

DEPARTMENT OF LAND RESOURCES

Mr. James R. Witte, Department Chairperson

Professor: R. Gazal

Associate Professors: B. Perkins

Assistant Professors: A. Black, J. Wilson, J. Witte

The Department of Land Resources prides itself on a “hands on” approach to learning. Students are provided a teaching/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 the Department of Science and Mathematics, and Department of Business. The degree is developed around the general education baccalaureate degree component, a Natural Resource Management core, seven major concentration areas and a block elective component. The seven degree concentrations are Applied Science, Business Management, Criminal Justice, Energy and Land Management, Environmental Science, Forest Technology and Land Surveying Technology.

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 Forestry Club, GEO (Glenville Environmental Organization), the Landman 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.

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

Bachelor of Science

Natural Resource Management (NRMT) with concentrations in
Applied Science, Business Management, Criminal Justice, Energy and Land
Management, Environmental Science, Forest Technology, (OR) Land Surveying
Technology

Associate of Science (2-year) Majors:

Forest Technology
Land Surveying

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 College at the in-state tuition rate.

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

Applied Science – This concentration centers on biological science with an emphasis on courses that build a solid applied science background. This degree in Natural Resource Management can help the students get a variety of jobs. Other students may wish to use this degree as a foundation for continuing their education in the science field.

Business Management – This concentration is designed for students primarily interested in the business management aspect of natural resources. This program prepares the student to deal with personnel management, budgetary items, and other financial concerns.

Criminal Justice – This concentration 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 concentration 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 concentration is designed for those students interested in environmental careers with government agencies and industry. The Environmental Science concentration 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 concentration 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 concentration 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 concentration 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.

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 College has offered an exemplary associate degree program in forest technology since 1969. 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 College 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.

**BACHELOR OF SCIENCE
NATURAL RESOURCE MANAGEMENT**

GSC 100 The First Year Experience 1 hour

All degree seeking students are required to take GSC 100 during their first semester. GSC 100 may be used to satisfy one hour of the General Electives requirement.

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 Applications	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 of 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 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)

Hours required vary by program area from 0-11 hours

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
MGMT 202	Entrepreneurship	3
MRKT 201	Principles of Marketing	3
NPLM 101	Introduction to Nonprofit Organizations	3
OREC 200	First Aid for the Professional Rescuer	1
OREC 201	Introduction to Outdoor Leadership	2

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OREC 210	Map, Compass and GPS Travel	1
OREC 220	Backpacking and Back Country Living	1
PHYS 201	General Physics I	4
PHYS 202	General Physics II	4
PHYS 209	General Geology	4
SCNC 101	Earth Science	4
RMGT 201	Introduction to Hospitality and Tourist	3

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

**NATURAL RESOURCE MANAGEMENT
APPLIED SCIENCE CONCENTRATION**

GSC 100 The First Year Experience 1 hour

All degree seeking students are required to take GSC 100 during their first semester. GSC 100 may be used to satisfy one hour of the General Electives requirement

General Education Requirement 39 hours

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

Natural Resource Management Core 29 hours

Applied Science Concentration 32 hours

BIOL 210	Zoology	4
BIOL 293	Techniques of Science	2
BIOL 305	General Botany	4
BIOL 362	Plant Physiology	4
BIOL 361	Microbiology	4
BIOL 493	Senior Seminar	1
CHEM 101	General Chemistry I	4
CHEM 102	General Chemistry II	4
FRST 109	Dendrology II	1
PHYS 209	General Geology	4

General Block Electives (300-400 level) 12 hours

Restricted Block Electives 8 hours

Total minimum hours required for degree 120-121 hours

GATEWAY ASSESSMENT - BIOL 293

CAPSTONE ASSESSMENT - NRMT 493

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

FIRST YEAR

ENGL 101	3	ART 200, CART 200, FNAR 100	
FRST 109	1	OR MUSC 200	3
GSC 100	1	BIOL 121	4
MATH 115	3	CART 101	3
MGMT 201	3	CSCI 101	3
NRMT 125	3	GEOG 203	3
Total Hours – Fall Semester	14	Total Hours – Spring Semester	16

