# Request for CHANGING an Existing Course

## PRESENT COURSE DESCRIPTION

<table>
<thead>
<tr>
<th>Title</th>
<th>FOREST PRACTICUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester Hours of Credit</td>
<td>4</td>
</tr>
</tbody>
</table>

If combination course type, # hrs. of credit for:
- **Lecture:** ______
- **Lab/Sem/Rec:** 1

Repeat Credit Max. (If repeatable): n

Graduate Credit? Yes [X] No [ ]

Credit will not be given for this course and:

- Contact Hours Per Week: (Indicate hours in appropriate course type.)
  - Lecture: ______
  - Lab: ______
  - Seminar: ______
  - Recitation: ______
  - Intern: ______
  - Res/Ind: ______
  - Clin/Pract: 1-4
- Total Weekly Contact Hours: 40

Grading System: Letter Grade [X] Pass/Fail ______

Course Description:
(Include course number, title, etc. exactly as it appears in the General Catalog)

3041 Forest Practicum (1-4) May be taken for a max. of 4 sem. hrs. of credit. 1-4 weeks practicum. Students are responsible for paying for travel expenses associated with this course. Field exposure to various aspects of forestry practices; intended for off-campus field, lab, workshop or other intensive training in the field of forestry.

## PROPOSED COURSE DESCRIPTION

<table>
<thead>
<tr>
<th>Title</th>
<th>FIELD STUDIES IN FORESTED WETLANDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Title</td>
<td>FORESTED WETLANDS</td>
</tr>
<tr>
<td>Semester Hours of Credit</td>
<td>1</td>
</tr>
</tbody>
</table>

If combination course type, # hrs. of credit for:
- **Lecture:** ______
- **Lab/Sem/Rec:** 1

Repeat Credit Max. (If repeatable): N

Graduate Credit? Yes [X] No [ ]

Credit will not be given for this course and:

- Contact Hours Per Week: (Indicate hours in appropriate course type.)
  - Lecture: ______
  - Lab: ______
  - Seminar: ______
  - Recitation: ______
  - Intern: ______
  - Res/Ind: ______
  - Clin/Pract: 1
- Total Weekly Contact Hours: 40

Grading System: Letter Grade [X] Pass/Fail ______

Course Description:
(Include course number, title, etc. exactly as it appears in the General Catalog)

3041 Field Studies in Forested Wetlands (1) Students are responsible for paying for travel expenses associated with this course. Learn about structure, functions, and ecosystem services of wetlands in forested landscapes through field experiences and field trips. Gain an appreciation for wetland and water management issues and techniques in forestry.

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### THESE QUESTIONS MUST BE ANSWERED COMPLETELY AND ACCURATELY OR PROPOSAL WILL BE RETURNED.

- Has this change been discussed with and approved by all departments/colleges affected? Yes [X] No [ ] N/A [ ]
- Is this course included in any curricula, concentrations, or minors? Yes [X] No [ ] If yes, please list on a separate sheet.
- Is this course a prerequisite or corequisite for other courses? Yes [X] No [ ] If yes, list courses; use separate sheet.
- Is this course on the General Education list? Yes [X] No [ ]

### JUSTIFICATION/EXPLANATION:
Use separate sheet.
Note: IF COURSE IS OR WILL BE CROSS-LISTED, SEPARATE FORMS MUST BE SUBMITTED BY EACH DEPARTMENT.

### APPROVALS

**Department Faculty Approval Date:** Aug 17 2014

Department Chair Signature: [Signature] (date: 11 Oct 16)

Graduate Dean Signature: [Signature] (date: [ ])

College Contact: Jennifer Neal jshew@lsu.edu

**College Faculty Approval Date:** Oct 28 2010

William B. Richardson Signature (date: 11 Nov 11)

Chair, FS C & C Committee (date: [ ])

Academic Affairs Approval (date: 3/1/17)
JUSTIFICATION: This name change reflects alignment with the actual content of “Forest Practicum” for the past 11 years. This is a one-week, one credit hour course taught as part of forestry camp. The original idea was to use this course number as a blanket rubric and number for a wide variety of practical courses that might change over time based on faculty and student interests. Instead, the course has been taught as Forested Wetlands every time since 2005 and only one faculty member has ever offered a section of the course. There are not now any plans to offer other “practicum” courses so it makes sense to reflect the actual content in the name. This course is taught during the second 8-week spring calendar and within that calendar is sequenced with RNR 3039, RNR 3038, **RNR 3041**, RNR 3036 (2 weeks of field practice), RNR 3034, and RNR 3037.

CURRICULUM:
The proposed course is part of the BS in Natural Resource Ecology and Management, fulfilling requirements in three areas of concentration: Forest Enterprise, Forest Resources Management, and Wildlife Habitat Conservation and Management. The course change will not affect any of these curricula; the content will be identical to its historical content.
Instructions for **Form C** · Request for Changing a Course

**RNR 3041 — FOREST PRACTICUM: FORESTED WETLANDS**

**Instructor:**

<table>
<thead>
<tr>
<th>Campus Office</th>
<th>Office Phone</th>
<th>Cell Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richard Keim</td>
<td>328</td>
<td>578-4169</td>
<td>252-4994</td>
</tr>
</tbody>
</table>

**Meeting:** March 30-April 2, 2015; Lee Forest

**Official Course Description:** Field exposure to various aspects of forestry practices; intended for off-campus field, lab, workshop, or other intensive training in the field of forestry.

**Objectives:** Learn about structure, functions, and ecosystem services of wetlands in forested landscapes through field experiences and field trips. Gain an appreciation for wetland and water management issues and techniques in forestry.

**Evaluation:**

- Short reports (3) 20 points each.  
  - Wetland delineation lab due Wed Apr 1, 7:00 AM (paper format)  
  - Coastal forest paper due Thurs Apr 2, 11:59 PM (email)  
  - SMZ lab due Thurs Apr 2, 11:59 PM (email)

- Participation and Engagement 20 points  
  - Enthusiasm, leadership, professionalism

(Total) (80 points)

**Grading scale guaranteed:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>4.3 Qpts</td>
<td>&gt;97.0</td>
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<tr>
<td>A</td>
<td>4.0 Qpts</td>
<td>93.0-96.9</td>
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<tr>
<td>A-</td>
<td>3.7 Qpts</td>
<td>90.0-92.9</td>
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<tr>
<td>B+</td>
<td>3.3 Qpts</td>
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<td>B</td>
<td>3.0 Qpts</td>
<td>83.0-86.9</td>
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<tr>
<td>B-</td>
<td>2.7 Qpts</td>
<td>80.0-82.9</td>
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<tr>
<td>C+</td>
<td>2.3 Qpts</td>
<td>77.0-79.9</td>
</tr>
<tr>
<td>C</td>
<td>2.0 Qpts</td>
<td>73.0-76.9</td>
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<tr>
<td>C-</td>
<td>1.7 Qpts</td>
<td>70.0-72.9</td>
</tr>
<tr>
<td>D+</td>
<td>1.3 Qpts</td>
<td>67.0-699</td>
</tr>
<tr>
<td>D</td>
<td>1.0 Qpts</td>
<td>63.0-66.9</td>
</tr>
<tr>
<td>D-</td>
<td>0.7 Qpts</td>
<td>60.0-62.9</td>
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<tr>
<td>F</td>
<td>&lt; 60.0</td>
<td></td>
</tr>
</tbody>
</table>

Guidelines for Evaluating Participation:

- **Outstanding Contributor:** Contributions in class reflect exceptional preparation. Ideas offered are substantive and provide major insights as well as direction for the class. Challenges are substantiated and persuasively presented. If this person were not a member of the class, the quality of discussion would be diminished markedly. (20)

- **Good Contributor:** Contributions in class reflect thorough preparation. Ideas offered are substantive and provide good insights and sometimes direction for the class. Challenges are substantiated and often persuasive. If this person were not a member of the class, the quality of discussion would be diminished. (16)

- **Adequate Contributor:** Contributions in class reflect satisfactory preparation. Ideas offered are sometimes substantive, provide generally useful insights but seldom offer a new direction for the discussion. Challenges are sometimes presented, fairly substantiated, and are sometimes persuasive. If this person were not a member of the class, the quality of discussion would be diminished. (12)

- **Non-Participant:** This person says little or nothing in class, so there is no adequate basis for evaluation. If this person were not a member of the class, the quality of discussion would not be changed. (4)

- **Unsatisfactory Contributor:** Contributions in class reflect inadequate preparation. Ideas offered are seldom substantive, provide few insights and never a constructive direction for the class. Integrative comments and
Instructions for Form C: Request for Changing a Course

effective challenges are absent. If this person were not a member of the class, valuable air-time would be saved. (0)

Course Schedule of Instruction:

<table>
<thead>
<tr>
<th>DAY</th>
<th>PLACE</th>
<th>TIME</th>
<th>LECTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon, Mar 30</td>
<td>Lee Forest</td>
<td>8:00-11:00</td>
<td>Wetland functions, ecosystem services, and regulatory delineation.</td>
</tr>
<tr>
<td>Tues, Mar 31</td>
<td>Lee Forest</td>
<td>8:00-11:00</td>
<td>Wetland functions, ecosystem services, and regulatory delineation.</td>
</tr>
<tr>
<td>Wed, Apr 1</td>
<td>Lee Forest</td>
<td>8:00-11:00</td>
<td>Pine woodland forests.</td>
</tr>
<tr>
<td>Thur, Apr 2</td>
<td>Lee Forest</td>
<td>8:00-11:00</td>
<td>Coastal forested wetlands.</td>
</tr>
<tr>
<td>Fri, Apr 3</td>
<td>Lee Forest</td>
<td>8:00-11:00</td>
<td>Streamside Management Zones (SMZs).</td>
</tr>
</tbody>
</table>

Course Schedule of Student Field Practice:

<table>
<thead>
<tr>
<th>DAY</th>
<th>PLACE</th>
<th>START TIME</th>
<th>STUDENT ACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon, Mar 30</td>
<td>Lee Forest</td>
<td>12:00</td>
<td>Wetland functions, ecosystem services, and regulatory delineation report site visit.</td>
</tr>
<tr>
<td>Tues, Mar 31</td>
<td>Lee Forest</td>
<td>12:00</td>
<td>Wetland functions, ecosystem services, and regulatory delineation report writing time.</td>
</tr>
<tr>
<td>Wed, Apr 1</td>
<td>Lee Forest</td>
<td>12:00</td>
<td>Pine woodland forests site visits and report writing time.</td>
</tr>
<tr>
<td>Thur, Apr 2</td>
<td>Lee Forest</td>
<td>12:00</td>
<td>Coastal forested wetlands site visits and report writing time.</td>
</tr>
<tr>
<td>Fri, Apr 3</td>
<td>Lee Forest</td>
<td>12:00</td>
<td>Streamside Management Zones (SMZs) lab activity and report writing time.</td>
</tr>
</tbody>
</table>
**REQUEST FOR ADDITION OF NEW COURSE**

