2001-02 Assessment Report
College of Agricultural and Life Sciences

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Based on Reports from Departments
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In June of 1998 all Departments in the College of Agricultural and Life Sciences submitted plans for the assessment of student learning outcomes. I am pleased to say that all Departments have implemented plans but with a variability in both approach and result. As in the creation of the plans, the degree of success and progress is greatly influenced by previous experience in assessment, financial and staffing resources, and other context driven crises. The departments are continuing to refine plans and to learn about assessment activities as they move forward. Each department has developed plans consistent with their abilities, interests and resources and all understand that assessment is an important part of continuous improvement in their academic activities.

THE COLLEGE PLAN

The Assessment Plan for the College of Agricultural and Life Sciences was developed by a special faculty committee composed of the chairs of all the faculty committees dealing with undergraduate or graduate education in the College. Both the faculty Curriculum Committee and the faculty Academic Planning Council approved the Plan.

The CALS Assessment Plan calls for each department to: (1) identify the knowledge and skills its students should acquire; (2) develop a mechanism to measure the extent to which this knowledge and skill has been acquired; and (3) use the information to make appropriate changes to improve student learning. This assessment process is identical for both undergraduate and graduate education.

THE COLLEGE STRATEGY

The College faculty deliberately adopted a "bottom-up" strategy for the planning and implementing of assessment. First, department plans are developed exclusively by department faculty. The great advantages of this strategy are: (1) the plans are very well adapted to the goals of the department's academic program; (2) the plans tend to be highly thoughtful and reflective of the department's philosophy; (3) once a plan is developed there is a very high probability that the plan will be implemented. The disadvantages of this "bottom-up" approach are largely due to the individualistic nature of departmental responses: (1) variations in the speed of adoption of assessment activity; (2) variations in the specificity of statements of knowledge and skill outcomes; (3) variations in the level of analytical power of the measurement system; (4) uneven amounts of faculty time and departmental attention devoted to assessment in general.

The second principle of the College's strategy is that assessment activity should be supported by the resources available in the department. The assessment plan is a

"local" plan, produced and implemented by department faculty, even though the use of external resources might produce more elegant analyses. In general, this "local control" of assessment implementation means that the activity is not as extensive, and the approach is not as scientifically or statistically rigorous, as an approach that uses external resources to design and implement detailed assessment studies. On the other hand, the activities are thoughtful and are targeted on issues the faculty believe are important. Most important, the assessment activity is sustainable over time by resources that are under the control of the faculty in the department. Assessment is not dependent on external resources that cannot be sustained in the future. Again, one consequence of the reliance on "local" resources is variation in the level of assessment activity by department.

Implicitly, the College implementation strategy accepts the variation in the plans and implementation activity as a reasonable price to pay for a set of plans that are well-suited to the department's program, implemented by departmental faculty, likely to produce results that the faculty in the department will use, and likely to be sustainable over the long run.

SUMMARY OF 2001-02 ACTIVITIES

In the last year, Departments pursued their plans in varied ways and with varied outcomes. The College's Office of Academic and Student Affairs applied for and was granted funding to assess the expectation, satisfaction, and effectiveness of student advising in the College of Agricultural and Life Sciences. The approach in this project was to work with the UW Survey Center and CALS faculty, staff and students to develop tools and processes for assessing faculty/staff and student expectation, satisfaction, and effectiveness in student advising in the College. At the end of the Summer 2002, summary data for email survey responses from students and faculty were presented in summary form to the office of Academic affairs. The analysis of data from this project will be conducted in the course of the next year and is expected to provide a useful cost effective tool for continuous assessment of advising in CALS and provide a model that other College's and Schools might also use.

In addition to the ongoing activities of evaluation at the Department level, several special projects were approved and received funding for 2002. The Department of Biochemistry is continuing to refine its assessment of student education and faculty instruction; the Center for Environmental Toxicology has received funding to support planning for the development of an assessment plan and the Biology Major has received significant support to develop a plan for assessment of the undergraduate education experience.

In the following section, the assessment activities of College Departments are presented. Each response is related to the four categories Departments were asked to examine: 1) A description of progress made in implementing assessment plans at the undergraduate and graduate level during the past year. 2) A brief description of the processes you have developed to use the assessment information to make changed in the major. 3) A brief description of any specific changes made as a result of assessment this past year. 4) A brief description of assessment plans for the 2002-2003 year.

