

Outcomes Assessment Activities – 2004-2005
Department of Agricultural Economics
And Agricultural Business

UNDERGRADUATE PROGRAM

1. **Current copy of Outcomes Assessment plan for undergraduate program**

Undergraduate program objectives

Our Outcomes Assessment objectives for undergraduate students include the following:

- Students should have the ability to think critically, communicate verbally and in writing, and synthesize information concerning the field of agricultural economics and agricultural business.
- Students should have a meaningful educational experience.
- Students should have, as a result of their college education, opportunities for productive and rewarding careers.

2. **Activities for 2004-2005**

We have three major direct measures of learning: 1) Senior Creative Project, 2) Capstone Senior course, and 3) Direct Testing; we also use several indirect measures. Beginning fall 2004, seniors were given a choice between completing the Senior Creative Project or the Capstone Senior Course

Senior Creative Project

We have now completed our eighth year of this measure. Students must integrate all phases of their education into the project and present a seminar to the public.

Capstone Senior Course

A capstone senior course, AG E 456, was taught spring 2005 with 45 students. The capstone course, developed and taught by Dr. James Libbin, is a series of case studies that require the student to integrate all fields of knowledge.

Direct Testing

We administered a general knowledge test for incoming freshmen for spring and fall 2005. During 2005 we tested 51 graduating seniors. Each semester, all entering freshmen and graduating seniors are tested. Freshmen testing began fall 2002 and senior

testing began fall 2003. A complete comparison analysis will be completed when we feel we have sufficient numbers to provide a valid comparison, hopefully at the end of 2006.

Other Measures

We also use exit interviews by the department head each semester as well as periodic alumni surveys. We also have seniors turn in a formal questionnaire before graduation (Addendum 2).

3. What we have learned.

a. Senior Project

Our Senior Creative Project is now in its eighth year. Our experience thus far has confirmed what we have previously surmised, namely, that students are accustomed to receiving information as opposed to using, integrating, and applying information and concepts to specific issues. Students tend to search for “right” answers rather than being comfortable with using concepts to address and analyze issues which have no “right” answers. We hasten to add that this shortcoming is not unique to students of this department. However, it is for this very reason, that our Senior Creative Project was instituted, i.e., to provide students with the opportunity to integrate and apply knowledge to issues or problems of their choice.

However, the general level of quality has not met the department’s expectations. Therefore, beginning fall 2003, a new capstone senior class was developed and taught as an alternative to the senior project.

b. Capstone Senior Course

Dr. James Libbin has previously taught case study classes, but he also took a sabbatical for fall 2003 to refine the case study class. The class has been a resounding success. In the spring 2005 with 45 students enrolled. Dr. Libbin’s case studies incorporated all of the major concepts we expect graduates to know. To successfully complete the class, students must demonstrate that they can integrate the various fields of study to analyze the case studies.

c. Direct Testing

We have score results for six freshmen classes and three graduating senior classes. The department is currently working on the correct method of analysis for the data, but at this point the additional graduating seniors are needed to make the comparisons valid. At the end of fall 2006, a complete comparison analysis will be completed.

d. Indirect Testing

With respect to indirect measures, surveys of students graduating during the fall 2004 and spring 2005 semesters showed us that:

- 95% strongly agreed or agreed that they had a positive educational experience in this program.
- 80% strongly agreed or agreed that they were prepared for career objectives.
- 100% of the students were very satisfied or satisfied with departmental instruction.
- Similar results were received regarding student satisfaction with departmental advising and their propensity to recommend to others this department for a degree program.

4. **Anticipated changes in Outcomes Assessment Activities.**

The department will get the first results of direct testing at the end of 2006. It is anticipated that these results will help guide the department on what changes will be necessary for the senior project and capstone courses.

5. **How results are communicated to faculty.**

Results are communicated to the faculty through participation in the entire process. Faculty members have set the objectives and procedures, and evaluate the results, all with the ultimate objective of maximizing the effectiveness of our program. All memos regarding outcomes are shared with faculty members. Input and advice from faculty members is sought for all reports. Additionally, with the new freshmen – senior testing system each faculty member is required to submit new questions for the test bank and are involved in evaluation of the results.

GRADUATE PROGRAM

1. Current copy of Outcomes Assessment plan for graduate program.

Graduate program objectives

Our Outcomes Assessment objectives for graduate students include the following:

- Students who are prepared to critically analyze an economic problem or issue.
 - Graduate students should have an educational experience applicable to careers in agricultural economics and economics.
 - Graduates in the AEEC program should find employment.
2. Our chief method of directly assessing learning (i.e., over and above a vigorous set of required courses) at the graduate level is the masters thesis and the public presentation each candidate is required to give. This presentation is separate from the formal oral exam. The candidate is expected to present the topic of his/her research at a public forum with emphasis on reducing the technical problem to terms understandable by a less technical audience. The faculty has agreed to another direct measure (discussed in 4 below).

Our indirect measures include exit interviews by the department head, a survey of our masters candidates upon graduation, and periodic alumni surveys (Addendum 3 attached – results discussed below).

Dr. James Libbin developed a capstone graduate case study class, AEEC 556. This class requires students to integrate all levels of knowledge. Spring 2005 enrollment was 15 students. This class was put in the core requirements for all Master of Agriculture and MBA agribusiness students.

3. What we have learned.

Regarding direct measures, we have found that with the encouragement and incentive offered by the public forum our M.S. candidates are indeed capable of presenting their research in terms understandable by the public. In fact, although often apprehensive, our candidates report finding their presentations to be constructive and useful experiences. The faculty has found this to be useful as a means of ascertaining the ability of students to present and effectively communicate their results.

Our most recent survey of departmental graduates revealed that:

- 100% of graduate degree alumni respondents strongly agreed that they had a positive educational experience.

- 100% of graduate degree respondents felt that the majority of their course work was relevant to their careers.
- 100% of graduate degree respondents agreed or strongly agreed that they were academically prepared for their career objectives.

4. **Anticipated changes in Outcomes Assessment Activities.**

As the public presentation of research results (in addition to the formal oral exam) has proven successful and has effectively become part of the “departmental culture,” we plan to continue it.

The department has agreed to institute another measure of direct learning. Upon entry into the program beginning in fall 2006, all graduate students will take a pre-test on advanced economic concepts. Prior to graduation, they will take a post-test on the same concepts. The objective is not for students to “pass” the test but for the department to obtain information on their education, i.e., a direct measure of learning. The department is in the process of developing a graduate test bank similar to the one developed for undergraduates. This bank will be used to develop and pre-test an entry exam for fall, 2006. The direct-testing program will start fall 2007. As this procedure will take two years to yield additional information, we plan to continue our other direct measures of learning and our existing indirect measures of learning.

Information provided by our master’s graduates indicated potential additional choices for graduate training. As such, the department entered into an agreement with the College of Business Administration and Economics to offer an MBA with a concentration in Agribusiness. That program was fully developed in 2004 and became available for students fall 2004. Additionally, a potential for a Doctorate program has been explored by the department and is still in the developmental stages.

5. **How results are communicated to faculty.**

Results are communicated to the faculty through participation in the entire process. Faculty members have set the objectives and procedures, and evaluate the results, all with the ultimate objective of maximizing the effectiveness of our program. One of our faculty members attended a two-day workshop (at our annual professional meeting) devoted exclusively to Outcomes Assessment. All memos regarding outcomes are shared with faculty members. Input and advice from faculty members is sought for all reports.

ADDENDUM 1

Undergraduate Information Survey

ADDENDUM 2

Graduate Information Survey

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Addendum 1

- A. Project titles and strategic plan goals to which they apply.
- B. Impacts of specific projects in terms of economic, environmental, social, and geographic consequences.

Addendum 2**Undergraduate Information Survey**

If you completed an **undergraduate** program in Agricultural Economics or Agricultural Business at NMSU, please answer the following questions by circling the appropriate number.

1. I had a positive educational experience during my program.

Strongly DisagreeStrongly Agree

1 2 3 4 5

2. I was academically prepared for my career objectives.

Strongly DisagreeStrongly Agree

Not Out of School
Long Enough
to Evaluate

1 2 3 4 5 6

3. What percentage of your course work was relevant to your career objectives?

0 - 1920 - 3940 - 5960 - 7980 - 100

1 2 3 4 5

4. Overall what was your level of satisfaction with departmental instruction?

Very DissatisfiedVery Satisfied

1 2 3 4 5

5. Overall what was your level of satisfaction with non-departmental instruction?

Very DissatisfiedVery Satisfied

1 2 3 4 5

6. Overall what was your level of satisfaction with departmental support and advising?

Very DissatisfiedVery Satisfied

1 2 3 4 5

7. For someone considering an undergraduate degree in Agricultural Economics or Agricultural Business, I would recommend NMSU.

Strongly DisagreeStrongly Agree

1 2 3 4 5

Addendum 3**Graduate Information Survey**

If you completed a **graduate** program in Agricultural Economics or Agricultural Business at NMSU, please answer the following questions by circling the appropriate number.

1. I had a positive educational experience during my program.

Strongly DisagreeStrongly Agree

1 2 3 4 5

2. I was academically prepared for my career objectives.

Strongly DisagreeStrongly Agree

Not Out of School
Long Enough
to Evaluate

1 2 3 4 5 6

3. What percentage of your course work was relevant to your career objectives?

0 - 1920 - 3940 - 5960 - 7980 - 100

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4. Overall what was your level of satisfaction with departmental instruction?

Very DissatisfiedVery Satisfied

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5. Overall what was your level of satisfaction with non-departmental instruction?

Very DissatisfiedVery Satisfied

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6. Overall what was your level of satisfaction with departmental support and advising?

Very DissatisfiedVery Satisfied

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7. For someone considering an graduate degree in Agricultural Economics or Agricultural Business, I would recommend NMSU.

Strongly DisagreeStrongly Agree

1 2 3 4 5

To: Dr. Wes Holley
From: Drs. Tim Ross and Derek Bailey
Through: Dr. Mark Wise
Date: February 27, 2006
Subject: Outcomes Assessment

Outcomes Assessment Plan:

Animal Science, Undergraduate Program

As indicated last year's report, we made several changes in our curriculum to enhance the educational experience of our majors. We are beginning to assess these changes and to assess the learning of our students in two ways.

1. **SWOT Analysis:** The faculty will evaluate the undergraduate program through a series of meetings and discussions to assess the Strength, Weaknesses, Opportunities and Threats to our programs and student learning. These discussions will begin as smaller groups assessing the undergraduate programs in animal science and range. These small groups will eventually report to the faculty as a whole to determine the direction of the departmental undergraduate programs.
2. **Exit Exams:** We have now completed three semesters of exit exams(one spring and 2 fall). Following the spring 2006 semester, we will have the minimum data to begin evaluating the performance of students by year as well as by the 9 discipline areas. I will share these reports with the faculty so the data can become part of the SWOT analysis in an effort to make the process more transparent. The exit exams are administered at the end of each semester in our Senior Seminar course (AnSc 402), a course required for all of our students.

Range Science

Similar to the animal science program, range science uses feedback and data from industry, graduates and an exit exam in its current assessment plan. Feedback from industry, graduates and current students have indicated a need for more emphasis on riparian management which is currently being incorporated into our senior capstone class, RGSC 460 Advanced Rangeland Management.

A general exam has been given to seniors in Range Science since the fall of 2004. Currently, this exam is not categorized by subject matter. As part of the SWOT process of evaluating undergraduate teaching, we will consider organizing the exit exam by subject to help assess where improvement would be beneficial.

Starting next year, we also plan to develop a background exam that will be given to students at the beginning of RGSC 460 to assess the training that students have received prior to enrolling this capstone course. The exit exam will be given at the end of the course to evaluate improvement in the students understanding of these and other areas.