**PROPOSED COURSE DESCRIPTION**

<table>
<thead>
<tr>
<th>Rubric &amp; No.</th>
<th>RNR 3913</th>
<th>Title</th>
<th>Quantitative Methods in Wildlife and Fisheries</th>
</tr>
</thead>
</table>

**Short Title (≤ 19 characters)**

- Q U A N T
- W I L D L I E F E
- F I S H

**Semester Hours of Credit**

- 4

**If combination course type, # hrs. of credit for**

- Lecture: 3
- Lab/Sem/Rec: 1

**Repeat Credit Max. (if repeatable):**

- _____ credit hours
- Graduate Credit?: __Yes__
- X No

**Credit will not be given for this course and:**

**Course Type (Indicate hours in the appropriate course type.)**

- Lecture 3
- Lab 3
- Seminar
- Recitation
- Lec/Rec
- Lec/Sem
- Lec/Lab
- Res/Ind
- Clin/Pract

**Maximum enrollment per section: (use integer, e.g. 25 not 20-30)**

- 25

**Grading System:**

- Letter Grade: X
- Pass/Fail
- Final Exam:**
- Yes X
- No

**(Attach justification if the proposed course will not hold a final exam during examination week.**)

**Course Description:**

(Concisely catalog statement exactly as you wish it to appear in the General Catalog)

**3913 Quantitative Methods in Wildlife and Fisheries (4)** Prereq. RNR 1010, RNR 2101, "C" or better in RNR 2102, FSST 2201, and junior or senior status. 3 hrs. lecture; 3 hrs. lab. Specialized, modern quantitative methods necessary for entry-level and early career positions in wildlife and fisheries research and management. Computer-based data analysis of GIS, remotely-sensed, and field collected experimental and observational data, including life tables, mark-recapture, matrix population expansion, and distance and detection based abundance estimation.

**BUDGET IMPACT (IF ANSWER TO ANY QUESTION IS "YES", ATTACH EXPLANATION.)**

- If this course is approved, will additional staff be needed? Yes____ No X
- Will additional space, equipment, special library materials or other major expense be involved? Yes____ No X

**Academic Affairs Approval:**

(Date)

**ATTACHMENTS (ATTACH THE FOLLOWING TO YOUR PROPOSAL)**

**JUSTIFICATION:** Justification must explain why this course is needed and how it fits into the curricula. Will the course duplicate other courses? SYLLABUS: Including 14 week outline of the subject matter; titles of text, lab manual, and/or required readings; grading scale and criteria (For 4000-level, specify graduate student grading criteria if requirements differ for graduate and undergraduate students).

**APPROVALS**

<table>
<thead>
<tr>
<th>Department Faculty Approval Date</th>
<th>05/02/2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Faculty Approval Date</td>
<td>10/07/10</td>
</tr>
</tbody>
</table>

**D. A. Paul Richardson**

(Date)

Department Chair Signature

**Jennifer Neal**

E-mail

**College Contact**

**William B. Richardson**

(Date)

Chair, FS C&C Committee

**Jennifer Neal**

(Date)

Academic Affairs Approval
Consistent feedback from employers and graduate programs that accept LSU undergraduates indicate that the student lack familiarity with specialized methodologies commonly employed in entry-level and early career positions, as well as, in Master's of Science programs. These methodologies are introduced in RNR 2101, RNR 2102, RNR 4011, RNR 4106, and RNR 4101 with each course addressing a subset of methods. However, some students may pass through the curriculum without exposure to all of the methodologies that they may be expected to have experienced. These students have been addressing deficiencies through student research, assisting graduate students and faculty, and through off-campus internship and employment. This alternative is unsustainable as funding for on-campus research is unpredictable, and off-campus opportunities are outside of the faculty's control. This course is proposed to address gaps in methodological knowledge for students for students whose concentrations do not include the aforementioned course sequence in its entirety and who recognize that their career opportunities may include fisheries and wildlife research and management activities. A pilot special topics version was offered during the spring of 2015 as RNR 4061. As previously mentioned, sections of this course appear in other Renewable Natural Resource courses, and in EMS/ENVS 4010, which is only 2 credits and lacks a laboratory component. A set of similar courses have been offered at the graduate level, EXST 7024 (currently inactive) and EXST 7025. Material for this course will be suitable for undergraduates. Graduate students will be not be permitted in this course and will be directed to EXST 7025 and, if offered, EXST 7024.

This proposed course is not included in any curriculum at this time. If student demand warrants, a future proposal will suggest that the course will be included in the B.S. in Natural Resources Ecology and Management Wildlife Ecology and Fisheries and Aquaculture Areas of Concentration.
Quantitative Methods in Wildlife and Fisheries

RNR 3913 (4 cr.): Spring 2017
Lecture: Mon/Wed/Fri 1:30-2:30, RNR 214
Lab: Wednesday 2:30-5:30

INSTRUCTORS: Dr. Bret Collier
Office: 341A RNR
Office Hours: M/W/F after class, or by appointment
Email: bcollier@agcenter.lsu.edu (best method)
Office Phone: 225-578-4192

MOODLE: TBA

COURSE DESCRIPTION AND GOALS
Quantitative Methods in Wildlife and Fisheries is focused on specialized, modern quantitative methods necessary for entry-level and early career positions in wildlife and fisheries research and management. Computer-based data analysis of GIS, remotely-sensed, and field collected experimental and observational data, including life tables, mark-recapture, matrix population expansion, and distance and detection based abundance estimation, will occur.

LECTURE AND LAB
Lectures will take place M/W/F in RNR 214. Lectures will focus on providing you with a set of modern, commonly-used methodologies used in fisheries and wildlife research and management. Theory and practice will be covered.

Labs will take place in RNR 214 unless otherwise stated. Most labs will be outside engaged in the field practices. We will designate several lab periods as data analysis "workshops" where you will work through exercises in small groups. In general, labs will last the full period, so please plan your schedules accordingly.

READINGS:
• Readings will be assigned

GRADING:
RNR 3913 is graded course. Official test dates will be announced in class a minimum of 3 class periods prior to the examination and the final examination being during the scheduled course meeting time in finals week. The mid-term exam will constitute 25\% of your course grade, the laboratory example will constitute 25\% of your course grade, and the final will constitute 50\% of your course grade.

Following the table below, your grade will not be less than these ranges (i.e., a 90\% will never be less than A-).

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>4.3 Qpts</td>
<td>&gt;97.0%</td>
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<tr>
<td>C</td>
<td>2.0 Qpts</td>
<td>73.0-76.9%</td>
</tr>
<tr>
<td>C-</td>
<td>1.7 Qpts</td>
<td>70.0-72.9%</td>
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<td>D+</td>
<td>1.3 Qpts</td>
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</tr>
<tr>
<td>D-</td>
<td>0.7 Qpts</td>
<td>60.0-62.9%</td>
</tr>
</tbody>
</table>

Grading:
Exams (2@ 12.5 pts) plus midterm (1@25) 50
Final exam 50
Participation 40
Field Trips 60
Total 200

Re-grades: Must be submitted directly to Dr. Collier, in person, within one week after exams are returned. The entire test will be re-graded; that is, there is the potential to both gain and lose points. Do not change your answers and ask for a re-grade.
**Participation:** Enthusiastic participation in lecture and lab is crucial, especially when we are hosting guest speakers. Attendance is obviously a prerequisite for participation. Guidelines for evaluating participation are as follows:

- **Excellent (40 points):** The student comes well-prepared, and always engages with the lecturer and other students in a constructive, positive manner. The student goes out of his/her way to ask questions and offer insightful commentary, and tends to lead classes in discussion.
- **Good (30 points):** The student is generally well-prepared, and often offers substantial commentary and questions. The student is an active participant in group discussions.
- **Satisfactory (20 points):** The student sometimes is well-prepared, and occasionally asks questions. The student participates in discussions when prodded.
- **Non-participant (10 points):** The student is rarely prepared for lecture, and rarely or ask questions or offers commentary. The student is disengaged from lecture and lab.
- **Negative participant (0 points):** The student is unprepared for lecture and lab, and wastes valuable time asking irrelevant questions or forcing the entire group to play catch-up.

**Field Trips:** For most field trips, you will be asked to keep a field notebook of upland bird sightings and other natural history observations. The quality of these notebooks will be the primary determining factor of your field trip grade. Quality will be assessed by: 1) inclusion of full sentence notes (50%); 2) drawings (25%); and spatial and temporal metadata (25%). 3 short field trips will be worth 10 points each; 2 overnight field trips will be worth 15 points each.

**CLASSROOM RESPECT**
- Class will begin on time. Please show up on time.
- Do not use your cell phones in class.
- Please stay focused in lecture. Most people cannot use their laptops and remain focused; if you use a laptop, it must have a privacy screen to avoid distracting other students.
- Field trips should be viewed as a privileged activity; show the utmost respect for the people and places we visit.

**UNIVERSITY POLICY STATEMENTS**

**Attendance:** LSU policy statements 22 and 24 and Faculty Senate resolution 12-3 state that individual faculty determine excuse and unexcused absences, and that attendance can be graded by randomly taking attendance during 12 randomly selected lectures. An unexcused absence during any graded activity will result in a 0 for the activity. Excused absences and make-up opportunities will be granted for university-approved off-campus activities, religious holidays, professional development activities, job interviews, and severe illnesses. Please contact me before course activities if possible to schedule a make-up.

**Academic integrity:** Cheating and plagiarism will not be tolerated in any form; it damages the integrity of the student, the department, and university, and can far-reaching effects into the future (e.g. "I don’t hire RNR grads anymore because I had one who cheated his (her) way through and was an awful employee"). We use of plagiarism detection software. Students violating the Academic Dishonesty policy of the LSU Code of Student Conduct will be referred to Student Advocacy & Accountability.

**Disability statement:** Louisiana State University is committed to providing reasonable accommodations for all persons with disabilities. The syllabus is available in alternate formats upon request. If you have a disability that may have some impact on your work in this class and for which you may require accommodations, please see a staff member in Disability Services (115 Johnston Hall) so that such accommodations can be considered. Students that receive accommodation letters, please meet with me to discuss the provisions of those accommodations as soon as possible.