SECOND YEAR

BIOL 210	4	BIOL 120, ENVR 101, PHYS 201, (OR)	
CHEM 101	4	SCNC 101	4
HIST 201, 202, 207 (OR) 208	3	CHEM 102	4
POSC 203	3	ENGL 102	3
Total Hours – Fall Semester	14	PHYS 209	4
		Total Hours – Spring Semester	15

THIRD YEAR

BIOL 293	2	BIOL 305	4
BIOL 361	4	ENVR 352	4
ENGL 203, 204, 205 (OR) 206	3	ENVR 393	3
NRMT 201	3	NRMT 234	3
PED 201	1	BLOCK ELECTIVES	4
Total Hours – Fall Semester	13	Total Hours – Spring Semester	18

FOURTH YEAR

BIOL 400	4	BIOL 362	4
BLOCK ELECTIVES	4	BIOL 493	1
BLOCK ELECTIVES (300-400 level)	8	MGMT ELECTIVE (300-400 level)	3
Total Hours – Fall Semester	16	NRMT 493	3
		BLOCK ELECTIVES (300-400 level)	4
		Total Hours – Spring Semester	15

**NATURAL RESOURCE MANAGEMENT
BUSINESS MANAGEMENT CONCENTRATION**

GSC 100 The First Year Experience 1 hour

All degree seeking students are required to take GSC 100 during their first semester. GSC 100 may be used to satisfy one hour of the General Electives requirement

General Education Requirement 39 hours

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

Natural Resource Management Core 29 hours

MGMT 484 Organizational Behavior (MGMT 300-400 level elective)

Business Management Concentration 36 hours

ACCT 231	Principles of Accounting I	3
BUSN 193	Applied Business Communications	3
BUSN 230	Quantitative Business Analysis I	3
BUSN 270	Business Law I	3
BUSN 330	Quantitative Business Analysis II	3
BUSN 470	Business Law II	3
ECON 201	Principles of Microeconomics	3
FINC 321	Business Finance	3
MGMT 383	Labor-Management Relations	3
MGMT 384	Human Resource Management	3
MGMT 487	Operations Management	3
STAT 361	Introduction to Statistical Analysis	3

General Block Electives (300-400 level) 5 hours

Restricted Block Electives 11 hours

Total minimum hours required for degree 120-121 hours

GATEWAY ASSESSMENT - BUSN 193

CAPSTONE ASSESSMENT - NRMT 493

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

FIRST YEAR

ART 200, CART 200, FNAR 100	BIOL 121.....	4
(OR) MUSC 200.....	CART 101.....	3
BUSN 230.....	HIST 201, 202, 207 (OR) 208.....	3
CSCI 101.....	NRMT 125.....	3
ENGL 101.....	STAT 361.....	3
GSC 100.....	Total Hours – Spring Semester	16
MATH 115.....		
Total Hours – Fall Semester		16

SECOND YEAR

ACCT 231.....	BUSN 193.....	3
BUSN 270.....	BUSN 330.....	3
ECON 201.....	ENVR 352.....	4
NRMT 201.....	FINC 321.....	3
PED 201.....	MGMT 201.....	3
POSC 203.....	Total Hours – Spring Semester	16
Total Hours – Fall Semester		16

THIRD YEAR

BIOL 120, CHEM 101, 102, ENVR 101,	BUSN 470.....	3
PHYS 201, 202, 209 (OR) SCNC 101..	ENGL 102.....	3
GEOG 203.....	MGMT 383.....	3
MGMT 484.....	NRMT 234.....	3
BLOCK ELECTIVES.....	BLOCK ELECTIVE (300-400 level).....	2
Total Hours – Fall Semester	Total Hours – Spring Semester	14
13		

FOURTH YEAR

BIOL 400.....	ENVR 393.....	3
ENGL 203, 204, 205 (OR) 206.....	MGMT 487.....	3
MGMT 384.....	NRMT 493.....	3
BLOCK ELECTIVES (300-400 level).....	BLOCK ELECTIVES.....	7
Total Hours – Fall Semester	Total Hours – Spring Semester	16
14		

