 150 Introduction to Animal Science	3	
ANS 151 Introduction to Animal Science Lab	1	
ARE 201 Introduction to Agricultural and Resource Economics <i>or</i> EC 201 Principles of Microeconomics <i>or</i> EC 205 Fundamentals of Economics	3	Social Sciences
SSC 200 Soil Science	3	Natural Sciences
SSC 201 Soil Science Lab	1	Natural Sciences

<u>Math and Science Courses</u>		
BIO 181	Introductory Biology: Ecology, Evolution, and Biodiversity	4
BIO 183	Introductory Biology: Cellular and Molecular Biology	4
CH 101	Chemistry – A Molecular Science	3
CH 102	General Chemistry Laboratory	1
<u>Poultry Science Concentration Courses</u>		
PO 201	Poultry Science and Production	3
PO 202	Poultry Science and Production Lab	1
PO 290	Poultry Science Seminar	1
PO 340	Live Poultry Products Evaluation	3
PO 421	Commercial Egg Production	3
PO 424	Poultry Meat Production	3
PO 435	Poultry Incubation and Breeding	4
<u>Concentration Courses/Groups/Electives:</u>		
<u>Poultry Science Elective</u>		
PO 406	Physiological Aspects of Poultry Management <i>or</i>	3
PO 410	Production and Management of Game Birds in Confinement <i>or</i>	
PO 411	Agrosecurity <i>or</i>	
PO 425	Feed Manufacturing Technology	
<u>Agricultural Elective</u>		
Choose any ANS, ARE, CS, HS, PO, or SSC course.		
<u>Free Electives:</u>		
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>		93 hours
COLLEGE REQUIREMENTS:		
<u>Orientation Course(s):</u>		
AEE 103	Foundations of Agricultural and Extension Education <i>or</i>	1
ALS 103	Freshman Transitions and Diversity in Agricultural and Life Sciences <i>or</i>	
ALS 303	Transfer Transitions and Diversity in Agricultural and Life Sciences	
<u>Other:</u>		
Total credit hours under College Requirements:		1 Hours

NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS <i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category <u>may not be subset</u> to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i> Specific courses should not be listed in any of the fields below other than ENG 101.		At least one of the following must be listed: 1 Choose course(s) from the University Approved GEP course list for this category. 2 Minimum requirements are satisfied by Major/College course requirements. 3 Major/College course requirement satisfies X credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category. 4 Co-requisite is satisfied by a Major/College course requirement. 5 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts. 6 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.
General Education Program Requirements: <i>Minimum 39-40 hrs</i>	Credit hours	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	6	(Choose statement 1, 2 or 3) 1
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	0	(Choose statement 1, 2 or 3) 2
English 101 (C- or better required) (4 credits)	4	ENG 101
Humanities (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	6	(Choose statement 1, 2 or 3) 1
Social Sciences (6 credits) (Courses from two different disciplines) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	0	(Choose statement 1, 2 or 3) 2
Additional Breadth (3 credits) (Choose approach that is different from the approach of the Major) <i>Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.</i>	3	(Choose statement 5 or 6) 1
Interdisciplinary Perspectives (5 credits) <i>Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.</i>	5	(Choose statement 1, 2 or 3) 1
Health and Exercise Studies (2 credits) (Including one Fitness and Wellness course)	2	Choose course(s) from the University Approved GEP course list for this category.
Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.	26 hours	
GEP Co-Requisites:		Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.
U.S. Diversity co-requisite (USD)	n/a	(Choose statement 1 or 4) 1
Global Knowledge co-requisite (GK)	n/a	(Choose statement 1 or 4) 1
Foreign Language Proficiency	n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:		Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)	X	Satisfied by College/Program Requirements
Technology Fluency	X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.	120 Total hours	As applicable, indicate here the overall GPA requirement for degree completion including course completion.