**Credit expectations:** For each earned credit, students must spend a minimum of 1 hour per week in lecture class or 3 hours per week in lab, and a minimum of 2-3 hours per week of studying/homework outside of class.
<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Life Tables</td>
<td>Imperfect Detection</td>
</tr>
<tr>
<td>2</td>
<td>Matrix Algebra Review</td>
<td>Life Tables</td>
</tr>
<tr>
<td>3</td>
<td>Matrix Population Expansion – Leslie and Stage-</td>
<td>Leslie Matrices</td>
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<tr>
<td></td>
<td>Classified Methods Methods</td>
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<tr>
<td>4</td>
<td>Matrix Population Expansion – Population Modeling</td>
<td>Stage-Classified Matrices</td>
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<tr>
<td>5</td>
<td>Matrix Population Expansion – Individual Based</td>
<td>Matrix-based population modeling</td>
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<td></td>
<td>Models</td>
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</tr>
<tr>
<td>6</td>
<td>Introduction to General and Generalized Linear</td>
<td>Individual Based Models</td>
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<tr>
<td></td>
<td>Model Applications to Fisheries and Wildlife</td>
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<tr>
<td>7</td>
<td>Logistic Model of Populations</td>
<td>Logistic Populations</td>
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<tr>
<td>8</td>
<td>Other GLMs used in Population Modeling</td>
<td>Exponential and other non-Logistic</td>
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<tr>
<td></td>
<td></td>
<td>Populations</td>
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<tr>
<td></td>
<td>MIDTERM EXAM</td>
<td></td>
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<tr>
<td>9</td>
<td>Sampling Designs for Fisheries and Wildlife Studies</td>
<td>Transects, Belts, and Point-Counts</td>
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<tr>
<td>11</td>
<td>Sampling Designs for Fisheries and Wildlife</td>
<td>Transects, Belts, and Point-Counts</td>
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<td></td>
<td>Population Monitoring</td>
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<td>12</td>
<td>Abundance by Mark-Recapture Methods</td>
<td>Quadrat-based Methods</td>
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<td>Abundance by Distance Methods</td>
<td>Methods for Marking and Recapture</td>
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<td>14</td>
<td>Abundance by Detection Methods</td>
<td>Methods for Marking and Recapture</td>
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<tr>
<td>15</td>
<td>Lotka-Voterra Models</td>
<td>Modifications for Aquatic Habitats</td>
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<tr>
<td></td>
<td>FINAL EXAM</td>
<td></td>
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</tbody>
</table>
REQUEST FOR ADDING, CHANGING, SUSPENDING OR DROPPING AN UNDERGRADUATE CONCENTRATION

Department: Renewable Natural Resources
College: Agriculture
Name of Concentration: Conservation Biology
Name of Curriculum/Major: Natural Resource Ecology and Management
Type of Degree: B.S.
Date: 5/2/2016

Has this change been discussed with and approved by all departments/colleges affected? Yes (X) No ( ) N/A ( )

ATTACH JUSTIFICATION for all actions: Use separate sheet.
ATTACH RESPONSE from any departments affected [i.e. any department whose course(s) are to be added.]
ATTACH FORM D ADDENDUM for all new concentration or changes involving General Education courses.

**ACTION (check appropriate box):**

( ) ADDING: The entire new concentration, by semester, must be typed on plain sheets and attached to Form E. (See sample layout attached.)

( X ) CHANGING: Regardless if all semesters of a concentration are to be changed or only parts, the present and proposed (eight-semester) recommended path should be attached on separate pages. On the Present recommended path, use strikeout and on the Proposed recommended path, highlight areas to identify deletions and additions. Do not use boldface to designate changes as boldface is reserved for critical requirements within the recommended path. Explain all changes adequately on attachment.

( ) SUSPENDING: Provide an adequate explanation for suspending the concentration on plain sheets and attach.

( ) DROPPING: Provide an adequate explanation for dropping the concentration on plain sheets and attach.

**CONCENTRATION**

<table>
<thead>
<tr>
<th>PRESENT</th>
<th>PROPOSED</th>
</tr>
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<tbody>
<tr>
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<td>Total semester hours in proposed concentration:</td>
</tr>
<tr>
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<td>38</td>
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**APPROVALS:**

Department Faculty Approval Date: 5/2/2016

D. [Signature] 11 Oct 16

Department Chair’s Signature: [Signature] (Date)

Chair, FS C & C Committee: [Signature] 11/16/16

College Faculty Approval Date: 10/21/16

[Signature] 10/28/16

College Dean’s Signature: [Signature] (Date)

Academic Affairs Approval: [Signature] 3/8/17

College/Division/Department Contact: Jennifer Neal

Contact E-mail: jshor@isu.edu
**GENERAL EDUCATION REQUIREMENTS**

When a department adds a new curriculum or makes changes in an existing one, a Form D Addendum must also be submitted. This form is simply a list of those courses in the curriculum that satisfy the General Education requirement. Include course rubric, number, and credit hours when curricula differ from the default values. Indicate the curriculum semester for all General Education courses.

<table>
<thead>
<tr>
<th>General Education Requirement</th>
<th>Course(s)</th>
<th>Credit Hours</th>
<th>Curriculum Semester</th>
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<td>English Composition (6 hrs.)</td>
<td>ENGL 1001 or 1004</td>
<td>3</td>
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<td></td>
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<td>(x) 4th (x) 8th</td>
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<tr>
<td>Analytical Reasoning (6 hrs.)</td>
<td>MATH 1021</td>
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<td>(At least 3 hours credit must</td>
<td>MATH 1431</td>
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<td>be from a MATH course.)</td>
<td></td>
<td></td>
<td>(x) 3rd (x) 7th</td>
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<td>(x) 4th (x) 8th</td>
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<tr>
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<tr>
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<td></td>
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<td>(x) 3rd (x) 7th</td>
</tr>
<tr>
<td>Natural Sciences (9 hrs.)</td>
<td>BIOL 1201, 1202</td>
<td>6</td>
<td>(x) 1st (x) 5th</td>
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<tr>
<td>(If 2 course sequence is taken</td>
<td>CHEM 1201</td>
<td>3</td>
<td>(x) 2nd (x) 6th</td>
</tr>
<tr>
<td>in the physical sciences, the</td>
<td></td>
<td></td>
<td>(x) 3rd (x) 7th</td>
</tr>
<tr>
<td>additional 3 hour course must</td>
<td></td>
<td></td>
<td>(x) 4th (x) 8th</td>
</tr>
<tr>
<td>be from the life sciences, and</td>
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<tr>
<td>vice versa.)</td>
<td></td>
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<td>Social Sciences (6 hrs.)</td>
<td>ECON 2030</td>
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<td>(At least three hours at the</td>
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<td>2000-level.)</td>
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<td>(x) 3rd (x) 7th</td>
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<td></td>
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<td></td>
<td>(x) 4th (x) 8th</td>
</tr>
</tbody>
</table>
**RECOMMENDED WORDING FOR GENERAL EDUCATION REQUIREMENTS**

Departments and programs should employ the following wording where possible to ensure consistency across curricula in the description of General Education requirements.

*If 2 course natural science sequence is taken in the physical sciences, the additional 3 hour natural science course must be from the life sciences, and vice versa.*

### English Composition
- English 1001 or 1004.................................................................3
- English 2000...........................................................................3

### Natural Sciences
- BIOL 1201, BIOL 1202..............................................................6
- CHEM 1201*............................................................................3

### Social Sciences
- ECON 2030.............................................................................3
- SOCL 2001/POLI 2051...............................................................3

### Analytical Reasoning
- MATH 1021.............................................................................3
- MATH 1431.............................................................................3

### Humanities
- CMST 2060.............................................................................3
- General education humanities course........................................3
- General education humanities course........................................3

### Arts
- General education arts course..................................................3
SUMMARY OF CHANGES:
1) Change MATH 1021/1431 to MATH 1431 only. This reflects feedback from graduate programs.

2) Replace AGEC 2003 with ECON 2030. ECON 2030 is a pre-requisite to the proposed required course, ECON 4320.

3) Change AGRO 2051/RNR 4025/4900/4033/3004 to RNR 3004 only. This reflects input from the accrediting committee of the Society of the American Foresters and resolves a frequently missing pre-requisite for the required RNR 4101.

4) Remove RNR 4011, RNR 4020/BIOL 4041, and the requirement to select one from: BIOL 4141, 4142, 4146, RNR 4012, 4013, 4037, 4110, 4145.

5) Add ECON 4320 and RNR 4150 to required AOC courses, and a requirement to select 9 hours from: EMS 3040, ENVS 4261, GEOG 4078, OCS 3103, 4600, BIOL/RNR 4017, RNR 4268.

6) Curriculum-wide, RNR 1002 is being dropped.

7) Remove option for CHEM 1212, because BIOL 1208 and BIOL 1209 are required for RNR 2101.

8) Added Honors versions of required courses (e.g., BIOL 1207, CHEM 1422).

9) Changed RNR 3002/3105 to RNR 3105 to better meet student needs.

Summary of credit hour changes:

<table>
<thead>
<tr>
<th>Courses added to NREM core:</th>
<th>Free elective</th>
<th>1 cr.</th>
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</thead>
<tbody>
<tr>
<td>Courses added to concentration:</td>
<td>ECON 4320; RNR 4150; 9 credits from: EMS 3040, ENVS 4261, GEOG 4078, OCS 3103, 4600, BIOL/RNR 4017, RNR 4268.</td>
<td>15 cr.</td>
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<tr>
<td>Courses options added that did not affect credit hours:</td>
<td>BIOL 1207 (Honors); CHEM 1422 (Honors); BIOL 1503 (Honors); CHEM 1431 (Honors); ECON 2030</td>
<td>No change</td>
</tr>
<tr>
<td>Courses options removed that did not affect credit hours:</td>
<td>MATH 1022; CHEM 1212; RNR 3002; AGRO 2051/RNR 4025/RNR 4033/RNR 4900</td>
<td>No change</td>
</tr>
<tr>
<td>Courses removed from NREM core:</td>
<td>RNR 1002</td>
<td>1 cr.</td>
</tr>
<tr>
<td>Courses removed from the concentration:</td>
<td>RNR 4011; Select two from: BIOL 4141, 4142, 4146, RNR 4012, 4013, 4037, 4110, 4145; Select one from: RNR 4020 or BIOL 4041</td>
<td>15-16 cr.</td>
</tr>
<tr>
<td>Net concentration change:</td>
<td></td>
<td>0-1 cr.</td>
</tr>
</tbody>
</table>

JUSTIFICATION: The science and practice of conservation biology has changed dramatically since the Area of Concentration was proposed in 2002. These changes reflect changes in priorities identified by the Society for Conservation Biology, faculty, and employers.

