

BS ES Prospectus

BS ES - NRM Prospectus SY 2018-19

Subject Code	Descriptive Title	Hours		Total	Units		Total	Pre-Requisites/C o-Requisites
		Lec	La b		Lec	Lab		
1st Year	1st Semester							
BIO 111	General Botany	3	3	6	3	1	4	None
ES 111	Fundamentals of Geology	3	0	3	3	0	3	None
CHEM 111	Organic Chemistry	3	6	9	3	2	5	None
MATH 101	Mathematics in the Modern World	3	0	3	3	0	3	None
SS 101	Understanding the Self	3	0	3	3	0	3	None
SS 104	Ethics	3	0	3	3	0	3	None
ENG 101	Purposive Communication	3	0	3	3	0	3	None
PE 101	PE I	2	0	2	(2)	0	(2)	None
NSTP 101	NSTP 1	3	0	3	(2)	0	(3)	None
	TOTAL			35	35		24 (5)	
1st Year	2nd Semester							
BIO 112	General Zoology	3	3	6	3	1	4	None
CHEM 121	Biochemistry	3	6	9	3	2	5	Organic Chemistry
MATH 201	Differential Calculus	4	0	4	4	0	4	Mathematics in the Modern World
SS 102	Readings in Philippine History	3	0	3	3	0	3	None
FIL 101	Wika, Kultura at Lipunan	3	0	3	3	0	3	None
SS 105	Life and Works of Rizal	3	0	3	3	0	3	None
PE 102	PE II	2	0	2	(2)	0	(2)	PE 1
NSTP 201	NSTP II	3	0	3	(3)	0	(3)	NSTP 1
	TOTAL			33			22 (5)	

2nd Year	1st Semester							
BIO 211	Microbiology	3	3	6	3	1	4	General Zoology
CHEM 121	Analytical Chemistry	3	6	9	3	2	5	Organic Chemistry, Biochemistry
PHYS 111.1	Mechanics	3	3	6	3	1	4	None
MATH 202	Integral Calculus	4	0	4	4	0	4	Differential Calculus
SS 103	The Contemporary World	3	0	3	3	0	3	None
FIL 103	Retorika	3	0	3	3	0	3	None
PE 103	PE III	2	0	2	2	0	(2)	PE 11
	TOTAL			33			23 (2)	

2nd Year	2nd Semester							
BIO 221	General Ecology	3	3	6	3	1	4	General Botany, General Zoology
ES 221	Fundamentals of Meteorology	3	0	3	3	0	3	None
ES 222	Science, Technology and Society	3	0	3	3	0	3	None
PHYS 121.1	Thermodynamics and Heat	3	3	6	3	1	4	Mechanics
MATH 223	Statistics	4	0	4	4	0	4	Mathematics in the Modern World
ENG 102	Art Appreciation	3	0	3	3	0	3	None
SS 201	Entrepreneurial Mind	3	0	3	3	0	3	None
ENG 203	Indigenous Creative Crafts	3	0	3	3	0	3	None
PE 104	PE IV	2	0	2	(2)	0	(2)	PE III
	TOTAL			33			27 (2)	
3rd Year	1st Semester							

ES 311	Introduction to Soil Science	3	3	6	3	1	4	Fundamentals of Geology
ES 312	Environmental Science	3	0	3	3	0	3	None
ES 313	Environmental Chemistry	3	3	6	3	1	4	Analytical Chemistry, General Ecology
ES 314	Natural Resources Conservation	3	0	3	3	0	3	General Ecology
EST315	Environmental Sociology	3	0	3	3	0	3	General Ecology
ES 316	Introduction to Geographic Information System	3	3	6	3	1	4	General Ecology
ES 317	Methods in Environmental Research	3	0	3	3	0	3	Statistics, General Ecology
	TOTAL			30			24	
3rd Year	2nd Semester							
NRM 321	Watershed Science	3	0	3	3	0	3	General Ecology, , Environmental Sociology
NRM 322	Soil Conservation and Management	3	0	3	3	0	3	General Ecology, Introduction to Soil Science, Environmental Sociology
NRM 323	Agroforestry Practices	3	0	3	3	0	3	General Ecology, Environmental Sociology
NRM 324	Terrestrial Biodiversity Management	3	3	6	3	1	4	General Ecology, Environmental Sociology
NRM 325	Aquatic Resources Management	3	3	6	3	1	4	General Ecology, Environmental Sociology
	TOTAL			21			17	

3rd Year	Summer							
ES 331	On-the-Job Training	200					3	All third year EST courses
4th Year	1st Semester							
ES 411	Business and Environment	3	0	3	3	0	3	Natural Resources Conservation, Entrepreneurial Mind
ES 411	Natural Resource Economics and Valuation	3	0	3	3	0	3	Natural Resources Conservation
ES 413	Environmental Laws, Policies and Ethics	3	0	3	3	0	3	Natural Resources Conservation, Environmental Sociology, Environmental Chemistry
ES 414	Undergraduate Thesis 1	3	0	3	3	0	3	All third year EST courses
	TOTAL			12			12	
4th Year	2nd Semester							
ES 421	Environmental Impact Assessment	3	0	3	3	0	3	All core EST courses
ES 422	Environmental Monitoring and Evaluation	3	6	9	3	2	5	All core EST courses
ES 423	Undergraduate Thesis 2	3	0	3	3	0	3	All third year EST courses
	TOTAL:			15			11	
	GRAND TOTAL:						160	

