

204 Department of Land Resources

**BACHELOR OF SCIENCE
NATURAL RESOURCE MANAGEMENT**

GSC 100 The First Year Experience 0 hour

All degree seeking students are required to take GSC 100 during their first semester.

General Education Requirement 39 hours

Natural Resource Management Core 29 hours

BIOL 400	Ecology and Field Biology	4
ENVR 352	Air/Water/Soil Quality	4
ENVR 393	Environmental Compliance	3
MGMT 201	Principles of Management	3
MGMT Elective (300-400 level)		3
NRMT 125	Computer Assisted Mapping	3
NRMT 201	Forest Ecology	3
NRMT 234	GIS Applications I	3
NRMT 493	Natural Resource Management	3

Required Hours in concentration by program area vary from 32-44.

General Block Electives (select from the following 300-400 level courses)

Hours required vary by program area from 5-15 hours.

BIOL 305	General Botany	4
BIOL 321	Animal Physiology	4
BIOL 335	Cell Physiology	4
BIOL 351	Flora or West Virginia (OR)	
NRMT 351	Flora of West Virginia	3
BIOL 361	Microbiology	4
BIOL 362	Plant Physiology	4
BIOL 399	Special Topics and Problems	1-3
BIOL 402	Ornithology	4
BIOL 456	Genetics	4
BUSN 330	Quantitative Business Analysis II	3
BUSN 470	Business Law II	3
ENVR 351	Soils and Land Reclamation	3
FINC 321	Business Finance	3
FINC 421	Risk Management and Insurance	3
HIST 303	West Virginia and the Appalachian Region	3
LAND 335	Hydrology, Drainage and Subdivision Design	3
MGMT 383	Labor Management Relations	3
MGMT 384	Human Resource Management	3
MGMT 402	Entrepreneurship	3
MGMT 484	Organizational Behavior	3
MGMT 487	Operations Management	3
NRMT 311	Natural Resource Permitting	3

NRMT 312	Sustainable Trails Design & Construction	3
NRMT 334	GIS Applications II	3
NRMT 389	Community Service	1-3
NRMT 399	Special Topics & Problems	1-3
NRMT 410	Energy Resource Law	3
NRMT 499	Individual Research Problems	1-3
PHYS 310	General Astronomy	4
SAFE 327	Legal Aspects and General Safety	2
STAT 361	Introduction to Statistical Analysis	3

Restricted Block Electives (select from the following courses. The required hours vary by program area from 0-11 hours)

If any of the following restricted electives are counted toward satisfying general education, core or concentration hours they cannot be counted as required restricted electives.

ACCT 231	Principles of Accounting I	3
ACCT 232	Principles of Accounting II	3
BIOL 120	Principles of Biology II	4
BIOL 210	Zoology	4
BIOL 293	Techniques of Science	2
BUSN 100	Introduction to Business	3
BUSN 193	Applied Business Communication	3
BUSN 230	Quantitative Business Analysis I	3
BUSN 270	Business Law I	3
BUSN 296	Dimensions in Professional Development	3
CHEM 293	Techniques of Chemistry	1
CRJU 111	Introduction to Criminal Justice System	3
CSCI 260	Management Information Systems	3
ECON 201	Principles of Microeconomics	3
ECON 202	Principles of Macroeconomics	3
FRST 108	Dendrology I	1
FRST 109	Dendrology II	1
FRST 110	Dendrology III	1
FRST 202	Forest Recreation and Wildlife Management	3
FRST 203	Forest Entomology and Pathology	3
GEOG 203	World Regional Geography	3
GEOG 204	Physical Geography	3
LAMN 193	Principles of Energy and Land Management	3
LAMN 293	Landman Titles and Abstracting	3
LAND 121	Introduction to Land Surveying	3
LAND 123	Land Survey Descriptions-Interpretations and Writing	2
LAND 124	Land Survey Boundary Law	3
LAND 244	Remote Sensing and Aerial Photo Interpretation	1
MATH 202	Calculus I	4
MATH 256	Probability and Statistics I	3
MRKT 201	Principles of Marketing	3
PHYS 201	General Physics I	4
PHYS 202	General Physics II	4
PHYS 209	General Geology	4
SCNC 101	Earth Science	4

206 Department of Land Resources

**NATURAL RESOURCE MANAGEMENT
CRIMINAL JUSTICE CONCENTRATION**

GSC 100 The First Year Experience 0 hour

All degree seeking students are required to take GSC 100 during their first semester.

