

DEPARTMENT OF LAND RESOURCES

Dr. Rico M. Gazal, Department Chair

Professor: R. Gazal

Associate Professors: A. Black, B. Perkins

Assistant Professor: N. Nasseri

Lecturers: D. Hupp

The Department of Land Resources prides itself on a “hands on” approach to learning. Students are provided a learning experience that duplicates as closely as possible real world applications. Two Associate of Science degree programs are offered, Forest Technology and Land Surveying Technology. The baccalaureate degree in Natural Resource Management takes advantage of the two associate degree programs in the Department of Land Resources and the strength of course offerings in other departments. The degree is developed around the general education baccalaureate degree component, a Natural Resource Management core, major and a block elective component. The six degree majors are Criminal Justice, Energy and Land Management, Environmental Science, Forest Technology, Land Surveying Technology and Wildlife Management.

The Department of Land Resources is housed in the Waco Center about one mile from the main campus. The department has about 300 acres of land adjacent to the building for outdoor projects. A sawmill is located on the property for student use along with storage buildings for timber harvesting equipment. A modern computer lab is available for use by students. This lab contains computers, plotters, and software that replicate those used in government, business, and industry. A wide array of hand tools, equipment, and forestry and land surveying instruments appropriate for teaching field labs are used to enhance instruction and learning. Global Positioning Systems (GPS) and Geographic Information Systems (GIS) technologies are used in several classes.

Student organizations include the Environmental Science Club, Forestry Club, and the Land Surveying Club. These groups promote camaraderie and provide opportunities for field trips, learning opportunities and community service.

Several scholarships are available specifically to students who are enrolled in the Land Resource programs.

For additional information about the Department of Land Resources, its programs, faculty and organizations, call (304) 462-6370.

Degree Programs: The following programs are available in the Department of Land Resources.

Bachelor of Science

Natural Resource Management (NRMT) with majors in Criminal Justice, Energy and Land Management, Environmental Science, Forest Technology, Land Surveying Technology, and Wildlife Management

Associate of Science (2-year) Majors:

Forest Technology
Land Surveying

The NRMT program has an active advisory committee comprised of representatives from government, business and industries that hire Glenville State University graduates. This advisory committee ensure courses are continually updated and help greatly with job placement for graduates.

The NRMT - Forest Technology and NRMT - Land Surveying Technology programs are listed on the Southern Regional Educational Board's (SREB) Academic Common Market and are available to out-of-state students subject to provisions of the Academic Common Market. This allows qualifying out-of-state students to attend Glenville State University at the in-state tuition rate.

The baccalaureate Natural Resource Management degree program provides the student with the opportunity to develop a major in one of the following areas:

Criminal Justice – This major is designed for those students who want to become Conservation or Natural Resources Police Officers or other enforcement personnel in the natural resource area.

Energy and Land Management Technology – The Energy and Land Management major is designed for students interested in working in energy and land use development, management and planning. Graduates of this program are able to find a large number of career opportunities with federal government agencies, such as U. S. Department of Transportation and the Bureau of Land Management. At the state level, graduates qualify for opportunities with the Department of Environmental Protection and Division of Highways and others. Additionally, graduates qualify for private industry positions including, but not limited to, oil and gas landman, realty specialist, right-of-way agent and title abstractor.

Environmental Science – This major is designed for those students interested in environmental careers with government agencies and industry. The Environmental Science major prepares students for career opportunities in the private, public, academic and nonprofit sectors. Employers may include Federal, state, and local governments; the natural resource sector; utilities; manufacturers; and industry, as well as small business.

Forest Technology – This major provides a pathway for associate degree students in forest technology to continue their education and receive the baccalaureate degree. Students broaden their perspectives in the natural resource area for careers with government agencies as well as the private sector. Graduates have the necessary credentials to be registered as a professional forester and practice forestry in West Virginia as a technician or professional.