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		Lec	Lab		Lec	Lab		
1st Year	1st Semester							
BIO 111	General Botany	3	3	6	3	1	4	None
ES 111	Fundamentals of Geology	3	0	3	3	0	3	None

CHEM 111	Organic Chemistry	3	6	9	3	2	5	None
MATH 101	Mathematics in the Modern World	3	0	3	3	0	3	None
SS 101	Understanding the Self	3	0	3	3	0	3	None
SS 104	Ethics	3	0	3	3	0	3	None
ENG 101	Purposive Communication	3	0	3	3	0	3	None
PE 101	PE I	2	0	2	(2)	0	(2)	None
NSTP 101	NSTP 1	3	0	3	(2)	0	(3)	None
	TOTAL			35			24 (5)	
1st Year	2nd Semester							
BIO 112	General Zoology	3	3	6	3	1	4	None
CHEM 121	Biochemistry	3	6	9	3	2	5	Organic Chemistry
MATH 201	Differential Calculus	4	0	4	4	0	4	Mathematics in the Modern World
SS 102	Readings in Philippine History	3	0	3	3	0	3	None
FIL 101	Wika, Kultura at Lipunan	3	0	3	3	0	3	None
SS 105	Life and Works of Rizal	3	0	3	3	0	3	None
PE 102	PE II	2	0	2	(2)	0	(2)	PE 1
NSTP 201	NSTP II	3	0	3	(3)	0	(3)	NSTP 1
	TOTAL			33			22 (5)	
2nd Year	1st Semester							
BIO 211	Microbiology	3	3	6	3	1	4	General Zoology
CHEM 121	Analytical Chemistry	3	6	9	3	2	5	Organic Chemistry, Biochemistry
PHYS 111.1	Mechanics	3	3	6	3	1	4	None
MATH 202	Integral Calculus	4	0	4	4	0	4	Differential Calculus

SS 103	The Contemporary World	3	0	3	3	0	3	None
FIL 103	Retorika	3	0	3	3	0	3	None
PE 103	PE III	2	0	2	2	0	(2)	PE 11
	TOTAL			33			23 (2)	

2nd Year	2nd Semester							
BIO 221	General Ecology	3	3	6	3	1	4	General Botany, General Zoology
ES 221	Fundamentals of Meteorology	3	0	3	3	0	3	None
ES 222	Science, Technology and Society	3	0	3	3	0	3	None
PHYS 121.1	Thermodynamics and Heat	3	3	6	3	1	4	Mechanics
MATH 223	Statistics	4	0	4	4	0	4	Mathematics in the Modern World
ENG 102	Art Appreciation	3	0	3	3	0	3	None
SS 201	Entrepreneurial Mind	3	0	3	3	0	3	None
ENG 203	Indigenous Creative Crafts	3	0	3	3	0	3	None
PE 104	PE IV	2	0	2	(2)	0	(2)	PE III
	TOTAL			33			27 (2)	
3rd Year	1st Semester							
ES 311	Introduction to Soil Science	3	3	6	3	1	4	Fundamentals of Geology
ES 312	Environmental Science	3	0	3	3	0	3	None
ES 313	Environmental Chemistry	3	3	6	3	1	4	Analytical Chemistry, General Ecology
ES 314	Natural Resources Conservation	3	0	3	3	0	3	General Ecology

EST315	Environmental Sociology	3	0	3	3	0	3	General Ecology
ES 316	Introduction to Geographic Information System	3	3	6	3	1	4	General Ecology
ES 317	Methods in Environmental Research	3	0	3	3	0	3	Statistics, General Ecology
	TOTAL			30			24	
3rd Year	2nd Semester							
EMT 321	Air Pollution Prevention and Control Technology and Management	3	3	6	3	1	4	General Ecology, Analytical Chemistry
EMT 322	Water Pollution Prevention and Control Technology and Management	3	3	6	3	1	4	General Ecology, Analytical Chemistry
EMT 323	Solid and Hazardous Waste Technology and Management	3	0	3	3	0	3	General Ecology, Analytical Chemistry

EMT 324	Green Energy Technology	3	0	3	3	0	3	General Ecology, Analytical Chemistry
EMT 325	Environmental Toxicology	3	0	3	3	0	3	General Ecology, Biochemistry
	TOTAL			21			17	
3rd Year	Summer							
ES 331	On-the-Job Training	200					3	All third year EST courses
4th Year	1st Semester							
ES 411	Business and Environment	3	0	3	3	0	3	Natural Resources Conservation, Entrepreneurial Mind
ES 411	Natural Resource Economics and Valuation	3	0	3	3	0	3	Natural Resources Conservation



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ES 413	Environmental Laws, Policies and Ethics	3	0	3	3	0	3	Natural Resources Conservation, Environmental Sociology, Environmental Chemistry
ES 414	Undergraduate Thesis 1	3	0	3	3	0	3	All third year EST courses
	TOTAL			12			12	
4 th Year	2 nd Semester							
ES 421	Environmental Impact Assessment	3	0	3	3	0	3	All core EST courses
ES 422	Environmental Monitoring and Evaluation	3	6	9	3	2	5	All core EST courses
ES 423	Undergraduate Thesis 2	3	0	3	3	0	3	All third year EST courses
	TOTAL:			15			11	
	GRAND TOTAL:						160	