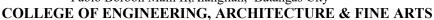


Republic of the Philippines **BATANGAS STATE UNIVERSITY**

Pablo Borbon Main II, Alangilan, Batangas City





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CURRICULUM

Bachelor of Science in Sanitary Engineering (BSSE)

Academic Year 2018-2019

Reference CMOs: CMO No. 98 s. 2017, CMO No. 4 s. 2018 and CMO No. 20, s. 2013

Curriculum Description

The BSSE program recognizes the importance of Sanitary Engineering in the protection and preservation of the environment as well as the promotion of health and well being of the general public.

Program Educational Objectives

The graduates of Bachelor of Science in Sanitary Engineering within three to five years after graduation shall:

- 1. Successfully practice as sanitary engineers; and
- 2. Adhere to professional, moral and ethical standards in the practice of sanitary engineering.

Student Outcomes

The following skills, knowledge, and behaviors are expected to be attained by students as they progress through the program:

- a. Ability to apply knowledge of mathematics and science to solve engineering problems.
- b. Ability to design and conduct experiments, as well as to analyze and interpret data.
- c. Ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability, in accordance with standards.
- d. Ability to function on multidisciplinary teams.
- e. Ability to identify, formulate, and solve engineering problems.
- f. Understanding of professional and ethical responsibility.
- g. Ability to communicate effectively.
- h. Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- i. Recognition of the need for, and an ability to engage in life-long learning.
- j. Knowledge of contemporary issues.
- k. Ability to use techniques, skills, and modern engineering tools necessary for engineering practice.
- 1. Knowledge and understanding of engineering and management principles as a member and leader in a team, to manage projects and in multidisciplinary environments.

CURRICULUM COMPONENTS

CURRICULUM COMPONENTS	Number of		Credit	
Classification/ Field / Course	Lec	Lab	Units	
I. TECHNICAL COURSES				
A. Mathematics				
Differential Calculus	3	0	3	
Integral Calculus	3	0	3	
Engineering Data Analysis	3	0	3	
Differential Equations	3	0	3	
Numerical Solutions to SE Problems (Advanced Mathematics)	2	3	3	
Sub-Total	14	3	15	
B. Natural and Physical Sciences				
General Chemistry	3	3	4	
Physics	3	3	4	
Geology	2	0	2	
Modern Biology	2	3	3	
Sub-Total	10	9	13	
C. Basic Engineering Sciences				
Sanitary Engineering Orientation	1	0	1	
Introduction to Engineering	0	3	1	
Engineering Drawing	0	3	1	
Computer Programming 1	0	3	1	
Computer Programming 2	0	3	1	
Computer Aided Design	0	3	1	
Statics of Rigid Bodies	3	0	3	
Dynamics of Rigid Bodies	2	0	2	
Strength of Materials	4	0	4	
Engineering Economics	3	0	3	
Engineering Management	2	0	2	
Technopreneurship	3	0	3	
Sub-Total	18	15	23	
D. Allied Courses	10	13	23	
Engineering Utilities 1	3	0	3	
Engineering Utilities 2	3	0	3	
Environmental Science and Engineering	3	0	3	
Sub-total	9	0	9	
E. Professional Courses		0	,	
Fundamentals of Surveying	3	6	5	
Construction Materials and Testing	2	3	3	
Structural Theory	3	3	4	
Principles of Reinforced/Prestressed Concrete Design	3	3	4	
Hydraulics	4	3	5	
Hydrology	3	0	3	
Sanitary Engineering Laws, Contract and Ethics	3	0	3	
Geotechnical Engineering 1 (Soil Mechanics)	3	3	4	
Construction Methods and Project Management	3	3	4	
Environmental and Sanitary Chemistry	2	3		
· · ·	2	3	3	
Microbioloy and Parasitology for Environmental Engineers	2	0	3 2	
Public Health Engineering Basic Occupational Safety and Health	3	0	3	
	3	0	3	
Solid and Hazardous Waste Engineering	3	0		
Environmental Planning, Laws and Impact Assssment	3	0	3	
Water Supply Planning and Development	3	0	3	
Sewerage and Urban Drainage	3	U	3	
Conitony Caianga Dlymbing and Eiga Dustration A1: -1 t- De-11.1'	2	2	2	
Sanitary Science, Plumbing and Fire Protection as Applied to Buildings	2	3	3	
Environmental Engineering Laboratory	0	3	1	
Water Purification Process Design	3	0	3	
Sewage and Industrial Wastewater Treatment	3	0	3	
SE Project Design 1	1	3	2	
SE Project Design 2	0	6	2	
SE Practice with Comprehensive Examinations	0	6	2	
Research Methods	3	0	3	
Sub-Total	60	51	77	