Land Surveying Technology – This major provides a pathway for associate degree students in land surveying to continue their education for a baccalaureate degree. Students will be technically proficient in land surveying and will be able to develop a strong major in geographic information systems and resource allocation for careers with government agencies and the private sector. This degree will also provide the baccalaureate degree necessary for licensure as a professional land surveyor in West Virginia and Ohio.

Wildlife Management – This major is designed for students who want to pursue a career in wildlife management or an advanced degree in wildlife. Through the Wildlife Management major, students will acquire knowledge of the life history, habitat, and ecological requirements of important game and non-game wildlife, learn to identify, classify, and name important flora and fauna endemic to the Appalachian region, demonstrate and apply wildlife management techniques and methods, develop office and field skills in the use of geospatial technologies, computer software, and quantitative analysis, and develop wildlife management plans.

Associate Degree Programs

The associate degree programs have active advisory committees comprised of representatives from government, business and industries that hire graduates. These advisory bodies ensure that classes are continually updated and help greatly with job placement for graduates. Graduates receive the associate degree upon completion of their programs in forestry or land surveying.

Forest Technology – The University has offered an exemplary associate degree program in forest technology since 1968. This program is accredited by the Society of American Foresters. Graduates work in all aspects of forestry in the state and region. The main career pathways are procurement forestry, consulting forestry, state and federal government forestry agencies, and utility forestry.

Land Surveying Technology – Glenville State University has been providing well-educated students for the land surveying profession since 1974. These graduates work in all aspects of surveying including; retracement, construction, route, mineral, and others. This curriculum is approved by the West Virginia Board of Professional Surveyors and the degree provides one of the six years required for licensure.

Department of Land Resources 199

**BACHELOR OF SCIENCE
NATURAL RESOURCE MANAGEMENT
CRIMINAL JUSTICE MAJOR**

GSU 100 The First Year Experience 0 hour

All degree seeking students are required to take GSU 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 requirements.

Natural Resource Management Core 29 hours

BIOL 121	Principles of Biology II	
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

Criminal Justice Major 52 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	1
POSC 204	State and Local Government	3
POSC 309	Civil Liberties	3
PSYC 201	General Psychology	3
SOCL 105	Interviewing and Counseling	3
SOCL 209	Social Problems	3
WLMT 301	Wildlife Law & Policy	3
General Block Electives (300-400 level)		15

See General Block Electives list at the end of this catalog section.

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
GSU 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	GENERAL ELECTIVES (300-400 level)	3
Total Hours – Fall Semester	16	Total Hours – Spring Semester	13

SUMMER

CRJU 397	1
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THIRD YEAR

ART 200, CART 200, FNAR 100 (OR) MUSC 200	3	ENGL 203, 204, 205 (OR) 206	3
NRMT 201	3	HIST 201, 202, 207 (OR) 208	3
SOCL 209	3	MGMT ELECTIVE (300-400 level)	3
WLMT 301	3	NRMT 125	3
GENERAL ELECTIVES (300-400 level) ..	3	GENERAL ELECTIVES (300-400 level) ..	3
Total Hours – Fall Semester	15	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
GENERAL ELECTIVES (300-400 level) ..	6	NRMT 493	3
Total Hours – Fall Semester	16	Total Hours – Spring Semester	13

Department of Land Resources 201

BACHELOR OF SCIENCE NATURAL RESOURCE MANGAMENT ENERGY AND LAND MANAGEMENT MAJOR

GSU 100 The First Year Experience 0 hour

All degree seeking students are required to take GSU 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 requirements.

Natural Resource Management Core 29 hours

BIOL 121	Principles of Biology II	
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

Energy and Land Management Major 52 hours

BUSN 193	Applied Business Communications	3
BUSN 225	Business Ethics	3
BUSN 270	Business Law I	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	
General Electives (300-400 level): These courses are recommended:		12
ENVR 351	Soil Science	
LAND 335	Hydrology, Drainage, and Subdivision Design	
MGMT 384	Human Resource Management	
MGMT 487	Operations Management	
Restricted Block Electives: These courses are recommended:		4
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

Department of Land Resources 202

**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
GSU 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 225	3	BUSN 193.....	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
GENERAL ELECTIVE (300-400 level).....	3	GENERAL 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	GENERAL ELECTIVE	4
POSC 203.....	3	GENERAL ELECTIVES (300-400 level)....	3
GENERAL ELECTIVE (300-400 level).....	3	Total Hours – Spring Semester	13
Total Hours – Fall Semester	15		

Department of Land Resources 203

BACHELOR OF SCIENCE NATURAL RESOURCE MANAGEMENT ENVIRONMENTAL SCIENCE MAJOR

GSU 100 The First Year Experience 0 hour

All degree seeking students are required to take GSU 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 requirements.