CURRICULUM: The Conservation Biology Area of Conservation is included in the B.S. in Natural Resource Ecology and Management.
SUPPORTING DOCUMENTS AND COMMUNICATION:

ECON 4320:
Professor Kaller,

The Department has reviewed your request and this email constitutes formal approval. Good luck with your new program.

Regards,
Bob Newman

Robert J. Newman
Gulf Coast Coca-Cola Bottling Co. Professor
Chair, Department of Economics
Editorial Board, Journal of Labor Research
Louisiana State University

From: Michael D Kaller
Sent: Monday, August 29, 2016 3:07 PM
To: Daniel A Brent
Cc: Robert J Newman; Allen Rutherford
Subject: ECON 4320

Hello Dr. Brent,

The School of Renewable Natural Resources requests permission to include ECON 4320 as a required course within the Conservation Biology Area of Concentration, B.S. in Natural Resource Ecology and Management. The faculty have substantially overhauled the concentration based on feedback from graduate programs and employers. This course would seem to address some of the concerns expressed during our reviews. We anticipate no more than 10 students would require the course annually. I have attached the proposed curriculum revision. Please do not hesitate to contact me, if you have additional questions.

Mike Kaller, Ph.D.
Associate Professor and
Curriculum Coordinator,
School of Renewable Natural Resources,
Louisiana State University
Associate Rector,
Agriculture Residence College

GEOG 4078:

As Dr. Wang wrote, I’m one of the faculty in my department who teaches GEOG 4078. I’m not the only one, but I’ve taught the course in recent years and intend to continue offering it periodically, likely every fourth semester.

I believe the course is germane to someone interested in conservation biology, and I welcome your students to take the course for credit towards this concentration.

P.S., and I know you’ve looked over many other courses and are confident in the courses you’re seeking to offer, but just to say we also teach in Geography GEOG 3070, Environmental Conservation. This might be too much overlap with your core courses within RNR, but it’s the other course I think of immediately if someone came to me and wanted to take a GEOG course who wanted to do conservation biology. Dr. Steve Namikas in the department (snamik1@lsu.edu) teaches that course.

Thanks for considering the Geography department and my course towards this concentration.

Brian Marks
bmarks@lsu.edu
(225)578-6077
Thank you for the prompt response. Our students have taken Geography courses and reported positively in the past. This should be a great benefit to the students.

From: Fahui Wang
Sent: Monday, August 29, 2016 4:21 PM
To: Michael D Kaller; Brian J Marks
Cc: Allen Rutherford
Subject: RE: GEOG 4078

Mike:
I support the changes by including Geog 4078 as one of the electives.

I am copying the response to Dr. Marks who teaches it (Dr. O’Keefe left for another university).

Thanks!

Fahui Wang, PhD
James J. Parsons Professor
Chair, Department of Geography & Anthropology
Louisiana State University
Baton Rouge, LA 70803
http://ga.lsu.edu/faculty/fahui-wang/

Fahui Wang | Department of Geography & Anthropology

ga.lsu.edu

Education. Ph.D. City & Regional Planning, The Ohio State University, 1995 M.A. Economics, The Ohio State University, 1993 B.S. Geography, Peking University, 1988


From: Michael D Kaller
Sent: Monday, August 29, 2016 3:25 PM
To: Paul O’Keefe
Cc: Allen Rutherford; Fahui Wang
Subject: GEOG 4078

Hello Dr. O’Keefe,

The School of Renewable Natural Resources requests permission to include GEOG 4078 within a set of restricted elective courses within the Conservation Biology Area of Concentration, B.S. in Natural Resource Ecology and Management. The faculty have substantially overhauled the concentration based on feedback from graduate programs and employers. This course would seem to address some of the concerns expressed during our reviews. We anticipate no more than 5 students would require the course annually. I have attached the proposed curriculum revision. Please do not hesitate to contact me, if you have additional questions.

Mike Kaller, Ph.D.
Associate Professor and
Curriculum Coordinator,
School of Renewable Natural Resources,
Louisiana State University
Associate Rector,
Agriculture Residence College
OCS 4600:

Hi Mike,

I have no problem for OCS 4600 to be included among the electives in the Conservation Biology Concentration in RNR as you described in your message.

Best regards,

Kam-biu

---

Kam-biu Liu, Ph.D.
George W. Barineau III Professor
Chair
Department of Oceanography and Coastal Sciences
College of the Coast and Environment
Louisiana State University
1002Y Energy, Coast and Environment Building
Baton Rouge, LA 70803
Phone: (225)-578-8203
E-mail: kliu1@lsu.edu

From: Michael D Kaller
Sent: Monday, August 29, 2016 4:38 PM
To: Kam-Biu Liu <kliu1@lsu.edu>
Cc: John R White <jwhite@lsu.edu>; Allen Rutherford <druther@lsu.edu>
Subject: OCS 4600

Hello Dr. Liu,

The School of Renewable Natural Resources requests permission to include OCS 4600 within a set of restricted elective courses within the Conservation Biology Area of Concentration, B.S. in Natural Resource Ecology and Management. The faculty have substantially overhauled the concentration based on feedback from graduate programs and employers. This course would seem to address some of the concerns expressed during our reviews. We anticipate no more than 5 students would require the course annually. I have attached the proposed curriculum revision. Please do not hesitate to contact me, if you have additional questions.

Mike Kaller, Ph.D.
Associate Professor and
Curriculum Coordinator,
School of Renewable Natural Resources,
Louisiana State University
Associate Rector,
Agriculture Residence College

OCS 3103:

Dr Keller,

I am fine with this.

Kanchan

Sent from my iPhone

On Aug 29, 2016, at 4:36 PM, Michael D Kaller <mkaller1@lsu.edu> wrote:

Hello Dr. Maui,

The School of Renewable Natural Resources requests permission to include OCS 3103 within a set of restricted elective courses within the Conservation Biology Area of Concentration, B.S. in Natural Resource Ecology and Management. The faculty have substantially overhauled the concentration based on feedback from graduate programs and employers. This course would seem to address some of the concerns expressed during our reviews. We anticipate no more than 5 students would require the course annually. I have attached the proposed curriculum revision. Please do not hesitate to contact me, if you have additional questions.
Mike Kaller, Ph.D.
Associate Professor and
Curriculum Coordinator,
School of Renewable Natural Resources,
Louisiana State University
Associate Rector,
Agriculture Residence College

EMS 3040:

Dear Mike,
We would be happy to have NREM students in the Conservation Biology concentration in EMS 3040 Applied Environmental Management, as NREM students provide a good perspective in EMS class discussion. We do not anticipate a problem with accommodating the estimated number of additional students in the class.
Thank you for checking and for making this option available to your students.
Please let me know if you need further information.
Maud

Maud M. Walsh, Ph.D.
Professor and Graduate & Undergraduate Advisor
School of Plant, Environmental and Soil Sciences
Louisiana State University
110 Sturges Hall, Baton Rouge, LA 70803-2110
office 225-578-1211 | fax 225-578-1403
evwalsh@lsu.edu | www.spess.lsu.edu
Facebook: LsuSchoolOfPlantEnvironmentalSoilSciences
Research Translation Core Leader, LSU Superfund Research Program
http://www.lsu.edu/srp/
Facebook: LSUSRP
Twitter: LSU SRP

From: Michael D Kaller
Sent: Thursday, June 16, 2016 2:46 PM
To: Maud M Walsh
Subject: EMS 3040

Hello Maud,

The faculty of RNR would like to include EMS 3040 in a set of restricted electives in the proposed revision to Conservation Biology (attached). Please let us know if 10 additional students annually would be acceptable.

Mike Kaller, Ph.D.
Associate Professor and
Curriculum Coordinator,
School of Renewable Natural Resources,
Louisiana State University
Associate Rector,
Agriculture Residence College
This e-mail is to inform you that CHEM 1212 is being proposed to be dropped as a general education course from the following concentrations in the B.S. in Natural Resource Ecology and Management: Conservation Biology; Fisheries and Aquaculture; Wetland Science; Wildlife Ecology. CHEM 1212 will remain in the B.S. in Natural Resource Ecology and Management concentrations: Pre-Veterinary Medicine Wildlife and Fisheries; Forest Resource Management; Forest Enterprise; Wildlife Habitat Concentration and Management. This change will affect under 10 students per year, based on our records.

Mike Keller, Ph.D.
Associate Professor and
Curriculum Coordinator,
School of Renewable Natural Resources,
Louisiana State University
Associate Rector,
Agriculture Residence College

MATH 1022

Dear Mike Keller,

Thanks for letting us know.

Best regards,

Oliver Dasbach

Dr. Oliver Dasbach,
Professor and Chair
Department of Mathematics
Louisiana State University
301-C Lockett Hall
office 225-578-1618
dasbach@math.lsu.edu | www.math.lsu.edu

On Dec 15, 2016, at 2:14 PM, Michael D Kaller <mkalle1@lsu.edu> wrote:

This e-mail is to inform you that MATH 1022 is proposed to be dropped as a general education course from the B.S. in Natural Resource Ecology and Management. MATH 1431 and 1550 were already included in the program, and all students will be directed to these courses. This change may affect as many as 75 students per year.

Mike Keller, Ph.D.
Associate Professor and
Curriculum Coordinator,
School of Renewable Natural Resources,
Louisiana State University
Associate Rector,
Agriculture Residence College

AGRO 2051

From: Labonte, Don R. [mailto:DLabonte@agcenter.lsu.edu]
Sent: Friday, December 16, 2016 11:18 AM
To: Michael D Keller
Subject: RE: AGRO 2051

ok

From: Michael D Kaller [mailto:mkalle1@lsu.edu]
Sent: Thursday, December 15, 2016 2:15 PM
To: Labonte, Don R.
Cc: Rutherford, Douglas
Subject: AGRO 2051
Hello Dr. Labonte,

This e-mail is to inform you that AGRO 2051 is being dropped as a restricted elective from the following concentrations in the B.S. in Natural Resource Ecology and Management: Conservation Biology; Wildlife Ecology; Pre-Veterinary Medicine Wildlife and Fisheries. The course will remain in the B.S. in Natural Resource Ecology and Management concentrations: Wetland Science; Forest Resource Management; Forest Enterprise; Wildlife Habitat Conservation and Management. This change will affect under 10 students per year, based on our records.