F. On-the-Job-Training			
OJT	3201	nrs	4
Total Technical Courses	111	78	141
II. Non-technical Courses			
A. General Education Courses			
Mathematics in the Modern World	3	0	3
Readings in Philippine History	3	0	3
Understanding the Self	3	0	3
The Contemporary World	3	0	3
Science, Technology and Society	3	0	3
Purposive Communication	3	0	3
Art Appreciation	3	0	3
Ethics	3	0	3
Sub-total Sub-total	24	0	24
B. Filipino/Literature/Rizal			
Kontekstwalisadong Komunikasyon sa Filipino	3	0	3
Filipino sa Iba't Ibang Disiplina	3	0	3
ASEAN Literature	3	0	3
Life and Works and Rizal	3	0	3
Sub-total	12	0	12
C. Physical Education			
PE 101	2	0	2
PE 102	2	0	2
PE 103	2	0	2
PE 104	2	0	2
Sub-total	8	0	8
D. NSTP			
NSTP 111	3	0	3
NSTP 121	3	0	3
Sub-total Sub-total	6	0	6
Total Non-Technical Courses	50	0	50
GRAND TOTAL	161	78	191

SUMMARY				
Courses	Number of Units			
I. Technical Courses				
A. Mathematics	15			
B. Natural/Physical Sciences	13			
C. Basic Engineering Sciences	23			
D. Allied Courses	9			
E. Professional Courses	77			
F. On-the-Job Training	4			
II. Non-Technical Courses				
A. General Education Courses	24			
B. Filipino/Literature/Mandated Courses	12			
C. Physical Education	8			
D. NSTP	6			
TOTAL	191			