Bachelor of Science in Agricultural Sciences

DEGREE KEY: 11AGESBS

FRESHMAN YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 103 Foundations of AEE ¹	1	_____	ANS 150 Intro to Animal Science	3	_____
BIO 181 Intro Biology – Ecology, Evol, & Biodiv ^B	4	_____	ANS 151 Animal Science Lab	1	_____
COM 110 Public Speaking <i>or</i>	3	_____	BIO 183 Intro Biology-Cell/Molecular ^B	4	_____
COM 112 Interpersonal Communication		_____	MA 121 Elements of Calculus <i>or</i>	3	_____
ENG 101 Academic Writing & Research ^H	4	_____	MA 131 Calculus for Life & Mgt Sci ^A		_____
MA 107 Precalculus 1 ^A	3	_____	_____ Humanities elective ^C	3	_____
HESF 1 _____ elective ^E	1	_____	HES _____ Hlth Exercise Studies elective ^E	1	_____
Total	16		Total	15	
SOPHOMORE YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 323 Leadership Development in Ag	3	_____	AEE 350 Personal Leadership Dev in ALS	3	_____
_____ Intro Ag Elective ²	3	_____	ARE 201 Intro to ARE <i>or</i>	3	_____
CH 101 Chemistry—A Molecular Sci ^B	3	_____	EC 201 Econ I <i>or</i> EC 205 Fund of Econ		_____
CH 102 General Chemistry Lab ^B	1	_____	_____ Natural Science elective ⁶	4	_____
_____ Social Science elective ^D	3	_____	CS 213 Crops: Adapt & Prod <i>or</i>	3	_____
			HS 201 Principles of Horticulture		_____
			_____ Humanities elective ^C	3	_____
Total	13		Total	16	
JUNIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
SSC 200 Soil Science	3	_____	AEE 435 Professional Presentations in Ag	3	_____
SSC 201 Soil Science Lab	1	_____	_____ Ag Specialization 1 Course ⁴	3	_____
_____ Ag Specialization 1 Course ⁴	3	_____	_____ Ag Specialization 2 Course ⁵	3	_____
_____ Add'l Breadth: Hum/Soc Sci	3	_____	_____ Interdisciplinary elective ⁶	3	_____
_____ Writing elective ³	3	_____	_____ Free elective ⁷	3	_____
_____ Free Elective ⁷	2	_____			_____
Total	15		Total	15	
SENIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 360 Team Leadership in ALS	3	_____	AEE 460 Organizational Leadership in Ag ⁸	3	_____
_____ Ag Specialization 1 Course ⁴	3	_____	AEE 490 Seminar in AEE	1	_____
_____ Ag Specialization 2 Course ⁵	3	_____	_____ Ag Specialization 1 Course ⁴	3	_____
_____ Ag Specialization 2 Course ⁵	3	_____	_____ Ag Specialization 2 Course ⁵	3	_____
_____ Free elective ⁷	3	_____	_____ Interdisciplinary elective ⁶	2	_____
			_____ Free Elective ⁷	3	_____
Total	15		Total	15	
Minimum Credit Hours Required for Graduation*: 120					

Corequisite Requirements: (May be met by completing courses listed above. List courses below that meet these requirements)^KForeign Language Proficiency _____^JGlobal Knowledge _____.^IUS Diversity _____.

Major/Program Footnotes:

- ¹ AEE 103 is the preferred orientation course. ALS 303 is accepted for transfer students.
- ² Select from AES 201, ES 100, or FS 201.
- ³ Select from AEE 311, ENG 332 or ENG 333.
- ⁴ First of two agricultural specializations required. Select from courses in the following areas of agriculture: Animal Science, Agricultural Business Management, Agricultural Environmental Technology, Crop Science, Feed Mill Management, Horticultural Science, Poultry Science, or Soil Science. Courses must focus on one of these agricultural disciplines. At least six semester hours of course credit in this specialization must be earned in courses at the 300 level or above.
- ⁵ Second of two agricultural specializations required. Select from courses in the following areas of agriculture: Animal Science, Agricultural Business Management, Agricultural Environmental Technology, Crop Science, Feed Mill Management, Horticultural Science, Poultry Science, or Soil Science. Courses must focus on one of these agricultural disciplines. Must be a different agricultural discipline from the first specialization. At least six semester hours of course credit in this specialization must be earned in courses at the 300 level or above.
- ⁶ Select from CH 201 and CH 202 or CH 220 and CH 222 or PY 131 or PY 211 or MEA 101 and MEA 110. A total of 4 credits are required.
- ⁷ Total hours of free electives vary in order to allow the minimum hours required for the degree to equal 120 credit hrs.

General Education Program (GEP) requirements and GEP Footnotes:

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

^AMathematical 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 107, MA 121**

^BNatural 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: **BIO 181, BIO 183, CH 101, CH 102, CH 220**

^CHumanities (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. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^DSocial 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 or EC 201 or EC 205. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^EPhysical Education/Healthy Living - (2 credit hours – at least one 100-level Fitness and Wellness Course from the HESF course list) The second course may be from the following Health and Exercise Studies Lists: HESA, HESD, HESF, HESO, HESR, HESS, HEST

^FAdditional Breadth - (3 credit hours to be selected from the following checked University approved GEP course lists)

☒ Humanities/Social Sciences/Visual and Performing Arts or ☐ Mathematical Sciences/Natural Sciences/Engineering

^GInterdisciplinary 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: **none**

^HIntroduction 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:****^IU.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**

^JGlobal 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**

^KForeign Language proficiency - Proficiency at the FL_102 level is required for graduation.