Mike Kaller, Ph.D.
Associate Professor and
Curriculum Coordinator,
School of Renewable Natural Resources,
Louisiana State University
Associate Rector,
Agriculture Residence College
PROPOSED

The Natural Resource Ecology and Management area of concentration in CONSERVATION BIOLOGY is designed to educate students concerning ways to protect biodiversity. This includes a broad base of training in ecology, taxonomy, the genetics of small populations, human dimensions of resource management, and the principles of population biology. Many students in this area of concentration will pursue advanced degrees prior to employment.

BASIC SCHOLASTIC EXPECTATIONS.
*Complete English 1001 and one General Education Analytical Reasoning course within the first 30 hours of study
*Maintain a cumulative and LSU GPA of 2.0
*Students entering the program with 30 or more semester hours will take one additional hour of general electives in place of AGRI 1001.

CRITICAL REQUIREMENTS
Sem 1: MATH 1021
Sem 2: MATH 1431
Sem 3: CHEM 1201
Sem 4: RNR 1010/1071; BIOL 1201
Sem 5: RNR 2101/2001

RECOMMENDED PATH

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<th>Semester 1</th>
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<td>AGRI 1001 INTR TO AGRICULTURE</td>
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<td>ENGL 1001 ENGL COMPOSITION</td>
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<td>MATH 1021 COLLEGE ALGEBRA</td>
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<td>BIOL 1201 BIOL FOR SCI MAJ I [CHEM 1201]</td>
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<td>BIOL 1208 BIOL LAB SCI MAJ [CR: BIOL 1201]</td>
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<td>RNR 1010/1071 INTRO NAT RES ECOL</td>
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<td>CHEM 1201 GEN CHEMISTRY I [CR: MATH 1022/1023/1431/1550/1551]</td>
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<td>CHEM 1202 GENERAL CHEMISTRY [CHEM 1201]</td>
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<td>RNR 2101/2070 ECOL RENEW NAT RES [BIOL 1202, 1209, RNR 1010/1071, 1002]</td>
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<td>RNR 2102 NAT RES MEASUR &amp; GIS</td>
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<td>FREE ELECTIVE</td>
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<th>Critical: RNR 1010/1071; BIOL 1201</th>
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<td>ENGL 2003 ENGLISH COMP [ENGL 1001]</td>
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<td>CMST 2600 PUBLIC SPEAKING</td>
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<td>SOCL 201/201 POLI 2051</td>
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<td>GEN. ED. COURSES – HUMANITIES</td>
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<td>AREA OF CONCENTRATION COURSE</td>
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<td>FREE ELECTIVES</td>
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Semester 5

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<td>EXST 2201 STATISTICAL ANALYSIS [MATH 1021]</td>
<td>4</td>
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Semester 6

<table>
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<tr>
<th>Course</th>
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<tr>
<td>RNR 3105</td>
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<tr>
<td>RNR 3004</td>
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<tr>
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<tr>
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Semester 7

<table>
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Semester 8

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>RNR 4101 NAT RES MGT/POL/HDIM [RNR 2039/2071, 3004]</td>
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<tr>
<td>AREA OF CONCENTRATION COURSES</td>
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</table>

1 - Students may elect to take MATH 1550/1551 in place of MATH 1431.
2 – Conservation Biology area of concentration courses: REQUIRED: CHEM 2060/2261/PHYS 2001; BIOL/RNR 4015, ECON 4320 or RNR 4038, RNR 2031/2072, 3018, 4103, 4107, 4150. Select one course from the following: KNK 4025 or KNK 4040. Select 9 hours from: BIOL 4017, EMS 3040, ENVS 4261, GEOG 4070, OCS 3103, 4900, RNR 4268.
3 - Students seeking federal employment following graduation should consult their academic adviser about federal requirements for animal and plant taxonomy courses.
The Natural Resource Ecology and Management area of concentration in CONSERVATION BIOLOGY is designed to educate students concerning ways to protect biodiversity. This includes a broad base of training in ecology, taxonomy, the genetics of small populations, human dimensions of resource management, and the principles of population biology. Many students in this area of concentration will pursue advanced degrees prior to employment.

BASIC SCHOLASTIC EXPECTATIONS.
*Complete English 1001 and one General Education Analytical Reasoning course within the first 30 hours of study.
*Maintain a cumulative and LSU GPA of 2.0
*Students entering the program with 30 or more semester hours will take one additional hour of general electives in place of AGRI 1001.

CRITICAL REQUIREMENTS
Sem 1: MATH 1021
Sem 2: MATH 4023/4143
Sem 3: CHEM 1201
Sem 4: RNR 1010/1071; BIOL 1201
Sem 5: RNR 2101/2001

RECOMMENDED PATH

<table>
<thead>
<tr>
<th>Semester</th>
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<tr>
<td><strong>Semester 1</strong></td>
<td>MATH 1021</td>
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<tr>
<td>AGRI 1001 INTRO TO AGRICULTURE</td>
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<td>ENGL 1001 ENGLISH COMPOSITION</td>
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<td>MATH 1021 COLLEGE ALGEBRA</td>
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<td>BIOL 1201 BIOL FOR SCI MAJ [CHEM 1201]</td>
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<td>RNR 1002/1083 NAT RESOURCE MGT [CR: RNR 1010/1071]'</td>
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<tr>
<td>GEN. ED. COURSE - ARTS</td>
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<td><strong>Semester 3</strong></td>
<td>CHEM 1201</td>
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<td>RNR 2039/2071 INT RNR RESRC PLCY</td>
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<tr>
<td>CHEM 1202 GENERAL CHEMISTRY [CHEM 1201]</td>
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<td>RNR 2101/2770 ECOL. RNFW NAT RES [BIOL 1202, 1209, RNR 1010/1071, 1002]</td>
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<td>RNR 2102 NAT RES MEASUR &amp; GIS</td>
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<td>CMST 2060 PUBLIC SPEAKING</td>
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<td>AGEC 2002/POLI 1001/2051/2052/2057</td>
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<td>EXST 2201 STATISTICAL ANALYSIS [MATH 1021]</td>
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<tr>
<td>FREE ELECTIVES</td>
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1 - Students may elect to take CHEM 1212 in place of BIOL 1208 and 1209.
2 - Students may elect to take MATH 1550/1551 in place of MATH 1431.
3 - Conservation Biology area of concentration courses: REQUIRED: CHEM 2060/2261/PHYS 2001; BIOL/RNR 4015, RNR 2031/2072, 3018, 4044, 4103, 4107. Select two courses from the following: RNR 4141, 4142, 4145, 4146, RNR 4012, 4013, 4037, 4110, 4145. Select one course from the following: RNR 4023 or RNR 4040.
4 - Students seeking federal employment following graduation should consult their academic advisor about federal requirements for animal and plant taxonomy courses.
REQUEST FOR ADDING, CHANGING, SUSPENDING OR DROPPING AN UNDERGRADUATE CONCENTRATION

Department: Renewable Natural Resources
College: Agriculture
Name of Concentration: Wildlife Ecology
Name of Curriculum/Major: Natural Resource Ecology and Management
Type of Degree: B.S.

Date: 5/2/2016

Has this change been discussed with and approved by all departments/colleges affected? Yes (X) No () N/A ()

ATTACH JUSTIFICATION for all actions: Use separate sheet.
ATTACH RESPONSE from any departments affected [i.e. any department whose course(s) are to be added.]
ATTACH FORM D ADDENDUM for all new concentration or changes involving General Education courses.

ACTION (check appropriate box):

( ) ADDING: The entire new concentration, by semester, must be typed on plain sheets and attached to Form E. (See sample layout attached.)

( X ) CHANGING: Regardless if all semesters of a concentration are to be changed or only parts, the present and proposed (eight-semester) recommended path should be attached on separate pages. On the Present recommended path, use strikeout and on the Proposed recommended path, highlight areas to identify deletions and additions. Do not use boldface to designate changes as boldface is reserved for critical requirements within the recommended path. Explain all changes adequately on attachment.

( ) SUSPENDING: Provide an adequate explanation for suspending the concentration on plain sheets and attach.

( ) DROPPING: Provide an adequate explanation for dropping the concentration on plain sheets and attach.

CONCENTRATION

<table>
<thead>
<tr>
<th>PRESENT</th>
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<td>Total semester hours in current concentration:</td>
<td>36</td>
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APPROVALS:

Department Faculty Approval Date 5/2/2016

D. Alecia Buckner

Department Chair’s Signature (Date) 4/15/16

College Faculty Approval Date 10/27/16

William B. Richardson

College Dean’s Signature (Date) 10/23/16

Chair, FS C & C Committee (Date) 4/15/16

Academic Affairs Approval (Date) 3/8/16

Jennifer Neal

College/Division/Department Contact: jshock@lsu.edu

Contact E-mail:
## GENERAL EDUCATION REQUIREMENTS

When a department adds a new curriculum or makes changes in an existing one, a Form D Addendum must also be submitted. This form is simply a list of those courses in the curriculum that satisfy the General Education requirement. Include course rubric, number, and credit hours when curricula differ from the default values. Indicate the curriculum semester for all General Education courses.

<table>
<thead>
<tr>
<th>General Education Requirement</th>
<th>Course(s)</th>
<th>Credit Hours</th>
<th>Curriculum Semester</th>
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<td>English Composition (6 hrs.)</td>
<td>ENGL 1001 or 1004</td>
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<td>(x) 1st (5th) (2nd) (6th) (3rd) (7th) (4th) (8th)</td>
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<td>ENGL 2000</td>
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<td>Analytical Reasoning (6 hrs.)</td>
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<td>(At least 3 hours credit must be from a MATH course.)</td>
<td>MATH 1431</td>
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<td>(1) 1st (5th) (x) 2nd (6th) (3rd) (7th) (4th) (8th)</td>
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<td>Humanities (9 hrs.)</td>
<td>CMST 2060</td>
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<td>(1) 1st (5th) (2nd) (6th) (3rd) (7th) (x) (4th) (8th)</td>
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<td>General Education humanities course</td>
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<td>(1) 1st (5th) (2nd) (6th) (3rd) (7th) (4th) (8th)</td>
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<td>General Education humanities course</td>
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<td>(1) 1st (5th) (2nd) (6th) (3rd) (7th) (x) (4th) (8th)</td>
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<tr>
<td>Natural Sciences (9 hrs.)</td>
<td>BIOL 1201, 1202</td>
<td>6</td>
<td>(x) 1st (5th) (2nd) (6th) (3rd) (7th) (4th) (8th)</td>
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<tr>
<td>(If 2 course sequence is taken in the physical sciences, the additional 3 hour course must be from the life sciences, and vice versa.)</td>
<td>CHEM 1201</td>
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<td>(1) 1st (5th) (x) 2nd (6th) (3rd) (7th) (4th) (8th)</td>
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<tr>
<td>Social Sciences (6 hrs.)</td>
<td>ECON 2030/POLI 1001/2053/2057</td>
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<td>(1) 1st (5th) (2nd) (6th) (3rd) (7th) (4th) (8th)</td>
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<tr>
<td>(At least three hours at the 2000-level.)</td>
<td>SOCL 2001/POLI 2051</td>
<td>3</td>
<td>(1) 1st (5th) (2nd) (6th) (3rd) (7th) (4th) (8th)</td>
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</table>
RECOMMENDED WORDING FOR GENERAL EDUCATION REQUIREMENTS

Departments and programs should employ the following wording where possible to ensure consistency across curricula in the description of General Education requirements.

