Appendix A -- Summary of Assurance of Learning Efforts and Results 2004-2009

A broad overview of the Assurance of Learning efforts made by the CoBE is provided in the main sections of the Maintenance of Accreditation report. This document provides additional detail and a review of results to date, along with descriptions of our efforts to apply those results to the modification and refinement of both curriculum and our assessment processes. The current Program Learning Goals were listed and described in the main sections of the report.

Tools and Procedures

To the extent possible student performance samples used as assessment data are collected from assignments normally given as class work or examinations. Answers to essay examination questions, solved problems, and case analysis papers are the main data of this type. These materials are accumulated in an on-line repository (the STEPS System, hosted by CSU-Chico). By using materials of this type, continuous collection of data is completely feasible, requiring only the effort to copy the materials to the storage site each semester. Collection of data across multiple semesters also allows both the accretion of larger bodies of data that may be sampled for assessment, but also allows longitudinal evaluation of the smaller (but more variable) groups identified with each semester. The every-semester data collection schedule makes the process a routine part of course planning and administration, and allows for more representative sampling of our entire student population at the annual and biannual intervals when data are actually analyzed. In addition, we have conducted unscheduled data-collection efforts in support of pretest-posttest experiments on the ETS examinations and on writing, and in response to observations of student difficulty in particular courses. Table A1 below lists all tools regularly used or planned for use to measure student performance, and lays out the regular data collection and analysis schedule.

	Table A1 – Data Collection Schedule and Evaluation Tools			
PLG#	Occasions for Data Collection	Assessment Tool	Data Collection Schedule	Analysis and Evaluation Schedule
1	End of program - MGT 490	ETS Business Major Field Examination	Collected every semester	Annual - Spring Semester
2	MGT 490 Case Analysis covering Social Responsibility Issues	CoBE Stakeholder Considerations Rubric		Biannual - Spring 09, Spring 11, Spring 13, etc.
3	Writing samples: MGT 300, MGT 490	CoBE Writing Rubric		Annual - Spring Semester
4	MGT 423 Ethical Reasoning Problem as part of the final exam	CoBE Ethical Considerations Rubric		Biannual - Spring 10, Spring 12, Spring 14, etc.
5	QBA 360 Problems on Exams	CoBE Quantitative Skills Rubric		Biannual - Spring 10, Spring 12, Spring 14, etc.
	MGT 490 Case Analysis	CoBE Complex Qualitative Analysis Rubric		Biannual - Spring 09, Spring 11, Spring 13, etc.
	Computer Competency Examination (Excel and Access)		Pre-Admission to BBA	Used to establish admission qualification

The most recent outcomes from the assessments

PLG#1

Students will be able to demonstrate comprehension of the fundamental principles of essential business functions.

ETS examination results from fall semester of 2000 to the present are charted at http://business.uhh.hawaii.edu/documents/etsbus08.pdf . The scores have only fallen more than one standard error away from the national mean on three occasions, two of which were more than one SEM above the mean. Otherwise, differences from that mean have been non-significant, indicating that the program has been consistent in meeting its goal in this area.

In addition to the regular tracking of scores, in the spring semester of 2005, the ETS exam was administered to 37 students enrolled in Accounting 250, which is typically one of the first classes business students take, although students in other majors also enroll for the course in significant numbers. In the spring of 2009, 13 members of that 2005 group of 37 (35%) had remained business majors at UHH and had taken the ETS exam a second time during the interim, as they were about to graduate.

We hypothesized that there should be an increase in total score between the two administrations if the program had been successful in meeting program learning goal #1. We looked first at the 13 students that had participated in both testing sessions. In a

paired-comparison t-test with 12 degrees of freedom, we found $t = 4.89$, $p = .0004$. The mean difference was 16.46 total scaled points higher at the second administration.

We also compared the mean score of the 37 students in our pre-test sample with the mean score of all 460 students who had taken the ETS exam between the spring semester of 2000 and the spring semester of 2009. We found a mean difference of 20.4 scaled points, and an unequal-variance t-test result of $t_{(37,460)} = 12.99$, $p < .0001$.

Both of these results support the hypothesis that the BBA program does enable meaningful increases in student knowledge of core business subjects, as measured by this examination. The BBA program remains committed to improvement on this measure of performance.

PLG#2

Students will be able to demonstrate the ability to analyze the relationship of business to its various stakeholders

This goal focuses on student understanding of the implications of corporate responsibility to the larger society and groups other than stockholders. A rubric has been developed for use in assessment of student performance on the key dimensions of the issues embodied in this perspective. The capstone course uses case materials that allow students to analyze aspects of these issues and propose courses of action that are consistent with contemporary views of corporate responsibility. The first assessment on this goal area was scheduled for spring semester 2009, but due to an administrative error in student instructions described below, it could not be conducted. It has been rescheduled for a subsequent semester.