Current Situation:

Last fall, our department initiated the SWOT analysis for the undergraduate teaching programs. We have refined the exit exam to address the earlier reported problems. We continue to conduct an Academic Quadrathlon program (voluntary). Last spring, the winning team of the local competition placed second in the western regional competition held in Logan, Utah.

Animal Science and Range Science, Graduate Program:

The best assessment of a graduate program is the placement of students. We are very successful in placing students into Ph.D. programs, professional schools and the workplace. In addition, our graduate program has the highest retention rate of any graduate program at NMSU. Our assessment plan includes:

1. Most of the M.S. students conduct independent research, prepare and thesis and defend the thesis in an oral exam. The Ph.D. Students will pass a qualifier exam, comprehensive written exams including a general exam over their area of interest, prepare a dissertation and defend that dissertation in an oral defense.
2. All of our graduates are strongly encouraged to present and publish their research in regional or national venues.
3. As with the undergraduate programs, the graduate programs are also undergoing a SWOT analysis. Faculty groups are meeting by discipline to assess the program and these will eventually reported to the faculty as a whole.

Current Situation:

The majority of our M.S. graduate students prepare a thesis and all the Ph.D. students prepare a dissertation. Our students do well on the various exams and are active in the American Society of Animal Science by presenting and publishing their research in regional and national venues. Feedback from industry has identified the need for training of managers for non-traditional ranches where wildlife management, recreation, preservation may have similar or greater priorities than livestock production. As part of the SWOT process we are discussing the possibilities of developing a program to meet this growing need.

Dissemination of Information:

Information collected through assessment activities will be provided to faculty for inclusion into the SWOT Analysis.

Recruitment –

In addition to our college recruiter, Dr. Jerry Holechek has been devoting a great deal of time visiting high schools in New Mexico to recruit new freshmen into the range science program. As a result of his and others efforts, enrollment of freshmen in range science has improved. In addition, Dr. Clay Elliot recruits at the high schools and junior colleges to attract students with livestock background into the Animal Science undergraduate program.

Future Assessment Activities:

We will continue with the SWOT analysis for both the undergraduate and graduate programs. We will continue to seek feedback from graduates, employers, faculty from professional and graduate schools regarding the preparedness of our graduates. We will continue with the undergraduate exit exam and various graduate exams and defenses. Following the spring 2006 exit exam, we will provide data to the faculty for analysis and discussion.

MEMORANDUM
January 21, 2006

TO: Dr. Wes Holley, Associate Dean and Associate Director of Academic Programs
FROM: Dr. Thomas Dormody, Department Head
SUBJECT: Agricultural and Extension Education Academic Outcomes Assessment Reports
for 2004-2005

Here is the Agricultural and Extension Education Department Undergraduate and Graduate Academic Outcomes Assessment Reports covering the semesters of Fall 2004 and Spring 2005. The department was at Stage 3 in both the undergraduate and graduate programs in 2003-2004.

1. Current copy of your outcomes assessment plan (attached)

Undergraduate Program Report

2. Outline the program's assessment activities within the context of your outcomes assessment plan.

- * The department addressed Program Learning Outcome 1, "Students in the Agricultural and Extension Education Bachelor of Science program will be able to develop and demonstrate specific entry-level employment competencies as described by the State Department of Education, United States Department of Agriculture, industry, and other employer groups" using supervisor-assessed and student self-assessed employability competency rating forms completed during and immediately after required senior internship experiences and by professionalism scores in AXED 444, 445, 446, and 460.
- * The department addressed Program Learning Outcome 2, "Students in the program will be able to plan and deliver educational programs, and evaluate student learning" with scores on a community development program planning project for a non-formal education setting in AXED 444; a public school curriculum development project in AXED 445; scores on lesson plans, videotaped microteaching presentations, and a student learning assessment tool for planned instruction in AXED 446; and scores on a laboratory demonstration in AXED 460.
- * The department addressed Program Learning Outcome 3, "Students in the program will develop human relations skills" using supervisor-assessed employability competency rating forms (containing competencies related to serving diverse clientele and human relations in the work place) completed during required senior internship experiences; by observing students participating in analysis and discussion of classroom management case studies

and video clips in AXED 446; and by observing students participating in analysis and discussion of case studies representing diverse, contemporary work place situations in AXED 444.

3a. What have you learned from your 2004-2005 outcomes assessment activities?

- * Program Learning Outcome 1. All three assessment standards were met by the students in 2004-2005. All 12 of the 2004-2005 student interns received passing scores from their supervisors on 80% or more of the specific entry-level employment competencies. On self-evaluations, all 12 of the student interns reported they had developed 80% or more of the specific entry-level employment competencies. All 46 of the professionalism scores recorded in AXED 444, 445, 446, and 460 were above the 80% criterion level.
- * Program Learning Outcome 2. Four of the six assessment standards were met by the students in 2004-2005. In AXED 444, nine of 10 students (90%) achieved or exceeded the criterion score on the community development program planning project for a non-formal education setting. In AXED 445, nine of 13 students (69%) achieved or exceeded the criterion score on the public school curriculum development project. In AXED 460, all 13 of the students achieved a score of 85% or higher on the laboratory demonstration. In AXED 446, 11 of 12 students (92%) achieved or exceeded the criterion average score of 85% on their lesson plans and all 12 of the students achieved or exceeded the criterion average score of 85% on videotaped microteaching presentations. Ten of 12 students (83%) in AXED 446 achieved or exceeded the criterion score of 85% on development of a student learning assessment tool tied to one of their microteaching lessons.
- * Program Learning Outcome 3. All three assessment standards were met by the students in 2004-2005. According to their internship supervisors, all 12 students enrolled in internships demonstrated at least 80% of the specific entry-level employment competencies related to diversity and human relations. All 12 students in AXED 446 demonstrated knowledge of classroom management by participating in analysis and discussion of case studies and video clips and writing a classroom management philosophy statement. In AXED 444, all 10 students who participated in analysis and discussion of case studies representing diverse, contemporary work situations demonstrated capabilities to serve diverse populations. These activities included discussion of assessing needs of diverse clientele, selecting diverse members for advisory committees, collecting diversity data for a county profile, and discussing the implications of the Americans With Disabilities Act for programs of agricultural and Extension education.

3b. Has this information led to changes in your program?

- * Ten of 12 assessment standards related to the three program learning outcomes in our undergraduate outcomes assessment program were met in 2004-2005. We're revising the curriculum development assignment in AXED 445 to have students utilize a new

electronic course outline development function that is tied to our new curriculum database for agricultural education in New Mexico. Although the curriculum development assignment will change, the assessment standard and measurement criterion for the assignment will remain the same until we have assessed students for a couple of years on the new assignment. The department head met with the faculty member teaching students to develop a student learning assessment tool to discuss how student performance on this standard can be improved. She shared that the two students who had not achieved the criterion score of 85% had scores of 80% and 84% on the assignment, respectively. Based on these results, we are not recommending program changes related to this criterion for 2005-2006.

3c. How will you use this information in your program planning?

- * The data indicate whether programs are effective in achieving undergraduate student learning outcomes. If the criteria for assessment standards are not met, changes can be made to courses, field experiences, and degree plans to improve student performance.

4. Do you anticipate changes in your outcomes assessment activities as a result of your past year's assessment experience or the latest OAC I evaluation of your assessment program?

- * The faculty last revised the departmental outcome assessment plan for the undergraduate program during Fall 2003. We feel the plan continues to adequately assess our key outcomes for undergraduate students. We do not anticipate changes to our undergraduate outcomes assessment program for 2005-2006. We're revising the curriculum development assignment in AXED 445 to match our new agricultural education curriculum for New Mexico, but the assessment standard and measurement criterion will not change. The College of Agriculture and Home Economics conducts exit surveys on all graduating students and provides pooled departmental results to the Agricultural and Extension Education Department. Departmental questions focus on satisfaction with the teaching and learning, job preparation, and advising received by students in the department. Graduate follow-up surveys are conducted as part of our accreditation procedures (National Council for Accreditation of Teacher Education). The most recent one of these was published in the Journal of Agricultural Education in 2002 and focused on state entry-level teaching competencies attained in the program. Recent departmental thesis research on New Mexico principals at schools with an agricultural education program found the principals felt their agricultural education teachers (most of whom are our graduates) were competent on 48 of 49 teaching and programmatic competencies or keys for local program success. The data from these procedures are discussed with faculty and used for program improvement. We choose to keep these sources of feedback separate from our outcomes assessment program because we consider them to involve less direct measures of student learning than the outcomes and standards we currently measure in the program.

5. How do you communicate the results of outcomes assessments to all faculty members in your department?

- * The faculty was asked for data and input for this report. The department head meets separately with faculty members whose students fell below a criterion score on an assignment for which they were responsible. This outcomes assessment report will be distributed to all faculty members in the department and will be discussed at a department meeting in Spring 2006. Faculty input will continue to be sought on future undergraduate outcomes assessment initiatives.

Graduate Program Report

2. Outline the program's assessment activities within the context of your outcomes assessment plan.

- * The department addressed Program Learning Outcome 1, "Students in the Agricultural and Extension Education Master of Arts program will be able to conduct and critique social science research" with scores on a research proposal assignment and a research article critique in AXED 556, and scores on data analysis and interpretation assignments in AXED 571.
- * The Department addressed Program Learning Outcome 2, "Students in the program will be able to plan and deliver educational programs, and evaluate student learning" with lesson plan and videotaped microteaching presentation scores in AXED 521 and 546; and scores on student learning assessment tools for planned instruction in AXED 546.
- * The department addressed Program Learning Outcome 3, "Students in the program will demonstrate higher order thinking skills" with scores on creative components (AXED 598), performance on theses (AXED 599), and performance in oral examinations.

3a. What have you learned from your 2004-2005 outcomes assessment activities?

- * Program Learning Outcome 1. All three assessment standards were met by the students in 2004-2005. In AXED 556, all 12 of the students who selected the proposal option scored at least 80% on the research proposal development assignment while all 24 of the students achieved or exceeded the criterion score on the research article critiques. In AXED 571, all 10 students achieved or exceeded the criterion score on a data analysis and interpretation assignment.
- * Program Learning Outcome 2. All three of the assessment standards that were assessed in 2004-2005 were met. All eight of the students in AXED 521 and AXED 546 exceeded an average lesson plan score of 85% and exceeded an average score of 85% on videotaped microteaching presentations. Both of the graduate students in AXED 546 achieved a score of 85% or higher on the development of an assessment tool for planned instruction.

- * Program Learning Outcome 3. Both assessment standards were met by our graduate students in 2004-2005. All eight of our graduate students completing the non-thesis option achieved a grade of 80% or higher on their creative component (AXED 598). Our only thesis student to complete the thesis option in 2004-2005 received a passing score on his thesis. All nine graduating graduate students passed their oral examination with a unanimous vote.

3b. Has this information led to changes in your program?

- * All assessment standards related to the three program learning outcomes in our graduate outcomes assessment program were met in 2004-2005. Based on this information, we are not recommending program changes related to this criterion for 2005-2006.

3c. How will you use this information in program planning?

- * The data indicate whether programs are effective in achieving graduate student learning outcomes. If the criteria for assessment standards are not met, changes can be made to courses, field experiences, and degree plans to improve student performance.

4. Do you anticipate changes in your outcomes assessment activities as a result of your past year's assessment experience or the latest OAC I evaluation of your assessment program?