General Education Requirement 39 hours

Students must complete BIOL 121, MATH 115, POSC 203 and SOCL 205 as part of the General Education requirement.

Natural Resource Management Core 29 hours

Criminal Justice Concentration 42 hours

CRJU 111	Introduction to Criminal Justice System	3
CRJU 215	Crime Scene Management	3
CRJU 222	Police Practices and Procedures	3
CRJU 223	Corrections	3
CRJU 232	Criminal Evidence and Procedures	3
CRJU 310	Criminal Justice Management	3
CRJU 397	Work Experience	6
POSC 204	State and Local Government	3
POSC 309	Civil Liberties	3
POSC 390	Introduction to Public Administration	3
PSYC 201	General Psychology	3
SOCL 105	Interviewing and Counseling	3
SOCL 209	Social Problems	3

General Block Electives (300-400 level) 10 hours

Total minimum hours required for degree 120 hours

GATEWAY ASSESSMENT – CRJU 232

CAPSTONE ASSESSMENT – NRMT 493

**NRMT: CRIMINAL JUSTICE
SUGGESTED PLAN OF STUDY**

FIRST YEAR

CRJU 111	3	BIOL 121	4
CSCI 101	3	CRJU 215	3
ENGL 101	3	CRJU 223	3
GSC 100	0	CRJU 232	3
MATH 115	3	POSC 203	3
MGMT 201.....	3	Total Hours – Spring Semester	16
Total Hours – Fall Semester	15		

SECOND YEAR

CRJU 222	3	CRJU 310	3
ENGL 102	3	PED 201.....	1
ENVR 101 (OR) SCNC 101.....	4	POSC 204	3
SOCL 105.....	3	PSYC 201	3
SOCL 205.....	3	BLOCK ELECTIVES (300-400 level).....	4
Total Hours – Fall Semester	16	Total Hours – Spring Semester	14

SUMMER

CRJU 397	6
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THIRD YEAR

ART 200, CART 200, FNAR 100 (OR) MUSC 200.....	3	ENGL 203, 204, 205 (OR) 206	3
NRMT 125	3	HIST 201, 202, 207 (OR) 208	3
NRMT 201	3	MGMT ELECTIVE (300-400 level).....	3
SOCL 209.....	3	POSC 390	3
Total Hours – Fall Semester	12	BLOCK ELECTIVES (300-400 level).....	3
		Total Hours – Spring Semester	15

FOURTH YEAR

BIOL 400.....	4	ENVR 352	4
CART 101	3	ENVR 393	3
POSC 309.....	3	NRMT 234.....	3
BLOCK ELECTIVES (300-400 level)	3	NRMT 493.....	3
Total Hours – Fall Semester	13	Total Hours – Spring Semester	13

**NATURAL RESOURCE MANAGEMENT
ENERGY AND LAND MANAGEMENT CONCENTRATION**

GSC 100 The First Year Experience **0 hour**

All degree seeking students are required to take GSC 100 during their first semester.

General Education Requirement **39 hours**

Students must complete BIOL 121, GEOG 203, MATH 115, PHYS 209, and POSC 203 as part of the General Education requirement. BIOL 121 requires a minimum grade of “C”.