PROGRAM OF STUDY

	FIRST YE					
	First Seme				ı	ı
Course Code	Course Title		Hour/s	Unit/s	Pre-requisite/s	Co-requisite/s
		Lec	Lab			00 104
GEd 102	Mathematics in the Modern World	3	0	3		
GEd 105	Readings in Philippine History	3	0	3		
GEd 101	Understanding the Self	3	0	3		
SCI 401	General Chemistry	3	3	4		
GEd 106	Purposive Communication	3	0	3		
ENGG 401	Introduction to Engineering	0	3	1		
MATH 401	Differential Calculus	3	0	3		
PE 101	Physical Fitness, Gymnastics and Aerobics	2	0	2		
NSTP 111	National Service Training Program 1	3	0	3		
	Total	23	6	25		
	FIRST YE	AR		•		
	Second Sem	ester				
			Hour/s			
Course Code	Course Title	Lec	Lab	Unit/s	Pre-requisite/s	Co-requisite/
MATH 402	Integral Calculus	3	0	3	MATH 401	
SCI 403	Physics 1	3	3	4	MATH 401	MATH 402
GEd 104	The Contemporary World	3	0	3	14171111 101	1411111102
GEd 104 GEd 109	Science, Technology and Society	3	0	3		
			-	-		
CpE 401	Computer Programming 1	0	3	1		
GEd 108	Art Appreciation	3	0	3		
ENGG 402	Engineering Drawing	0	3	1		
PE 102	Rhythmic Activities	2	0	2	PE 101	
NSTP 121	National Service Training Program 2	3	0	3	NSTP 111	
	Total	20	9	23		
	FIRST YE	AR				
	Midtern	1				
~ ~ .	G	No. of	Hour/s			
Course Code	Course Title	Lec	Lab	Unit/s	Pre-requisite/s	Co-requisite/s
GEd 107	Ethics	3	0	3		
GEd 103	Life and Works of Rizal	3	0	3		
SCI 402	Modern Biology	2	3	3		
501402	Total	8	3	9		
	1 111		3	9		
	SECOND Y					
	First Seme		TT /	1		ı
Course Code	Course Title		Hour/s	Unit/s	Pre-requisite/s	Co-requisite/s
		Lec	Lab			•
MATH 404	Differential Equations	3	0	3	MATH 402	
CE 404	Fundamentals of Surveying	3	6	5	ENGG 402	
SCI 405	Geology	2	0	2		
PE 103	Individual and Dual Sports	2	0	2	PE 101	
ENGG 407			U			
E1100 T0/	Statics of Rigid Bodies	3	0	3	SCI 403, MATH 402	
ENGG 403	Statics of Rigid Bodies		-		SCI 403, MATH 402 ENGG 402	
	Statics of Rigid Bodies Computer Aided Design	3	0	3		
ENGG 403 SE 401	Statics of Rigid Bodies Computer Aided Design Sanitary Engineering Orientation	3 0 1	0 3 0	3 1 1	ENGG 402	
ENGG 403 SE 401 SE 402	Statics of Rigid Bodies Computer Aided Design Sanitary Engineering Orientation Environmental and Sanitary Chemistry	3 0 1 2	0 3 0 3	3 1 1 3	ENGG 402 SCI 401	
ENGG 403 SE 401	Statics of Rigid Bodies Computer Aided Design Sanitary Engineering Orientation Environmental and Sanitary Chemistry Dynamics of Rigid Bodies	3 0 1 2 2	0 3 0 3 0	3 1 1 3 2	ENGG 402	
ENGG 403 SE 401 SE 402	Statics of Rigid Bodies Computer Aided Design Sanitary Engineering Orientation Environmental and Sanitary Chemistry Dynamics of Rigid Bodies Total	3 0 1 2 2 18	0 3 0 3	3 1 1 3	ENGG 402 SCI 401	
ENGG 403 SE 401 SE 402	Statics of Rigid Bodies Computer Aided Design Sanitary Engineering Orientation Environmental and Sanitary Chemistry Dynamics of Rigid Bodies Total SECOND Y	3 0 1 2 2 18 EAR	0 3 0 3 0	3 1 1 3 2	ENGG 402 SCI 401	
ENGG 403 SE 401 SE 402	Statics of Rigid Bodies Computer Aided Design Sanitary Engineering Orientation Environmental and Sanitary Chemistry Dynamics of Rigid Bodies Total	3 0 1 2 2 18 EAR ester	0 3 0 3 0 12	3 1 1 3 2	ENGG 402 SCI 401	