- * The faculty last revised the departmental outcome assessment plan for the graduate program during Fall 2003. We feel the plan continues to adequately assess our key outcomes for graduate students. We do not anticipate changes to our graduate outcomes assessment program for 2005-2006. The College of Agriculture and Home Economics conducts exit surveys on all graduating students and provides pooled departmental results to the Agricultural and Extension Education Department. Departmental questions focus on satisfaction with the teaching and learning, job preparation, and advising received by students in the department. Graduate follow-up surveys are conducted as part of our accreditation procedures (National Council for Accreditation of Teacher Education). The most recent one of these was published in the Journal of Agricultural Education in 2002 and focused on state entry-level teaching competencies attained in the program. Recent departmental thesis research on New Mexico principals at schools with an agricultural education program found the principals felt their agricultural education teachers (most of whom are our graduates) were competent on 48 of 49 teaching and programmatic competencies or keys for local program success. The data from these procedures are discussed with faculty and used for program improvement. We choose to keep these sources of feedback separate from our outcomes assessment program because we consider them to involve less direct measures of student learning than the outcomes and standards we currently measure in the program.

5. How do you communicate the results of outcomes assessments to all faculty members in your department?

- * The faculty was asked for data and input for this report. The department head met separately with faculty members whose students fall below a criterion score on an assignment for which they were responsible. This outcomes assessment report will be distributed to all faculty members in the department and will be discussed at a department meeting in Spring 2006. Faculty input will continue to be sought on future undergraduate outcomes assessment initiatives.

Assessment of Student Learning 2004-2005
BS Degree - Agricultural Biology
Department of Entomology, Plant Pathology and Weed Science

Departmental Instructional Philosophy:

The undergraduate instructional program in Agricultural Biology provides students with the appropriate degree of training within the plant and animal protection disciplines necessary to qualify them for a professional career in Integrated Pest Management or related fields, or to pursue further studies in related graduate or professional programs.

We expect our students to acquire a broad knowledge of the biological sciences, to become knowledgeable in subject matter areas applicable to pest management and to integrate knowledge of their discipline into the broad arena of agricultural production, including the interface of agriculture with environmental social and economic issues. We also expect our students to become proficient at both written and oral communications including the integration of current computer based technologies.

- 1. Outcomes Assessment Plan – (attached).**
- 2. Outline Assessment activities for 2004-2005.**

A. Indirect Assessment

Opinion Surveys – Graduating Senior Interviews

The department head continued the historical practice of interviewing graduating seniors. This survey provides a satisfaction/dissatisfaction rating of course offerings, course content and instruction. We use it primarily to assure positive student/instructor relationship. Virtually all graduating students were highly satisfied with the departmental undergraduate program.

B. Direct Assessment Activities

Assessing Learning in Intramural Core Courses – (Senior Subject Matter Examination)– 2004/2005 was the fifth year that we have administered a senior subject matter examination to assess student's learning in departmental core courses.

As in previous years, a committee composed of an entomologist, a plant pathologist, a weed scientist, a plant physiologist and the department head prepared and administered the written examination to our graduating seniors. The test was composed of questions designed to test basic knowledge in five areas critical to the departmental teaching mission, i.e., Entomology, Plant Pathology, Weed Science, Physiology and Integrated Pest Management. These students were numerically scored on the written exam, with a score above 70% as a target for satisfactory learning within each category. Average scores were; Entomology 68%, Plant

Pathology 52%, Weed Science 68%, Plant Physiology 51% and IPM 80%.

Assessing student ability to integrate learning achieved in core courses to real world IPM.

EPWS 492, “Diagnosing Plant Disorders”, is one of two capstone courses that require students to integrate academic knowledge received in core IPM courses (Introductory IPM, Economic Entomology, Plant Pathology, Weed Science and Plant Physiology) as well as other supporting courses to diagnose and provide solutions to IPM problems under actual field conditions. This directly measures knowledge acquired in our core IPM courses as well as the student’s ability to integrate diverse knowledge in problem solving. Completion of the course signifies adequate learning in core courses, as well as the ability to integrate knowledge to solve real world problems. All entering students successfully integrated knowledge from core courses at a satisfactory level.

Assessing students knowledge of plant systems

EPWS 314 - “Plant Physiology” is a course offered only to students with an appropriate level of course work in basic plant sciences. A written test administered at the beginning of the course quantifies the knowledge students have acquired across basic plant related courses. It is used to assess student learning in the group of courses considered prerequisite to meaningful study of the interrelationships of plants physiological systems with biotic and abiotic factors related to IPM. The instructor, used this information to start the course at the student’s level of knowledge. It provides a mechanism for judging the ability of students to integrate basic course work knowledge into the complexities of plant physiological systems. Passing this course indicates satisfactory learning in the plant related aspects of our curriculum.

Assessing student’s knowledge of computer application and communication skills

EPWS 447, “Senior Seminar”, Functions as a forum to judge two of our important program goals, i.e. communications skills and use of computers in communication. Each student is required to prepare a science-based seminar, to prepare their own graphic aids and to effectively present a seminar using state of the art computer technology. This course also requires an extensive literature search, interpretation of data, and assimilation of both into written and oral presentations. The entire faculty attends seminars and help judge student performance. After each presentation, students are questioned by the faculty and peers. This creates an effective mechanism to judge students’ general knowledge of IPM, their communication skills and ability to use current technology in communication. Passing senior seminar constitutes adequate learning relative to interpretation of and communication of scientific information and up to date use of computer assisted communication skills.

Assessing student competitiveness against students from similar programs

Last year, we sent students to compete in academic contests against students from similar departments. Our Linnaean Games Team competed in a regional contest, placing second which qualified them for the national finals. At the national contest, they placed 8th. We also sponsored travel for students to present scientific papers at regional or national meetings. These presentations allowed our faculty to judge both quality and ability of our students against standards expected in the profession.

3. What have we learned?

We have administered the senior written subject matter exam for 5 years. Initially, the test results showed that we needed a broader capstone component to help student integrate course work knowledge of Entomology, Plant Pathology and Weed into the process of solving real world IPM problems under field conditions. This became part of our instructional goals and we successfully hired a new professor with the background and ability to teach the desired course (Advanced IPM) to help students learn to integrate what might otherwise remain fragmented areas of knowledge. This course was taught the third time in 2005. A major assessment component of this course is a verbal and graphic presentation that incorporates virtually all aspects of IPM. That is, teams of students are assigned a hypothetical IPM problem that requires library research, knowledge of farming practices, irrigation, fertilization and environmental factors, pest interactions and etc., to formulate an action plan. Their assessment of the problem and the proposed solution is presented in an hour long forum to a faculty group representing all the IPM disciplines. This gives each faculty person an opportunity to see how well students' assimilated knowledge in their classes, as well as identifying knowledge gaps to help them make their instruction more effective. All students in this class passed the course which is an indication of satisfactory learning.

In earlier years our senior exam had indicated that either high or low levels of learning were common in some areas, i.e. Plant Physiology and Plant Pathology. Last year, we reported changes in instructional approaches to help solve this problem. Specifically, we added a lab for Plant Physiology and the Plant Pathology professor participated in numerous activities to increase teaching effectiveness. We also introduced Mycology (EPWS 472) in 2003 in response to previous needs as indicated by alumni surveys. In 2005, we initiated another Plant Pathology course entitled "Plant Virology" which will continue to improve discipline related learning.

The introduction of EPWS 455, "Advanced IPM", a capstone course has contributed to a steady increase in senior exam scores in the IPM sector, i.e. scores rose from 70% in 2004 to 80% in 2005. This year, scores for graduating seniors were near our minimum expectations in Entomology and Weed Science, but significantly below this level for Plant Physiology and Plant Pathology. We still have the challenge of increasing learning in these areas. A course in Molecular Biology in Agriculture had also been identified as an obvious need of our students. A new faculty member with

the ability to teach this course was hired in 2003 and Molecular Agriculture Biology (EPWS 451) was offered for the first time in 2004. This course has added a new dimension to our curriculum and made our graduates more relevant in the job market. This course will officially become part of our curriculum in 2006.

Alumni surveys and exit interviews indicate that an adequate integration of computer technology is now contained in our curriculum. Thus, we have made significant improvements in teaching and student learning in 2005, but still have areas that need improvement.

4. Changes in Outcome Assessment Activities

In addition to previously used assessment activities, we will continue to improve and institutionalize procedures for the senior examinations. Specifically, we hope to develop procedures and formats that reliably measure effectiveness across all broad program goals. We will explore the need for a molecular agriculture component in our senior exam.

5. Results of Outcomes Assessment Activities

Results are discussed at faculty meetings. New techniques for assessing learning are debated in our on going effort to offer a relevant program to our undergraduate students. This process has become routine over the last 4 years. The Department Head also discusses with and advises appropriate faculty on indicated needs for curriculum changes or improvement in instructional activities when opportunities are identified to address learning needs of our undergraduate students.

Department of Entomology, Plant Pathology & Weed Science
College of Agriculture & Home Economics
Outcome Assessment Plan
BS Degree in Agricultural Biology
(Revised 2004-2005)

Departmental Mission and Philosophy:

This document addresses assessment of the B. S. Degree Program in the Department of Entomology, Plant Pathology and Weed Science. The program endeavors to provide graduates with the appropriate degree of training within the plant and animal pest protection disciplines required to qualify them for a professional career in Integrated Pest Management or related field or to pursue further studies in related graduate programs. We also expect our students to acquire a broad knowledge of the biological sciences.

Our graduates must integrate their discipline related knowledge within the broad arena of agriculture production, including the interface of agriculture with environmental, social and economics issues. We also expect our students to develop skills in both written and oral communication, and to become proficient in the use of computer technologies including both data analysis and electronic communications.

Broad Program Goals for Student Learning:

- Goal** - Students will attain an appropriate level of professional competence in the biological sciences.
- Goal** - Students will attain an appropriate level of competence in the general agricultural sciences.
- Goal** - Students will attain an appropriate level of competence in the respective disciplines of Entomology, Plant Pathology and Weed Science.
- Goal** - Students will develop the ability to interpret scientific data and effectively communicate their interpretation to both scientific and lay audiences.

Related Program Goals:

- Goal** - Graduates seeking employment will be prepared for life long learning and to enjoy a productive career.
- Goal** - Graduates completing the B.S. Degree with a 3.25 GPA and seeking admission to the graduate program will be prepared and competitive.
- Goal** - Graduates seeking employment will be prepared and competitive.
- Goal** - Graduates will find professional employment within a year of graduation.
- Goal** - Graduates will be adequately prepared to work effectively with the computer software required in their first job.

Plan for Assessing Student Learning:
B.S. Degree Program in Agricultural Biology

Indirect Measures

A. Senior Exit Interviews

Conduct departmental interviews to ascertain attitudes and opinions of graduating seniors relative to curriculum, course content and instruction.

B. Employer Evaluations

We will request appraisal of competency of our graduates with respect to our broad program goals.

Direct Measures

A. Measurement of Integrative Learning in Basic Science and Core Courses

Senior Comprehensive Examination

- A subject matter exam with a separate set of questions addressing weed science, plant pathology, entomology, plant physiology and integrated pest management is administered to senior students immediately prior to graduation. A written score of 70% will be the base line for satisfactory learning.

Assessing Student Knowledge of Plant Systems

- EPWS 314, “Plant Physiology”, will employ opening day testing to measure students overall knowledge of plant systems and stress/antagonist interactions acquired in extramural course work. The instructor uses this test to both assess learning to this phase, as well as, to adjust lectures to accommodate student learning within EPWS 314.

Assessing Knowledge of Computer Applications and Communication Skills

- EPWS 447, “Senior Seminar”, accesses students written and verbal communication skills, as well as, their ability to assimilate information from several core courses and make appropriate biological interpretations. It evaluates ability of students to use computer technology in scientific presentation of data.

Assessing Student’s Ability to Integrate Knowledge from Core Courses into Practical Applications

- EPWS 492 (Diagnosing Plant Disorders) accesses basic knowledge acquired in core (intramural) curriculum courses, particularly Economic Entomology (EPWS 303), Plant Pathology (EPWS 310), Weed Science

(EPWS 311) and Plant Physiology (EPWS 314), as well as, the integration of knowledge from these courses in the process of diagnosing pest related problems under field conditions.