* If 2 course natural science sequence is taken in the physical sciences, the additional 3 hour natural science course must be from the life sciences, and vice versa.

English Composition
English 1001 or 1004 ................................................................. 3
English 2000 ................................................................................ 3

Natural Sciences
BIOL 1201, BIOL 1202 ............................................................... 6
CHEM 1201* .............................................................................. 3

Social Sciences
ECON 2030/POLI 1001/2053/2057 .............................................. 3
SOCL 2001/POLI 2051 ................................................................. 3

Analytical Reasoning
MATH 1021 ................................................................................. 3
MATH 1431 ................................................................................. 3

Humanities
CMST 2060 ................................................................................. 3
General education humanities course ........................................ 3
General education humanities course ........................................ 3

Arts
General education arts course .................................................. 3
SUMMARY OF CHANGES:
1) Remove MATH 1022 and require MATH 1431. MATH 1431 will be required for the proposed RNR 49XX – Introduction to Wildlife Population Dynamics.

2) Remove AGEC 2003 and replace with ECON 2030 for a general education social science course.

3) Change AGRO 2051/RNR 4025/4900/4033/3004 to RNR 3004 only. This reflects input from the accrediting committee of the Society of the American Foresters. This change also resolves a prerequisite issue for RNR 4101.

4) Reduce free electives by 3 to add the proposed RNR 49XX – Introduction to Wildlife Population Dynamics.

5) Remove ENGL 3002, which has only been offered three times since spring 2008.

6) Move RNR 3018 from a set of electives to a required course. Add RNR 4051 and 4913 (proposed Introduction to Wildlife Population Dynamics) as a required courses. Reduce to one course or course pair in the case of RNR 4064 and RNR 4110 (RNR 4064 is a pre-requisite for RNR 4110) from the list: BIOL 4141, 4142, 4145, 4146, ENTM 4002, 4005, 4040, RNR 4012, 4013, 4015 (proposed Upland Game Bird Biology), 4037, 4064 and 4110, 4145, OCS 4012.

7) Reactivate RNR 4051.

9) Remove RNR 1002, which is a curriculum-wide change.

9) Remove option for CHEM 1212, because BIOL 1208 and BIOL 1209 are required for RNR 2101.

10) Added Honors versions of required courses (e.g., BIOL 1207, CHEM 1422).

11) Changed RNR 3002/3105 to RNR 3105 to better meet student needs.

JUSTIFICATION: Since the original conception of the Area of Concentration (AOC) in Wildlife Ecology in 2002, the employment and placement landscape has changed for undergraduates in the B.S. in Natural Resource Ecology and Management. The AOC was conceived to place the majority of undergraduates into state and federal agencies as entry-level biologists and technicians. Since 2002, the entry-level requirements for biologists have increased beyond a BS, such that the AOC prepares only for technician level. Consequently, an increasing proportion of undergraduates are entering graduate programs (~40% running average since 2010). Moreover, approximately 40% (since record keeping began in 2010) of undergraduates are finding employment with environmental consulting firms. Thus, only about 20% are being placed into the intended roles with state and federal agencies following graduation, although this number increases post-graduate study. Consequently, the required coursework is being realigned with the needs of graduate study and consulting positions. The emphasis herein is on graduate study, as the faculty intends to increase graduate school placement to 70-80% in the future.
Summary of credit hour changes:

<table>
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<th>Courses added to NREM core:</th>
<th>None</th>
<th>No change</th>
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</thead>
<tbody>
<tr>
<td>Courses added to concentration:</td>
<td>RNR 3018; RNR 4051; RNR 4913; Select 8 hours from: BIOL 4141, 4142, 4145, 4146, ENTM 4002, 4005, 4040, RNR 4012, 4013, 4015, 4037, 4064 and 4110, 4145, OCS 4012.</td>
<td>18 cr.</td>
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<tr>
<td>Courses options added that did not affect credit hours:</td>
<td>BIOL 1207 (Honors); CHEM 1422 (Honors); BIOL 1503 (Honors); CHEM 1431 (Honors); ECON 2030; PHIL 1021</td>
<td>No change</td>
</tr>
<tr>
<td>Courses options removed that did not affect credit hours:</td>
<td>MATH 1022; CHEM 1212; AGRO 2051/RNR 4025/4900/4033</td>
<td>No change</td>
</tr>
<tr>
<td>Courses removed from NREM core:</td>
<td>RNR 1002; Free electives</td>
<td>9 cr.</td>
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<tr>
<td>Courses removed from the concentration:</td>
<td>ENGL 3002; Select two courses from: BIOL 4141, 4142, 4146, RNR 3018, 4012, 4013, 4110, BIOL/RNR 4145</td>
<td>11 cr.</td>
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<tr>
<td>Net concentration change:</td>
<td></td>
<td>7 cr.</td>
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SUPPORTING DOCUMENTS AND COMMUNICATION:

OCS 4012

Hello Mike,

Thank you for the email. I am open to adding OCS 4012 as an approved elective for your Wildlife Ecology Area of Concentration in the BS in Natural Resource Ecology and Management. The RNR students I had in class last semester were great and I’d look forward to more RNR students taking OCS4012. To facilitate this I’ve cc’d Drs. Kam-blu Liu and John White on this email as they are the chair of DOCS and the DOCS curriculum committee chair, respectively. Please let us know what the process might entail and what information our college can provide. Thank you!

Best,

Mike

Michael J. Polito, PhD
Assistant Professor
Department of Oceanography and Coastal Sciences
Louisiana State University
1239 Energy, Coast & Environment Building, Baton Rouge, LA 70803
Office: 225-578-9403
mpolito@lsu.edu | lsu.edu | www.oceanography.lsu.edu/politolab/

From: Michael D Kaller
Sent: Wednesday, June 08, 2016 10:58 AM
To: Michael J Polito
Subject: curriculum request OCS 4012

Hello Mike,

The faculty of RNR are requesting to include OCS 4012 in a list of restricted electives (i.e., pick from this set) for our Wildlife Ecology Area of Concentration in the BS in Natural Resource Ecology and Management. Student feedback about your course has been very positive, and the students recommended that we formally include this course. Additionally, the curriculum in RNR was recently reviewed internally and externally. Both groups noted the lack of diversity in our restricted electives regarding taxonomy and systematics (e.g., we only specify ichthyology, ornithology, mammalogy, herpetology, but do not mention marine, entomology, or invertebrate zoology courses). This is a relic of the historic BS in Wildlife Management that we need to address in our more holistic curriculum. I would anticipate not more than 10 students would elect to complete OCS 4012 in a given year. Please let me know if you are amenable, and if so, I will start the formal communication between our Colleges.
Mike Kaller, Ph.D.
Associate Professor and
Curriculum Coordinator,
School of Renewable Natural Resources,
Louisiana State University
Associate Rector,
Agriculture Residence College

ENTM 4002, 4005, 4040

Mike,

The department approved your wish to include ENTM 4002, 4005, and 4040 as restricted electives within the B.S. in Renewable Natural Resources, Wildlife Ecology Area of Concentration. However, the department has some questions about your proposed new course, ENTM 4020. The departmental C&C and the department would like you to combine 7020 Aquatic Entomology with 4020. Concerns were also brought up about who will teach both courses as Chris is retiring (Chris was not at the meeting). The department asked if you would join us for our next departmental meeting on November 1, 2016 at 11 am to discuss this.

Jeff Davis

---

CHEM 1212

Michael D Kaller

sent: Thu 12/15/2016 2:15 PM
To: Carol H Tayler
Cc: Allen Rutherford (drutherford@lsu.edu)

This e-mail is to inform you that CHEM 1212 is being proposed to be dropped as a general education course from the following concentrations in the B.S. in Natural Resource Ecology and Management: Conservation Biology; Fisheries and Aquaculture; Wetland Science; Wildlife Ecology. CHEM 1212 will remain in the B.S. in Natural Resource Ecology and Management concentrations: Pre-Veterinary Medicine Wildlife and Fisheries; Forest Resource Management; Forest Enterprise; Wildlife Habitat Concentration and Management. This change will affect under 10 students per year, based on our records.

---

Mike Kaller, Ph.D.
Associate Professor and
Curriculum Coordinator,
School of Renewable Natural Resources,
Louisiana State University
Associate Rector,
Agriculture Residence College

AGRO 2051

From: Labonte, Don R. [mailto:DLabonte@agcenter.lsu.edu]
Sent: Friday, December 16, 2016 11:18 AM
To: Michael D Kaller
Subject: RE: AGRO 2051

ok

From: Michael D Kaller [mailto:mkalle1@lsu.edu]
Sent: Thursday, December 15, 2016 2:15 PM
To: Labonte, Don R.
Cc: Rutherford, Douglas
Subject: AGRO 2051

Hello Dr. Labonte,

This e-mail is to inform you that AGRO 2051 is being dropped as a restricted elective from the following concentrations in the B.S. in Natural Resource Ecology and Management: Conservation Biology; Wildlife Ecology; Pre-Veterinary Medicine Wildlife and Fisheries. The course will remain in the B.S. in Natural Resource Ecology and Management concentrations: Wetland Science; Forest Resource Management; Forest Enterprise; Wildlife Habitat Conservation and Management. This change will affect under 10 students per year, based on our records.

Mike Kaller, Ph.D.
Associate Professor and
Curriculum Coordinator,
School of Renewable Natural Resources,
Dear Mike Keller,
Thanks for letting us know.
Best regards,
Oliver Dasbach

Dr. Oliver Dasbach,
Professor and Chair
Department of Mathematics
Louisiana State University
301-C Lockett Hall
Office 225-578-1618
dasbach@math.lsu.edu | www.math.lsu.edu

On Dec 15, 2016, at 2:14 PM, Michael D Kaller <mkalle1@lsu.edu> wrote:

This e-mail is to inform you that MATH 1022 is proposed to be dropped as a general education course from the B.S. in Natural Resource Ecology and Management. MATH 1431 and 1550 were already included in the program, and all students will be directed to these courses. This change may affect as many as 75 students per year.