Natural Resource Management Core 29 hours

BIOL 121	Principles of Biology II	
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

Environmental Science Major 52 hours

BIOL 250	Microbiology of Diseases (OR)	
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	Soil Science	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
	See General Block Electives list at the end of this catalog section.	
Restricted Block Electives		5
	See Restricted Block Electives at the end of this catalog section.	

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
GSU 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	PHYS 209.....	4
NRMT 234	3	Total Hours – Spring Semester	15
Total Hours – Fall Semester	16		

SUMMER

ENVR 397	1
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THIRD YEAR

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

FOURTH YEAR

BIOL 250 (OR) 361	4	NRMT 493.....	3
ENGL 203, 204, 205 (OR) 206	3	GENERAL ELECTIVES	2
POSC 203	3	GENERAL ELECTIVES (300-400 level).....	11
GENERAL ELECTIVES (300-400 level) ..	4	Total Hours – Spring Semester	16
Total Hours – Fall Semester	14		

Department of Land Resources 205

BACHELOR OF SCIENCE NATURAL RESOURCE MANAGEMENT FOREST TECHNOLOGY MAJOR

GSU 100 The First Year Experience 0 hour

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

General Education Requirement 39 hours

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

Natural Resource Management Core 29 hours

BIOL 121	Principles of Biology II	
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

Forest Technology Major 52 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

See General Block Electives list at the end of this catalog section.

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
GSU 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
GENERAL ELECTIVES (300-400 level) ..	4	GENERAL 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
GENERAL ELECTIVES (300-400 level).....	3	GENERAL ELECTIVES (300-400 level).....	4
Total Hours – Fall Semester	14	Total Hours – Spring Semester	14

**BACHELOR OF SCIENCE
NATURAL RESOURCE MANAGEMENT
LAND SURVEYING TECHNOLOGY MAJOR**

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

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

General Education Requirement **39 hours**

Students must complete BIOL 121, MATH 115 and ENVR 101 (OR) PHYS 209 (OR) SCNC 101 as part of the General Education requirements.

Natural Resource Management Core **29 hours**

BIOL 121	Principles of Biology II		
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	

Land Surveying Major **51 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 Math and Geomatics I	3	
LAND 197	Work Experience	1	
LAND 230	Survey Math and Geomatics 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 115	College Algebra		
MATH 125	College Trigonometry	3	
General Block Electives (300-400 level)		8	

See General Block Electives list at the end of this catalog section.

General Elective **1 hour**

PED 301 is recommended

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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
GSU 100.....	0	LAND 123	2
LAND 121	3	LAND 124	3
MATH 115	3	LAND 193	3
NRMT 125	3	MATH 125	34
PED 201	1	PED 301 (OR) General Elective.....	1
Total Hours – Fall Semester	14	Total Hours – Spring Semester	16

SUMMER

LAND 197	1
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SECOND YEAR

ENGL 102	3	LAND 240	4
ENVR 101, PHYS 209, (OR) SCNC 101 ...	4	LAND 241	2
LAND 230	3	LAND 293	6
LAND 231	3	Total Hours – Spring Semester	12
LAND 232	3		
LAND 244	1		
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
GENERAL ELECTIVES (300-400 level) ..	4	GENERAL ELECTIVES (300-400 level)...	4
Total Hours – Fall Semester	15	Total Hours – Spring Semester	14

Department of Land Resources 210

BACHELOR OF SCIENCE NATURAL RESOURCE MANAGEMENT WILDLIFE MANAGEMENT MAJOR

GSU 100 The First Year Experience 0 hour

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

General Education Requirement 39 hours

Students must complete BIOL 120, 121 and MATH 115 as part of the General Education requirements.