B. Regional and National Competitions

We will send student teams to regional competitions relating to the Entomology and the Weed Science disciplines where they are competitively ranked against students from other universities.

This allows our faculty to judge their knowledge and ability against those of students from peer universities.

Revised: February 16, 2006

New Mexico State University

Broad Program Goals for Assessing Student Learning Master of Science Degree in Agricultural Biology

**Department of Entomology, Plant Pathology and Weed Science
College of Agriculture and Home Economics
(Revised 2004-2005)**

Departmental Mission and Philosophy:

Agricultural Biology at New Mexico State University encompasses the study of applied sciences and management principles as they apply to the field of agriculture in general and integrated pest management in particular. The Master of Science degree builds on B.S. level training in integrated pest management. The major emphasis is on training students in research approaches, techniques, data analysis and interpretation and publication of scientific data.

The program provides both formal and informal opportunities for students to prepare for either a career within their discipline or continuing their education in a Ph.D. or other pre-professional program.

Broad Program Goal:

To graduate students that are proficient in performing scientific research in the Agricultural and Biological Sciences.

Related Broad Program Goal:

Graduates are expected to develop skills in both written and oral communication and to become proficient in the use of computer technologies, including both data manipulation and electronic communication.

Program Learning Outcome 1:

Graduates are qualified to develop a hypothesis, develop a research programs to test the hypothesis.

Assessment standard and its measurement:

1. Seventy-five percent of graduates polled one year after graduation will “agree” or “strongly agree” that their graduate instruction taught them how to develop and test valid research hypothesis.

2. The student's graduate committee will verify that the students possess the ability to effectively develop and test a valid research hypothesis. Passing the final examination will constitute effective learning.

Program Learning Outcome 2:

Graduates completing a Master of Science degree in Agricultural Biology will be able to statistically analyze research data and to synthesize statistically relevant conclusions.

Assessment standard and its measurement:

1. Seventy-five percent of graduates polled will "agree" or "strongly agree" that they effectively learned how to apply relevant statistical test to scientific data.
2. Seventy-five percent of graduates will "agree" or "strongly agree" that they learned how to draw statistically valid conclusions from scientific data.
3. The student's graduate committee will certify that the students have learned how to apply relevant statistical tests to scientific data. Passing the final examination will constitute effective learning.

Program Learning Outcome 3:

Graduates completing a Master of Science degree in Agricultural Biology will possess the ability to effectively present scientific information in the verbal format. Verbal presentation of their research project, along with major findings will be presented to the entire faculty.

Assessment standard and its measurement:

1. Seventy-five percent of graduates polled will "agree" or "strongly agree" that they acquired adequate skills to effectively present scientific data in the verbal format.
2. The student's graduate committee will establish that the students have learned how to effectively present scientific information in the verbal format. Passing the final examination will constitute effective learning.

Program Learning Outcome 4:

Graduates completing an Agricultural Biology degree will possess the ability to effectively present scientific information in the written format. The students M.S. thesis is the document from which this outcome is judged. Most students will be expected to publish their research findings in a peer referred journal within one year after graduation.

Assessment standard and its measurement:

1. Students polled 1 year after graduation will “agree” or “strongly agree” that they possess adequate knowledge to present scientific information in written reports, including refereed journals.
2. The student’s graduate committee will certify that the students have learned how to present scientific data in written format. Passing the final examination will constitute effective learning.

Program Learning Outcome 5:

Graduates completing a Master of Science degree in Agricultural Biology and continuing their graduate programs or seeking employment will be well prepared and competitive.

Assessment standard and its measurement:

1. Seventy-five percent of students completing the Master of Science degree in Agricultural Biology and seeking employment will secure a professional position within twelve months of graduation.

Assessment of Student Learning 2004-2005
Master of Science Degree Program in Agricultural Biology
Department of Entomology, Plant Pathology and Weed Science

1. Current outcome assessment plan – attached
2. Outline of assessment activities for 2004-2005

Indirect Measures of Assessment

The Department Head conducted exit interviews with each graduating M.S. student. The students are asked to fill out a standardized questionnaire as well provide verbal appraisal of how well their learning M.S. experience met the department's five program learning outcomes.

Direct Measures of Assessment

The department formulates a unique graduate committee for all graduates. This committee evaluates the effective learning of each individual student. Graduate committees are composed of 3-5 members, including the chair, from the EPPWS faculty, a representative with recognized professional expertise in statistics and a representative chosen by the graduate school.

Successful completion of a M.S. program requires formulation of a research hypothesis, conducting research to test the hypothesis, applying appropriate statistical analysis, synthesizing and interpreting the data, writing a thesis, detailing the information in a faculty/student seminar and defending their thesis to the graduate committee at a final oral examination. Acceptance of a written thesis of publication quality and passing the final oral examination constitute satisfactory learning.

3. What has been learned for assessment activities?
 - a. M.S. students graduating in 2003-2004 indicated that our graduate program of study provided the learning outcomes stipulated within our broad program goals.
 - b. The M.S. degree program in Agricultural Biology follows the conventional nationwide model. It has and continues to function satisfactorily and effective learning is being achieved, i.e., the instructional objectives are being met. We, however, continually strive to improve the program and we have recognized the value of broader than conventional faculty investment in each student's program. In 2002, we initiated the requirement that each student present his or her research plan in an open forum to the entire faculty prior to initiation of the research. During 2004-2005 this mechanism assessed each incoming M.S. student's preparedness, assessed academic needs and provided comments to assure proper research approach and direction with respect to their proposed research. Each student was also required to provide an open seminar on their M.S. work prior to their final defense that facilitated faculty wide appraisal of the students learning.

As agriculture adopts more genetically modified cultivars, science becomes more molecular, and as Integrated Pest Management becomes progressively more technical, we have become more aware of the need to assure that our M.S. graduates are better trained in these areas. We have consciously directed thesis research emphasis toward the molecular when possible. Knowledge gained in the assessment process has stimulated faculty to place a higher level of importance on assuring that all incoming students either possess, or acquire within their plan of study, a satisfactory knowledge of subject matter areas considered core to our discipline.

4. During 2004-2005 we have moved progressively toward more stringent entry requirements for incoming students. The Department Head has taken action to assure that all major professors provide an appropriate level of supervision of the M.S. research performed by their students.
5. All relevant findings are discussed at faculty meetings. These discussions have created a departmental ethic for assuring that all M.S. programs are of high quality. Faculty involvement with our graduate program has increased, i.e., the entire faculty has become more concerned and aware of the learning opportunities and of the quality of research projects performed by each individual student.

Revised: February 16, 2006

TO: Martha Archuleta
Interim Department Head
Department of Family and Consumer Sciences and Home Economics
Extension Services

FROM: Roselyn Smitley
Assessment Committee (Acting Chair for Spring 2006)

RE: Report On Assessment of Student Learning Outcomes (2004-2005)
Department of Family and Consumer Sciences

DATE: February 25, 2006

Attached, please find the report of the Assessment Committee for the Academic Year 2004-2005.

**REPORT ON ASSESSMENT OF STUDENT LEARNING OUTCOMES
For 2004-2005 Academic Year
DEPARTMENT OF FAMILY AND CONSUMER SCIENCES**

UNDERGRADUATE ASSESSMENT

1. Department of Family and Consumer Sciences Assessment Plan - Enclosure A
2. Assessment activities in 2004-2005
 - a. Standardized field experience manual for all majors in Department of Family and Consumer Sciences (FCSC) pilot tested in Spring 2004
 - b. Portfolio review completed by subcommittee (R. Del Campo, R. Smitley, A. Bock) on October 8, 2005.
3. Results of direct measures of student learning from portfolio review
 - a. Portfolio review checklist - Enclosure B.
 - b. All undergraduate programs reviewed: Clothing, Textiles and Fashion Merchandising (CTFM), Human Nutrition and Food Science (HNFS), Family and Child Science (FCS), and Family and Consumer Sciences Education (FCSE).
 - c. Number of portfolios reviewed: 5
 - d. Classes used for portfolio development: capstone classes CTFM 402 (Field Experience) & CTFM 475 (Fashion Buying), HNFS 401/407 (Hospital Dietetics Field Experience/Community Nutrition Field Experience), FCS 425 (Field Experience), and FCSE 448 (Supervised Teaching in Family and Consumer Sciences). Additional portfolio materials provided by FCSE 348 (Teaching in the Informal Setting), and FCSC 400 (Research Methods in Family and Consumer Sciences).
 - e. Portfolios used for review were cumulative notebooks and assignments prepared by students. Portfolios were evaluated by the subcommittee as having met or not having meet each of the Departmental Assessment Goals.
 - f. The ratings for the five undergraduate portfolios reviewed were (based on an average of the three raters): 5.0, 5.0, 4.3, 4.3, 5.0; $\bar{x} = 4.72$ (5 = met all five assessment goals, 0 = met none of the assessment goals). For raw scores see Enclosure B. Slightly higher ratings overall for 2004-2005 portfolios compared with 2003-2004 (4.6 versus 4.72).

g. Results of indirect measures of student learning:

Number of graduating seniors accepted into graduate school: 17

Number of graduating seniors who received professional licensure: 7

Number of graduating seniors who received professional registration attainment: 0

Number of graduating seniors who were accepted into post-baccalaureate internship programs: 0

Number of graduating seniors who were accepted into post-baccalaureate management training programs: 8

4. Anticipated changes.

a. Implement use of standardized Departmental Field Experience Manual in Fall 2004 for all FCSC majors to use.

b. Evaluation of Departmental Field Experience Manual in Spring 2005 for potential revisions.

5. Communication with faculty in department on assessment.

Assessment committee membership is all faculty with teaching appointments plus adjunct faculty who teach capstone classes. Assessment committee meets in fall and spring semesters. Minutes of meetings shared with all faculty on the joint faculty meeting on January 2006. Written report from portfolio review subcommittee was submitted to the Department Head on February 2006.

GRADUATE ASSESSMENT

1. Department assessment plan - Enclosure A

2. Assessment activities

a. Portfolio review completed by subcommittee (R. Del Campo, R. Smitley, A. Bock) on October 8, 2005.

3. Results of direct measures of student learning

a. Portfolio review checklist - Enclosure C.

b. Number of portfolios reviewed: 2 (one thesis and one non-thesis)

c. Written competency exam was reviewed as evidence of student outcomes measure for the non-thesis student. Thesis was reviewed as evidence for the thesis student. Evaluations of the subcommittee were based on meeting or not meeting each of the five departmental assessment goals.

d. The ratings were 5.0 for the thesis student and 5.0 for non-thesis student. (5 = met all five assessment goals; 0 = met none of the assessment goals).

e. Results of indirect measures of student learning :

Number of graduating masters students accepted into doctoral programs: 1

Number of graduating graduate students receiving licensure: 4

Number of graduating graduate students receiving professional registration: 6

Number of graduating graduate students who were accepted into post-graduate internship programs: 6

Number of graduating graduate students who were accepted into post-graduate management training programs: 1

Number of professional/scientific presentations made by graduating graduate students: 5

Number of publications in peer reviewed journals from graduating graduate students: 0

4. Anticipated changes.

a. Development of a check list form to be used during oral examinations to document that all five assessment goals were addressed. This was a recommendation of 2004 report. Still needs development. This will be referred to the Graduate Committee of the department (A. Bock, chair; after March 2006 will be chaired by Dr. Eastman).

b. Development of a standardized list of questions (with many choices) as potential questions to be asked during oral examinations of both thesis and non-thesis graduate students. Sample questions have been submitted by faculty but still needs refinement. Will continue our efforts in this regard. This also referred to the Graduate Committee.

