Natural Resources Management, B.S.
SNRE
AY 14/15 and 15/16

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1. Assessment information collected
   i. Posters presented by SNRE students at the Undergraduate Research and Scholarly Activity (URSA) Research Day and selected 300 and 400-level course exams, term papers, and other projects were reviewed with the following VALUE Rubrics: Critical Thinking (CT), Problem Solving (PS), Oral Communication (OC), Written Communication (WC), and Inquiry and Analysis (IA), where 1 = benchmark, 2 and 3 = milestones, and 4 = capstone. Three posters were presented and evaluated by two raters. Average scores across the three posters were 2.7, 2.8, 2.8, 3.0, and 3.0 for CT, PS, OC, WC, and IA, respectively. Within students, the average scores across the rubrics were 2.4, 2.6, and 3.6. The student who scored 3.6 received the 2nd place overall URSA award.

   Thirty-seven course assignments were evaluated (exams n = 13; term paper n = 6; other project n = 18) across three 400-level courses and one 300-level course. There were 26 unique students evaluated. Across students and assignment type, averages were: 3.0, 3.0, 3.5, 3.1, and 2.9, for CT, PS, OC, WC, and IA, respectively. (Note, oral communication was only applicable in six evaluations.) Within students 15 (58%) had averages >= 3.0 (i.e., the upper score of “milestone”), with the following ranges: 4.0, n = 4; 3.0 – 3.9, n = 11; 2.0 – 2.9, n = 10; 1 – 1.9, n = 1.

   ii. Interim Dean Stephen Sparrow and Director of Academic Programs David Valentine conducted exit interviews with 7 graduating seniors to garner their opinions of strengths and weaknesses of the program during the past 2 years. Students consistently cited the well-rounded and integrative nature of the courses as vital to their sense of being prepared for the next step (graduate school or employment opportunity). Many cited the courses in Geographic Information Systems, Natural Resources Law and Policy, and Soil Science as particularly valuable, and indicated they wished additional courses were available in these areas.
iii. The SLOA plan calls for surveys to alumni and employers every five years. Since there were done within the past five years, they were not done for this assessment period.

2. Conclusions drawn from the information summarized above
   i. The URSA posters had average scores across all rubrics just below the 3.0 criteria for “upper milestone." For those students with average scores slightly below the 3.0 criteria, time and effort expended by the student’s thesis advisor and committee could be a factor. A rubric for poster presentations should be developed along with clear deadlines to allow for adequate review and feedback.

   Fifty-eight percent of the students evaluated were above the 3.0 criteria for “upper milestone." This assessment placed more emphasis on understanding the 42% percent of students scoring below the 3.0 criteria. The one 300-level course included in the assessment did have slightly lower scores; students with multiple evaluations showed a high degree of variability, consistently scoring a 4 on one assignment and 2 on another, as evaluated by the same rater; and there appears to be a few outliers who consistently score low on all rubrics. Some of the students who scored low appear to be transfer students, two were non-NRM majors, and one of the low-scoring students in the 300-level course had a lower-division status. It should be investigated as to whether those students met the course prerequisites and/or have been adequately prepared for the courses. Novel methods to engage students with low motivation should be investigated by faculty.

   ii. From the 7 exit interviews, a few common themes emerged. Several students thought advising could have been stronger and expressed frustration over negotiating class schedules, especially in the (now defunct) forestry option where course requirements were relatively inflexible. Students consistently cited the well-rounded and integrative nature of the courses as being vital to their sense of being prepared for their next steps (graduate school or employment). Many cited as particularly valuable their courses in Geographic Information Systems, Natural Resources Law and Policy, and Soil Science, and indicated they wished there were more offerings in each area. Students expressed overall satisfaction with most NRM classes and noted they appreciated the opportunities to learn to think independently and critically. Based in part on these interviews and
other informal conversations, and in part on our hope to expand educational opportunities, we encouraged faculty to participate in a series of SNRE-focused iTeach sessions during spring 2016.

3. **Curricular changes resulting from conclusions drawn above**
   i. A rubric for URSA posters will be developed and disseminated to faculty members. In addition, a poster review process with clear deadlines will be developed.
   ii. Content of 100 and 200-level courses will be reviewed to ensure students are prepared for the upper division courses.
   iii. Preparedness for upper-level classes of transfer students will be assessed.
   iv. Interrelatedness of courses within the curriculum will be reviewed with an eye toward enhancing student experience.

4. **Identify the faculty members involved in reaching the conclusions drawn above and agreeing upon the curricular changes resulting**
   David Valentine, Director of Academic Programs; Meriam Karlsson, Chair Department of Agriculture and Horticulture; Peter Fix, Chair, Department of Natural Resources Management.