Mike Kaller, Ph.D.
Associate Professor and
Curriculum Coordinator,
School of Renewable Natural Resources,
Louisiana State University
Associate Rector,
Agriculture Residence College
PRESENT

The Natural Resource Ecology & Management concentration in WILDLIFE ECOLOGY covers traditional management that focuses on wildlife populations, especially game animals and charismatic species of concern to the public. Students study the principles of population growth, theory, and practices concerning population exploitation, habitat requirements and methods of management, and the way that public policy influences wildlife resources. Coursework follows guidelines for professional certification by The Wildlife Society upon graduation. Many students in this area of concentration will pursue advanced degrees prior to employment.

BASIC SCHOLASTIC EXPECTATIONS.
*Complete English 1001 and one General Education Analytical Reasoning course within the first 30 hours of study
*Maintain a cumulative and LSU GPA of 2.0
*Students entering the program with 30 or more semester hours will take one additional hour of general electives in place of AGRI 1001.

CRITICAL REQUIREMENTS
Sem 1: MATH 1021
Sem 2: MATH 1022/1431
Sem 3: CHEM 1201
Sem 4: RNR 1010/1071; BIOL 1201
Sem 5: RNR 2101/2001

RECOMMENDED PATH

Semester 1
Critical: MATH 1021.

AGRI 1001 INTR TO AGRICULTURE 1
ENGL 1001 ENGL COMPOSITION 3
MATH 1021 COLLEGE ALGEBRA 3
BIOL 1201 BIOL FOR SCI MAJ I [CHEM 1201] 3
BIOL 1208 BIOL LAB SCI MAJ [CR: BIOL 1201] 1
RNR 1010/1071 INTRO NAT RES ECOL 4
RNR 1002 USS NAT RESOURCE MGT [CR: RNR 1010/1071] 4

Total Semester Hours: 46

Semester 2
Critical: MATH 1022/1431

CHEM 1201 GEN CHEMISTRY I [CR: MATH 1022/1023/1431/1550/1551] 3
MATH 4023/1431 3
BIOL 1202 BIOL FOR SCI MAJ II [BIOI 1201] 3
BIOL 1209 1
GEN. ED. COURSE – HUMANITIES 3
GEN. ED. COURSE – ARTS 2

Total Semester Hours: 16

Semester 3
Critical: CHEM 1201

RNR 2039/2071 INT RNR RESRC PLCY 3
CHEM 1202 GENERAL CHEMISTRY [CHEM 1201] 3
RNR 2101/2070 ECOL RENEW NAT RES [BIOL 1202, 1209, RNR 1010/1071, 1002] 3
RNR 2102 NAT RES MEASUR & GIS 3
GEN.ED.COURSE – HUMANITIES 3
FREE ELECTIVE 3

Total Semester Hours: 18

Semester 4
Critical: RNR 1010/1071; BIOL 1201

ENGL 2000 ENGLISH COMP [ENGL 1001] 3
CMST 2060 PUBLIC SPEAKING 3
SOCL 2001/POLI 201 3
AREA OF CONCENTRATION COURSE 6

Total Semester Hours: 15

Semester 5

RNR 2001/2020/BIOL. 4020/4041 2-4
AGEC 2003/POLI 1001/2053/2057 3
EXST 2201 STATISTICAL ANALYSIS [MATH 1021] 4
AREA OF CONCENTRATION COURSES 5
FREE ELECTIVE 1-4

Total Semester Hours: 46

Semester 6

RNR 4032/3105 2
AGEC 2004 [RNR 4025/4900/4033/3004] 3-4
FREE ELECTIVES 9

Total Semester Hours: 16

Semester 7

AREA OF CONCENTRATION COURSES 11
FREE ELECTIVES 8

Total Semester Hours: 46

Semester 8

RNR 4101 NAT RES MGT/POL/HDIM [RNR 2039/2071, 3004] 4
AREA OF CONCENTRATION COURSES 5
FREE ELECTIVES 7

Total Semester Hours: 16

1 - Students may elect to take CHEM 1212 in place of BIOL 1208 and 1209.
2 - Students may elect to take MATH 1550/1551 in place of MATH 1431.
3 - Wildlife Ecology areas of concentration courses: REQUIRED: CHEM 2060/2261/PHYS 2001, RNR 2031/2072, 3005, 4011, 4103, 4107, ENGL 4002, BIOL/RNR 4015. Select one course from: RNR 4023 or 4040. Select two courses from: BIOL 4141, 4142, 4146, RNR 3018, 4012, 4015, 4110, BIOL/RNR 4145
4 - Students seeking federal employment following graduation should consult their academic adviser about federal requirements for animal and plant taxonomy courses.
PROPOSED

The Natural Resource Ecology & Management concentration in WILDLIFE Ecology covers traditional management that focuses on wildlife populations, especially game animals and charismatic species of concern to the public. Students study the principles of population growth, theory, and practices concerning population exploitation, habitat requirements and methods of management, and the way that public policy influences wildlife resources. Coursework follows guidelines for professional certification by The Wildlife Society upon graduation. Many students in this area of concentration will pursue advanced degrees prior to employment.

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**CRITICAL REQUIREMENTS**

Sem 1: MATH 1021  
Sem 2: MATH 1431  
Sem 3: CHEM 1201  
Sem 4: RNR 1010/1071; BIOL 1201  
Sem 5: RNR 2101/2001

**RECOMMENDED PATH**

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Critical: MATH 1021</th>
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<tbody>
<tr>
<td>AGR1 1001 INTRO TO AGRICULTURE</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 1001 ENGL COMPOSITION</td>
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<td>MATH 1021 COLLEGE ALGEBRA</td>
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<tr>
<td>BIOL 1201/1422 BIOL FOR SCI MAJ [CHEM 1201]</td>
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<tr>
<td>BIOL 1208/1207 BIOL LAB SCI MAJ [CR: BIOL 1201]</td>
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<tr>
<td>RNR 1010/1071 INTRO NAT RES ECOL</td>
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<table>
<thead>
<tr>
<th>Semester 2</th>
<th>Critical: MATH 1431</th>
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<tbody>
<tr>
<td>MATH 1431</td>
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<tr>
<td>BIOL 1202 BIOL FOR SCI MAJ II [BIOL 1201]</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1209/1503</td>
<td>1</td>
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<tr>
<td>GEN. ED. COURSE – HUMANITIES</td>
<td>3</td>
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<tr>
<td>GEN. ED. COURSE – ARTS</td>
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<td><strong>Total Semester Hours:</strong></td>
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<table>
<thead>
<tr>
<th>Semester 3</th>
<th>Critical: CHEM 1201/1422</th>
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<tbody>
<tr>
<td>RNR 2039/2071 INT RNR RESRC PLCY</td>
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<tr>
<td>CHEM 1202 GENERAL CHEMISTRY [CHEM 1201]</td>
<td>3</td>
</tr>
<tr>
<td>RNR 2101/2070 ECOL RENEW NAT RES [BIOL 1202, 1209, RNR 1010/1071, 1002]</td>
<td>3</td>
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<tr>
<td>RNR 2102 NAT RES MEASUR &amp; GIS</td>
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<tr>
<td>GEN. ED. COURSE – HUMANITIES</td>
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<tr>
<td>FREE ELECTIVE</td>
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<table>
<thead>
<tr>
<th>Semester 4</th>
<th>Critical: RNR 1010/1071; BIOL 1201</th>
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<tbody>
<tr>
<td>ENGL 2000 ENGLISH COMP [ENGL 1001]</td>
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<tr>
<td>CMST 2060 PUBLIC SPEAKING</td>
<td>3</td>
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<tr>
<td>SOCL 2001/2051</td>
<td>3</td>
</tr>
<tr>
<td>AREA OF CONCENTRATION COURSE</td>
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<table>
<thead>
<tr>
<th>Semester 5</th>
<th>Critical: RNR 2101/2001</th>
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<tbody>
<tr>
<td>RNR 2001/4020/4041</td>
<td>2-4</td>
</tr>
<tr>
<td>ECON 2030/2053/2057</td>
<td>3</td>
</tr>
<tr>
<td>EXST 2201 STATISTICAL ANALYSIS [MATH 1021]</td>
<td>4</td>
</tr>
<tr>
<td>AREA OF CONCENTRATION COURSES</td>
<td>5</td>
</tr>
<tr>
<td>FREE ELECTIVE</td>
<td>2-0</td>
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<tr>
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<table>
<thead>
<tr>
<th>Semester 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>RNR 3105</td>
</tr>
<tr>
<td>RNR 3004</td>
</tr>
<tr>
<td>AREA OF CONCENTRATION COURSES</td>
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<tr>
<td><strong>Total Semester Hours:</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Semester 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>AREA OF CONCENTRATION COURSES</td>
</tr>
<tr>
<td><strong>Total Semester Hours:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>RNR 4101 NAT RES MGT/POL/HDIM [RNR 2039/2071, 3004]</td>
</tr>
<tr>
<td>AREA OF CONCENTRATION COURSES</td>
</tr>
<tr>
<td>FREE ELECTIVES</td>
</tr>
<tr>
<td><strong>Total Semester Hours:</strong></td>
</tr>
</tbody>
</table>

1. Students may elect to take MATH 1550/1551 in place of MATH 1431.
3. Students seeking federal employment following graduation should consult their academic adviser about federal requirements for animal and plant taxonomy courses.
REQUEST FOR ADDING, CHANGING, SUSPENDING OR DROPPING AN UNDERGRADUATE CONCENTRATION

Department: Renewable Natural Resources
College: Agriculture
Name of Concentration: Forest Enterprise
Name of Curriculum/Major: Natural Resource Ecology and Management
Type of Degree: B.S.
Date: 9/15/2015

Has this change been discussed with and approved by all departments/colleges affected? Yes ( ) No ( ) N/A (X)

ATTACH JUSTIFICATION for all actions: Use separate sheet.
ATTACH RESPONSE from any departments affected [i.e. any department whose course(s) are to be added.]
ATTACH FORM D ADDENDUM for all new concentration or changes involving General Education courses.

ACTIONS (check appropriate box):

( ) ADDING:
The entire new concentration, by semester, must be typed on plain sheets and attached to Form E. (See sample layout attached.)

( ) CHANGING:
Regardless if all semesters of a concentration are to be changed or only parts, the present and proposed (eight-semester) recommended path should be attached on separate pages. On the Present recommended path, use strikeout and on the Proposed recommended path, highlight areas to identify deletions and additions. Do not use boldface to designate changes as boldface is reserved for critical requirements within the recommended path. Explain all changes adequately on attachment.