5. Communication with faculty in department on assessment.

Assessment committee membership includes all faculty with graduate school appointments who served as members and chairs of graduate student committees. Assessment committee meets in fall and spring semesters. Report of committee meeting was made during the joint faculty meeting of the FCS Department on January 2006. Written report of the portfolio review subcommittee was submitted to the Department Head on February 27, 2006. Copies of the report will be distributed to the faculty members on February 28, 2006.

Enclosure A
DEPARTMENT OF FAMILY AND CONSUMER SCIENCES
PLAN FOR THE ASSESSMENT OF STUDENT LEARNING OUTCOMES

Introduction

The Department of Family and Consumer Sciences (FCSC) offers undergraduate and graduate academic programs that encompass four areas of emphasis. These are Clothing, Textiles, and Fashion Merchandising (CTFM), Family and Child Science (FCS), Family and Consumer Science Education (FCSE), and Human Nutrition and Food Science (HNFS). Within the HNFS undergraduate emphasis, there are three options, Dietetics, Food Science and Technology, and Pre-Health. Within the FCS undergraduate emphasis there are two options, Child Science and Family Science. The FCS graduate emphasis offers two options, Family and Child Science and Marriage and Family Therapy. Students majoring in FCSC prepare themselves for professional careers that improve the quality of lives for individuals and families including their own.

Goals for Assessment of Student Learning

Upon completion of an undergraduate and/or graduate degree awarded from FCSC, it is the goal of this Department to have students who demonstrate competency, proficiency, and professionalism in each of the following areas:

1. FCSC graduates will be able to apply research and theory to process issues faced by families and consumers.
2. FCSC graduates will be able to synthesize information from a variety of reliable sources to formulate appropriate educational and professional strategies for improving the quality of life for families and consumers.
3. FCSC graduates will be able to implement educational and professional strategies in a variety of settings to assist families and consumers in effective behavioral changes.
4. FCSC graduates will be able to demonstrate professionalism and follow ethical standards in interactions with families and consumers.
5. FCSC graduates will be able to demonstrate proficiency in written and oral communication and use of technologies related to Family and Consumer Sciences professional fields of study.

Undergraduate Measures

Direct Measures

All FCSC graduating seniors will have completed a departmental capstone class, FCSC 425 (Senior Seminar in Family and Consumer Sciences - 1 credit). Within each program area, each student will have completed an additional capstone class specific to the major. The capstone classes within the areas of emphasis will be CTFM 402/475, FCS 425, FCSE 448, HNFS 401/407, and HNFS 447. During the capstone classes within the majors, each student will prepare and submit a student academic portfolio. The portfolio will document the culminating senior research projects and/or internship/field experience/student teaching experience. The portfolios will document competencies and proficiencies in each of the FCSC Departmental assessment goals. Portfolio documents will be collected into three ring binder notebooks. Instructional faculty will inform students their portfolios may be included in a random sample that will be reviewed by the Department Assessment Committee. Faculty are encouraged to include this information in course syllabi. Students are to be assured that the portfolio review process will have no bearing on the grade that is assigned by the instructor of record.

During the FCSC capstone class, FCSC 425, graduating seniors will do oral presentations of their learning experiences from their course of study with a particular emphasis on the capstone class of the major. This is summarized in Figure 1.

A representative sample of the written portfolios will be reviewed on an annual basis by the Review Subcommittee of the FCSC Department Assessment Committee. The Assessment Committee will not assign nor comment on letter grades given by the instructor of record. The Assessment Committee will be reviewing sample portfolios for evidence that the Department Assessment Goals have been addressed and accomplished.

Indirect Measures

Additional outcome measures on the effectiveness of learning of the FCSC undergraduate program will include the reporting of student data on acceptance rates into graduate programs, receiving licensure, professional registration attainment, acceptance into post-baccalaureate internship programs and management training programs, completion of undergraduate research programs such as the McNair Program, performance on standardized graduate entrance examinations such as the GRE and MCAT, and honors program participation.

Figure 1
Assessment of Direct Measures of Undergraduate Learning Outcomes

Major	Departmental Capstone Class FCSC 425 (1 credit) Oral Presentation	Capstone Class Within Each Major Written Portfolio
FCSE	X	FCSE 448 (Supervised Teaching in Family and Consumer Sciences)
FCS	X	FCS 424 (Field Experience)
HNFS Dietetics & Pre-Health Food Science and Technology	X X	HNFS 401/407 (Field Experience- Hospital Dietetics/Community) HNFS 447 (Experimental Foods)
CTFM	X	CTFM 402 (Field Experience)/ CTFM 475 (Fashion Buying)

Graduate Measures

Direct Measures

All FCSC graduate students will have completed a Departmental capstone class, FCSC 525 (Graduate Seminar in Family and Consumer Sciences - 1 credit). Graduate students will have complete either a thesis or a non-thesis option in FCSC. All graduate students will be evaluated on their competencies and proficiency in each of the FCSC Department assessment goals. For the thesis students, competency will be demonstrated by the completion of an approved written thesis and the passing of an oral examination on the thesis as judged by the graduate committee of each student. For the non-thesis students, proficiency will be demonstrated by the passing of written competency examinations and oral examinations administered by the student's graduate committee. Members of the FCSC graduate faculty will use the FCSC Department Assessment goals in the evaluation process. This is summarized in Figure 2.

Indirect Measures

Additional outcome measures on the effectiveness of learning of the FCSC graduate program will include the reporting of student data on acceptance rates into doctoral programs, receiving licensure, professional registration attainment, acceptance into post-graduate internship programs and management training programs, professional and scientific presentations, and publications in peer reviewed journals.

Figure 2.
Assessment of Direct Measures of Graduate Learning Outcomes

Option	Department Capstone Class FCSC 525 (1 credit) Oral presentation	Written Competency	Oral Competency
Non-thesis	X	Written comprehensive exam	Final oral exam
Thesis	X	Approved thesis	Final oral exam

FCSC Department Assessment Committee

The FCSC Department Assessment Committee is delegated the responsibility for conducting and reporting on the Departmental Assessment Plan to the FCSC Department Head. Duties will include:

1. Preparation of an annual report of FCSC student assessment of learning submitted to the FCSC Department Head
 - Part I - Undergraduate program
 - Part II - Graduate program
2. Review of undergraduate portfolios using Departmental assessment goals as standards.
3. Assignment of ratings to portfolios
 - a. Met all five assessment goals
 - b. Met three to four assessment goals
 - c. Met two or fewer assessment goals
4. Use a random sampling technique for selection of portfolios to be reviewed
5. Membership of the FCSC Assessment Committee will consist of all FCSC faculty with teaching responsibilities. Chair of the FCSC Department Assessment Committee will be appointed by the FCSC Department Head. The Annual Review Assessment Subcommittee will be composed of three FCSC faculty with three year staggered terms. Except during the initial phase-in time, one member will be serving his/her third year on the subcommittee, one member will be serving his/her second year, and one member will be serving his/her first year.
6. The general FCSC capstone classes will be taught with one section of FCSC 425 (1 credit) offered in the fall semester and one section being offered in the spring semester (1 credit). One section of FCSC 525 (1 credit) will be offered in the fall semester. This three credit teaching assignment will be included as part of the assigned faculty member's regular teaching load and not be assigned as a teaching overload. The teaching of FCSC 425/525 will rotate equally among all FCSC faculty with teaching appointments.

Faculty Reviewers R. Del Campo, A. Bock, R. Smitley

Date February 27, 2006

Enclosure B
FCSC PORTFOLIO ASSESSMENT OF STUDENT LEARNING
Undergraduates 2004-2005

Assessment Goal	Student: FCS#1	Student: FCS#2	Student: FCSE
Synthesized information from a variety of reliable sources to formulate appropriate action steps for improving the quality of life for families and consumers	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: evidence not found
Implemented educational and professional strategies in a variety of settings to assist families and consumers in desired behavioral changes	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: met goal
Applied research and theory to process issues faced by families and consumers	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: evidence not found
Demonstrated professionalism and follow ethical standards in interactions with families and consumers	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: met goal
Demonstrated proficiency in written and oral communication and use of technologies related to Family and Consumer Sciences	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: met goal
Overall Rating of Portfolio	$5 + 5 + 5 = 15 \div 3 = 5.0$	$5 + 5 + 5 = 15 \div 3 = 5.0$	$5 + 5 + 3 = 13 \div 3 = 4.3$

Assignment of overall ratings to portfolios:

Met all five assessment goals

Met three to four assessment goals

Met two or less assessment goals

Faculty Reviewers R. Del Campo, A. Bock, R. Smitley

Date February 27, 2006

Enclosure B
FCSC PORTFOLIO ASSESSMENT OF STUDENT LEARNING
Undergraduates 2004-2005

Assessment Goal	Student: HNFS	Student: CTFM
Synthesized information from a variety of reliable sources to formulate appropriate action steps for improving the quality of life for families and consumers	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: met goal
Implemented educational and professional strategies in a variety of settings to assist families and consumers in desired behavioral changes	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: met goal
Applied research and theory to process issues faced by families and consumers	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: met goal
Demonstrated professionalism and follow ethical standards in interactions with families and consumers	RDC: evidence not found RS: evidence not found AB: met goal	RDC: met goal RS: met goal AB: met goal
Demonstrated proficiency in written and oral communication and use of technologies related to Family and Consumer Sciences	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: met goal
Overall Rating of Portfolio	$4 + 4 + 5 = 13 \div 3 = 4.3$	$5 + 5 + 5 = 15 \div 3 = 5.0$

Assignment of overall ratings to portfolios:

Met all five assessment goals

Met three to four assessment goals

Met two or less assessment goals

Faculty Reviewers R. Del Campo, A. Bock, R. Smitley
 Date February 27, 2006

Enclosure C
FCSC PORTFOLIO ASSESSMENT OF STUDENT LEARNING
Graduate Students 2004-2005

Assessment Goal	Student: Thesis	Student: Non-Thesis
Synthesized information from a variety of reliable sources to formulate appropriate action steps for improving the quality of life for families and consumers	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: met goal
Implemented educational and professional strategies in a variety of settings to assist families and consumers in desired behavioral changes	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: met goal
Applied research and theory to process issues faced by families and consumers	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: met goal
Demonstrated professionalism and follow ethical standards in interactions with families and consumers	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: met goal
Demonstrated proficiency in written and oral communication and use of technologies related to Family and Consumer Sciences	RDC: met goal RS: met goal AB: met goal	RDC: met goal RS: met goal AB: met goal
Overall Rating of Portfolio	$5 + 5 + 5 = 15 \div 3 = 5.0$	$5 + 5 + 5 = 15 \div 3 = 5.0$

Assignment of overall ratings to portfolios:
 Met all five assessment goals
 Met three to four assessment goals
 Met two or less assessment goals

**2005 Outcomes Assessment Plan
for the School of Hotel, Restaurant, and Tourism Management**

I. **OUTCOME:** Students completing the program and seeking employment in the hospitality and tourism industry will be well prepared for their first position in the field.

ASSESSMENT CRITERIA & PROCEDURES

- Students will complete a “capstone course.”
- Final oral assessments will be juried by appropriate hospitality industry professionals.
- Students will score above a “C” on comprehensive, “capstone” examinations.
- A majority of those completing the graduating student survey will make positive comments on preparation for their first position.
- Eighty-five percent of the hospitality and tourism employers completing the employer survey following the student’s’ internships will “agree” or “strongly agree” that the graduates were well prepared for their first position.
- Eighty-five percent of the students completing the required field experience will receive employer performance evaluations indicating that the employer would consider employing the student upon graduation if a position were available.
- Changes will be made in course content or course offerings through careful review of industry and alumni input as utilized in assessing student learning outcomes.

