

BACHELOR OF SCIENCE IN MINING ENGINEERING							
EFFECTIVE ACADEMIC YEAR 2018-2019							
(Updated Program of Study as of Academic Year 2020-2021)							
COURSE CODE	COURSE TITLE	HOURS		UNITS	PRE-REQUISITE	CO-REQUISITE	
		LEC	LAB				
FIRST YEAR							
FIRST SEMESTER		22	3	23			
EM131	Orientation to EM	2	0	2			
GEOL131	Principles of Geology	3	0	3		CHEM131, CHEM181	
MATH137	Engineering Calculus 1	3	0	3			
CHEM131	Chemistry for Engineers, lec.	3	0	3		CHEM181	
CHEM181	Chemistry for Engineers, lab	0	3	1		CHEM131	
MATH031	Mathematics in the Modern World	3	0	3			
PSYCH031	Understanding the Self	3	0	3			
PE103	Movement Enhancement	2		2			
NSTP111	National Service Training Program 1	3		3			
SECOND SEMESTER		22	9	25			
EM132	Principles of Mining	3	0	3	GEOL131		
CE268	General Surveying	2	3	3	MATH137		
MATH138	Engineering Calculus 2	3	0	3	MATH137		
PHYS132	Physics for Engineers, lec.	3	0	3	MATH137	PHYS182, MATH138	
PHYS182	Physics for Engineers, lab	0	3	1	MATH137	PHYS132, MATH138	
ES083	Computer-Aided Design and Drafting	0	3	1			
PHILO031	Ethics	3	0	3			
HUM031	Art Appreciation	3	0	3			
PE104	Fitness Exercises	2		2	PE103		
NSTP112	National Service Training Program 2	3		3	NSTP111		
SECOND YEAR							
FIRST SEMESTER		19	9	22			
GEOL261	Elementary Mineralogy	3	3	4	GEOL131		
EM231	Underground Mining	3	0	3	EM132		
MET231	Principles of Metallurgy	3	0	3			
GEOL263	Petrology	2	3	3			
MATH237	Differential Equations	3	0	3	MATH138		
ES084	Computer Programming 1	0	3	1			
GE-EM 1	General Education Elective 1	3	0	3			
PE205	Physical Activities Towards Health and Fitness I	2		2	PE103		
SECOND SEMESTER		21	9	24			
EM232	Surface Mining	3	0	3	EM132		
GEOL262	Structural Geology	2	3	3	GEOL131, GEOL261		
MET262	Mineral Processing	2	3	3	MET231, EM261		
ES033	Engineering Mechanics	3	0	3	PHYS132, PHYS182		
ES036	Environmental Science and Engineering	3	0	3	CHEM131, CHEM181		
ES085	Computer Programming 2	0	3	1	ES084		
ENGL031	Purposive Communication	3	0	3	None		
SOCSCI031	Readings in Philippine History	3	0	3			
PE206	Physical Activities Towards Health and Fitness II	2		2	PE103		

THIRD YEAR						
FIRST SEMESTER		22	3	23		
EM331	Mine Safety	3	0	3	EM132, EM232, EM231	
EM361	Mine Environmental Management	3	0	3	EM132, ES036	
MET361	Techniques of Metallurgical Analysis	1	3	2	MET231	
ME331	Fluid Mechanics	3	0	3	ES033	
EE331	Basic Electrical Engineering	3	0	3	PHYS132, PHYS182	
ES031	Engineering Data Analysis	3	0	3	MATH137	
STS031	Science, Technology and Society	3	0	3		
ES034	Engineering Management	3	0	3		
SECOND SEMESTER		22	9	25		
EM332	Optimization Techniques for Mining	3	0	3	Third Year Standing	ES032
EM362	Mine Ventilation	2	3	3	ME331	
EM364	Rock Mechanics	2	3	3	ES033, EM231, EM232	
EM366	Mineral Exploration	3	3	4	GEOL261	
EMTS332	Track specialization 1	3	0	3	3rd Year Standing	
GEOL332	Mineral Deposits	3	0	3	GEOL262, 3rd Year Standing	
ES032	Engineering Economics	3	0	3	ES 031	
GE-EM 2	General Education Elective 2	3	0	3	ES 031	
SUMMER TERM		0		6		
EM400	Mine & Plant Practice (320 lab hrs.) Certificate of Practice	0	320	6	3rd Year Standing	
FOURTH YEAR						
FIRST SEMESTER		22	9	25		
EM431	Mine Management	3	0	3	ES034	
EM433	Coal Mining	3	0	3	ME331	
EM435	Mine Drilling and Blasting	3	0	3	ME331	
EM461	Mine Research and Study 1	1	6	3	EM400, 4th Year Standing	
EMTS431	Track Specialization 2	3	0	3	EMTS332	
EMCC481	EM Comprehensive Evaluation Course 1	0	3	1	4th Year Standing	
GEOL431	Mineral Resources of RP	3	0	3	4th Year Standing	
SOCSCI032	The Contemporary World	3	0	3		
GE-EM 3	General Education Elective 3	3	0	3		
SECOND SEMESTER		20	12	24		
EM432	Mining and Environmental Laws and Ethics	3	0	3	4th Year Standing	
EM434	Mine Economics	3	0	3	GEOL332, EM361, EM231, ES032	
EM462	Mine Design	2	3	3	EM400, 4th Year Standing	
EMTS432	Track Specialization 3	3	3	4	4th Year Standing	
EMCC482	EM Comprehensive Evaluation Course 2	0	3	1	EMCC481, 4th Year Standing	
EMCC484	EM Comprehensive Evaluation Course 3	0	3	1	EMCC481, 4th Year Standing	
ES038	Technopreneurship	3	0	3	ES034	
EMELEC432	Free Elective	3	0	3		
RIZAL031	The Life and Works of Rizal	3	0	3		
GRAND TOTAL		170	63	197		

RECOMMENDED TRACK SPECIALIZATION COURSES						
EMTS332	Mine Surveying	3	0	3	3rd year standing	
EMTS431	Introduction to Petroleum Engineering	3	0	3	EMTS332	
EMTS432	Computer Applications for EM	3	3	4	4th year standing	
other courses under Mining or Energy Resource Extraction Tracks may be offered/ credited						
RECOMMENDED FREE ELECTIVES						
EM436	Basic Occupational Safety and Health for EM	3	0	3	ES036	
EM438	Equipment and Cost Estimation	3	0	3		
FL033	Foreign Language 3: Nihongo 1	3	0	3		
any other 3-unit lecture courses from other engineering programs						
RECOMMENDED GENERAL EDUCATION ELECTIVES						
ENGL014	Technical Writing/ Communication	3	0	3		
SSP031	Creative Thinking Tools	3	0	3		
SSP032	Sustainability Development and Global Citizenship	3	0	3		