Natural Resource Management Core **29 hours**

Energy and Land Management Concentration **36 hours**

BUSN 193	Applied Business Communications	3	
BUSN 270	Business Law I	3	
BUSN 296	Dimensions in Professional Development	3	
BUSN 470	Business Law II	3	
LAMN 193	Principles of Energy and Land Management	3	
LAMN 293	Landman Titles & Abstracting	3	
LAMN 397	Work Experience	1	
LAND 121	Introduction to Land Surveying	3	
LAND 123	Land Survey Descriptions-Interpretation and Writing	2	
MGMT 484	Organizational Behavior	3	
NRMT 311	Natural Resources Permitting	3	
NRMT 334	GIS Applications II	3	
NRMT 410	Energy Resource Law	3	
PHYS 209	General Geology	3	

Block Electives (300-400 level) **12 hours**

These courses are recommended:

ENVR 351	Soils and Land Reclamation		
LAND 335	Hydrology, Drainage, and Subdivision Design		
MGMT 384	Human Resource Management		
MGMT 487	Operations Management		

Block Electives (restricted) **4 hours**

These courses are recommended:

FRST 109	Dendrology II		
LAND 244	Remote Sensing and Aerial Photo Interpretation		

Total minimum hours required for degree **120 hours**

GATEWAY ASSESSMENT - LAMN 293 - CAPSTONE ASSESSMENT - NRMT 493

**NRMT: ENERGY AND LAND MANAGEMENT
SUGGESTED PLAN OF STUDY**

FIRST YEAR

CSCI 101	3	ART 200, CART 200, FNAR 100	
ENGL 101	3	(OR) MUSC 200	3
GSC 100	0	BIOL 121	4
LAMN 193	3	CART 101.....	3
MATH 115	3	ENGL 102.....	3
NRMT 125	3	LAMN 293	3
Total Hours – Fall Semester	15	Total Hours – Spring Semester	16

SUMMER

LAMN 397	1
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SECOND YEAR

BUSN 193	3	BUSN 296.....	3
BUSN 270	3	ENVR 393	3
GEOG 203	3	LAND 123	2
LAND 121	3	NRMT 234.....	3
MGMT 201.....	3	PHYS 209.....	4
Total Hours – Fall Semester	15	Total Hours – Spring Semester	15

THIRD YEAR

BIOL 400.....	4	BUSN 470.....	3
MGMT ELECTIVE (300-400 level).....	3	ENGL 203, 204, 205 (OR) 206	3
NRMT 201	3	ENVR 352	4
PED 201	1	NRMT 311.....	3
BLOCK ELECTIVE (300-400 level).....	3	Block Elective (300-400 level).....	3
Total Hours – Fall Semester	14	Total Hours – Spring Semester	16

FOURTH YEAR

MGMT 484.....	3	HIST 201, 202, 207 (OR) 208	3
NRMT 334	3	NRMT 493.....	3
NRMT 410	3	BLOCK ELECTIVE	4
POSC 203	3	BLOCK ELECTIVES (300-400 level).....	3
BLOCK ELECTIVE (300-400 level).....	3	Total Hours – Spring Semester	13
Total Hours – Fall Semester	15		

210 Department of Land Resources

**NATURAL RESOURCE MANAGEMENT
ENVIRONMENTAL SCIENCE CONCENTRATION**

GSC 100 The First Year Experience 0 hour

All degree seeking students are required to take GSC 100 during their first semester.

General Education Requirement 39 hours

Students must complete BIOL 121, ENVR 101, GEOG 203, MATH 115 and POSC 203 as part of the General Education requirement.

Natural Resource Management Core 29 hours

Environmental Science Concentration 32 hours

BIOL 361	Microbiology	4
CHEM 101	General Chemistry I	4
CHEM 102	General Chemistry II	4
ENVR 193	Solid Waste Management	3
ENVR 255	Health and Safety	3
ENVR 351	Soils and Land Reclamation	3
ENVR 397	Work Experience	1
NRMT 334	GIS Applications II	3
PHYS 209	General Geology	4
STAT 361	Introduction to Statistical Analysis	3

General Block Electives (300-400 level) 15 hours

Restricted Block Electives 5 hours

Total minimum hours required for degree 120 hours

GATEWAY ASSESSMENT - ENVR 193

CAPSTONE ASSESSMENT - NRMT 493

**NRMT: ENVIRONMENTAL SCIENCE
SUGGESTED PLAN OF STUDY**

FIRST YEAR

ENGL 101	3	BIOL 121	4
ENVR 101	4	CART 101.....	3
GEOG 203.....	3	CSCI 101	3
GSC 100.....	0	ENGL 102.....	3
MATH 115	3	NRMT 125.....	3
PED 201	1	Total Hours – Spring Semester	16
Total Hours – Fall Semester	14		