II. **OUTCOME:** Graduates of the program will find ready employment in the field of hospitality and tourism services.

ASSESSMENT CRITERIA & PROCEDURES

- At least seventy-five percent of the graduates of the program who actively seek employment will receive at least one job offer in a related field within three months of graduation.
 BENCHMARK: Goal is to raise the percentage to eighty percent over 3 years.
- The percentage of graduates employed in the hospitality and tourism industry compares favorably with the placement rate for similar programs nationally.
 BENCHMARK: Goal is to increase the already high placement rate of ninety-five percent to ninety-eight percent over 3 years.

III. **OUTCOME:** Graduates of the program and employers will provide feedback on the efficacy of the program curriculum, content and concentration trends.

ASSESSMENT CRITERIA & PROCEDURES

- Conduct student focus groups and assess responses for incorporation.
- Conduct alumni interviews and assess responses for incorporation.
- Conduct Board of Advisors meetings on curriculum and trends.
- Conduct employer/recruiter interviews on student preparedness.

2005 Outcomes and Assessment Progress Report for the School of Hotel, Restaurant, and Tourism Management

- I. **Outcome:** Students completing the program and seeking employment in the hospitality and tourism industry will be well prepared for their first position in the field.
- Students complete a capstone course during which they must demonstrate, often to industry professionals, that they have an understanding of concepts, as well as specific material. Feedback indicates that students understood concepts, demonstrated competency with material and communicated it well.
 - Students in the Quantity Food Production Class prepare and market a variety of meals for the general public. Completed comment sheets are extremely positive and indicate that the students planned, prepared and served the meals in a professional manner.
 - Marketing and excellence in the International Dinners Series has generated a “sold out” semester for the class for spring 2006.
 - Students continue to demonstrate competency with program material and technology.
 - Students are able to communicate such material in an effective manner.
 - Students must complete a 400 hour intern program. This generally occurs between their Junior and Senior year working in industry management training (preferred) with industry partners.

- Virtually all students completing internships in 2004-2005 achieved high grades and positive recommendation from their superiors. The grade for the internship is communicated by the supervising individual to HRTM.
- Approximately 85% of our student interns were approached by the companies, with which they interned, inquiring whether they might be interested in permanent employment with the company.
- In addition, students spend a minimum of 400 hours gaining practical experience within the industry. This “real world” experience ensures that students are aware of responsibilities and requirements necessary to compete in the industry.
- Virtually all employers who evaluated our students agreed or strongly agreed that upon graduation our students were well prepared for their first jobs.
- As a new component of the program, students are awarded credit for attending trade shows and industry conferences both in and out of New Mexico. All indications from industry feedback and from assigned projects related to these experiences were that students benefited greatly from this industry participation.

II. Outcome: Graduates of the program will find ready employment in the field of hospitality and tourism services.

- More than 95% of our 2004/2005 graduates were offered employment in industry sectors.
- Our placement rate continues to be equal to or better than the majority of similar programs nationwide.
- The 2005 Career Fair which is student directed and implemented generated a record number of recruiters and interviews for HRTM students.
- Recruiters continue to seek out our students, often at times other than during the department’s annual career fair.

- Recruiter surveys were conducted during the 2005 Career Fair. The survey data will serve as a benchmark for levels of satisfaction. The recruiter survey will be implemented again in 2006 to enable the School of HRTM to analyze satisfaction levels and respond accordingly through planning and reviewing student learning outcomes.

III. Outcome: Graduates of the program and employers will provide feedback on the efficacy of the program curriculum, content and concentration trends.

- A curriculum committee is being established within our Board of Advisors which evaluated the entire curriculum and recommended changes to ensure that the program is keeping up with the ever changing needs of the industry.
- Our alumni have generally fared quite well in the workplace and feedback from them is that they felt very well prepared for their jobs.
- The principles and practices learned during HRTM classes are apparently being used effectively by our students in the work place.
- The School of Hotel, Restaurant, and Tourism Management Board of Advisors is extremely active and new members with extensive industry experience are added as appropriate. The Board meets twice each year either in Las Cruces, Santa Fe or at the location of another hospitality program similar to ours.
- HRTM continued to work on its goal to increase diversity within the Board of Advisors and create new mentorship opportunities.
- Ad Hoc Board committees dealing with issues relevant to the program are created as needed. In 2005, the curriculum review ad hoc committee completed their work.

Outcome assessment measurements and results were discussed with faculty in 2005. We routinely discuss student issues, including scope of knowledge, degree of competency and their preparedness for industry. We have reviewed 207 competencies related to course content and outcomes. The new curriculum was implemented in 2005. We will be continually revisiting our measures and reviewing course content for continued program improvement.

Assessment of Undergraduate Student Learning Outcomes
Academic Year 2004-2005
Department of Plant and Environmental Sciences
February 21, 2005

Prepared by: Dr. Greg L. Mullins, Dept. Head

The Department of Plant and Environmental Sciences (Formerly the Department of Agronomy and Horticulture) attracts outstanding undergraduate students from very diverse backgrounds, i.e., educational, ethnicity, sex, and financial status. The Department of Plant and Environmental Sciences assessed the learning outcomes of our undergraduate students using up to five (5) different instruments. Each year the instruments themselves are also evaluated for their usefulness in assessing our programs. If necessary, the assessment instrument is changed depending on the outcome of that evaluation. In addition, we revise our internal assessment plans to meet departmental needs.

During 2003-04, an indirect assessment by use of an alumni survey was conducted. This survey was sent to students that had graduated one year ago. A very low number of students responded. Nevertheless, one area of agreement among the alumni was support for the Department of Agronomy and Horticulture to change its name to the Department of Plant and Environmental Sciences. During the 2004-05 academic year the department was successful in having our name changed to the Department of Plant and Environmental Sciences which was approved by the Board of Regents in December 2005. An examination of our curriculum will be initiated in the 2005-06 academic year.

Direct assessment of undergraduate students is a continuous and dynamic process. For one assessment, students meet with their faculty advisors at least twice during the academic year to discuss progress toward graduation. Information gathered from faculty advisors is relayed to the Department Head, who then meets with the appropriate departmental committee/faculty to investigate its implication. For example, a recommendation from horticulture students taking the departments landscape design course was to add more “hands” drawing into the course. This was shared with the instructor and he has discussed this with the Art Department. In addition, several undergraduate students requested more “social” events, so each semester, the instructor of HORT 100 (Introduction to Plant Sciences) has a pizza party for students to socialize.

A capstone course, “Environmental Impacts of Land Use” (ES 470), was offered to integrate knowledge, concepts, and skills associated with the entire sequence of study in Environmental Science. This course became a method of assessment for the Environmental Science major. When the students were asked to compare the teaching of this class with the teaching of the other courses they were taking that semester, 100% of the students rated the

course “superior.”

Another capstone course for horticulture, agronomy, soils, and environmental science majors is a departmental seminar, AGRO/HORT 447. The students prepare oral presentations on major articles from recent professional journals, focusing on why and how the research was done and on the validity and interpretation of the data. Normally, five or more evaluators examine the presentation and score it using a standardized evaluation form. In 2004-05, all students demonstrated that they had achieved the goals of comprehension, application, analysis, synthesis and evaluation of research.

Finally, graduating seniors in 2004-05 were given a standardized written and oral exit survey. Most of the graduating seniors responded. Of those who responded, 100% “strongly agreed” or “agreed” they were satisfied with the education they received in the Department of Plant and Environmental Sciences. During the exit interview, the students are encouraged to comment on how their education could have been improved. This feed back results in suggestions for things that might be done differently in a particular class. One suggestion (which was also noted in 2003-04) was to increase the time allocated to “free hand” drawing of landscape designs and the addition of more courses in landscape design. This suggestion was shared with appropriate faculty and is being explored. Another suggestion was to add more courses in genetics, and our curriculum committee is evaluating the possible addition of a major in genetics.

The various assessment tools indicate that most Plant and Environmental Sciences seniors are achieving the desired levels of knowledge and skills necessary to be productive in their chosen field.

Assessment of Graduate Student Learning Outcomes
Academic Year 2003-2004
Department of Plant and Environmental Sciences
February 21, 2005

Prepared by: Dr. Greg L. Mullins, Dept. Head

The Department of Plant and Environmental Sciences (Formerly the Department of Agronomy and Horticulture) attracts outstanding graduate students from very diverse backgrounds, i.e., educational, ethnicity, sex, and financial status. Assessment of student learning can be conducted using a variety of available instruments and methods. The Department of Plant and Environmental Sciences assessed the learning outcomes of our graduate students using up to four (4) instruments. Each year the instruments themselves are also evaluated for their usefulness in assessing our programs. If necessary, the assessment instrument is changed depending on the outcome of that evaluation. In addition, we revise our internal assessment plans to meet departmental needs.

The indirect assessment was the same as for undergraduate students. The survey of alumni provided data about student preparation for professional work, program satisfaction, and curriculum relevancy. Graduate student alumni were in agreement with their undergraduate counterparts that the Department of Agronomy and Horticulture would be better served if we changed our name to more accurately reflect the program offerings of the Department of Agronomy and Horticulture. During the 2004-05 academic year the department was successful in having our name changed to the Department of Plant and Environmental Sciences which was approved by the Board of Regents in December 2005.

One of the direct assessments for graduate students was AGRO/HORT/SOIL 505, "Research Orientation." In 2004-05, 15 evaluators appraised the students' poster presentations. More than 96% of the evaluators indicated that the poster presentations were sufficient in all 10 categories scored. Nine (9) evaluators appraised the oral presentations and scored them using a standardized evaluation form. Most of the scorers ranked the oral presentations as 'Good' (4) to 'Outstanding' (5) in all categories. Secondly, a graduate research seminar, AGRO/HORT/SOIL 590, based on the student's own research, was mandatory. The student is required to formulate two hypotheses, to explain a set of data, use the hypotheses to predict the results of further tests, and design an experiment to distinguish between the two hypotheses. Evaluators scored each presentation using a standardized evaluation form.

Both M.S. and Ph.D. students are given a written and oral exam as per the Graduate School's protocol. The exam covers course work and the student's thesis or dissertation. Comments from the exam are forwarded from the Graduate School to the Department Head. In

2004-05, the Graduate School remarked that the Department of Plant and Environmental Sciences has one of the highest graduation rates among the departments offering graduate study.

Exit interviews have become increasingly important tools for understanding the educational needs of our students. In the Department of Plant and Environmental Sciences, a standardized written and oral exit survey is provided. During this interview, students were asked to reflect on what they had learned as graduate students in the Department of Department of Plant and Environmental Sciences in order to generate information for program improvement. Through this method, insight was gained about what students did or did not like about our courses. Suggestions included the addition of more modeling software into our graduate courses and more opportunities for social functions for graduate students. These suggestions were forwarded to the faculty. To foster social and professional interactions among graduate students, the Departmental Graduate Student Organization was reinstated during the 2004-2005 academic year.

Finally, with the exit interview, we ask if they are satisfied with the training they received to become a scientist via formal course work, laboratory exercises, and the faculty as role models. The outcomes assessment indicates that all Plant and Environmental Sciences graduate students are satisfied with the graduate education they received.

OUTCOMES ASSESSMENT REPORT

2005

UNDERGRADUATE PROGRAM

DEPARTMENT
OF
FISHERY AND WILDLIFE SCIENCES

Mark C. Andersen, Associate Professor
Department of Fishery and Wildlife Sciences
February 2006

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OUTCOMES ASSESSMENT REPORT

2005

UNDERGRADUATE PROGRAM

DEPARTMENT
OF
FISHERY AND WILDLIFE SCIENCES

Part 1 –Outcomes Assessment Plan for 2005

MISSION

The Department of Fishery and Wildlife Sciences seeks to serve with distinction the needs of its clientele, based on excellence in the discipline of Wildlife Management, a focused dedication to mission and a clear understanding of the requirements and expectations of each of the clientele groups it serves. The Department is committed to a broad constituency representing a diversity of opinions and having a wide variety of interests and needs. Clientele groups include colleagues in discipline, students, private citizens, and a wide variety of agricultural, government and business concerns. The Department is committed to supporting and sustaining the profession through outstanding research, effective teaching and responsive service.

