

Chemical Engineering & Textile Engineering (BS): Dual Major (14CHEBS-14CHETE)

Semester Display Effective Date: 1.2013

FRESHMAN YEAR

Fall Semester	Credit		Spring Semester	Credit
CH 101 Chemistry, A Molecular Science ¹	3		CH 201 Chemistry – Quantitative Sci. ²	3
CH 102 General Chemistry Lab ¹	1		CH 202 Quantitative Chem Lab	1
E 101 Introduction to Engr & Prob Solv ²	1		MA 241 Calculus II ¹	4
E 115 Intro to Computing Environ	1		PY 205 Physics for Engineers & Scientists I ¹	3
ENG 101 Academic Writing and Research ²	4		PY 206 Physics for Engineers & Scientists I Lab	1
MA 141 Calculus I ¹	4		TE 110 Comp Based Model Engineers	3
HES_*** Health & Exercise Studies Course*	1		HES_*** Health & Exercise Studies Course*	1
	15			16

SOPHOMORE YEAR

Fall Semester	Credit		Spring Semester	Credit
CH 221 Organic Chemistry I ^{3,6}	3		TE 201 Textile Engr. Sci.	4
CH 222 Organic Chemistry I Lab ⁶	1		MAE 206 Engr Statics OR	
CHE 205 Chemical Proc Prin ²	4		CE 214 Engr Statics	3
MA 242 Calculus III ²	4		MA 341 Applied Differential Eq ²	3
PY 208 Physics Engineers & Scientists II	3		CH 223 Organic Chemistry II ⁶	3
PY 209 Physics for Engineers & Scientists II Lab	1		CH 224 Organic Chemistry II Lab ⁶	1
	16		CHE 225 Chemical Proc Systems ²	3
				17

JUNIOR YEAR

Fall Semester	Credit		Spring Semester	Credit
CH 315 Quantitative Analysis	4		TE 302 Textile Mfg Proc II	4
TE 301 Engr Textile Structures I	3		ST 370 Prob & Stat for Engineers	3
GC 120 Found of Graphics	3		CHE 312 Transport Processes II	3
CHE 311 Transport Processes I ²	3		CHE 316 Thermo of Chem & Phase Eq	3
CHE 315 Chem Process Thermo ^{2,4}	3		TE 205 Analog & Digital Circuits ⁵	4
CHE 395 Professional Dev Seminar	1			
	17			17

SENIOR YEAR

Fall Semester	Credit		Spring Semester	Credit
CHE 446 Des & Analy Chem Reactors	3		TE 402 Textile Engr Des II ⁶	4
CHE 450 CHE Design I	3		TE 404 Six Sigma Quality	3

GEP IP Requirement*	3		TE 424 Tex Engr Qual Impr Lab	1
TE 401 Textile Engr Des I	4		GEP Requirement*	3
EC 205 Economics* OR	3		GEP Requirement*	3
EC 201 Economics* OR			GEP Requirement*	3
ARE 201 Economics*	16			17

5TH YEAR

Fall Semester	Credit		Spring Semester	Credit
CHE 330 Chem Engr Lab I	4			
CHE 435 Proc System Analy & Control	3			
PCC 301 Tech of Dyeing & Finish	3			
GEP IP Requirement*	1			
GEP IP Requirement*	2-3			
	16			

Minimum Credit Hours Required for Graduation*:

147

Major/Program requirements and footnotes:

¹ Grade of C (2.0) or higher required.

² Minimum grade of C- required.

³ CH 221 will replace TE 200 (in the Textile Engineering curriculum)

⁴ CHE 315 will replace TE 303 (in the Textile Engineering curriculum)

⁵ TE 402 will replace CHE 451 (in the Chemical Engineering curriculum)

⁶ CH 225/226 may substitute for CH 221/222 and CH 227/228 may substitute for CH 223/224.

* General Education Program (GEP) requirements:

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

Health & Exercise Studies - 2 hours to be selected from the approved GEP Health & Exercise Studies list.

a. One Health & Exercise Studies course (any HES 100-level course).

b. One additional credit hour of Health & Exercise Studies activity courses.

HUMANITIES – 6 credits to be selected in two different disciplines (two different course prefixes) from the approved GEP Humanities list.

SOCIAL SCIENCES - 3 credits to be selected in a discipline other than economics from the approved GEP Social Sciences list. EC 205, 201 or ARE 201 taken as part of the Major requirements satisfies 3 credit hours of the 6 credit hours needed to fulfill the GEP Social Sciences requirement.

ADDITIONAL BREADTH - 3 credits to be selected from the approved GEP Humanities, Social Sciences or Visual and Performing Arts lists.

INTERDISCIPLINARY PERSPECTIVES - 5 credits to be selected from the approved GEP Interdisciplinary Perspectives list.

Co-requisites:

U.S. Diversity and Global Knowledge co-requisites must be satisfied to complete the General Education requirements. Choose course(s) that are identified on the approved GEP course lists as meeting the U.S. Diversity and Global Knowledge co-requisites. Foreign Language proficiency at the FL_102 level will be required for graduation.