While all Departments report continued progress and attention, some have been able to dedicate more energy to the process than others. There are a number of reasons

for this. A number of Departments are preparing for external reviews by professional agencies or peer review mandated by external bodies. Others have been involved with curriculum revision and new program development.

DEPARTMENTAL ACTIVITIES

Agricultural and Applied Economics

Graduate

The Agricultural & Applied Economics Graduate Committee continued its established assessment strategies, which have been reported in previous years. In addition to these regular activities, the committee undertook a lengthy review of the graduate program in fall 2001 in preparation for a departmental planning retreat held in December. The issues addressed included:

- Plan course offerings in light of scarce faculty resources (with the Undergraduate Committee)
- Reassess and evaluate Ph.D. curriculum and preliminary examinations
- Consider offering a cross-disciplinary Master's of Applied Economics
- Consider developing two new courses: a pedagogy course for graduate students pursuing academic jobs, and a new segment of microeconomic theory for Master's level students
- Find ways to integrate the AAE graduate program with the agribusiness MBA program

In considering these matters, the committee compiled data on course offerings and enrollments, it solicited input from graduate students and faculty, and it considered various models for the new courses. A comprehensive curriculum review was conducted jointly with the Undergraduate Committee. Some new initiatives are underway. The Department developed useful discussions with our graduate students, who provided valuable input.

While this type of wide-ranging assessment activity takes place only once every few years, we believe that it provides the foundation for deliberation and planning for the next several years.

Undergraduate

1. As a part of its regular business, the Undergraduate Committee (UC) of the Department of Agricultural and Applied Economics (AAE) continually assesses the curriculum and academic programs intended to meet the educational needs of students within the Department and across CALS and the University. This past year the UC made some revisions in the requirements for the AAE major and made some attempts to identify possible voids in the AAE undergraduate program.

2. The assessment process employed by the UC of the Department of AAE involved a review of responses from a survey of recent graduates, an analysis of trends in enrollments in AAE courses, and regular discussions of issues related to the undergraduate program. At the conclusion of this assessment process, program resources

and curriculum changes are brought to the faculty for approval and implementation.

3. Two specific changes were made as a result of the assessment process this past year. One of these changes was a revision of the requirements of the Agribusiness Management degree. These changes were essentially an identification of AAE courses that could be taken to satisfy requirements that were previously fulfilled with courses taught in the School of Business. The other significant change was the development of a plan for offering a certificate program in "bio-economics." This program is targeted at life science majors who want to understand the application of economics to life science processes or biotechnology. This certificate program would be administered by AAE.

4. In the 2001-2002 year the Department of AAE will be going through a department wide planning exercise. As a part of the planning process, the Department will evaluate the undergraduate program in terms of curriculum, course offerings, faculty needs, and coordination of undergraduate and graduate instruction. This overall review should be completed sometime late in 2002.

Agronomy

The Department reports it is executing assessment as proposed in its initial plan.

Animal Sciences

1. In September 2001, seniors in Animal Science and Poultry Science convened and provided their assessment of strengths, weaknesses, opportunities and threats with regard to their major. This information was reported in the document prepared for our CSREES Departmental Review in November 2001. Senior exit interviews were conducted in December 2001 and May 2002, and students completing the Summer Poultry Program were surveyed.

2. Information received from undergraduate students has been considered by the faculty and instructional staff in small groups. New course offerings are imminent.

3. As a result of these assessments, the Department is planning to offer AS 375, Careers in Animal and Poultry Science, on alternate years beginning in spring 2003. A course in animal well-being and animal handling is being planned. A freshman orientation program were offered in August of 2001 and 2002.

4. Undergraduate exit interviews will continue. Assessment of the graduate program will be discussed, with some action likely to occur.

Bacteriology

1. The department continues to assess graduating seniors using an email survey to ask about job placement/continuing education; their assessment of how the Bacteriology curriculum prepared them for academic/professional life; and suggestions for improvement in curriculum. No formal survey of Masters students was done in the past year. Our PhD program has merged with that of the Medical Microbiology and Immunology Department and is now part of the Microbiology Doctoral Training Program.