ENGG 403 SE 401 SE 402	Statics of Rigid Bodies Computer Aided Design Sanitary Engineering Orientation Environmental and Sanitary Chemistry Dynamics of Rigid Bodies Total SECOND Y	3 0 1 2 2 18 EAR ester No. of	0 3 0 3 0 12	3 1 1 3 2	ENGG 402 SCI 401	Co-requisite/
ENGG 403 SE 401 SE 402 ENGG 408	Statics of Rigid Bodies Computer Aided Design Sanitary Engineering Orientation Environmental and Sanitary Chemistry Dynamics of Rigid Bodies Total SECOND Y Second Sem Course Title	3 0 1 2 2 18 EAR ester No. of Lec	0 3 0 3 0 12 Hour/s	3 1 1 3 2 22 22	ENGG 402 SCI 401 ENGG 407 Pre-requisite/s	Co-requisite/
ENGG 403 SE 401 SE 402 ENGG 408 Course Code	Statics of Rigid Bodies Computer Aided Design Sanitary Engineering Orientation Environmental and Sanitary Chemistry Dynamics of Rigid Bodies Total SECOND Y Second Sem Course Title Numerical Solutions to SE Problems (Advanced Mathematics)	3 0 1 2 2 18 EAR ester No. of Lec 2	0 3 0 3 0 12 Hour/s Lab	3 1 1 3 2 22 22 Unit/s	ENGG 402 SCI 401 ENGG 407 Pre-requisite/s MATH 404	Co-requisite/s
ENGG 403 SE 401 SE 402 ENGG 408 Course Code SE 403 PE 104	Statics of Rigid Bodies Computer Aided Design Sanitary Engineering Orientation Environmental and Sanitary Chemistry Dynamics of Rigid Bodies Total SECOND Y Second Sem Course Title Numerical Solutions to SE Problems (Advanced Mathematics) Team Sports	3 0 1 2 2 18 EAR ester No. of Lec 2	0 3 0 3 0 12 Hour/s Lab 3	3 1 1 3 2 22 22 Unit/s 3	ENGG 402 SCI 401 ENGG 407 Pre-requisite/s MATH 404 PE 101	Co-requisite/
ENGG 403 SE 401 SE 402 ENGG 408 Course Code SE 403 PE 104 ENGG 413	Statics of Rigid Bodies Computer Aided Design Sanitary Engineering Orientation Environmental and Sanitary Chemistry Dynamics of Rigid Bodies Total SECOND Y Second Sem Course Title Numerical Solutions to SE Problems (Advanced Mathematics) Team Sports Environmental Science and Engineering	3 0 1 2 2 18 EAR ester No. of Lec 2 2	0 3 0 3 0 12 Hour/s Lab 3 0	3 1 1 3 2 22 22 Unit/s 3 2 3	ENGG 402 SCI 401 ENGG 407 Pre-requisite/s MATH 404 PE 101 SCI 401	Co-requisite/
ENGG 403 SE 401 SE 402 ENGG 408 Course Code SE 403 PE 104 ENGG 413 MATH 403	Statics of Rigid Bodies Computer Aided Design Sanitary Engineering Orientation Environmental and Sanitary Chemistry Dynamics of Rigid Bodies Total SECOND Y Second Sem Course Title Numerical Solutions to SE Problems (Advanced Mathematics) Team Sports Environmental Science and Engineering Engineering Data Analysis	3 0 1 2 2 18 EAR ester No. of Lec 2 2 3 3	0 3 0 3 0 12 Hour/s Lab 3 0 0	3 1 1 3 2 22 22 Unit/s 3 2 3 3	Pre-requisite/s MATH 404 PE 101 SCI 401 MATH 402	Co-requisite/