**NATURAL RESOURCE MANAGEMENT
CRIMINAL JUSTICE CONCENTRATION**

GSC 100 The First Year Experience 1 hour

All degree seeking students are required to take GSC 100 during their first semester. GSC 100 may be used to satisfy one hour of the General Electives requirement

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 120-121 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	1	CRJU 232	3
MATH 115	3	POSC 203	3
MGMT 201	3	Total Hours – Spring Semester	16
Total Hours – Fall Semester	16		

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 1 hour

All degree seeking students are required to take GSC 100 during their first semester. GSC 100 may be used to satisfy one hour of the General Electives requirement

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
NRTM 334	GIS Applications II	3
NRMT 410	Energy Resource Law	3
PHYS 209	General Geology	

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 120-121 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	1	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	16	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		

**NATURAL RESOURCE MANAGEMENT
ENVIRONMENTAL SCIENCE CONCENTRATION**

GSC 100 The First Year Experience 1 hour

All degree seeking students are required to take GSC 100 during their first semester. GSC 100 may be used to satisfy one hour of the General Electives requirement.

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 120-121 hours

GATEWAY ASSESSMENT - ENVR 193

CAPSTONE ASSESSMENT - NRMT 493

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**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	1	ENGL 102.....	3
MATH 115	3	NRMT 125.....	3
PED 201	1	Total Hours – Spring Semester	16
Total Hours – Fall Semester	15		

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 (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	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		

**NATURAL RESOURCE MANAGEMENT
FOREST TECHNOLOGY CONCENTRATION**

GSC 100 The First Year Experience 1 hour

All degree seeking students are required to take GSC 100 during their first semester. GSC 100 may be used to satisfy one hour of the General Electives requirement.

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 120-121 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	1	NRMT 234.....	3
MATH 115	3	Total Hours – Spring Semester	17
Total Hours – Fall Semester	14		

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 384.....	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 201.....	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

BIOL 120, CHEM 101, 102, ENVR 101, PHYS 201, 202, 209 (OR) SCNC 101..	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 1 hour

All degree seeking students are required to take GSC 100 during their first semester. GSC 100 may be used to satisfy one hour of the General Electives requirement.

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 120-121 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	1	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	15		

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 244	1
LAND 232	3	LAND 293	6
PHYS 201	4	Total Hours – Spring Semester	13
Total Hours – Fall Semester	16		

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

**ASSOCIATE OF SCIENCE
FOREST TECHNOLOGY**

GSC 100 The First Year Experience **1 hour**

All degree seeking students are required to take GSC 100 during their first semester. GSC 100 may be used to satisfy one hour of the General Electives requirement.

General Education **24 hours**

BIOL 121	Principles of Biology II	4
ENGL 101	Critical Reading and Writing I	3
ENGL 102	Critical Reading and Writing II: The American Mosaic	3
FRST 108	Dendrology I	1
MATH 115	College Algebra	3
MGMT 201	Principles of Management	3
NRMT 201	Forest Ecology	3
NRMT 234	GIS Application I	3
PED 201	First Aid and Safety	1

Area of Specialization **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 **60-61 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
GSC 100	1	NRMT 234.....	3
MATH 115	3	Total Hours - Spring Semester	17
Total Hours - Fall Semester	14		

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**

GSC 100 The First Year Experience 1 hour

All degree seeking students are required to take GSC 100 during their first semester. GSC 100 may be used to satisfy one hour of the General Electives requirement.

General Education 24 hours

ENGL 101	Critical Reading and Writing I	3
ENGL 102	Critical Reading and Writing II: The American Mosaic	3
MATH 115	College Algebra	3
MATH 120	Precalculus	4
NRMT 125	Computer Assisted Mapping	3
PED 201	First Aid and Safety	1
PHYS 201	General Physics I	4

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

Area of Specialization 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 Measurement and Computations I	3
LAND 197	Work Experience	1
LAND 230	Surveying 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 Aerial Photo Interpretation	1
LAND 293	Survey Decisions/Professional Applications	6

Total minimum hours required for degree 60-61 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
GSC 100	1	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	15		

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 244	1
LAND 232	3	LAND 293	6
PHYS 201	4	Total Hours - Spring Semester	13
Total Hours - Fall Semester	16		

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