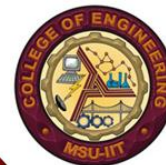




PROGRAM OF STUDY

Bachelor of Science in Ceramics Engineering



Student's Name : _____
Family Name First Name Middle Name

I.D. No. : _____

Complete Home Address : _____

Contact Information:

Mobile Phone No. : _____

Phone No. : _____

E-mail : _____

Father's Information : _____

Mobile Phone No. : _____

Home Phone No. : _____

E-mail : _____

Mother's Information : _____

Mobile Phone No. : _____

Home Phone No. : _____

E-mail : _____

Program of Study

The BS Ceramics Engineering program enriches the sample/model program of study depending on the needs of the ceramic industry and relevant stakeholders, provided that all prescribed courses required in the curriculum outlines are offered and pre-requisites and co-requisites are complied with.

The sample Program of Study listed below is meant for HEIs operating on a Semestral System. HEIs with CHED approved trimester or quarter term systems may adjust their courses and course specifications accordingly to fit their delivery system, as long as the minimum requirements are still satisfied.

The HEIs are also encouraged to include other courses to fulfil their institutional outcomes, as long as the total units for the whole program shall not exceed 240 units, including P.E., and NSTP.

First Year, First Semester

Course No.	Course Title	Units	Hrs/Wk			Pre-requisite(s)	Grades
			Lec.	Lab.	Total		
Engl. 3	Oral Communications	3	3	0	3	None	
Engl. 1	College English 1	3	3	0	3	None	
Fil. 1	Sining ng Komunikasyon	3	3	0	3	None	
Hist 1	Philippine History	3	3	0	3	None	
Math 17	Algebra & Trigonometry	6	6	0	6	None	
P.E. 1	Physical Fitness and Health	2	2	0	2	None	
MS 1/CWTS 1	Military Science 1/ Civic welfare Training Service 1	(3)	3	0	3	None	
Total		20	23	0	23		

First Year, Second Semester

Course No.	Course Title	Units	Hrs/Wk			Pre-requisite(s)	Grades
			Lec.	Lab.	Total		
Engl. 2	College English 2	3	3	0	3	Eng. 1	
Math 51	Anal. Geo. & Cal. 1	6	6	0	6	Math 17	
Phys. 21	General Physics I	3	3	0	3	Math 17	
Phys. 21.1	General Phys. Lab I	1	1	3	4	Math 17	
Chem. 15	General Chemistry I	3	3	0	3	None	
Chem. 15.2.	General Chemistry Lab I	2	0	6	6	None	
P.E. 2	Martial Arts/Dance	2	2	0	2	P.E. 1	
MS 2/CWTS 2	Military Science 2/ Civic welfare Training Service 2	(3)	3	0	3	MS1	
Total		20	21	9	30		

Second Year, First Semester

Course No.	Course Title	Units	Hrs/Wk			Pre-requisite(s)	Grades
			Lec.	Lab.	Total		
Engl. 4	Introduction to Literature	3	3	0	3	Engl 2	
Pol. Sci. 2	Philippine Government and Constitution, Agrarian Reform, Taxation, Family Planning and Population Education	3	3	0	3	None	
Math 61	Anal. Geom. & Cal. II	6	6	0	6	Math 51	
Phys. 31	General Physics II	3	3	0	3	Phys 21	
Phys. 31.1	General Physics Lab. II	1	0	3	3	Phys 21	
Chem 16	General Chemistry II	3	3	0	3	Chem 15	
Chem 16.2	General Chemistry Lab II	2	0	6	6	Chem 15/ Chem 15.2	
P.E. 3	Individual & Dual Sports	2	2	0	2	P.E. 1	
Total		23	20	9	29		

Second Year, Second Semester

Course No.	Course Title	Units	Hrs/Wk			Pre-requisite(s)	Grades
			Lec.	Lab.	Total		
Bio. 1	Biology	3	3	0	3	None	
Engl. 8	Technical Writing	3	3	0	0	Engl. 2	
Math 71	Anal. Geo. & Cal. III	6	6	0	6	Math 61	
Phys. 41	Gen. Physics III	3	3	0	3	Math 61/ Phys. 21/ Phys. 21.1	
Phys. 41.1	Gen. Physics Lab. III	1	0	3	3	Math 61/ Phys. 21/ Phys. 21.1	
Chem 28	Quantitative Analytical Chemistry	3	3	0	3	Chem 16	
Chem 28.2	Quantitative Analytical Chemistry Lab	2	0	6	6	Chem 16/Chem 16.2	
P.E. 4	Team Sports	2	2	0	2	P.E. 1	
Total		23	17	9	26		

Third Year, First Semester

Course No.	Course Title	Units	Hrs/Wk			Pre-requisite(s)	Grades
			Lec.	Lab.	Total		
ES 52	Engineering Drawing with CAD	2	0	6	6	Math 51	
ES 61	Statics of Rigid Bodies	3	3	0	3	Math 71/Phys 21/ Phys. 21.1	
ES 67	Elements of Material Science	3	3	0	3	Chem 16/16.2	
ES 81	Math. Methods in Eng'g. I	3	3	0	3	Math 71	
MSE 111	Material Science Measurements	2	0	6	6	Chem 16/ Phys 31/ Phys 31.1	
MSE 115	Material Science Physical Chemistry	2	2	0	2	Chem 28/Math 71/Phys 31/Phys 31.1	
GS 111	Principles of Geology	3	3	0	3	Chem 15/Chem 15.2	
EE 123	Elementary Electrical Engineering	3	2	3	5	Math 71/ Phys 41	
Total		21	16	15	31		