Bachelor of Science in Agricultural Sciences

DEGREE KEY: 11 AGESBS

FRESHMAN YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 103, Foundations of AEE ¹	1	_____	ANS 150, Intro to Animal Science	3	_____
BIO 181, Intro Biology – ECO/DIV ^B	4	_____	ANS 151, Animal Science Lab	1	_____
COM 110, Public Speaking or	3	_____	BIO 183, Intro Biology-Cell/Molecular ^B	4	_____
COM 112, Interpersonal Communication		_____	MA 121, Elements of Calculus or	3	_____
ENG 101, Academic Writing & Research ^H	4	_____	MA 131 Calculus for Life & Mgt Sci ^A		_____
MA 107, Precalculus 1 ^A	3	_____	_____ Humanities elective ^C	3	_____
HESF 1 _____ elective ^E	1	_____	HES _____ Hlth Exercise Studies elective ^E	1	_____
Total	16		Total	15	
SOPHOMORE YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 323, Leadership Development in Ag	3	_____	AEE 350, Personal Leadership Dev in ALS	3	_____
_____ Intro Ag Elective ²	3	_____	ARE 201, Intro to ARE or	3	_____
CH 101, Chemistry—A Molecular Sci ^B	3	_____	EC 201, Economics I or EC 205		_____
CH 102, General Chemistry Lab ^B	1	_____	_____ Natural Science elective ⁶	4	_____
_____ Social Science elective ^D	3	_____	CS 213, Crops: Adapt & Prod or	3-4	_____
			HS 201, Principles of Horticulture		_____
			_____ Humanities elective ^C	3	_____
Total	13		Total	16-17	
JUNIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
SSC 200, Soil Science	3	_____	AEE 435, Professional Presentations in Ag	3	_____
SSC 201, Soil Science Lab	1	_____	_____ Ag Specialization 1 Course ⁴	3	_____
_____ Ag Specialization 1 Course ⁴	3	_____	_____ Ag Specialization 2 Course ⁵	3	_____
_____ Add'l Breadth: Hum/Soc Sci	3	_____	_____ Interdisciplinary elective ^G	3	_____
_____ Writing elective ³	3	_____	_____ Social Science elective ^D	3	_____
_____ Free Elective ⁷	2-3	_____			_____
Total	15-16		Total	15	
SENIOR YEAR					
FALL SEMESTER	Cred.	Sem.	SPRING SEMESTER	Cred.	Sem.
AEE 360, Team Leadership in ALS	3	_____	AEE 460, Organizational Leadership in Ag ⁸	3	_____
_____ Ag Specialization 1 Course ⁴	3	_____	AEE 490, Seminar in AEE	1	_____
_____ Ag Specialization 2 Course ⁵	3	_____	_____ Ag Specialization 1 Course ⁴	3	_____
_____ Ag Specialization 2 Course ⁵	3	_____	_____ Ag Specialization 2 Course ⁵	3	_____
_____ Free elective ⁷	3	_____	_____ Interdisciplinary elective ^G	2-3	_____
			_____ Free Elective ⁷	3	_____
Total	15		Total	15-16	
Minimum Credit Hours Required for Graduation*: 121					

Corequisite Requirements: (May be met by completing courses listed above. List courses below that meet these requirements)^KForeign Language Proficiency _____^JGlobal Knowledge _____.^IUS Diversity _____.

Major/Program Footnotes:

- ¹ AEE 103 is the preferred orientation course. ALS 303 is accepted for transfer students.
- ² Select from AES 201, ES 100, or FS 201.
- ³ Select from AEE 311, ENG 332 or ENG 333.
- ⁴ First of two agricultural specializations required. Select from courses in the following areas of agriculture: Animal Science, Agricultural Business Management, Agricultural Environmental Technology, Crop Science, Feed Mill Management, Horticultural Science, Poultry Science, or Soil Science. Courses must focus on one of these agricultural disciplines. At least six semester hours of course credit in this specialization must be earned in courses at the 300 level or above.
- ⁵ Second of two agricultural specializations required. Select from courses in the following areas of agriculture: Animal Science, Agricultural Business Management, Agricultural Environmental Technology, Crop Science, Feed Mill Management, Horticultural Science, Poultry Science, or Soil Science. Courses must focus on one of these agricultural disciplines. Must be a different agricultural discipline from the first specialization. At least six semester hours of course credit in this specialization must be earned in courses at the 300 level or above.
- ⁶ Select from CH 201 and CH 202 or CH 220 and CH 222 or PY 131 or PY 211 or MEA 101 and MEA 110. A total of 4 credits are required.
- ⁷ Total hours of free electives vary in order to allow the minimum hours required for the degree to equal 121 credit hrs.

General Education Program (GEP) requirements and GEP Footnotes:

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

^AMathematical 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 107, MA 121**

^BNatural 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: **BIO 181, BIO 183, CH 101, CH 102, CH 220**

^CHumanities (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. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^DSocial 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 or EC 201 or EC 205. Some courses in this category will fulfill the US Diversity and Global Knowledge co-requisite.**

^EPhysical Education/Healthy Living - (2 credit hours – at least one 100-level Fitness and Wellness Course from the HESF course list) The second course may be from the following Health and Exercise Studies Lists: HESA, HESD, HESF, HESO, HESR, HESS, HEST

^FAdditional Breadth - (3 credit hours to be selected from the following checked University approved GEP course lists)

☒ Humanities/Social Sciences/Visual and Performing Arts or ☐ Mathematical Sciences/Natural Sciences/Engineering

^GInterdisciplinary 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: **none**

^HIntroduction 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:**^IU.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**

^JGlobal 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**

^KForeign Language proficiency - Proficiency at the FL_102 level is required for graduation.