ENGG 403 SE 401 SE 402 ENGG 408 Course Code SE 403 PE 104 ENGG 413 MATH 403 CE 402	Statics of Rigid Bodies Computer Aided Design Sanitary Engineering Orientation Environmental and Sanitary Chemistry Dynamics of Rigid Bodies Total SECOND Y Second Sem Course Title Numerical Solutions to SE Problems (Advanced Mathematics) Team Sports Environmental Science and Engineering Engineering Data Analysis Strength of Materials	3 0 1 2 2 18 EAR ester No. of Lec 2 2 3 3	0 3 0 3 0 12 Hour/s Lab 3 0 0	3 1 1 3 2 22 22 Unit/s 3 2 3	Pre-requisite/s MATH 404 PE 101 SCI 401 MATH 402 ENGG 407	Co-requisite/
ENGG 403 SE 401 SE 402 ENGG 408 Course Code SE 403 PE 104 ENGG 413 MATH 403	Statics of Rigid Bodies Computer Aided Design Sanitary Engineering Orientation Environmental and Sanitary Chemistry Dynamics of Rigid Bodies Total SECOND Y Second Sem Course Title Numerical Solutions to SE Problems (Advanced Mathematics) Team Sports Environmental Science and Engineering Engineering Data Analysis Strength of Materials Microbiology and Parasitology for Environmental Engineers	3 0 1 2 2 18 EAR ester No. of Lec 2 2 3 3	0 3 0 3 0 12 Hour/s Lab 3 0 0	3 1 1 3 2 22 22 Unit/s 3 2 3 3	Pre-requisite/s MATH 404 PE 101 SCI 401 MATH 402	Co-requisite/
ENGG 403 SE 401 SE 402 ENGG 408 Course Code SE 403 PE 104 ENGG 413 MATH 403 CE 402	Statics of Rigid Bodies Computer Aided Design Sanitary Engineering Orientation Environmental and Sanitary Chemistry Dynamics of Rigid Bodies Total SECOND Y Second Sem Course Title Numerical Solutions to SE Problems (Advanced Mathematics) Team Sports Environmental Science and Engineering Engineering Data Analysis Strength of Materials	3 0 1 2 2 18 EAR ester No. of Lec 2 2 3 3	0 3 0 3 0 12 Hour/s Lab 3 0 0	3 1 1 3 2 22 22 Unit/s 3 2 3 3 4	Pre-requisite/s MATH 404 PE 101 SCI 401 MATH 402 ENGG 407	Co-requisite/
ENGG 403 SE 401 SE 402 ENGG 408 Course Code SE 403 PE 104 ENGG 413 MATH 403 CE 402 SE 404	Statics of Rigid Bodies Computer Aided Design Sanitary Engineering Orientation Environmental and Sanitary Chemistry Dynamics of Rigid Bodies Total SECOND Y Second Sem Course Title Numerical Solutions to SE Problems (Advanced Mathematics) Team Sports Environmental Science and Engineering Engineering Data Analysis Strength of Materials Microbiology and Parasitology for Environmental Engineers Kontekstwalisadong Komunikasyon sa Filipino	3 0 1 2 2 18 EAR ester No. of Lec 2 2 3 3 4	0 3 0 3 0 12 Hour/s Lab 3 0 0 0 0	3 1 1 3 2 22 22 Unit/s 3 2 3 4 3	Pre-requisite/s MATH 404 PE 101 SCI 401 MATH 402 ENGG 407	Co-requisite/s
ENGG 403 SE 401 SE 402 ENGG 408 Course Code SE 403 PE 104 ENGG 413 MATH 403 CE 402 SE 404 Fili 101	Statics of Rigid Bodies Computer Aided Design Sanitary Engineering Orientation Environmental and Sanitary Chemistry Dynamics of Rigid Bodies Total SECOND Y Second Sem Course Title Numerical Solutions to SE Problems (Advanced Mathematics) Team Sports Environmental Science and Engineering Engineering Data Analysis Strength of Materials Microbiology and Parasitology for Environmental Engineers	3 0 1 2 2 18 EAR ester No. of Lec 2 2 3 3 4 2	0 3 0 3 0 12 Hour/s Lab 3 0 0 0 0 3	3 1 1 3 2 22 22 Unit/s 3 2 3 4 3 3	Pre-requisite/s MATH 404 PE 101 SCI 401 MATH 402 ENGG 407	Co-requisite/