SECOND YEAR

CHEM 101	4	CHEM 102.....	4
ENVR 193	3	ENVR 352	4
MGMT 201.....	3	ENVR 393	3
NRMT 201	3	NRMT 234.....	3
PHYS 209.....	4	Total Hours – Spring Semester	14
Total Hours – Fall Semester	17		

SUMMER

ENVR 397	1
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THIRD YEAR

BIOL 400.....	4	ART 200, CART 200, FNAR 100	
ENVR 255	3	(OR) MUSC 200	3
ENVR 351	3	HIST 201, 202, 207 (OR) 208	3
NRMT 334	3	STAT 361	3
Total Hours – Fall Semester	13	MGMT ELECTIVE (300-400 level).....	3
		BLOCK ELECTIVES	3
		Total Hours – Spring Semester	15

FOURTH YEAR

BIOL 361.....	4	NRMT 493.....	3
ENGL 203, 204, 205 (OR) 206	3	BLOCK ELECTIVES	2
POSC 203	3	BLOCK ELECTIVES (300-400 level).....	11
BLOCK ELECTIVES (300-400 level)	4	Total Hours – Spring Semester	16
Total Hours – Fall Semester	14		

212 Department of Land Resources

**NATURAL RESOURCE MANAGEMENT
FOREST TECHNOLOGY CONCENTRATION**

GSC 100 The First Year Experience 0 hour

All degree seeking students are required to take GSC 100 during their first semester.

General Education Requirement 39 hours

Students must complete BIOL 121 and MATH 115 as part of the General Education requirement.

Natural Resource Management Core 29 hours

Forest Technology Concentration 37 hours

FRST 103	Forest Measurements I	3
FRST 108	Dendrology I	1
FRST 109	Dendrology II	1
FRST 110	Dendrology III	1
FRST 193	Forest Measurements II	3
FRST 197	Work Experience	1
FRST 202	Forest Recreation and Wildlife Management	3
FRST 203	Forest Entomology and Pathology	3
FRST 205	Wood Products, Processing and Marketing	2
FRST 206	Timber Harvest Planning and Systems	3
FRST 209	Silviculture and Vegetation Management	4
FRST 212	Timber Harvesting Techniques	2
FRST 214	Fire Protection	2
FRST 216	Wood Identification	1
FRST 293	Forest Management	3
LAND 121	Introduction to Land Surveying	3
LAND 244	Remote Sensing and Aerial Photo Interpretation	1

General Block Electives (300-400 level) 15 hours

Total minimum hours required for degree 120 hours

GATEWAY ASSESSMENT - FRST 293

CAPSTONE ASSESSMENT - NRMT 493

**NRMT: FOREST TECHNOLOGY
SUGGESTED PLAN OF STUDY**

FIRST YEAR

ENGL 101	3	BIOL 121	4
FRST 103	3	ENGL 102.....	3
FRST 108	1	FRST 110.....	1
FRST 109	1	FRST 193.....	3
FRST 214	2	LAND 121	3
GSC 100	0	NRMT 234.....	3
MATH 115	3	Total Hours – Spring Semester	17
Total Hours – Fall Semester	13		

SUMMER

FRST 197	1
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SECOND YEAR

FRST 203	3	FRST 202.....	3
FRST 209	4	FRST 205.....	2
FRST 212	2	FRST 206.....	3
LAND 244.....	1	FRST 216.....	1
MGMT 201	3	FRST 293.....	3
NRMT 201	3	PED 201.....	1
Total Hours – Fall Semester	16	Total Hours – Spring Semester	13