( ) SUSPENDING:
Provide an adequate explanation for suspending the concentration on plain sheets and attach.

( ) DROPPING:
Provide an adequate explanation for dropping the concentration on plain sheets and attach.

CONCENTRATION

<table>
<thead>
<tr>
<th>PRESENT</th>
<th>PROPOSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total semester hours in current concentration: 47</td>
<td>Total semester hours in proposed concentration: 47</td>
</tr>
</tbody>
</table>

APPROVALS:

Department Faculty Approval Date: 5/2/2016
D. Arnold
11 Oct 16

College Faculty Approval Date: 10/29/16
William B. Richardson

Department Chair's Signature: (Date)
John B. Hoyle

College Dean's Signature: (Date)
Matthew

Chair, FS C & C Committee: (Date)

Academic Affairs Approval: (Date)

College/Division/Department Contact: Jennifer Neal

Contact E-mail: jnhene1@isu.edu
# GENERAL EDUCATION REQUIREMENTS

When a department adds a new curriculum or makes changes in an existing one, a Form D Addendum must also be submitted. This form is simply a list of those courses in the curriculum that satisfy the General Education requirement. Include course rubric, number, and credit hours when curricula differ from the default values. Indicate the curriculum semester for all General Education courses.

<table>
<thead>
<tr>
<th>General Education Requirement</th>
<th>Course(s)</th>
<th>Credit Hours</th>
<th>Curriculum Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition (6 hrs.)</td>
<td>ENGL 1001 or 1004</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ENGL 2000</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Analytical Reasoning (6 hrs.)</td>
<td>MATH 1021</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>(At least 3 hours credit must be from a MATH course.)</td>
<td>MATH 1431</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Arts (3 hrs.)</td>
<td>General Education arts course</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Humanities (9 hrs.)</td>
<td>CMST 2060</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>General Education humanities course</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>General Education humanities course</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Natural Sciences (9 hrs.)</td>
<td>BIOL 1201, 1202</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>(If 2 course sequence is taken in the physical sciences, the additional 3 hour course must be from the life sciences, and vice versa.)</td>
<td>CHEM 1201</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Sciences (6 hrs.)</td>
<td>AGEC 2003</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>(At least three hours at the 2000-level.)</td>
<td>General education social science course</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
Departments and programs should employ the following wording where possible to ensure consistency across curricula in the description of General Education requirements.

* If 2 course natural science sequence is taken in the physical sciences, the additional 3 hour natural science course must be from the life sciences, and vice versa.

**English Composition**
- English 1001 or 1004 ..................................................... 3
- English 2000 ................................................................. 3

**Natural Sciences**
- BIOL 1201, BIOL 1202 .................................................. 6
- CHEM 1201* ................................................................. 3

**Social Sciences**
- AGEC 2003 ................................................................. 3
- General education social science course .......................... 3

**Analytical Reasoning**
- MATH 1021 ................................................................. 3
- MATH 1431 ................................................................. 3

**Humanities**
- CMST 2060 ................................................................. 3
- General education humanities course .............................. 3
- General education humanities course .............................. 3

**Arts**
- General education arts course ...................................... 3
SUMMARY OF CHANGES:

1) RNR 1002 is being removed, which is a curriculum-wide change.

2) Honors versions of courses added.

JUSTIFICATION: RNR 1002 will not be offered as a regular offering in the future.
PROPOSED

The FOREST ENTERPRISE area of concentration provides skills and theory to students planning to work in forestry consulting/engineering firms and the timber and wood products industry. Considerable forestry and timber production currently occurs on private lands and involves contracting among various harvesting, processing, and land management entities. Additionally, non-timber revenues, including wildlife leases and mitigative credits and incentive programs, require different experiences of students than traditional management. Knowledge of legal precedents, business planning, contracting, and ethical best management practices is in demand among environmental consulting/engineering firms and the timber and wood products industry.

BASIC SCHOLASTIC EXPECTATIONS
*Complete English 1001 and one General Education Analytical Reasoning course within the first 30 hours of study
*Maintain a cumulative and LSU GPA of 2.0
*Students entering the program with 30 or more semester hours will take one additional elective in place of AGR 1001.

CRITICAL REQUIREMENTS
Sem 1: MATH 1021
Sem 2: MATH 1431
Sem 3: CHEM 1201
Sem 4: RNR 1010/1071; BIOL 1201
Sem 5: RNR 2102/2001

RECOMMENDED PATH

Semester 1
Critical: MATH 1021.

BIOL 1201 BIOL FOR SCI MAJ I [CHEM 1201] 3
BIOL 1208/1207 BIOL LAB SCI MAJ I [CR: BIOL 1201] 2
ENGL 1001 ENGL COMPOSITION 3
MATH 1021 COLLEGE ALGEBRA 3
RNR 1010/1071 INTRO NAT RES ECOL 4
AGRI 1001 INTR TO AGRICULTURE 1

Total Semester Hours: 15

Semester 2
Critical: MATH 1431

BIOL 1202 BIOL FOR SCI MAJ II [BIOL 1201] 3
BIOL 1209/1203 BIOL LAB SCI MAJ II [BIOL 1208 CR: BIOL 1202] 2
MATH 1431 CAL-BUS & ECO APLCAT [MATH 1021] 3
GEN. ED. COURSE – ARTS 3
GEN. ED. COURSE – SOCIAL SCIENCES 2

Total Semester Hours: 16

Semester 3
Critical: CHEM 1201

CHEM 1202 GENERAL CHEMISTRY [CHEM 1201] 3
AGEC 2003 3
RNR 2001 TREES & WDF PLANTS SE 2
RNR 2101/2070 ECOL RENEW NAT RES [BIOL 1202, 1209, RNR 1010/1071, 1002] 3
CMST 2060 PUBLIC SPEAKING 3
AREA OF CONCENTRATION COURSES 2

Total Semester Hours: 16

Semester 4
Critical: RNR 1010/1071; BIOL 1201

RNR 2039/2071 INT RNR RESRC PLCY 3
EXST 2201 STATISTICAL ANALYSIS [MATH 1021] 4
ENGL 2000 ENGLISH COMP [ENGL 1001] 3
AREA OF CONCENTRATION COURSES 7

Total Semester Hours: 17

Semester 5
Critical: RNR 2102/2001

RNR 2102 NAT RES MEASUR & GIS 3
GEN. ED. COURSE – HUMANITIES 6
AREA OF CONCENTRATION COURSES 7

Total Semester Hours: 16

Semester 6

AREA OF CONCENTRATION COURSES 12
FREE ELECTIVES 4

Total Semester Hours: 17

Semester 7

AREA OF CONCENTRATION COURSES 9
FREE ELECTIVES 6

Total Semester Hours: 16

Semester 8

RNR 4101 NAT RES MGT/POL/HDIM [RNR 2039/2071, 3004] 4
RNR 4900 WATERSHED HYDROLOGY 3
AREA OF CONCENTRATION COURSES 2

Total Semester Hours: 16

1 – Students may take MATH 1550/1551 in place of MATH 1431.
2 – Forest Enterprise area of concentration courses: ACCT 2001, BLAW 3201, CHEM 1212, MGT 3260, RNR 2003, 2043, 3002, 3034, 3036, 3037, 3040, 3041, 3105, 4001, 4036, 4038. *Must take three different sections of RNR 3041 (1 credit hour each) or a combination of 3038, 3039, or 3041 for a total of three credit hours. RNR 3002 and 4001 must be completed in the fall before spring courses RNR 3034, 3036, 3037, 3040, 3041, and 3105. Select 12 hours from: AGEC 3003, 3413, 4403, 4443**, FIN 3352, 3353, 3355, 3440, or RNR 4107. **A minimum of 9 hours of AGEC must be selected.
3 – Students interested in professional certification in forestry, participation in required forestry course, or graduate and professional school are advised to take PHIL 2020 as one general education humanities course.
4 – The 6th semester is intended to include the 8 week field camp experience (RNR 3034, 3036, 3037, 3040, 3041) preceded by 8 week on-campus courses (RNR 3103, 3105). Students shall only enroll in 8 week area of concentration and 8 week elective courses during this semester and shall expect to be off campus extended periods of time, including overnight trips, during the second 8 weeks.
The FOREST ENTERPRISE area of concentration provides skills and theory to students planning to work in forestry consulting/engineering firms and the timber and wood products industry. Considerable forestry and timber production occurs on private lands and involves contracting among various harvesting, processing, and land management entities. Additionally, non-timber revenues, including wildlife leases and mitigative credits and incentive programs, require different experiences of students than traditional management. Knowledge of legal precedents, business planning, contracting, and ethical best management practices is in demand among environmental consulting/engineering firms and the timber and wood products industry.

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Sem 2: MATH 1431
Sem 3: CHEM 1201
Sem 4: RNR 1010/1071; BIOL 1201
Sem 5: RNR 2101/2001

RECOMMENDED PATH
Semester 1
Critical: MATH 1021.
BIOL 1201 BIOL FOR SCI MAJ I [CHEM 1201] 3
BIOL 1208 BIOL LAB SCI MAJ I [CR: BIOL 1201] 1
ENGL 1001 ENGL COMPOSITION 3
MATH 1021 COLLEGE ALGEBRA 3
RNR 1010/1071 INTRO NAT RES ECOL 4
RNR 1002 INTSS NAT RESOURCE MGT [CR: RNR 1010/1071] 4
AGRI 1001 INTR TO AGRICULTURE 1
Total Semester Hours: 46

Semester 2
Critical: MATH 1431
BIOL 1202 BIOL FOR SCI MAJ II [BIOL 1201] 3
BIOL 1209 BIOL LAB SCI MAJ II [BIOL 1208 CR: BIOL 1202] 1
CHEM 1201 GEN CHEMISTRY I [CR: MATH 1022/1023/1431/1550/1551] 3
MATH 1431 CAL-BUS & ECO APLICAT [MATH 1021] 3
GEN. ED. COURSE – ARTS 3
GEN. ED. COURSE – SOCIAL SCIENCES 3
Total Semester Hours: 16

Semester 3
Critical: CHEM 1201
CHEM 1202 GENERAL CHEMISTRY [CHEM 1201] 3
AGEC 2003 3
RNR 2001 TREES & WDY PLANTS SE 2
RNR 2101/2070 ECOL RENEW NAT RES [BIOL 1202, 1209, RNR 1010/1071, 1002] 3
CMST 2060 PUBLIC SPEAKING 3
AREA OF CONCENTRATION COURSES 2
Total Semester Hours: 16