	THIRD YE							
	First Semes		Hour/s					
Course Code	Course Title	Lec	Lab	Unit/s	Pre-requisite/s	Co-requisite/		
CE 405	Hydrology	3	0	3				
CE 407	Structural Theory	3	3	4	CE 402			
CE 410	Hydraulics	4	3	5	CE 402, ENGG 408			
CE 411	Geotechnical Engineering 1 (Soil Mechanics)	3	3	4	CE 402, SCI 405			
ENGG 404	Engineering Economics	3	0	3	MATH 402			
ENGG 406	Engineering Management	2	0	2				
SE 405	Public Health Engineering	2	0	2	SE 404			
ENGG 416	Research Methods	3	0	3	MATH 403			
	Total	23	9	26				
	THIRD YE							
	Second Semo							
Course Code	Course Title		Hour/s	Unit/s	Pre-requisite/s	Co-requisite/		
Course coue		Lec	Lab			Co requisite/		
SE 406	Water Supply Planning and Development	3	0	3	CE 410			
SE 407	Sewerage and Urban Drainage	3	0	3	CE 405			
SE 408	Sewage and Industrial Wastewater Treatment	3	0	3	ENGG 413			
CE 406	Construction Materials and Testing	2	3	3	CE 402			
SE 409	Environmental Planning, Laws and Impact Assessment	3	0	3				
ENGG 411	Basic Occupational Safety and Health	3	0	3				
CE 415	Principles of Reinforced/Prestressed Concrete Design	3	3	4	CE 407			
SE 410	Solid and Hazardous Waste Engineering	3	0	3	SE 405			
	Total		6	25				
	THIRD YE							
	Midtern							
Course Code	Course Title	No. of	Hour/s	Unit/s	Pre-requisite/s	Co-requisite/s		
		Lec	Lab		Tre requisite/s	Co requisite.		
Litr 102	ASEAN Literature	3	0	3				
CpE 402	Computer Programming 2	0	3	1				
Fili 102	Filipino sa Iba't Ibang Disiplina	3	0	3				
	Total		3	7				
	FOURTH Y							
	First Semes	ster		ı	Т	Т		
	· · · · · · · · · · · · · · · · · · ·				I]nit/s	Unit/s		
Course Code	Course Title	No. of		Unit/s	Pre-requisite/s	Co-requisite/s		
Course Code	Course Title	Lec	Lab		•	Co-requisite/s		
Course Code ENGG 417	Course Title On-the-Job Training	Lec		Unit/s 4	4th yr standing	Co-requisite/s		
		Lec	Lab		4th yr standing SE 405, SE 407,	Co-requisite/s		
ENGG 417	On-the-Job Training	Lec 320	Lab	4	4th yr standing SE 405, SE 407, SE 408, SE 409,	Co-requisite/s		
		Lec	Lab hrs		4th yr standing SE 405, SE 407, SE 408, SE 409, CE 415, ENGG	Co-requisite/s		
ENGG 417 SE 411	On-the-Job Training SE Project Design 1	320	Lab hrs	2	4th yr standing SE 405, SE 407, SE 408, SE 409,	Co-requisite/s		
ENGG 417	On-the-Job Training SE Project Design 1 SE Laws, Contracts and Ethics	1 3	Lab hrs 3	2	4th yr standing SE 405, SE 407, SE 408, SE 409, CE 415, ENGG	Co-requisite/s		
ENGG 417 SE 411	On-the-Job Training SE Project Design 1 SE Laws, Contracts and Ethics Total	1 3 4	Lab hrs	2	4th yr standing SE 405, SE 407, SE 408, SE 409, CE 415, ENGG	Co-requisite/s		
ENGG 417 SE 411	On-the-Job Training SE Project Design 1 SE Laws, Contracts and Ethics Total FOURTH Y	1 3 4 EAR	Lab hrs 3	2	4th yr standing SE 405, SE 407, SE 408, SE 409, CE 415, ENGG	Co-requisite/s		
ENGG 417 SE 411	On-the-Job Training SE Project Design 1 SE Laws, Contracts and Ethics Total	1 3 4 EAR ester	Lab hrs 3 0 3	2	4th yr standing SE 405, SE 407, SE 408, SE 409, CE 415, ENGG	Co-requisite/s		
ENGG 417 SE 411	On-the-Job Training SE Project Design 1 SE Laws, Contracts and Ethics Total FOURTH Y	1 3 4 EAR ester No. of	Lab hrs 3 0 3 Hour/s	2	4th yr standing SE 405, SE 407, SE 408, SE 409, CE 415, ENGG			
ENGG 417 SE 411 SE 412 Course Code	On-the-Job Training SE Project Design 1 SE Laws, Contracts and Ethics Total FOURTH Y Second Semonth Second Second Semonth Second Semonth Second Sec	1 3 4 EAR ester No. of Lec	Lab hrs 3 0 3 Hour/s Lab	2 3 9	4th yr standing SE 405, SE 407, SE 408, SE 409, CE 415, ENGG 416 Pre-requisite/s			
ENGG 417 SE 411 SE 412 Course Code CE 417	On-the-Job Training SE Project Design 1 SE Laws, Contracts and Ethics Total FOURTH Y Second Semontonian Second Sec	1 3 4 EAR ester No. of Lec 3	Lab hrs 3	2 3 9 • Unit/s	4th yr standing SE 405, SE 407, SE 408, SE 409, CE 415, ENGG 416 Pre-requisite/s ENGG 406			