2. Survey responses are reviewed by the Student Services Coordinator and members of the faculty to look for evidence of problems or areas for improvement in the curriculum. If areas of concern are detected, they are referred to the appropriate committee or individual to address.

3. Because student response is generally favorable, no specific changes have been made in the past year. The data collected is used to inform discussions of curriculum changes, to ensure that valuable aspects of the undergraduate program are retained and strengthened.

4. Assessment plans for the 2002-2003 year.
The Department of Bacteriology intends to continue surveying recently graduated students; to survey students in the Capstone course, and to develop a survey method for use with Masters students as the Masters program continues to grow.

Biochemistry

The Department reports it is executing assessment as proposed in its initial plan.

Biological Systems Engineering

The Department reports it is executing assessment as proposed in its initial plan.

Biology Major

Does not currently have an assessment plan since it is a new program. However, faculty and students in the Biology major will participate in developing a set of educational objectives for the major and initiating a pilot assessment program. A Project Assistant, funded by University Assessment Funds, will assist in these efforts during 2002-2003.

Dairy Science

The Department reports it is executing assessment as proposed in its initial plan.

Entomology

The Department reports it is executing assessment as proposed in its initial plan.

Food Science

1. This past year we conducted exit interviews with each graduating senior. We did not obtain any information that indicated need for significant change in the curriculum. Rather, we received information as to how we might improve certain lab exercises to compliment the lectures in certain courses. One problem we faced was 40% of the students did not have jobs at the time of the interviews and we did no receive permission from the students later on to talk to their supervisors. We had done an alumni survey (within 3 years of BS) a few years ago and used that alumni list to solicit permission for the employer survey. Now we simply ask students at the exit interview (when they graduate) if they will sign a permission form. This gives us more freedom and should give us better responses in the future. We also used our industry group, the Babcock Associates, to solicit input on what skills they would like our students to have. This

involved a facilitated discussion to clarify their needs and any concerns about our graduates.

We do not have a specific mechanism for assessment at the graduate student level. However, we are going through an exercise of evaluating our requirements for advanced degrees to make sure we are consistent and meet our desired goals.

2. We are still developing the best approach for using the assessment data. We have an Assessment Subcommittee of the Curriculum Committee charged with developing plans for assessment and curricular revision. We envision something like an annual retreat to discuss the assessment data and to get the faculty together to discuss potential changes to our curricula.

3. Only a few changes were made to our curriculum this year based on our assessment program. Probably the most widely discussed topic was that of team work and interpersonal skills through the activities of the CALS Instructional Improvement Committee. This exercise forced our faculty to discuss where and how we develop these skills in our students. We have started thinking about how best to introduce our students to group skills (in our Freshman class) and have discussed implementing a sophomore class to reinforce the principles.

4. Our program was reviewed by our professional society (IFT) this past year. Approval is now based on assessment of learning outcomes and we were able to show that we have developed outcomes for our classes and that we assess against those desired outcomes, both on a course-by-course basis and programmatically. We will have a faculty retreat to completely reevaluate our curricula to modify some minor areas to address a couple minor deficiencies identified by the IFT review committee.

Forest Ecology and Management

1. The USDA Cooperative State Research, Education and Extension Service (CSREES) completed a review of the department's programs (including undergraduate and graduate instruction) during 2002. The review team's report was very favorable regarding both the undergraduate and graduate programs and noted that our students are "capable of a high level of academic achievement". Our undergraduate students "have a good reputation with outside constituents such as the Wisconsin DNR", while the graduate students receive "very good support, including financial and mentoring support".

2. We continued to conduct exit interviews during 2001-02 with both undergraduate and graduate students for use in curriculum assessment, as well as identification of faculty and staff for various mentoring awards. Responses from undergraduate interviews completed during 2001-02 suggested a greater degree of satisfaction with preparation for careers. The most recent interviews (May, 2002) had very high ratings (all scores >4.0 on a 0-5 scale). These exit interviews have proven very useful during the past few years as our Curriculum Committee has wrested with changes to existing course requirements. In addition, student exit interviews have identified one or two new assistant professors as valuable teaching resources.