Natural Resource Management Core 29 hours

BIOL 121	Principles of Biology II	
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

Wildlife Management Major 52 hours

BIOL 120	Principles of Biology I	
BIOL 314	Zoology	4
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 202	Forest Recreation and Wildlife Management	3
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 293	Forest Management	3
WLMT 301	Wildlife Law & Policy	3
WLMT 302	Wildlife Habitat Management	3
WLMT 397	Work Experience	1
WLMT 404	Mammalogy	4
WLMT 493	Wildlife Techniques	3

General Block Electives (300-400 level) These courses are recommended: 8

BIOL 305	General Botany	
BIOL 351	Flora of West Virginia (cross listed as NRMT 351)	
BIOL 361	Microbiology	
BIOL 371	Evolution	
BIOL 460	Physiological Ecology	
BIOL 470	Conservation Biology	

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Department of Land Resources 211

NRMT 499 Individual Research Problems

Total minimum hours required for degree 120 hours

GATEWAY ASSESSMENT – FRST 202 - CAPSTONE ASSESSMENT – WLMT 493

**NRMT: WILDLIFE MANAGEMENT
SUGGESTED PLAN OF STUDY**

FIRST YEAR

ENGL 101	3	BIOL 121	4
FRST 103	3	ENGL 102.....	3
FRST 108	1	FRST 110.....	1
RST 109.....	1	FRST 193.....	3
FRST 214	2	FRST 202.....	3
GSU 100.....	0	NRMT 234.....	3
MATH 115	3	Total Hours – Spring Semester	17
Total Hours – Fall Semester	13		

SECOND YEAR

BIOL 120.....	4	ART 200, CART 200, FNAR 100 (OR)	
FRST 209	4	MUSC 200.....	3
FRST 212	2	CART 101.....	3
MGMT 201.....	3	FRST 206.....	3
NRMT 201	3	FRST 293.....	3
Total Hours – Fall Semester	16	HIST 201, 201, 207 (OR) 208	3
		Total Hours – Spring Semester	15

THIRD YEAR

BIOL 314.....	4	BIOL 300-400 elective	4
CSCI 101	3	ENGL 203, 204, 205 (OR) 206	3
ECON 201, GEOG 203, PSYC 201,		HIST 201, 202, 207, 208 (OR)	
SOCL 205 (OR) SOCS 225.....	3	POSC 203	3
MGMT 300-400 elective.....	3	WLMT 302.....	3
NRMT 125	3	Total Hours – Spring Semester	13
Total Hours – Fall Semester	16		

SUMMER

WLMT 397	1
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FOURTH YEAR

BIOL 300-400 elective	4	ENVR 352	4
BIOL 400.....	4	ENVR 393	3
PED 201	1	NRMT 493.....	3
WLMT 301.....	3	WLMT 493.....	3
WLMT 404.....	4	Total Hours – Spring Semester	13
Total Hours – Fall Semester	16		

Department of Land Resources 213

Students must select from this list of General Block Electives and Restricted Block Electives per their degree requirements.

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

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

BIOL 305	General Botany	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 371	Evolution	4
BIOL 399	Special Topics and Problems	1-3
BIOL 456	Genetics	4
BIOL 460	Physiological Ecology	4
BIOL 470	Conservation Biology	4
BUSN 470	Business Law II	3
ENVR 351	Soil Science	3
HIST 303	West Virginia History	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 397	Work Experience II	1-4
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
WLMT 301	Wildlife Law & Policy	3
WLMT 302	Wildlife Habitat Management	3
WLMT 404	Mammalogy	4
WLMT 493	Wildlife Techniques	3

Restricted Block Electives

If any of the following restricted electives are counted toward satisfying general education, core or major 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 293	Techniques of Science	2
BIOL 314	Zoology	4
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
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

