

**North Carolina State University  
CONSTRUCTION ENGINEERING**

**Degree: B.S. in Construction Engineering; Dept. of Civil, Construction, and Environmental Engineering**

**MECHANICAL CONSTRUCTION CONCENTRATION**

For Students entering after January 2015 (S '15)

**FRESHMAN YEAR**

<u>Fall Semester</u>		<u>Credits</u>	<u>Spring Semester</u>		<u>Credits</u>
CH 101	Chemistry – A Molecular Science	3	CSC 111	Intro. to Computing - Python	3
CH 102	General Chemistry Laboratory	1	EC 205	Economics (GEP Soc Sci Requirement) <sup>1</sup>	3
E 101	Intro. to Engineering & Prob. Solving	1	MA 241	Calculus II	4
E 115	Intro. to Computing Environments	1	PY 205	Physics for Engrs. & Sci. I	3
ENG 101	Academic Writing and Research	4	PY 206	Physics for Engrs. & Sci. I Lab	1
MA 141	Calculus I	4	HES__ XXX	Phys. Ed/Healthy Living Elective	<u>1</u>
HESF 1XX	Fitness & Wellness Course	<u>1</u>			15
		15			

**SOPHOMORE YEAR**

<u>Fall Semester</u>		<u>Credits</u>	<u>Spring Semester</u>		<u>Credits</u>
CE 214	Engineering Mechanics - Statics	3	CE 313	Mechanics of Solids	3
TDE 220	Civil Engineering Graphics	3	CE 365	Constr. Equipment & Methods (S)	3
MA 242	Calculus III	4	ST 370	Probability and Statistics for Engrs.	3
PY 208	Physics for Engrs. & Sci. II	3	MSE 200	Mech. Prop. of Structural Materials	3
PY 209	Physics for Engrs. & Sci. II Lab	1	MAE 301	Engr. Thermodynamics I	3
CE 263	Introduction to Construction Engr.	<u>3</u>		Management Science Elective (GEP) <sup>1,2</sup>	<u>3</u>
		17			18

**JUNIOR YEAR**

<u>Fall Semester</u>		<u>Credits</u>	<u>Spring Semester</u>		<u>Credits</u>
CE 382	Hydraulics	3	CE 367	Mech. & Elec. Sys. in Buildings (S)	3
CE 463	Const. Est., Planning & Control (F)	3	CE 464	Legal Aspects of Contracting (S)	3
CE 390	Engineering Economics	1		Civil Engineering Elective <sup>3</sup>	3
MAE 302	Engr. Thermodynamics II	3	MAE 310	Conduction & Radiation Heat Transfer	3
MA 341	Applied Differential Equations I	3	MAE 305	ME Lab I	1
MA 302	Num. Analysis to Diff Eqns	1		GEP Requirement <sup>1</sup>	<u>3</u>
COM 110	<b>or</b>				16
ENG 331	Communication for Engr & Tech	<u>3</u>			
		17			

**SENIOR YEAR**

<u>Fall Semester</u>		<u>Credits</u>	<u>Spring Semester</u>		<u>Credits</u>
ACC 200	Intro. To Managerial Acc. <b>or</b>		CE 469	Construction Engr. Project (S)	3
MIE 330	Human Resource Management	3	MAE 403	Air Conditioning (S)	3
ECE 331	Princ. of Electrical Engr. I	3		General Engineering Elective <sup>4</sup>	4
MAE 406	Energy Conservation in Industry (F)	3		GEP Requirement <sup>1</sup>	3
GEP Requirement <sup>1</sup>		3		GEP Requirement <sup>1</sup>	<u>2</u>
GEP Requirement <sup>1</sup>		<u>3</u>			15
		15			

**Minimum Credit Hours Required for Graduation = 128**

<sup>1</sup>GEP Requirements to be selected from the appropriate lists in consultation with the advisor.

<sup>2</sup> Management Science Elective (second Social Science) Select one: SOC 205, SOC 301, SOC 305/AFS 305 (USD), SOC 310, PS 202, PS 310, PS 312, PS 314, PS 315, PS 320.