3. Our 'capstone course' intended as an integrative experience for seniors has continued to provide useful information on student preparedness. Faculty attend and critique the final

course presentations by 'teams' completing large property management plans. During 2001, one of our 'capstone course' teams won first prize in the Upper Midwest Regional Capstone Competition, an annual activity involving several natural resource and agriculture programs.

4. In response to student demand, and as a perceived opportunity for UW-Madison undergraduates, the Curriculum Committee created a new 'track' (Forest Ecosystem Management) within the Forest Science curriculum. This new option complements the existing options in Forest Management and Natural Resource Conservation and Management. The new option was made available beginning September, 2002.

5. The department completed a 'self assessment' of our undergraduate program for the Society of American Foresters, our professional accreditation organization. Much of the information contained here focused on undergraduate preparedness and employment of alumni. This was a 5-year update so no site visit was made by SAF. However, some of the materials assembled reinforced the value of our annual exit interviews and new curriculum changes.

6. At the graduate level, we are instituting changes in how we evaluate candidates for admission in response to changes made in the administration of Graduate record Exams and well as to the shift in orientation of many applicants to ecological and environmental areas. A new subcommittee of our graduate faculty will be providing more timely evaluations of applicants, as well as processing of more nominations for fellowships and other competitive awards.

Genetics

The Department reports it is executing assessment as proposed in its initial plan.

Horticulture

The Department reports it is executing assessment as proposed in its initial plan.

Landscape Architecture

Undergraduate

The Undergraduate Committee in the Department of Landscape Architecture is responsible for evaluating and implementing both its professionally accredited program and natural resources program. Since the professional program is nationally accredited, the vast majority of students pursue this option. Because of high student demand, access into the program is competitive. After students have taken six pre-requisite courses during their first year (PLA) in the Department, their GPAs are evaluated (letters-of-intent are also required). Twenty students are then selected to enter the advanced program (ALA), which is three additional years in duration.

The undergraduate program is constantly being evaluated to determine if it is meeting the changing needs of society and the profession. In addition to departmental reviews, an evaluation of the Department was conducted, in November 1991, by a national three-member team appointed by the American Society of Landscape Architects. This review, which has occurred every five years since the time of the Department's

founding in 1964, evaluated the program to assess its strengths and weaknesses, and to determine whether or not it should be accredited for another period. In February the review of the visiting team was forwarded to the Department by the national accrediting board. The review proved to be one of the most positive evaluations the Department has received over the past three decades, and revealed no significant weaknesses in its program. In February, the Department was informed that it was included in an initial, small group of North American landscape architecture programs that received re-accreditation for six ensuing years.

In preparing the accreditation report the Department conducted an in-depth review of alumni who had graduated during the previous five years. Every effort possible was made to contact each of these alumni and have them respond to the assessment form, which gave special emphasis to their employment history, salaries, and their assessments of the success of the Department in preparing them for their careers. A similar questionnaire was also distributed to a smaller group of alumni who had graduated more than five years prior to 2001.

The Department's highly regarded capstone course, which covers both semesters of the senior year, serves as one of the primary means by which student progress and success are evaluated. The capstone requires each student to work with a client (often a community or public organization) to develop proposals and plans for a project that requires the perspective of a landscape architect. Other studios in the Department also include juries comprised of faculty and professionals who critique the students' work over each semester.

The Department receives assistance from a small group of CALS faculty, appointed by the Dean, who review the program in terms of its potential linkages with other departments, and who also serve as advocates for its programs and initiatives.

Each year the Department completes a report, issued by ASLA, which includes data on how the program has met its goals and objectives. As always, the Undergraduate Program Committee will continue its ongoing review of the Department's program in preparing for the 2002-03 academic year.

Graduate

The Graduate Committee in the Department of Landscape Architecture is responsible for evaluating and implementing its Master's programs. During the past year the Graduate Program Bulletin, which provides information about the Department for prospective students, and also offers a road map of requirements and deadlines for enrolled students, was updated and revised.

Since each student is required to complete a research thesis prior to graduation, this document serves as one of the primary means by which student accomplishments are evaluated. In addition to the thesis, each student also presents his/her results to the Graduate Colloquium that is conducted each Fall Semester. Furthermore, the highest quality theses are selected by outside evaluators to receive graduate student awards distributed by the American Society of Landscape Architects.

Several of alumni who received graduate degrees from the Department, were included in the 2001 survey that was sent our as part of undergraduate program accreditation.