CURRICULUM REQUIREMENTS

Format B

<u>Degree/Plan Title:</u> Agricultural Sciences-BS	<u>Plan SIS Code:</u> 11AGESBS
<u>Concentration/Subplan Title:</u>	<u>Subplan SIS Code:</u>
<u>Indicate requirements status:</u> Current: XXX Proposed:	<u>Proposed</u> Effective Semester: January 2019
<u>New Degree Audit required?</u> (Y or N) Yes	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
COM 110 Public Speaking <i>or</i> COM 112 Interpersonal Communication	3	Communication in the Major Communication in the Major, Social Sciences
<u>Agricultural and Extension Education Courses</u>		
AEE 323 Leadership Development in Agriculture and Life Sciences	3	
AEE 350 Personal Leadership Development in Agriculture and Life Sciences	3	
AEE 360 Developing Team Leadership in Agricultural and Life Sciences	3	
AEE 435 Professional Presentations in Agricultural Organizations	3	
AEE 460 Organizational Leadership Development in Agricultural and Life Sciences	3	
AEE 490 Seminar in Agricultural and Extension Education	1	
<u>Mathematical and Natural Science Courses</u>		
MA 107 Precalculus I	3	Mathematical Sciences
MA 121 Elements of Calculus <i>or</i> MA 131 Calculus for Life and Management Sciences A	3	Mathematical Sciences
BIO 181 Introductory Biology: Ecology, Evolution, and Biodiversity	4	Natural Sciences
BIO 183 Introductory Biology: Cellular and Molecular Biology	4	Natural Sciences
CH 101 Chemistry – A Molecular Science	3	Natural Sciences
CH 102 General Chemistry Laboratory	1	Natural Sciences
<u>Professional Content Courses</u>		
ANS 150 Introduction to Animal Science	3	
ANS 151 Introduction to Animal Science Lab	1	
ARE 201 Introduction to Agricultural and Resource Economics <i>or</i> EC 201 Principles of Microeconomics <i>or</i> EC 205 Fundamentals of Economics	3	Social Sciences
CS 213 Crop Science <i>or</i> HS 201 Principles of Horticulture	3	Social Sciences Social Sciences Natural Sciences Natural Sciences
SSC 200 Soil Science	3	Natural Sciences
SSC 201 Soil Science Lab	1	Natural Sciences

<p><u>Concentration Courses/Groups/Electives:</u></p> <p><u>Writing Elective</u> AEE 311 Communication Methods and Media ENG 332 Communication for Business and Management ENG 333 Communication for Science and Research</p> <p><u>Natural Sciences Elective</u> CH 201 Chemistry – A Quantitative Science and CH 202 Chemistry – A Quantitative Science PY 131 Conceptual Physics PY 211 College Physics I MEA 101 Geology I: Physical and MEA 110 Geology I Laboratory</p> <p><u>Restricted Agricultural Specialization Elective Option 1</u> First of two agricultural specializations required. Select from courses in the following areas of agriculture: Animal Science, Agricultural Business Management, Agricultural Environmental Technology, Crop Science, Feed Mill Management, Horticultural Science, Poultry Science, or Soil Science. Courses must focus on one of these agricultural disciplines. At least six semester hours of course credit in this specialization must be earned in courses at the 300 level or above.</p> <p><u>Restricted Agricultural Specialization Elective Option 2</u> Second of two agricultural specializations required. Select from courses in the following areas of agriculture: Animal Science, Agricultural Business Management, Agricultural Environmental Technology, Crop Science, Feed Mill Management, Horticultural Science, Poultry Science, or Soil Science. Courses must focus on one of these agricultural disciplines. At least six semester hours of course credit in this specialization must be earned in courses at the 300 level or above.</p>	<p>3</p> <p>4</p> <p>12</p> <p>12</p>	<p>Natural Sciences Natural Sciences Natural Sciences Natural Sciences Natural Sciences Natural Sciences</p>
<p><u>Free Electives:</u></p>	<p>8</p>	
<p>Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i></p>	<p>90 hours</p>	
<p>COLLEGE REQUIREMENTS:</p>		
<p><u>Orientation Course(s):</u> AEE 103 Foundations of Agricultural and Extension Education or ALS 103 Freshman Transitions and Diversity in Agricultural and Life Sciences or ALS 303 Transfer Transitions and Diversity in Agricultural and Life Sciences</p>	<p>1</p>	<p>Diversity Diversity</p>
<p><u>Other:</u></p>		
<p>Total credit hours under College Requirements:</p>	<p>1 Hours</p>	

NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS <i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category <u>may not be subset</u> to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i> Specific courses should not be listed in any of the fields below other than ENG 101.		At least one of the following must be listed: 1 Choose course(s) from the University Approved GEP course list for this category. 2 Minimum requirements are satisfied by Major/College course requirements. 3 Major/College course requirement satisfies X credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category. 4 Co-requisite is satisfied by a Major/College course requirement. 5 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts. 6 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.
General Education Program Requirements: <i>Minimum 39-40 hrs</i>	Credit hours	How will the GEP requirement be met? (Choose applicable statement from 1-6 listed above)
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	6	(Choose statement 1, 2 or 3) 1
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	0	(Choose statement 1, 2 or 3) 2
English 101 (C- or better required) (4 credits)	4	ENG 101
Humanities (6 credits) (Courses from two different disciplines) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	6	(Choose statement 1, 2 or 3) 1
Social Sciences (6 credits) (Courses from two different disciplines) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	3	(Choose statement 1, 2 or 3) 1
Additional Breadth (3 credits) (Choose approach that is <i>different</i> from the approach of the Major) Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.	3	(Choose statement 5 or 6) 1
Interdisciplinary Perspectives (5 credits) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	5	(Choose statement 1, 2 or 3) 1
Health and Exercise Studies (2 credits) (Including one Fitness and Wellness course)	2	Choose course(s) from the University Approved GEP course list for this category.
Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.	29 hours	
GEP Co-Requisites:		Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.
U.S. Diversity co-requisite (USD)	n/a	(Choose statement 1 or 4) 1
Global Knowledge co-requisite (GK)	n/a	(Choose statement 1 or 4) 1
Foreign Language Proficiency	n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:		Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)	X	Satisfied by College/Program Requirements
Technology Fluency	X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.	120 Total hours	As applicable, indicate here the overall GPA requirement for degree completion including course completion.