ENGG 417 SE 411 SE 412 Course Code CE 417 ENGG 405	On-the-Job Training SE Project Design 1 SE Laws, Contracts and Ethics Total FOURTH Y Second Sem Course Title Construction Methods and Project Management Technopreneurship	1 3 4 EAR ester No. of Lec 3 3	Lab hrs 3	2 3 9 Unit/s 4 3	4th yr standing SE 405, SE 407, SE 408, SE 409, CE 415, ENGG 416 Pre-requisite/s ENGG 406 4th yr standing			
ENGG 417 SE 411 SE 412 Course Code CE 417 ENGG 405 SE 413	On-the-Job Training SE Project Design 1 SE Laws, Contracts and Ethics Total FOURTH Y Second Sem Course Title Construction Methods and Project Management Technopreneurship Environmental Engineering Laboratory	1 3 4 EAR ester No. of Lec 3 3 3 0	Lab hrs 3	3 9 Unit/s 4 3 1	4th yr standing SE 405, SE 407, SE 408, SE 409, CE 415, ENGG 416 Pre-requisite/s ENGG 406 4th yr standing 4th yr standing			
ENGG 417 SE 411 SE 412 Course Code CE 417 ENGG 405 SE 413 SE 414	On-the-Job Training SE Project Design 1 SE Laws, Contracts and Ethics Total FOURTH Y Second Semo Course Title Construction Methods and Project Management Technopreneurship Environmental Engineering Laboratory SE Project Design 2	Lec 320	Lab hrs	2 3 9 Unit/s 4 3 1 2	4th yr standing SE 405, SE 407, SE 408, SE 409, CE 415, ENGG 416 Pre-requisite/s ENGG 406 4th yr standing 4th yr standing SE 411			
ENGG 417 SE 411 SE 412 Course Code CE 417 ENGG 405 SE 413	On-the-Job Training SE Project Design 1 SE Laws, Contracts and Ethics Total FOURTH Y Second Semo Course Title Construction Methods and Project Management Technopreneurship Environmental Engineering Laboratory SE Project Design 2 SE Practice with Comprehensive Examinations	1 3 4 EAR ester No. of Lec 3 3 3 0	Lab hrs 3	3 9 Unit/s 4 3 1	4th yr standing SE 405, SE 407, SE 408, SE 409, CE 415, ENGG 416 Pre-requisite/s ENGG 406 4th yr standing 4th yr standing			
ENGG 417 SE 411 SE 412 Course Code CE 417 ENGG 405 SE 413 SE 414	On-the-Job Training SE Project Design 1 SE Laws, Contracts and Ethics Total FOURTH Y Second Semon Course Title Construction Methods and Project Management Technopreneurship Environmental Engineering Laboratory SE Project Design 2 SE Practice with Comprehensive Examinations Sanitary Science, Plumbing and Fire Protection as	Lec 320	Lab hrs	2 3 9 Unit/s 4 3 1 2	4th yr standing SE 405, SE 407, SE 408, SE 409, CE 415, ENGG 416 Pre-requisite/s ENGG 406 4th yr standing 4th yr standing SE 411			
ENGG 417 SE 411 SE 412 Course Code CE 417 ENGG 405 SE 413 SE 414 SE 415 SE 416	On-the-Job Training SE Project Design 1 SE Laws, Contracts and Ethics Total FOURTH Y Second Semon Course Title Construction Methods and Project Management Technopreneurship Environmental Engineering Laboratory SE Project Design 2 SE Practice with Comprehensive Examinations Sanitary Science, Plumbing and Fire Protection as Applied to Buildings	Lec 320 1	Lab hrs	3 9 Unit/s 4 3 1 2 2 3 3 3 3 3 3 4 3 1 2 3 3	4th yr standing SE 405, SE 407, SE 408, SE 409, CE 415, ENGG 416 Pre-requisite/s ENGG 406 4th yr standing 4th yr standing SE 411 Graduating CE 410			
ENGG 417 SE 411 SE 412 Course Code CE 417 ENGG 405 SE 413 SE 414 SE 415	On-the-Job Training SE Project Design 1 SE Laws, Contracts and Ethics Total FOURTH Y Second Semon Course Title Construction Methods and Project Management Technopreneurship Environmental Engineering Laboratory SE Project Design 2 SE Practice with Comprehensive Examinations Sanitary Science, Plumbing and Fire Protection as	Lec 320 1	Lab hrs 3	3 9 Unit/s 4 3 1 2 2	4th yr standing SE 405, SE 407, SE 408, SE 409, CE 415, ENGG 416 Pre-requisite/s ENGG 406 4th yr standing 4th yr standing SE 411 Graduating	Co-requisite/s Co-requisite/s		