Additional refinements to the program will continue throughout the 2002-03 academic year.

Life Sciences Communication

The Department reports it is executing assessment as proposed in its initial plan.

Nutritional Sciences/Dietetics

Undergraduate Program

1. As the dietetics programs are accredited/approved by The American Dietetic Association, specific assessment plans were already in place. We have continued to implement these assessment plans which include: graduate surveys, alumni surveys, employer surveys, exit interviews with graduating seniors, course evaluations, and supervised practice director surveys. In addition our plans include monitoring of: current student and graduate GPAs, passing rate on the national registration examination for dietitians, and supervised practice program placement.

2. Assessment activities are scheduled throughout the year. Results are discussed in detail at meetings of the Dietetic Programs Committee. Recommendations for changes are implemented by this committee and/or sent to the Department of Nutritional Sciences Curriculum Committee/Faculty, as appropriate.

3. The Department underwent a comprehensive self study and external review that included a formal assessment of our undergraduate instructional programs in September 2001. As a result of this review, two major changes were approved and implemented. First, we have merged our three degree programs, BS Dietetics, BS Natural Sciences and BS International Agriculture and Natural Resources, to the single major code of Nutritional Sciences to reduce confusion amongst students and administrators regarding departmental instructional programs. Second, we are phasing out the Coordinated Program in Dietetics and have received approval from the American Dietetic Association to maintain our accreditation status through August 2005. This decision was made, in part, because there are increasing opportunities for students to obtain appointment to a dietetic internship after completion of the BS Dietetics and to reduce instructional costs.

4. We will continue with the same plans outlined in point 1, 2 and 3. In addition group exit interviews will be conducted with BS Natural Sciences students and faculty will receive a "refresher course" in best practices for advising undergraduate students.

Graduate Program

The Department underwent a comprehensive self study and external review that included a formal assessment of our Interdepartmental Graduate Program in Nutritional Sciences (IGPNS) in September 2001. The review concluded that: "This is a successful graduate program that is operating well. The IGPNS staff and faculty are to be commended for their outstanding recruiting efforts and conscientious mentoring of graduate students". We have made two changes in the past year, an expanded orientation program for new graduate students and personal contact (phone call or email) with PhD alumni 3-5 years after graduation to discuss their career progress and receive feedback about the IGPNS.

Plant Pathology

The Department reports it is executing assessment as proposed in its initial plan.

Rural Sociology

1. The Department of Rural Sociology continues to implement the assessment program it established in 1997. The central mechanism by which the Department assesses educational outcomes is a systematic program of exit interviews of graduating seniors. For the past five years, the Chair of the department has taken responsibility for implementing these interviews, and we believe that they provide an intimate and personalized approach to gauging both student achievement and program efficacy. The interviews have explored students' views on the quality of their overall educational experience in the Department of Rural Sociology and solicited feedback on specific dimensions of that experience. A written summary of each interview and an evaluation of each student's achievements relative to the department's educational goals has been maintained.

2. The Instruction Committee analyzes the interview reports and is responsible for recommending any policy or program changes it deems necessary or appropriate.

3. In exit interviews, many graduating seniors expressed dissatisfaction with the structure of requirements associated with the departmental major. Specifically, they felt that the four thematic areas across which they were required to distribute their courses in Rural Sociology were not appropriate to their needs and interests. The Instruction Committee had for some time been aware that the four-fold structure of requirements was a legacy of earlier times and no longer fit well with either the state of the discipline or current course offerings. Accordingly, the Instruction Committee proposed a new structure for major requirements. Rather than requiring a particular distribution of courses, students are charged with consulting their faculty advisors in shaping a set of courses that both ensure an understanding of the scope of the discipline and also are tailored to the needs and interests of the individual student. The new curricular structure was adopted by the Department.

4. The Department of Rural Sociology has found its exit interviews to be a valuable and effective means of gauging student achievement and of soliciting information that can be used to improve the educational programs of the department. The Department is also developing a set of options for the capstone experience which includes, but is not limited to, a capstone course.

Soil Sciences

The Department reports it is executing assessment as proposed in its initial plan.