College of Sciences

Department of Marine, Earth,
and Atmospheric Sciences

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Raleigh, NC 27695-8208

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www.meas.ncsu.edu

Memorandum

To: Mike Mullen, Vice Chancellor and Dean of the Division of Academic and Student Affairs

From: Carrie Thomas, Director of Undergraduate Programs, Marine, Earth & Atmospheric Sciences

Revision of Geology curriculum

Proposed effective date: January 2019

Plan affected: 17GEOLBS

List of revisions with reasons and impacts:

- 1) Allow students to double count required the college orientation course COS 100 Science of Change toward the Interdisciplinary Perspectives GEP requirement.
- 2) Revise course requirements to reflect current catalog offerings:
 - A) COS 100 Perspectives on Learning (1 credit) is now COS 100 Science of Change (2 credits). The credit difference is accounted for by double counting.
 - B) The computing option is updated to remove CSC 114 and GIS 410 which are no longer in the catalog and replace them with CSC 113 and GIS 280.
 - C) The Physics I and II options are updated to reflect the changes the physics department made to PY 205 and PY 208. The labs for each are now listed separately. The current audit reflects these changes but the semester-by-semester display does not.
 - D) MEA 495 Senior Seminar is now MEA 495 Junior Seminar.
- 3) Rearrange semester-by-semester plan to ensure pre-requisite sequencing, balance hours and reflect catalog changes.
 - A) MEA 100 Earth Systems Science is moved from the spring semester of the sophomore year to the fall semester of the freshman year.
 - B) The CH 101/102 and CH 201/202 series is shifted one semester (CH 101/102 moves to spring freshmen year; CH 201/202 moves to fall sophomore year).
 - C) One GEP Social Science requirement moves from fall sophomore year to spring sophomore year to accommodate the shift in chemistry.

- D) MEA 495 Junior Seminar is moved from the fall semester of the senior year to the spring semester of the junior year.
- E) The GEP Interdisciplinary Perspective requirement is removed from the fall semester of the junior year.
- 4) Update footnotes to reflect changes in the curriculum.

Attachments:

Consultations
Signature page
Current Semester-by-Semester Plan
Proposed Format A
Proposed Format B

Consultations

From: Eric Money <esmoney@ncsu.edu>
Date: Wed, Sep 5, 2018 at 1:10 PM
Subject: Re: consultation for curricular revisions
To: Carrie Thomas <cjthomas@ncsu.edu>
Cc: Ross Meentemeyer <rkmeente@ncsu.edu>

Hi Carrie,

Since I handle most of the curricular stuff at the undergraduate level right now for GIS, I'm happy to provide a statement. I'll let Ross chime in if he needs to add anything:

The Center for Geospatial Analytics approves of updating the computing option for students in this curriculum to GIS 280: Introduction to GIS. This course is a revised version of the previous dual-listed course GIS 410/510 which no longer exists. GIS 280 was created in order to be more accessible to undergraduate students and it will be able to accommodate these students and we look forward to providing them this option in their curriculum.

Let me know if you need something else.

Best,

- Eric

On Wed, Sep 5, 2018 at 12:50 PM Carrie Thomas <cjthomas@ncsu.edu> wrote:
Dear Ross,

I am revising the MEAS undergraduate curricula to align them with the new limit on credit hours. As I am revising them, I am updating our computing option. They are all dated in terms of the GIS course option, previously GIS 410 or 510. I am writing to ask if you could provide me a blanket email that I can attach to each supporting GIS 280 as a computing option for the following majors in MEAS:

BS in Geology

BS in Marine Science

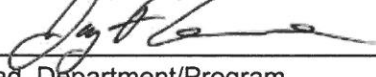
BS in Natural Resources with a concentration in Marine and Coastal Resources.

This should not result in a change in the number of students taking GIS 280. They already take it and we sub it in for the old 410/510 requirement.

Thank you,
Carrie

Signature Page
MEAS Curricular Revisions

Endorsed By:

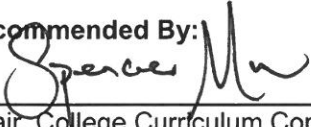


Head, Department/Program

12 November 2018

Date

Recommended By:



Chair, College Curriculum Committee

11/20/2018

Date

Endorsed By:



College Dean

11/20/18

Date

Recommended By:

Chair, University Courses & Curricula Committee

Date

Approved By:

Dean, (DASA)

Date

Geology (BS) (17GEOLBS)

