This sample plan assumes that the MTH 110 requirement has been fulfilled. If MTH 110 is needed, students should take the course in the first semester in place of the chemistry option.

<table>
<thead>
<tr>
<th>Year One</th>
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<th>Year Two</th>
<th></th>
</tr>
</thead>
</table>
| **BIO 120 General Biology I**  
Prerequisites: High school chemistry, CHM 109, or CHM 115 strongly recommended (CHM 109 or 115 may be taken concurrently with BIO 120)  
See notes below regarding BIO 120/121 option | 4 | **BIO 121 General Biology II**  
See notes below regarding BIO 120/121 option | 4 |
| CHM 109 Introductory Chemistry  
OR CHM 115 Principles of Chemistry I  
Prerequisites: High school chemistry and (MTH 110 or MTH 122 or MTH 125 or MTH 201) | 4 | NRM 150 Introduction to Natural Resources | 3 |
| Gen Ed – choose two or WRT 098 (self-placement)  
Elective – choose any 1 credit course to reach 15 for the semester | 3-4 | **MTH 122 College Algebra**  
Prerequisite: MTH 110 or proficiency through math placement – see notes below regarding math placement | 3 |
| **WRT 150 Strategies in Writing**  
E elective – choose any 1 credit course to reach 15 credits for the semester | 1 | **STA 215 Introductory Applied Statistics**  
Prerequisite: MTH 110 or equivalent | 3 |
| Total 15 | Total 15 | **ECO 211 Introductory Microeconomics**  
Prerequisites: MTH 110 or MTH 122 or MTH 201, sophomore standing recommended | 3 |
| NRM 450 Applied Spatial Analysis of Natural Resources  
Prerequisite: NRM 395 or GPY 307 | 3 | **GEO 111 Exploring the Earth**  
Gen Ed | 4 |
| 3/4 | 3/4 | **NRM Cognate Group Course** | 3/4 |
| **NRM Core Electives** | 3 | **NRM Core Electives** | 6/7 |
| Gen Ed | 3 | Gen Ed/Issue | 3 |
| Total 14-15 | Total 16* | Total 15-16 | |
| **NRM 450 GIS Applications in Resource Management**  
Prerequisite: GPY 307 or NRM 250 | 3 | **NRM 320 Introduction to Resource Systems**  
Prerequisites: BIO 215 and MTH 122 | 3 |
| **NRM Cognate Group Course** | 3/4 | **NRM Cognate Group Course** | 3/4 |
| 6/7 | 6/7 | **NRM Core Electives** | 3/4 |
| Gen Ed | 3 | Gen Ed | 3 |
| Total 15-16 | Total 15-16 | Total 13-15 | |

<table>
<thead>
<tr>
<th>Year Four</th>
<th></th>
<th>Year Four</th>
<th></th>
</tr>
</thead>
</table>
| **BIO 460 Terrestrial Ecosystem Ecology**  
Prerequisites: BIO 215; NRM 281 recommended | 4 | **NRM 495 SWS Trends in Natural Resources Mgt OR NRM 496 + 497 (Capstone)**  
Prerequisites: Completion of 20 credits in NRM, STA 215 | 4 |
| 3/4 | 3/4 | **NRM Cognate Group Course** | 3/4 |
| **NRM Core Electives** | 3 | **NRM Core Elective** | 3/4 |
| Gen Ed/Issue | 3 | Gen Ed | 3 |
| Total 14-15 | Total 13-15 | Total 13-15 | |

*A The block tuition rate is for 12-15 credits. You will pay additional tuition for any credits over 15.

A total of 120 credits are required for graduation. Please supplement your schedule with elective courses to reach the required 120 credits.

**Students who have fulfilled the MTH 122 requirement based on ACT scores are still required to complete a college level mathematics course higher than MTH 110. Students should choose from MTH 123, 125 or 201.**

1 Students have the option of starting in BIO 120 or 121 in the fall semester. BIO 120 requires a prerequisite of high school chemistry or CHM 109 or 115 (can be taken concurrently). Students who have an ACT science sub-score of 22 and below should start with BIO 121.

2 NRM majors must complete a total of 40 credits of NRM courses with a GPA of 2.0 or better. NRM 250, 395, and 450 are required for the Resource Analysis Methods emphasis. Please see reverse for additional NRM options.

3 NRM majors must complete a minimum of 40 credits of cognate courses (These cannot have NRM prefixes). Please see reverse for cognate courses. Resource Analysis Methods students must complete one group of cognate courses. Groups include: Computer Science, Statistics, and Spatial Methods.