TEACHING

The primary goal of the Department's teaching program is to produce students that are capable of becoming professionals of the highest caliber. The Department offers undergraduate and graduate programs that prepare students for careers in research and management of wild aquatic and terrestrial animals and the systems they depend on. Professionals in this field must understand scientific principles inherent in population dynamics, habitat relationships, community dynamics, ecosystem processes, and animal behavior while working in an atmosphere often dominated by human social and political factors. To be effective professionals must be able to plan ahead, work well in teams of diverse people, identify and analyze problems, communicate clearly and apply a wide variety of management strategies and techniques in an array of natural settings.

RESEARCH

The practice of Wildlife Management is integrative in nature, relying on a great many scientific disciplines ranging from the social sciences and psychology, to ecology and systematics, and microbiology and molecular genetics. As a result, research within the field tends to be equally broad with the unifying elements coming from ultimate goals that are directed at managing natural systems in ways that insure sustainability.

SERVICE

Public service activities serve a broad constituency ranging from school children to working professionals. Public education programs are provided on a regular basis in a effort to increase understanding of and an appreciation for the natural systems that sustains all life on the planet. In more professional settings, guidance, training and information is regularly provided directly to managers who are directly involved in development of solutions to management problems.

BROAD PROGRAM GOAL

The Department of Fishery and Wildlife Sciences offers instruction to prepare students for (1) careers as wildlife managers in government service and private industry, or (2) admission to graduate programs where they can seek advanced training in Wildlife Management or related fields.

PROGRAM LEARNING OUTCOME 1

Learning Goal 1

Graduates of the Department of Fishery and Wildlife Sciences will be able to develop and demonstrate specific entry-level competencies as professional fishery and wildlife managers.

Assessment Standards and their Measurement

- 1) In senior seminar (WLSC 402) 90% of students will demonstrate professional competencies in the analysis of real world management problems.
- 2) 70% of students will demonstrate professional competencies in each of 5 subject area specialties by scoring at least 70% in each area in an exit examination administered in senior seminar (WLSC 402).

PROGRAM LEARNING OUTCOME 2

Learning Goal 2

Students will develop and be able to express a personal philosophy related to the wise stewardship of natural resources.

Assessment Standards and their Measurement

- 1) A written philosophy statement will be prepared by all students and collected at various times throughout the program. The statements will show the gradual development of a philosophy appropriate for a professional manager by the time of graduation.
- 2) Self-evaluations by students nearing graduation will show that at least 90% understand the personal and professional qualities that lead to a successful career in Wildlife Management.

PROGRAM LEARNING OUTCOME 3

Learning Goal 3

Graduates of the program will develop the capabilities to be effective managers in social and political environments characterized by a wide diversity of opinions.

Assessment Standards and their Measurement

- 1) Using self evaluations by students at least 90% of graduates will indicate that they believe they can demonstrate at least 80% of the entry level competencies required for employment as an entry level manager in state and federal agencies or in industry.
- 2) At least 90% of students nearing graduation will demonstrate the capability to serve diverse populations in domestic and international settings by participating in analysis and discussions of real world management problems.

Part 2 – Outcome Assessment Activities in 2005

The Department's Outcomes Assessment Plan was fully implemented in its current form beginning in the fall of 2001. However, portions of the plan were first implemented in the spring of 2000 with additional sections implemented in the fall of 2000. Finally, one of the original assessment standards was replaced by two new standards in the fall of 2001. The current plan has yielded quantifiable data that are being analyzed on an annual basis to provide measures of student performance. However, due to the change in departmental leadership early in 2006, the outcomes assessment plan was not fully implemented in 2005. Specifically, some outcomes data were not collected; other data were collected but could not be located after Dr. Caccamise's departure.

PROGRAM ACTIVITIES FOR UNDERGRADUATES

Based on our analysis of student performance and changing needs and demands in the discipline we have undertaken a complete revision of both the undergraduate and graduate curricula in Fishery and Wildlife Sciences. We expect to be finished with this undertaking in time for the next call for catalog revisions in fall 2006. This will allow us to implement our new curricula by the fall of 2007.

Once the revision is complete we will restructure our outcomes assessment procedures to correspond to the new curricular structure.

In the meantime we have focused this year's Outcomes Assessment on the kinds of information that is best suited to provide us with the kinds of information that we are using in our curriculum revision. The results of this analysis are indicated below.

Learning Goal 1

Graduates of the Department of Fishery and Wildlife Sciences will be able to develop and demonstrate specific entry-level competencies as professional fishery and wildlife science managers.

Assessment Standard		2005 Activity	AI ¹	UR ²
1.	In senior seminar (WLSC 402) 90% of students will demonstrate professional competencies in the analysis and discussion of real world management problems.	This assessment procedure was implemented as planned.	yes	yes
2.	70% of students will demonstrate professional competencies in each of 5 subject area specialties by scoring at least 70% in each area in an exit examination administered in senior seminar (WLSC 402).	The examination has been administered. However, we were not able to locate the results.	No	No

¹ Assessment Implemented

² Using Results of Learning Assessment Measures

Learning Goal 2

Students will develop and be able to express a personal philosophy related to the wise stewardship of natural resources.

Assessment Standard		2005 Activity	AI ¹	UR ²
1.	A written philosophy statement will be prepared by all students and collected at various times throughout the program. The statements will show the gradual development of a philosophy appropriate for a professional manager by the time of graduation.	This assessment was implemented as planned in our freshman course (WLSC 110), but not in our senior seminar course (WLSC 402). The results could not be located.	No	No

2.	Self-evaluations by students nearing graduation will show that at least 90% understand the personal and professional qualities that lead to a successful career in Wildlife Management.	It is not known if this assessment was actually implemented. The results could not be located.	No	No
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¹ Assessment Implemented

² Using Results of Learning Assessment Measures

Learning Goal 3

Graduates of the program will develop the capabilities to be effective managers in social and political environments characterized by a wide diversity of opinions.

	Assessment Standard	2005 Activity	AI¹	UR²
1.	Using self evaluations by students at least 90% of graduates will indicate that they believe they can demonstrate at least 80% of the entry level competencies required for employment as an entry level manager in state and federal agencies or in industry.	We are unable to determine whether this assessment was implemented as planned.	??	No
2.	At least 90% of students nearing graduation will demonstrate the capability to serve diverse populations in domestic and international settings by participating in analysis and discussions of real world management problems.	This assessment was implemented as planned in WLSC 402.	yes	yes

¹ Assessment Implemented

² Using Results of Learning Assessment Measures

Part 3 – Results for 2005

Learning Goal 1

Assessment Standard 1 – Students met the initial standard. Continued assessments each year will be used to monitor for deficiencies in the future. Note that this standard is redundant with Assessment Standard 2 for Learning Goal 3.

Assessment Standard 2 – The examination has been administered for seven semesters, not including Fall of 2005, for which results have apparently been lost. For the first three semesters the average scores increased markedly (44%, 54%, 64%). Initially, it looked like the grades were responding to the increased rigor expressed in our earlier curriculum revisions. With results from the most recent exams in, it is beginning to look like the initial increase was just normal variation, as the scores seem to have stabilized around 50%. The department may continue to administer the exam in anticipation of an eventual increase in performance, perhaps after the next curriculum revision is implemented.

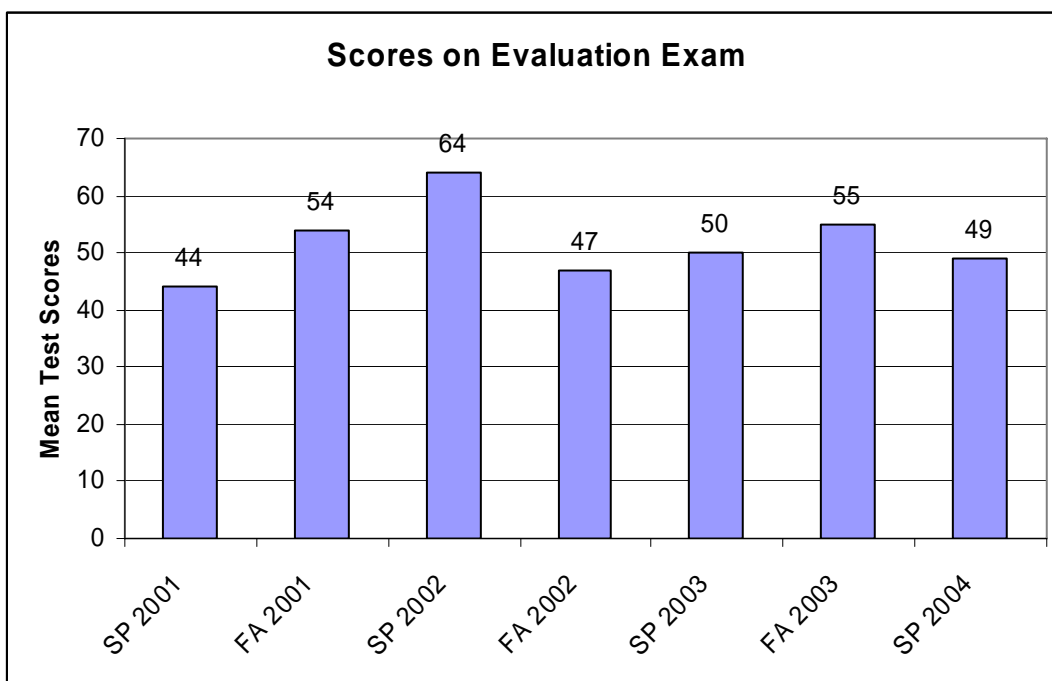


Figure 1. Mean scores on Student Evaluation Examination from 2001 through 2004.

Learning Goal 2

Assessment Standard 1 – Data from 2005 were not available to be analyzed. This assessment has been intended to provide a vertical comparison where we evaluate incoming freshmen and then evaluate the same students using the same metric when they are seniors. Last year was the first time that a cohort had moved all the way through the system. Not surprisingly, the comparisons provided good evidence of profound changes in professional sophistication by the time they had finished the curriculum. Yet, some deficiencies were apparent in some of the

programmatic areas the department considers important. These areas are being addressed as we formulate the curriculum revision that is currently underway.

Assessment Standard 2 – Data from 2005 were not available to be analyzed. Through 2005, the students showed marked improvement in meeting this standard. It appears that they have a clear understanding of the personal and professional qualities that lead to a successful career in Wildlife Management.

Learning Goal 3

Assessment Standard 1 – Data from 2005 were not available to be analyzed. In the past, as many as 80% of the students have met the standard, but this still falls short of our goal (90%). Additional improvement is necessary. Changes in course syllabi and the addition of new group oriented projects in our field courses should move students in the right direction. As the proportion of our students who have had these experiences increases the scores should improve.

Assessment Standard 2 – The students easily met this standard. The standard will be subsequently monitored to assure the standard is maintained.

Part 4 – Changes in Assessment Activities for 2006

This department is currently in the midst of a major curriculum revision based on our own perceptions as well as results from the ongoing outcomes assessments process we apply each year. We anticipate having the new curriculum ready for the 2007-2008 catalog. At that time we will have to revise our Outcomes Assessment plan to correspond with the new curriculum. In the meantime, we will continue with our current procedures through one more year.

Part 5 - Communication of Assessment Results to Faculty

The Department Head is responsible for assigning assessment tasks to faculty, and compiling and communicating results. This is done mainly through exchange with the Department's Undergraduate Curriculum Committee which in turn reports to the faculty at monthly faculty meetings. In addition, the Department Head communicates through direct personal exchange and through the preparation of written evaluations and reports, where appropriate. Annually, an agenda item dealing with the outcomes assessment process is prepared for a spring faculty meeting. At this time, the need for responses to the year's assessment activities is specifically addressed, and appropriate actions implemented.