Current

Freshman Year

Fall Semester	Credit	Spring Semester	Credit
CH 101 Chem Molecular Science ^{1,B}	3	CH 201 Chem Quant Science ^{2,B}	3
CH 102 General Chem Lab ^{2,B}	1	CH 202 General Quant Lab ^{2,3}	1
MA 141 (or MA 131) Calculus I ^{1,A}	3-4	ENG 101 Acad Writing and Research ^{1,H}	4
MEA 101 Geology I: Physical ^{3,4,2,5}	3	MA 241 (or MA 231) Calculus II ^{1,A}	3-4
MEA 110 Geology I Lab ^{3,2}	1	MEA 202 Geology II: Historical ^{3,2}	3
HES_*** Health & Exercise Studies Course ^E	1	MEA 211 Geology II Lab ^{3,2}	1
COS 100 Perspectives on Learning ^{4,6}	1		
	13-14		15-16

move to Fall fresh yr

Sophomore Year

Fall Semester	Credit	Spring Semester	Credit
Math/Science Option ^{3,6}	3	Computer Science Option ⁷	3
MEA 410 Intro to Mineralogy and Petrology ^{3,2}	4	MEA 100 Earth System Science ^{3,6}	4
PY 205 (or PY 211) Physics I ¹ (PY 205/206 or 211)	4	MEA 450 Sed. Petrol. & Strat. ^{3,2}	4
GEP Social Sciences Requirement ^D	3	PY 208 Physics for Engineers & Scientists II ²	3-4
		PY 208 Physics for Engineers & Scientists II Lab	1

14-15

15-14

Junior Year

Fall Semester	Credit	Spring Semester	Credit
Math/Science Option ^{2,6}	3	Advanced Writing Elective ⁹	3
MEA 451 Structural Geology ^{3,2}	4	Advised Elective ^{3,10}	3
Restricted Earth Science Elective ^{3,8}	3	COM 110 Public Speaking	3
GEP Interdisciplinary Perspectives Req. ^G	1-2 <i>del</i>	Surface Processes Elective ^{3,11}	3
Free Elective ¹³	3	GEP Social Sciences Requirement ^D	3
	13 <i>14-15</i>		15 <i>16</i>

Summer

Summer Semester	Credit
MEA 465 Geologic Field Camp ^{3,2}	4

*move to
Sp junior yr*

Senior Year

Fall Semester	Credit	Spring Semester	Credit
Applied Earth Science Elective ^{3,12}	3	Advised Elective ^{3,10}	3
Advised Elective ^{3,10}	4	Advised Elective ^{3,10}	3
MEA 495 <i>Junior</i> Seminar in MEAS ²	1	Restricted Earth Science Elective ^{3,8}	3
GEP Humanities Req. ^C	3	GEP Humanities Requirement ^C	3
GEP Additional Breadth Req. ^F	3	Free Elective ¹³	3
HES_*** Health & Exercise Studies Course ^{*E}	1		
	<i>15/14</i>		15

Major/Program Footnotes

1. A grade of a C- or higher is required in ENG 101; CH 101; MA 131, 141, 231, 241; PY 205, 211.
2. No more than one D will be allowed in other math and natural science courses.
3. No more than one D will be allowed in MEA courses and Restricted and Advised Electives.
4. Transfer students who have completed MEA 120, MEA 140, MEA 150 or MEA 200 can use those credits in lieu of MEA 101. All students must complete MEA 110.
- ~~5. E 115 may substitute for COS 100.~~
6. Math/Science Option to be selected from BIO 181, 183; CH 220, 221, 222; MA 242; MAE 301; or any 300-level or higher course in BIO, CH, MA, PY, or ST.
7. One of the following GIS 410, MA 116, CSC 112, CSC 114, CSC 116, or CSC 200. GIS 410 or MA 116 is recommended for most students.
8. Restricted Earth Science Electives to be chosen from MEA 300, MEA 323, MEA 411, MEA 440, MEA 459, MEA 470, MEA 471, MEA 481, or MEA 485.
9. Advanced Writing Elective must be selected from ENG 331, ENG 332, and ENG 333. The Advanced Writing Elective satisfies the Communication in the Major Co-Requisite.
10. Advised electives are in the geosciences and related fields and are to be selected with the advice and consent of the advisor to meet the student's career objective.
11. Surface Processes Electives to be chosen from MEA 411, MEA 459, and MEA 481.
12. Applied Earth Science Elective to be chosen from MEA 323, MEA 485, or MEA 471.
13. Free electives may not be MA 100, MA 101, MA 103, MA 107, MA 108, or MA 111.

* General Education Program (GEP) requirements and GEP Footnotes

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <https://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 131, MA 141, MA 231, or MA 241

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, CH 201

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: none

E. Health & Exercise Studies (2 credit hours; at least one 100-level Fitness and Wellness 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

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: MEA 100

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.

FORMAT A
(SEMESTER-BY-SEMESTER CURRICULUM DISPLAY)