Wildlife Ecology

1. The Department added an evaluation component to our capstone classes; began individual undergraduate student exit interviews (18 were completed in 02); this has now been expanded to include graduate student exit interviews. Assessment plans were also discussed as a part of the Department’s CSREES review in March 02.

2. Exit interview results were summarized and presented to the faculty and Department Curriculum Committee.
3. Two new courses are under discussion and course content is being revised to reduce redundancy identified by students.
4. We intend to continue assessment with procedures implemented in 2001-02

Urban and Regional Planning

The Department reports it is executing assessment as proposed in its initial plan.

Summary

Assessment is a high priority for the College of Agricultural and Life Sciences. Several committees in the College address the topic either directly or indirectly as part of their mandate. The Curriculum Committee of the college and most departments continually discuss refinements and improvements of curricula to enhance the preparation of College graduates. The Instructional Improvement Committee has a particular interest in instructional improvement throughout the college and the Office of Academic Student Affairs is persistent in seeking meaningful and useful learning experiences for students. Further, the Undergraduate Honors and Research Committee looks for ways to enhance the experiential learning base for students through mentored research activities. There is considerable evidence that faculty are increasingly concerned with making the learning environment and outcomes as relevant and rich as possible for all students.

Assessment Activities in the College of Agricultural and Life Sciences Graduate Programs 2001/02								
Department/Program	Direct Indicators			Indirect Indicators				
	Preliminary Exams	Review Theses/ dissertations	Performance Evaluations	Student Surveys	Exit Interviews	Alumni Surveys	Employer Surveys	External reviews
Ag/ Applied Economics	Annual	Annual		Annual				1996
Ag. Journalism	Annual	Annual						1997
Agronomy	Annual	Annual	Annual		Annual			2001
Animal Science	Annual	Annual	Annual					
Bacteriology	Annual	Annual	Annual				Annual	
Biochemistry	Annual	Annual				1999, 2001		2001
Bio Systems Engineering	Annual	Annual	Annual					
Biology	Annual	Annual	Annual					
Dairy Science	Annual	Annual	Annual					2001
Entomology	Annual	Annual						1999
Food Science	Annual	Annual	Annual					
Forest Ecology & Mgmt	Annual	Annual	Annual					2001
Genetics	Annual							1995
Horticulture	Annual	Annual						2002
Landscape Architecture			Annual					1996, 1998, 2001
Nutritional Science	Annual	Annual	Annual					
Plant Pathology	Annual	Annual	Annual					
Rural Sociology	Assessed through a joint program with sociology							2001
Soil Sciencee	Annual	Annual	Annual					
Urban & Regional Planning	Annual	Annual	Annual					
Wildlife Ecology	Annual	Annual	Annual					2001-02

Assessment Activities in the College of Agricultural and Life Sciences Undergraduate Programs 2001/02

Department/Program	Direct Indicators					Indirect Indicators				
	National Exams	Capstone Courses	Embedded Testing	Student Portfolios essays, projects)	Student Surveys	Exit Interviews	Alumni Surveys	Employer Surveys	External Reviews	
Ag/ Applied Economics		Annual				Annual	2001		1996	
Ag. Journalism		1998			1995, 1998		1997		1997	
Agronomy	Annual	Annual				1998				
Animal Science		Annual				Annual	2001		2001	
Bacteriology	Annual	Annual			Annual		Annual	Annual		
Biochemistry	Annual	Annual				1998	1999, 2001			
Bio Systems Engineering		Annual	Annual				Annual, 2001		2001	
Biology										
Dairy Science			Annual		Annual		Annual, 2001	1999		
Entomology			Annual		Annual	2001	1998-9			
Food Science					Annual		2001	2000	2001	
Forest Ecology & Mgmt		Annual				Annual	Annual, 2000	1998-9	1999, 2001	
Genetics	Underway									
Horticulture			Annual			1998-9	Annual, 2000	Planned		
Landscape Architecture			Annual				Annual	1995	2002	1996-7
Nutritional Science		Annual	Annual		Annual		Annual NS	Annual C, D	Annual C,E	1996-C, 1998-D, 2001-E
Plant Pathology			Annual		Annual		Annual		2001	
Rural Sociology						Annual				
Soil Sciencee			Annual	Annual			2001			
Urban & Regional Planning	Graduate Program Only									
Wildlife Ecology				Annual						