4 Students must complete a total of two courses with an SWS attribute.

NRM classes are generally not offered during the summer. You are encouraged to obtain a natural resources management job, an internship (NRM 490), conduct a research project (NRM 499), or take general education and elective classes during the summer.

It is imperative to meet with your faculty advisor and an advisor in the CLAS Academic Advising Center regularly.

The CLAS Academic Advising Center is located in C-1-140 MAK, 616-331-8585.

Your academic advisor in the CLAS Academic Advising Center is Betty Schaner (schanerb@gvsu.edu)

Online at: http://www.gvsu.edu/clasadvising
Bachelor of Science Degree

Natural Resources Management Students only have the option of pursuing a Bachelor of Science degree. The B.S. degree requirements are incorporated into the major and include: MTH 122, NRM 320, and BIO 460.

Declaring the Natural Resources Management - Resource Analysis Methods Major:
1. Log into myBanner from the GVSU homepage
2. Once logged in select “Student,” “Student Records,” and then “Change Major”
3. Click on the “Change Major 1/Program” box
4. Click on the down arrow in the box next to “New Major 1/Program,” from here scroll down and choose “Natural Resources Mgmt – BS Resource Analysis Methods”
5. Click “Submit” and then “Change to New Program”

General Education Overlap

<table>
<thead>
<tr>
<th>General Education Categories fulfilled by the NRM Major:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Sciences with Lab: BIO 120</td>
</tr>
<tr>
<td>Mathematical Sciences: MTH 122 or STA 215</td>
</tr>
<tr>
<td>Issue: NRM 451, BIO 328, ECO 345</td>
</tr>
</tbody>
</table>

Natural Resources Management Cognate Courses

There are 29-30 credits of cognates required in the curriculum:

- MTH 122 College Algebra
- STA 215 Introductory Applied Statistics
- BIO 120 General Biology I
- BIO 121 General Biology II
- BIO 215 General Ecology
- GEO 111 Physical Geology
- CHM 115 Principles of Chemistry I 
  or CHM 109 Introductory Chemistry
- ECO 211 Microeconomics

Complete ONE of the following GROUPS of cognate courses to reach a total of 40 cognate credits:

<table>
<thead>
<tr>
<th>Computer Science</th>
<th>Statistics</th>
<th>Spatial Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 160 Programming with Visual Basic</td>
<td>STA 216 Intermediate Applied Statistics</td>
<td>Choose three courses from the following:</td>
</tr>
<tr>
<td>CIS 231 Problem Solving Using Spreadsheets</td>
<td>STA 315 Design of Experiments</td>
<td>GPY 307 Introduction to Computer Mapping/Geographic Info Systems</td>
</tr>
<tr>
<td></td>
<td>STA 321 Applied Regression Analysis</td>
<td>GPY 407 Advanced GIS</td>
</tr>
<tr>
<td></td>
<td>STA 416 Multivariate Data Analysis</td>
<td>GPY 470 Digital Image Processing</td>
</tr>
</tbody>
</table>

Natural Resources Management Core Electives

NRM majors must complete a total of 40 credits of NRM courses with a GPA of 2.0 or better. Choose from the list below to reach the minimum of 40 NRM credits.

- BIO 408 Wildlife Management (check with your advisor)
- NRM 380 Special Topics (also NRM 180, 280, 480)
- NRM 240 Principles of Climatology
- NRM 281 Principles of Soil Sciences
- NRM 308 Wildlife Ecology
- NRM 330 Environmental Pollution
- NRM/BIO 386 Ecological Restoration and Management
- NRM 399 Readings in Resource Management
- NRM 420 Wildland Recreation Mgmt.
- NRM 451 Natural Resource Policy
- NRM 452 Watershed and Wetland Management
- NRM 462 Forest Ecosystem Management
- NRM 486 Advanced Restoration Ecology
- NRM 490 Internship in Resource Management
- NRM 499 Research in Resource Management

Notes:
- NRM 180, 280, 380 and 480 are designations for a special topics class. You may take multiple classes with an NRM X80 designation because each class will cover a different topic.
- No more than 3 credits of NRM 399 (readings) will be counted towards the major.
- No more than 3 credits of NRM 499 (research) will be counted towards the major.
- No more than 5 credits of NRM 490 (internship) and NRM 499 (research) total can be applied to the major.
- BIO 417 and BIO 418 are field trip classes. You MAY be able to count these classes as core classes (NRM credit) but you MUST check with your advisor BEFORE you take the class. No more than 6 credits can be applied to the major.