Indicate display status: Current: Proposed: X Proposed Effective Semester: 2191

Degree/Plan Title: BS in Geology

Concentration/Subplan Title: 17GEOLBS

Plan SIS Code: n/a

Subplan SIS Code: n/a

New Degree Audit required? (Y or N) N

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
MA 141 (or MA 131) Calculus I ^{1, A}	3-4 CP	CH 101 Chemistry Molecular Science ^{1, B}	3 CP
MEA 100 Earth Systems Science ^{2, G, J}	4	CH 102 General Chemistry Lab ^{3, B}	1
MEA 101 Geology I: Physical ^{2, 5}	3 CP	ENG 101 Acad. Writing and Research ^{1, H}	4
MEA 110 Geology I Lab ²	1 CP	MA 241 (or MA 231) Calculus II ^{1, A}	3-4
HESF 1** Health & Exercise Studies ^E	1	MEA 202 Geology II: Historical ²	3
COS 100 Science of Change ^{4, G}	2	MEA 211 Geology II Lab ²	1
	Total: 14-15		Total: 15-16
SOPHOMORE YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
CH 201 Chemistry Quant. Science ^{3, B}	3	Computer Science Option ⁷	3
CH 202 General Quant. Lab ³	1	MEA 450 Sed. Petrol. & Strat. ²	4
Math/Science Option ^{3, 6}	3	Physics II (PY 208/209 or PY 212) ³	4
MEA 410 Intro. to Mineral. & Petrology ²	4 CP	GEP Social Sciences Requirement ^D	3
Physics I (PY 205/206 or PY 211) ¹	4		
	Total: 15		Total: 14
JUNIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
Math/Science Option ^{3, 6}	3	Advanced Writing Elective ⁹	3
MEA 451 Structural Geology ²	4	Advised Elective ^{2, 10}	3
Restricted Earth Science Elective ^{2, 8}	3	COM 110 Public Speaking	3
Free Elective ¹³	3	MEA 495 Junior Seminar in MEAS ²	1
		Surface Processes Elective ^{2, 11}	3
		GEP Social Sciences Requirement ^D	3
	Total: 13		Total: 16
SUMMER SESSION I			
MEA 465 Geologic Field Camp ² 4 credits			
SENIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
Applied Earth Science Elective ^{2, 12}	3	Advised Elective ^{2, 10}	3
Advised Elective ^{2, 10}	4	Advised Elective ^{2, 10}	3
GEP Humanities Requirement ^C	3	Restricted Earth Science Elective ^{2, 8}	3
GEP Additional Breadth Requirement ^F	3	GEP Humanities Requirement ^C	3
HES_ *** Health & Exercise Studies ^E	1	Free Elective ¹³	3
	Total: 14		Total: 15
Minimum Credit Hours Required for Graduation*: 120 ^{I, K}			

Major/Program Footnotes:

1. A grade of a C- or higher is required in ENG 101; CH 101; MA 131, 141, 231, 241; PY 205, 211.
2. No more than one D will be allowed in MEA courses and Restricted and Advised Electives.
3. No more than one D will be allowed in other math and natural science courses.
4. COS 100 is for new freshmen only. Transfer students will need to select a course from the GEP Interdisciplinary Perspectives course list.
5. Transfer students who have completed MEA 120, MEA 140, MEA 150 or MEA 200 can use those credits in lieu of MEA 101. All students must complete MEA 110.

6. Math/Science Option to be selected from BIO 181, 183; CH 220, 221, 222; MA 242; MAE 301; or any 300-level or higher course in BIO, CH, MA, PY, or ST.
7. One of the following GIS 280, MA 116, CSC 112, CSC 113, CSC 116, or CSC 200. GIS 280 or MA 116 is recommended for most students.
8. Restricted Earth Science Electives to be chosen from MEA 300, MEA 323, MEA 411, MEA 440, MEA 459, MEA 470, MEA 471, MEA 481, or MEA 485.
9. Advanced Writing Elective must be selected from ENG 331, ENG 332, and ENG 333. The Advanced Writing Elective satisfies the Communication in the Major Co-Requisite.
10. Advised Electives are in the geosciences and related fields and are to be selected with the advice and consent of the advisor to meet the student's career objective.
11. Surface Processes Elective to be chosen from MEA 411, MEA 459, and MEA 481.
12. Applied Earth Science Elective to be chosen from MEA 323, MEA 485, or MEA 471.
13. Free electives may not be MA 100, MA 101, MA 103, MA 107, MA 108, or MA 111.

***General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied.

University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

- 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 131, MA 141, MA 231, or MA 241**
 - 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, CH 210,**
 - 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: **none**
 - E. **Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)
Choose from the University approved GEP Physical Education/Healthy Living course list.
 - F. **Additional Breadth** - (3 credit hours to be selected from the following checked University approved GEP course lists)
☒ Humanities/Social Sciences/Visual and Performing Arts
 - 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: **COS 100, MEA 100**
 - 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.