OUTCOMES ASSESSMENT REPORT

2005

GRADUATE PROGRAM

IN

WILDLIFE SCIENCE

Mark C. Andersen, Associate Professor
Department of Fishery and Wildlife Sciences
February 2006

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OUTCOMES ASSESSMENT REPORT

2005

GRADUATE PROGRAM

IN

WILDLIFE SCIENCE

PART 1 –OUTCOMES ASSESSMENT PLAN FOR 2005

STUDENT EDUCATIONAL PERFORMANCE AND DEVELOPMENT ASSESSMENT

GRADUATE PROGRAM IN WILDLIFE SCIENCES

DEPARTMENT OF FISHERY AND WILDLIFE SCIENCES

February 2006

MISSION

The Department of Fishery and Wildlife Sciences seeks to serve with distinction the needs of its clientele, based on excellence in the discipline of Wildlife Management, a focused dedication to mission and a clear understanding of the requirements and expectations of each of the clientele groups it serves. The Department is committed to a broad constituency representing a diversity of opinions and having a wide variety of interests and needs. Clientele groups include colleagues in discipline, students, private citizens, and a wide variety of agricultural, government and

business concerns. The Department is committed to supporting and sustaining the profession through outstanding research, effective teaching and responsive service.

TEACHING

The primary goal of the Department's teaching program is to produce students that are capable of becoming professionals of the highest caliber. The Department offers undergraduate and graduate programs that prepare students for careers in research and management of wild aquatic and terrestrial animals and the systems they depend on. Professionals in this field must understand scientific principles inherent in population dynamics, habitat relationships, community dynamics, ecosystem processes, and animal behavior while working in an atmosphere often dominated by human social and political factors. To be effective professionals must be able to plan ahead, work well in teams of diverse people, identify and analyze problems, communicate clearly and apply a wide variety of management strategies and techniques in an array of natural settings.

RESEARCH

The practice of Wildlife Management is integrative in nature, relying on a great many scientific disciplines ranging from the social sciences and psychology, to ecology and systematics, and microbiology and molecular genetics. As a result, research within the field tends to be equally broad with the unifying elements coming from ultimate goals that are directed at managing natural systems in ways that insure sustainability.

SERVICE

Public service activities serve a broad constituency ranging from school children to working professionals. Public education programs are provided on a regular basis in a effort to increase understanding of and an appreciation for the natural systems that sustains all life on the planet. In more professional settings, guidance, training and information is regularly provided directly to managers who are directly involved in development of solutions to management problems.

BROAD PROGRAM GOAL

The Department of Fishery and Wildlife Sciences offers instruction to prepare students for (1) careers as wildlife managers in government service and private industry, or (2) admission to graduate programs where they can seek advanced training in Wildlife Management or related fields.

GRADUATE PROGRAM LEARNING OUTCOMES

Learning Goal

Graduates of the Graduate Program in Wildlife Science will be able to conduct, evaluate and communicate research and practice in Wildlife Management at a professional level.

Assessment Standards and their Measurement

- 1) 80% of all students enrolled in WLSC 522 (Research Methods) will score at least an 80% on the research proposal development assignment (the final project for the class).
- 2) 80% of all students enrolled in WLSC 522 (Research Methods) will score at least 80% on the writing assignments other than the research proposal.
- 3) 60% of all students completing a thesis will successfully publish (or have accepted) at least one paper in a refereed outlet.
- 4) 90% of students will demonstrate professional competencies in each of 5 subject area specialties by scoring at least 80% in each area in an exit examination administered during the last semester in graduate school.

PART 2 – ASSESSMENT ACTIVITIES FOR 2005

This Outcomes Assessment Plan was fully implemented in its current form beginning in the fall of 2001. However, portions of the plan were first implemented in the spring of 2000 with additional sections implemented in the fall of 2000. Finally, one of the original assessment standards was replaced by two new standards in the fall of 2001. The current plan has yielded quantifiable data that have been analyzed on an annual basis to provide measures of student performance. However, due to the change in departmental leadership early in 2006, the outcomes assessment plan was not fully implemented in 2005. Specifically, some outcomes data were either not collected or could not be located after Dr. Caccamise's departure.

ACTIVITIES FOR THE GRADUATE PROGRAM

Based on our analysis of student performance and changing needs and demands in the discipline we have undertaken a complete revision of both the undergraduate and graduate curricula in Fishery and Wildlife Sciences. We expect to be finished with this undertaking in time for the next call for catalog revisions in fall 2006. This will allow us to implement our new curricula by the fall of 2007. Once the revision is complete we will restructure our outcomes assessment plan to correspond with the new curricular structure.

In the meantime we have focused this year's Outcomes Assessment on activities that are best suited to provide us with the kinds of information that we are using in our curricular revisions. The results of this analysis are indicated below.

OUTCOME ASSESSMENT PLAN

LEARNING GOAL

Graduates of the Graduate Program in Wildlife Science will be able to conduct, evaluate and communicate research and practice in Wildlife Management at a professional level.

Assessment Standard		2005 Activity	AI ¹	UR ²
1.	80% of all students enrolled in WLSC 522 (Research Methods) will score at least an 80% on the research proposal development assignment (the final project for the class).	This assessment standard was implemented in the fall of 2005. The data have been compiled and analyzed.	yes	yes
2.	80% of all students enrolled in WLSC 522 (Research Methods) will score at least 80% on the other writing assignments.	This assessment standard was implemented in the fall of 2005.	yes	yes
3.	60% of all students completing a thesis will successfully publish (or have accepted) at least one paper in a refereed outlet within a year of graduation.	Historical data has been compiled and faculty are being encouraged to contribute to this standard by including publications in the goal in thesis completion.	yes	yes
4.	90% of students will demonstrate professional competencies in each of 5 subject area specialties by scoring at least 80% in each area in an exit examination administered in the last semester (approximately) in graduate school.	The examinations have in the past been administered as students complete their requirements. However, we were unable to locate the data.	??	No

¹ AI - Assessment Implemented

² UI - Using Results of Learning Assessment Measures

PART 3 – RESULTS FOR 2005

LEARNING GOALS

ASSESSMENT STANDARD 1

This standard was met in 2005. The assessment will be monitored in the future to assure that the standard is maintained.

ASSESSMENT STANDARD 2

This year students exceeded the goal for this assessment by scoring over 80% in their overall assessment. Our Research Methods (WLSC 522) course, where this standard is administered, is required of all graduate students and appears to be better preparing students than it has in the recent past. The writing section in the course has been expanded and students seem to be responding favorably to the changes.

ASSESSMENT STANDARD 3

Although results for 2005 are not available, information on the historical publication rate has been compiled and a new standard has been set based on these results. There is a lag in our ability to monitor this standard due to normal publication delays between the time a thesis is finished and the resulting publication finally appears in print. Nonetheless, since this standard was implemented there has been significant improvement in how faculty deliver research guidance to their students. Faculty clearly are planning publication outcomes more carefully when graduate programs are designed for students and as students prepare their theses. Publication rates are now much higher than in the past and for the past two years the assessment standard has been exceeded (Figure 1). However, the results for 2004 are a little misleading in that six theses were completed, but we have not received results from two faculty members. These two were temporarily dropped from the sample. The remaining four students have all published their theses.

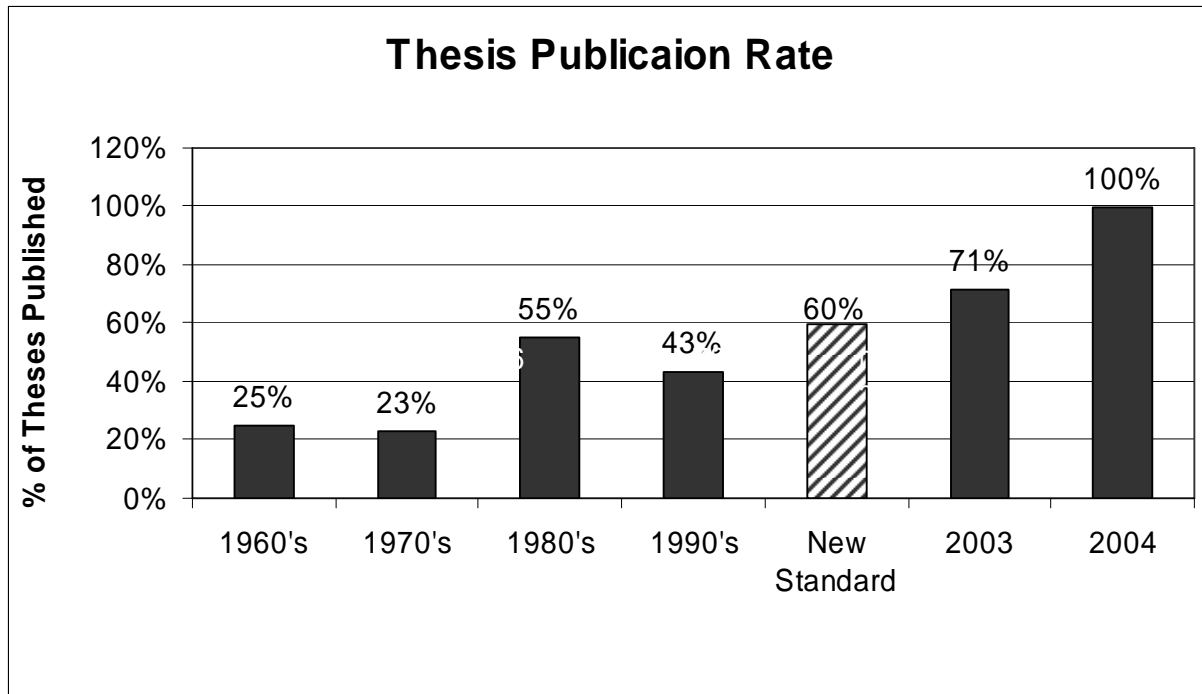


Fig. 1. Thesis publication rate for the Department of Fishery and Wildlife Science since the department's inception 25 years ago. The bar labeled "New Standard" represents the goal for this assessment standard.

ASSESSMENT STANDARD 4

Results from 2005 were not available for analysis. Past scores from on the graduate exit exam have been variable. However, they are far less variable and far higher than the undergraduates (mean undergraduate score = 50, mean grad student score = 67). For graduate students, both admission policies and course content are important in determining the results for this standard. As a result both areas are being addressed. We have implemented new procedures and standards for admission into our graduate program and expect this to have a positive effect on this standard over time. However, as new students move through the program we anticipate an overall increase in scores and a decrease in variance. Faculty are informed of results for each section of the exit exam. At this point, it has been left to them to make adjustments in courses where they feel improvements are necessary.

PART 4 – CHANGES IN ASSESSMENT ACTIVITIES FOR 2006

This department is currently in the midst of a major curriculum revision based on our own perceptions as well as results from the ongoing outcomes assessments process we apply each year. We anticipate having the new curriculum ready for the 2007-2008 catalog. At that time we will have to revise our Outcomes Assessment Plan to correspond with the new curriculum. In the meantime, we will continue with our current procedures through one more year.

PART 5 - COMMUNICATION OF ASSESSMENT RESULTS TO FACULTY

The Department Head is responsible for assigning assessment tasks to faculty, and compiling and communicating results. This is done mainly through exchange with the Department's Graduate Program Committee which in turn reports to the faculty at monthly faculty meetings. In addition, the Department Head communicates through direct personal exchange and through the preparation of written evaluations and reports, where appropriate. Annually, at least one agenda item dealing with the outcomes assessment process is prepared for a spring faculty meeting. At this time, the need for responses to the year's assessment activities is specifically addressed, and appropriate actions implemented.