<sup>3</sup> Civil Engineering Elective: CE 383, CE 305, CE 373, or CE 332

<sup>4</sup> General Engineering Elective: either CE 342 or MAE 306 ME Lab II plus one of the following: CE 301, CE 305, CE 332, CE 327\*, CE 373, CE 383, CE 476\*(F), CE 477\*(S), CE 478 (F), CE 479\*(S), CE 487 (S), CE or MAE 421(S) \*(CE 327: per-req CE 332) (CE 476, CE 477, & CE 479: pre-req CE 373)

Foreign Language Proficiency at the FL\_102 level is required for graduation.

**CONSTRUCTION ENGINEERING**  
**MECHANICAL CONSTRUCTION CONCENTRATION**  
 COURSE LISTING WITH PRE- AND COREQUISITES IN PARENTHESES  
 For students entering after January 2015 (S '15)

Fall Semester

Spring Semester

**FRESHMAN YEAR**

CH 101	(CoReq. CH 102)	CSC 111	(CoReq. E 115 and MA 141)
CH 102	(CoReq. CH 101)	EC 205	(GEP Soc. Sci. Requirement) <sup>1</sup>
E 101		MA 241	(C or better in MA 141)
E 115		PY 205	(C or better in MA 141)
ENG 101		PY 206	(C or better in MA 141, CoReq PY 205)
MA 141		HES__ XXX	Phys. Ed/Healthy Living Elective
HESF 1XX	Fitness & Wellness Course		

**Matriculation Requirements ("CODA"):** 1. C or better in CH 101, CH 102, ENG 101, MA 141, MA 241, PY 205, PY 206  
 2. Completion of E 115

**SOPHOMORE YEAR**

CE 214	(C or better PY205 & MA241, CoReq MA 242)	CE 313	(MA 242, C- or better in CE 214)
TDE 220	(Graphics Elective)	CE 365 (S)	(CE 263, CoReq ST 370)
MA 242	(C or better in MA 241)	ST 370	(MA 241)
PY 208	(C or better in PY 205 & MA 241)	MSE 200	(CH 101)
PY 209	(C /better PY205, PY206 &MA241; CoReq PY208)	MAE 301	(MA 242, PY 208)
CE 263 (F)	(CoReq CE 214)		Management Science Elective <sup>1,2</sup>

**JUNIOR YEAR**

CE 382	(CE 214, CoReq ST 370)	CE 367 (S)	(CE 382)
CE 463 (F)	(CE 263) (F), CE 365 (S)	CE 464 (S)	(CE 463) (F), CoReq CE 365) (S)
CE 390	(CSC 111, ST 370 or MA 341)		Civil Engineering Elective <sup>3</sup>
MAE 302	(CSC 111, C- or better in MAE 301)	MAE 310	(MA 341, C- or better MAE 301, CoReq CE 382)
MA 341	(MA 242)	MAE 305	(CE 382)
MA 302	(MA 241)		GEP Requirement <sup>1</sup>
COM 110	<u>or</u>		
ENG 331	(Junior Standing)		

**SENIOR YEAR**

ACC 200	<i>or</i>	CE 469	(CE 463, CoReq. CE 464) (S)
MIE 330	(MIE 201 (not required for this degree))	MAE 403 (S)	(MAE 302, MAE 310, CE 382) (S)
ECE 331	(MA 241, PY 208)		General Engineering Elective <sup>4</sup>
MAE 406 (F)	(MAE 302, MAE 310)		GEP Requirement <sup>1</sup>
GEP Requirement <sup>1</sup>			GEP Requirement <sup>1</sup>
GEP Requirement <sup>1</sup>			

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<sup>4</sup> General Engineering Elective: either CE 342 or MAE 306 ME Lab II plus one of the following: CE 301, CE 305, CE 332, CE 327\*, CE 373, CE 383, CE 476\*(F), CE 477\*(S), CE 478 (F), CE 479\*(S), CE 487 (S), or MAE 421(S) \*(CE 327: *per-req* CE 332) (CE 476, CE 477, & CE 479: *pre-req* CE 373).

Foreign Language Proficiency at the FL\_102 level is required for graduation.

(F) or (S) indicates a required course is offered in the Fall (F) only or the Spring (S) only.