

Ceramic Engineering Curriculum - Approved Fall 2022

Freshman Year

FE 1100 Study & Careers in Eng.	(1)		ME 1720 Intro to Engineering Design	(3)	
Chem 1310 General Chemistry	(4)		Math 1215 Calculus for Engineers II <i>Math 1160; and 1208 or 1214, or by placement exam</i>	(4)	
Chem 1319 General Chemistry Lab <i>*Chem 1310, *Chem 1100</i>	(1)		Phys 1135 Engineering Physics I <i>Math 1208 or 1214</i>	(4)	
Math 1214 Calculus for Engineers I <i>Math 1160; and 1120 or 1140, or by placement exam</i>	(4)		Chem 1320 General Chemistry II	(3)	
Engl 1120 Exposition and Argument	(3)		Cer Eng 2210 Ceramics in the Modern	(2)	
Hum/Soc Sci Elective	(3)				

Sophomore Year

Cer Eng 2110 Atomic Structure of Cer	(3)		Statistics ¹	(3)	
Cer Eng 3230 Thermodynamics <i>Chem 1310</i>	(3)		Cer Eng 2120 Intro to Glass Science <i>Cer 2110</i>	(3)	
Cer Eng 2315 Ceramic Materials Lab I <i>Sophomore standing</i>	(2)		Cer Eng 2325 Ceramic Matls Lab II <i>Cer 2315</i>	(2)	
Math 2222 Calc w/Analytic Geo III <i>Math 1215 or 1221</i>	(4)		Math 3304 ¹ <i>Math 2222</i>	(3)	
Phys 2135 Engineering Physics II <i>Phys 1135, Math 1221 or 1215</i>	(4)		Civil Eng 2200 Statics <i>Phys 1135 or 1111, *Math 2222</i>	(3)	
			Hum/Soc Sci Elective	(3)	

Junior Year

Cer Eng 3315 Ceramic Processing Lab II <i>Cer 2325</i>	(2)		Cer Eng 3325 Ceramic Process Lab II <i>Cer 3315</i>	(2)	
Cer Eng 3210 Thermal Processes	(3)		Cer Eng 3410 Char. of Inorganic Solids <i>Cer 2110 or Met 2110</i>	(3)	
Cer Eng 3220 Phase Equilibria <i>Chem 1320</i>	(3)		Cer Eng 4310 Ceramic Processing <i>Senior standing</i>	(3)	
Technical Elective ²	(2)		Physics 2305 Intro to Modern Physics <i>Math 2222, Phys 2135</i>	(3)	
Civil Eng 2210 Mechanics of Materials <i>CE 2200</i>	(3)		Advanced Chemistry Elective ³	(3)	
Hum/Soc Sci Elective	(3)		Hum/Soc Sci Elective	(3)	

Senior Year

Cer Eng 4096 Senior Design I <i>Cer 3315</i>	(3)		Cer Eng 4096 Senior Design II <i>Cer 4096</i>	(3)	
Cer Eng 4410 Intro to ICME <i>Cer 2110, Cer 3230, Math 3304</i>	(3)		Cer Eng 4220 Mechanical Properties <i>CE 2210</i>	(3)	
Cer Eng 4250 Thermal Properties <i>Senior standing</i>	(3)		Cer Eng 4240 Electrical Properties <i>Phys 2305</i>	(3)	
Technical Elective ²	(3)		Technical Elective ²	(3)	
Hum/Soc Sci Elective	(3)		Hum/Soc Sci Elective	(3)	

* Preceded or Accompanied by

¹ All ceramic engineering students must take MATH 3304 and one statistics course (3000-level or higher).

² Technical electives must be selected from upper level engineering and science courses with the advisor's approval.

³ All ceramic engineering students must select an advanced chemistry elective with the advisor's approval. The courses that can be considered are CHEM 2210, CHEM 2310, CHEM 3410, CHEM 4310, CHEM 4810, or CHEM 3420.