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ASSOCIATE OF SCIENCE FOREST TECHNOLOGY

GSU 100 The First Year Experience 0 hour

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

General Education Requirements 24 hours

WRITTEN AND ORAL COMMUNICATION

ENGL 101 Critical Reading and Writing I 3

ENGL 102 Critical Reading and Writing II: Research Writing 3

PROBLEM SOLVING AND CRITICAL THINKING

BIOL 121 Principles of Biology II 4

FRST 108 Dendrology I 1

MATH 115 College Algebra 3

NRMT 201 Forest Ecology 3

CULTURE AND SOCIETY

MGMT 201 Principles of Management 3

PED 201 First Aid and Safety 1

TECHNOLOGY

NRMT 234 GIS Application I 3

Major 36 hours

FRST 103 Forest Measurements I 3

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 Aerial Photo Interpretation 1

Total minimum hours required for degree 60 hours

GATEWAY ASSESSMENT - FRST 193 - CAPSTONE ASSESSMENT - FRST 293

**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
GSU 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

**ASSOCIATE OF SCIENCE
LAND SURVEYING TECHNOLOGY**

GSU 100 The First Year Experience 0 hour

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

General Education 24 hours

WRITTEN AND ORAL COMMUNICATION

ENGL 101	Critical Reading and Writing I	3
ENGL 102	Critical Reading and Writing II: Research Writing	3

PROBLEM SOLVING AND CRITICAL THINKING

ENVR 101	Environmental Science (OR)	
PHYS 209	General Geology (OR)	
SCNC 101	Earth Science	4
MATH 115	College Algebra	3
MATH 125	College Trigonometry	3

CULTURE AND SOCIETY

PED 201	First Aid and Safety	1
PED 301	Lifelong Wellness	1

Any one of the following: 3

ECON 201	Principles of Microeconomics	
ECON 202	Principles of Macroeconomics	
GEOG 203	World Regional Geography	
HIST 201	History of World Cultures I	
HIST 202	History of World Cultures II	
HIST 207	U.S. History to 1877	
HIST 208	U.S. History Since 1877	
POSC 203	American National Government	
PSYC 201	General Psychology	
SOCL 205	Principles of Sociology	
SOCS 225	Introduction to Global Studies	

TECHNOLOGY

NRMT 125	Computer Assisted Mapping	3
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Major 36 hours

FRST 109	Dendrology II	1
FRST 216	Wood Identification	1
LAND 121	Introduction to Land Surveying	3
LAND 123	Land Survey Descriptions-Interpretation and Writing	2
LAND 124	Land Survey Boundary Law	3
LAND 193	Survey Math and Geomatics I	3
LAND 197	Work Experience	1
LAND 230	Surveying Math and Geomatics 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

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LAND 244	Remote Sensing Aerial Photo Interpretation	1
LAND 293	Survey Decisions/Professional Applications	6
MATH 115	College Algebra	
MATH 125	College Trigonometry	

Total minimum hours required for degree **60 hours**

GATEWAY ASSESSMENT - LAND 193 - CAPSTONE ASSESSMENT - LAND 293

**LAND SURVEYING
SUGGESTED PLAN OF STUDY**

FIRST YEAR

ENGL 101	3	FRST 216.....	1
FRST 109	1	GEOG 203*	3
GSU 100.....	0	LAND 123	2
LAND 121	3	LAND 124	3
MATH 115	3	LAND 193	3
NRMT 125	3	MATH 125	3
PED 201	1	PED 301.....	1
Total Hours - Fall Semester.....	14	Total Hours - Spring Semester	16

SUMMER

LAND 197.....	1
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SECOND YEAR

ENGL 102	3	LAND 240	4
ENVR 101, PHYS 209 (OR) SCNC 101	4	LAND 241	2
LAND 230.....	3	LAND 293	6
LAND 231	3	Total Hours - Spring Semester	12
LAND 232	3		
LAND 244.....	1		
Total Hours - Fall Semester.....	17		

*Suggested course due to being required in 4-year surveying degree.