Third Year, Second Semester

Course No.	Course Title	Units	Hrs/Wk			Pre-requisite(s)	Grades
			Lec.	Lab.	Total		
Hum 1	Introduction to Humanities	3	3	0	3	None	
ES 62	Dynamics of Rigid Bodies	3	3	0	3	ES 61	
ES 64	Mechanics of Deformable Bodies	3	3	0	3	ES 61	
GS 122	Elementary Mineralogy	3	2	3	5	GS 111	
CerE 112	Phase Equilibria in Ceramic System	2	2	0	2	MSE 110/MSE 115	
CerE 114	Ceramic Crystal Chemistry I	3	3	0	3	MSE 110/MSE 115	
CerE 122	Ceramics Analysis	2	0	6	6	MSE 110/MSE 115	
MSE 116	Material Science Physical Chemistry II	2	2	0	2	MSE 115	
MSE 118	Material Science Physical Chemistry II Lab	1	0	3	3	MSE 110/MSE 115	
Total		22	18	12	30		

Fourth Year, First Semester

Course No.	Course Title	Units	Hrs/Wk			Pre-requisite(s)	Grades
			Lec.	Lab.	Total		
Hist 3	History of the Muslim Filipinos	3	3	0	3	NONE	
ES 65	Mechanics of Fluid	3	3	0	3	ES 62	
ES 85	Probability and Statistics in Engineering	3	3	0	3	Math 71	
CSc 101	Introduction to Computer Programming	3	3	2	5	Math 71	
CerE 113	Kinetics of Ceramic System	3	3	0	3	MSE 116/ MSE 118	
CerE 115	Ceramic Crystal Chemistry II	3	3	0	3	CerE 114	
CerE 131	Ceramic Raw Materials & Processes	3	3	0	3	Chem 28/GS 122	
CerE 131.2	Ceramic Raw Materials & Processes Laboratory	2	0	6	6	Chem 28.2/CerE 122	
Total		23	21	8	29		

Fourth Year, Second Semester

Course No.	Course Title	Units	Hrs/Wk			Pre-requisite(s)	Grades
			Lec.	Lab.	Total		
Hist 5	Life and Works of Rizal	3	3	0	3	NONE	
ES 84	Numerical Methods	3	2	3	5	ES 81/CSC 101	
ES 91	Engineering Economy	3	3	0	3	ES 85	
CerE 118	Properties of Ceramic Products	3	3	0	3	CerE 115/CerE 113	
CerE 134	Thermal Processes and Pyrometry	3	2	3	5	CerE112	
CerE 149	Enamels and Glazes	3	2	3	5	CerE 112/131 /131.2	
CerE 150	Glass Technology	3	2	3	5	CerE 112/131 /131.2	
Total		21	17	9	26		

Summer – OJT: 320 hours. The student must secure permission from CERE adviser.

Fifth Year, First Semester

Course No.	Course Title	Units	Hrs/Wk			Pre-requisite(s)	Grades
			Lec.	Lab.	Grades		
ES 92	Engineering Management	3	3	0	3	ES 91	
CerE 151	Structural Clay Products and Whitewares Lecture	3	3	0	3	CerE 149/118/131	
CerE 151.2	Structural Clay Products and Whitewares Laboratory	2	0	6	6	CerE 134/118//149	
CerE 155	Refractories Technology	2	2	0	2	CerE 134/118/ 131/131.2	
CerE 158	Advanced Ceramics I	2	2	0	2	CerE 134/118	
CerE 197	Research and Development in Ceramic Engineering	3	3	0	3	ES 85/CerE 134/149	
CerE 198	Ceramic Plant Design	2	1	3	4	ES 91/ES 51	
Tech 1	Elective	3	3	0	3		
Total		20	17	9	26		

Fifth Year, Second Semester

Course No.	Course Title	Units	Hrs/Wk			Pre-requisite(s)	Grades
			Lec.	Lab.	Total		
STS 1	Science Technology & Society	3	3	0	3	ES 92	
ES 95	Environmental Engineering	2	2	0	2	Bio 1	
CerE 156	Cement Manufacturing Technology	2	2	0	2	CerE 134/118	
CerE 159	Advanced Ceramics II	2	2	0	2	CerE 158	
CerE 172	Inspection Trips, Seminars & Safety Management	2	1	3	4	CerE 151/151.2 /ES 92	
CerE 173	Special Topics in Ceramic Engineering	2	2	0	2	CerE 158	
CerE 199	Undergraduate Thesis	3	1	6	7	CerE 197/158	
Tech 2	Elective	3	3	0	3		
	Total	19	16	9	25		

Grand Total 212 Units**Suggested electives:**

Course No.	Course Title	Units	Hrs/Wk			Pre-requisite(s)	Grades
			Lec.	Lab.	Total		
CerE 136	Fuels and Combustion	3	2	3	5	MSE 116/MSE 118	
CerE 126	Quality Control Fundamental and Instrumentation	2	2	0	2	ES 85	
EM 113	Elements of Mining	3	3	0	3	GS 111	
	Total	8	7	3	10		

Note: Students are required to take 6 units of electives.