THIRD YEAR

CSCI 101	3	ART 200, CART 200, FNAR 100, (OR) MUSC 200	3
ECON 201, GEOG 203, PSYC 201, SOCL 205 (OR) SOCS 225	3	CART 101.....	3
MGMT ELECTIVE (300-400 level)	3	ENGL 203, 204, 205 (OR) 206	3
NRMT 125	3	HIST 201, 202, 207, 208 (OR) POSC 203 ..	3
BLOCK ELECTIVES (300-400 level)	4	BLOCK ELECTIVES (300-400 level).....	4
Total Hours – Fall Semester	16	Total Hours – Spring Semester	16

FOURTH YEAR

ENVR 101, SCNC 101, 102, 103, (OR) SCNC 104.....	4	ENVR 352	4
BIOL 400.....	4	ENVR 393	3
HIST 201, 202, 207, 208 (OR) POSC 203 ..	3	NRMT 493.....	3
BLOCK ELECTIVES (300-400 level)	3	BLOCK ELECTIVES (300-400 level).....	4
Total Hours – Fall Semester	14	Total Hours – Spring Semester	14

**NATURAL RESOURCE MANAGEMENT
LAND SURVEYING TECHNOLOGY CONCENTRATION**

GSC 100 The First Year Experience **0 hour**
All degree seeking students are required to take GSC 100 during their first semester.

General Education Requirement **39 hours**
Students must complete BIOL 121, MATH 115 and PHYS 201 as part of the General Education requirement.

Natural Resource Management Core **29 hours**

Land Surveying Concentration **44 hours**

FRST 109	Dendrology II	1
FRST 216	Wood Identification	1
LAND 121	Introduction to Land Surveying	3
LAND 123	Land Survey Descriptions-Interpretations and Writing	2
LAND 124	Land Survey Boundary Law	3
LAND 193	Survey Measurements and Computations I	3
LAND 197	Work Experience	1
LAND 230	Survey Measurements and Computations II	3
LAND 231	Retracement Surveys	3
LAND 232	Cartographic Surveying	3
LAND 240	Route and Construction Surveys	4
LAND 241	Energy Resource Surveying	2
LAND 244	Remote Sensing and Aerial Photo Interpretation	1
LAND 293	Survey Decisions/Professional Applications	6
LAND 335	Hydrology, Drainage and Subdivision Design	4
MATH 120	Precalculus	4

Block Electives (300-400 level) **8 hours**

Total minimum hours required for degree **120 hours**

GATEWAY ASSESSMENT - LAND 293

CAPSTONE ASSESSMENT - NRMT 493

**NRMT: LAND SURVEYING TECHNOLOGY
SUGGESTED PLAN OF STUDY**

FIRST YEAR

ENGL 101	3	FRST 216.....	1
FRST 109	1	GEOG 203	3
GSC 100	0	LAND 123	2
LAND 121	3	LAND 124	3
MATH 115	3	LAND 193	3
NRMT 125	3	MATH 120	4
PED 201	1	Total Hours – Spring Semester	16
Total Hours – Fall Semester	14		

SUMMER

LAND 197.....	1
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SECOND YEAR

ENGL 102	3	LAND 240	4
LAND 230.....	3	LAND 241	2
LAND 231.....	3	LAND 293	6
LAND 232.....	3	Total Hours – Spring Semester	12
LAND 244.....	1		
PHYS 201.....	4		
Total Hours – Fall Semester	17		

THIRD YEAR

ART 200, CART 200, FNAR 100 (OR) MUSC 200.....	3	BIOL 121	4
CSCI 101	3	CART 101.....	3
ENGL 203, 204, 205 (OR) 206.....	3	HIST 201, 202, 207 (OR) 208	3
MGMT 201.....	3	MGMT ELECTIVE (300-400 level).....	3
NRMT 201	3	NRMT 234.....	3
Total Hours – Fall Semester	15	Total Hours – Spring Semester	16

FOURTH YEAR

BIOL 400.....	4	ENVR 352	4
LAND 335.....	4	ENVR 393	3
POSC 203	3	NRMT 493.....	3
BLOCK ELECTIVES (300-400 level)	4	BLOCK ELECTIVES (300-400 level).....	4
Total Hours – Fall Semester	15	Total Hours – Spring Semester	14