<u>Degree/Plan Title:</u> BS in Geology	<u>Plan SIS Code:</u> 17GEOLBS
<u>Concentration/Subplan Title:</u> n/a	<u>Subplan SIS Code:</u> n/a
<u>Indicate requirements status:</u> Current: Proposed: X	<u>Proposed Effective Semester:</u> 2191
<u>New Degree Audit required?</u> (Y or N) N	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
<p>Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.</p> <p>Indicate if course or course groupings have a C-wall or MGPA requirement</p>		<p>List GEP category and hours satisfied by a Major requirement</p>
<p><u>GEOLOGY CORE COURSES</u></p> <p>INTRODUCTORY COURSE OPTION (MEA 101, MEA 150 or MEA 200)</p> <p>MEA 100 EARTH SYSTEMS SCIENCE</p> <p>MEA 110 GEOLOGY I LABORAT</p> <p>MEA 202 GEOLOGY II HISTOR</p> <p>MEA 211 GEOLOGY II LABORAT</p> <p>MEA 410 INTRO MIN PET</p> <p>MEA 450 INTR SED PET/STRAT</p> <p>MEA 451 STRUCTURAL GEOLOGY</p> <p>MEA 465 GEOL FIELD CAMP</p> <p>MEA 495 JUNIOR SEMINAR IN MEAS</p>	<p>3 CP</p> <p>4</p> <p>1 CP</p> <p>3</p> <p>1</p> <p>4 CP</p> <p>4</p> <p>4</p> <p>4</p> <p>1</p>	<p>Interdisciplinary Perspectives 4 hours, Satisfies the Global Knowledge Co-Requisite</p> <p>Satisfies the Technology Fluency Co-Requisite</p>
<p><u>MATHEMATICAL SCIENCES</u></p> <p>MATH OPTION I (MA 131 or MA 141) (C-wall)</p> <p>MATH OPTION II (MA 231 or MA 241) (C-wall)</p>	<p>3 CP</p> <p>3</p>	<p>Mathematics 3 hours</p> <p>Mathematics 3 hours</p>
<p><u>NATURAL SCIENCES</u></p> <p>CH 101 CHEM MOLECULAR SCI (C-wall)</p> <p>CH 102 GEN CHEM LAB</p> <p>CH 201 CHEM-A QUANTI SCI</p> <p>CH 202 QUANT CHEM LAB</p> <p>PHYSICS OPTION I (PY 205 and PY 206, or PY 211) (C-wall)</p> <p>PHYSICS OPTION II (PY 208 and PY 209, or PY 212)</p>	<p>3 CP</p> <p>1</p> <p>3</p> <p>1</p> <p>4</p> <p>4</p>	<p>Natural Science 3 hours</p> <p>Natural Science 1 hours</p> <p>Natural Science 3 hours</p>
<p><u>RESTRICTED ELECTIVES</u></p> <p>SURFACE PROCESSES ELECTIVE (MEA 411, MEA 459, or MEA 481)</p> <p>RESTRICTED EARTH SCIENCE ELECTIVE (MEA 300, MEA 323, MEA 411, MEA 440, MEA 481, MEA 485, MEA 470, MEA 471, or MEA 459)</p> <p>APPLIED EARTH SCIENCE ELECTIVE (MEA 323, MEA 485, or MEA 471)</p> <p>MATH/NATURAL SCIENCE OPTION (BIO 181, BIO 183, CH 220, CH 221, CH 222, MA 242, MAE 301, or any course 300-level of higher in BIO, CH, MA, PY or ST)</p>	<p>3</p> <p>6</p> <p>3</p> <p>6</p>	
<p><u>ADVISED ELECTIVES</u></p> <p>ADVISED ELECTIVE (no course pattern)</p>	<p>13</p>	
<p><u>COMPUTER LITERACY</u></p> <p>COMPUTER SCIENCE OPTION (GIS 280, MA 116, CSC 112, CSC 113, CSC 116, or CSC 200)</p>	<p>3</p>	

WRITING & SPEAKING COM 110 PUBLIC SPEAKING No more than one D will be accepted in MEA courses and Restricted and Advised Electives. No more than one D will be allowed in other Math and Natural Science Courses.	3	
Concentration Courses/Groups/Electives:		
Free Electives: EXC 995 (***) except MA 100, MA 101, MA 103, MA 107, MA 108, MA 111)	6	
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>	94 hours	
COLLEGE REQUIREMENTS:		
Orientation Course(s): COS 100 SCIENCE OF CHANGE	2	Interdisciplinary Perspectives 2 hours
Other: ADVANCED WRITING: ENG 331, ENG 332, or ENG 333	3	Satisfies Communication in the Major GEP co-requisite
Total credit hours under College Requirements:	5 Hours	

NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS

Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category may not be subset to require a specific course from the category list. Required courses must be listed in the Major/College requirements.

Specific courses should not be listed in any of the fields below other than ENG 101.

At least one of the following must be listed:

- 1 Choose course(s) from the University Approved GEP course list for this category.
- 2 Minimum requirements are satisfied by Major/College course requirements.
- 3 Major/College course requirement satisfies X credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category.
- 4 Co-requisite is satisfied by a Major/College course requirement.
- 5 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts.
- 6 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.

General Education Program Requirements:

Credit

How will the GEP requirement be met?

Minimum 39-40 hrs	hours	(Choose applicable statement from 1-6 listed above)
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements.
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements.
English 101 (C- or better required) (4 credits)	4	ENG 101
Humanities (6 credits) (Courses from two different disciplines) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	6	(Choose statement 1, 2 or 3) Choose course(s) from the University Approved GEP course list for this category.
Social Sciences (6 credits) (Courses from two different disciplines) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	6	(Choose statement 1, 2 or 3) Choose course(s) from the University Approved GEP course list for this category.
Additional Breadth (3 credits) (Choose approach that is different from the approach of the Major) Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.	3	(Choose statement 5 or 6) Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts.
Interdisciplinary Perspectives (5 credits) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	X	(Choose statement 1, 2 or 3) Minimum requirements are satisfied by Major/College course requirements.
Health and Exercise Studies (2 credits) (Including one Fitness and Wellness course)	2	Choose course(s) from the University Approved GEP course list for this category.
Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.	21 hours	
GEP Co-Requisites:		Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.
U.S. Diversity co-requisite (USD)	n/a	(Choose statement 1 or 4) Choose course(s) from the University Approved GEP course list for this category.
Global Knowledge co-requisite (GK)	n/a	(Choose statement 1 or 4) Co-requisite is satisfied by a Major/College course requirement.
Foreign Language Proficiency	n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:		Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)	X	Satisfied by College/Program Requirements
Technology Fluency	X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.	120 Total hours	As applicable, indicate here the overall GPA requirement for degree completion including course completion.