The administrative error in this instance provided an important insight for everyone involved in the assessment process. Students need to be aware of the rubrics that will be applied to the work for its evaluation, simply as a matter of fairness to the students when their grades will be affected by the evaluation, but also to insure that their responses are provided in the context desired for assessment. Publication of the rubrics on the CoBE website and on class websites, along with reference to them while discussing the course assignments will become standard practice in the BBA program. Faculty members are being encouraged to use or adapt the rubrics for course grading, where possible and appropriate.

PLG#3

Students will be able to express ideas clearly, logically, and persuasively in written communication.

As noted in the Maintenance of Accreditation report, the BBA program has been in active collaboration with members of the University writing faculty. We have conducted a variety of assessments of student writing performance in the required Writing for Business (ENG 209) course, as well as in MGT 300 and MGT 490 over the past several years, in an effort to isolate and identify particular issues in student writing

that it may be possible for the BBA program to address. We also contracted with an outside consultant to assist us in developing the writing rubric now in use.

In 2005, an assessment using the ACT COMPASS e-write tool was conducted on students in ENG 209. Based on the outcomes of that assessment and extensive discussion within the BBA program, it was decided to attempt an experiment in the MGT 300 class that would increase the intensity and focus on writing specific to business, and greatly increase the amount of writing done in the course, along with extensive opportunities for feedback and revision. This was done by designating the course as "Writing Intensive", which by university policy limits it to 22 students. This necessitated offering a second section of the course to accommodate student demand, which was the major cost element since it diverted the faculty member involved from other course offerings.

This experiment began in fall semester 2008, and has continued into spring 2009. As noted in the Maintenance of Accreditation report, preliminary indications are that the results have been positive in terms of improvement in performance in the short term. Whether or not this cohort of students will demonstrate sustained performance in later courses remains to be seen, as does the cost-effectiveness of the approach taken. Systematic review of the experiment is scheduled for fall semester 2009.

The university has also committed funds, space, and personnel to enhancement of writing support as part of general academic support services for the coming years. We are hopeful that our participation in the planning of this effort will lead to better support for our weakest students from sources outside the college. Kilohana: The Academic Success Center has been established in renovated space within the library. A permanent director has been hired and the pre-existing writing center has been placed under Kilohana's direction. This center will coordinate tutoring services across disciplines and provide formal training in tutoring for students hired for that purpose. Hours of operation and the variety of services available are expected to increase substantially.

As was also noted in the Maintenance of Accreditation report, analysis of the written work of graduating seniors collected over the three semesters since spring 2008 yielded encouraging assessments of the performance of our students. Our standard is that at least 95% of every graduating cohort should meet or exceed the BBA program's writing standard as measured using the current writing rubric. In two of the three most recent semesters, 100% of the students were able to meet that standard. When aggregated across all three semesters, 64 students had been assessed, and 93.75% had met or exceeded the standard. Individual semester sample sizes can be quite variable. In these three semesters, they were 12, 26, and 26. The semester with only 12 students showed the weakest performance, with 3 students below standard on one dimension and 4 below standard on the other dimension. In each of these instances, the students were not native speakers of English. UH Hilo also has a relatively high proportion of students who, even though they are from Hawaii, do not speak English at home.

PLG#4

Students will be able to understand the importance of behaving ethically in their professional lives (i.e., have an ethical perspective)

As presently stated, this program learning goal has three components. A rubric has been developed to assess the third of these, but work remains to be done on operationally defining the measurements for the other two performance elements. Assessment on this goal is scheduled for the spring semester of 2010. One of the C/A committee's tasks for fall 2009 is the finalization of these assessment tools, and the resolution of some issues that have been raised by one faculty member relating to assessment in this area. A tentative selection of a venue for data collection has been made, but discussions continue on this.

PLG#5

Students will be able to demonstrate the ability to analyze complex, unstructured qualitative and quantitative problems using appropriate tools and technology

This goal has also been subdivided into three separate outcome measurement areas: qualitative problem-solving, quantitative problem-solving, and use of technological tools.

We assess the student's ability to use basic technological tools as an entrance requirement for the program. Each student must achieve at least a 75% correct score on a practical test of skills in the use of Microsoft Excel and Access before they will be admitted to upper-division business course work. As a practical matter, that admission decision constitutes one criterion for admission to the business program.

Quantitative problem-solving is to be assessed using a rubric developed by the A/C committee and other faculty members that teach in quantitative analysis areas. It is scheduled for initial use in spring 2010. During fall 2009, the A/C committee and interested faculty will complete a set of quantitative problems of comparable complexity and difficulty that can be rotated through final examinations in the final quantitative course in the BBA program. These will be collected as the data for evaluation using the rubric.

Qualitative problem-solving is assessed using a rubric developed by the A/C committee from work done elsewhere. Case analysis papers are collected in the capstone course, accumulated, and then samples are evaluated by the C/A committee and other faculty volunteers. So far, we have been able to provide token compensation for the time spent in calibration and evaluation sessions by these faculty members. Future budgets will determine the feasibility of continuing this practice.

This rubric was applied to case materials collected in the capstone course in spring 2009 from 26 students, all of whom either graduated that semester or will graduate in the fall of 2009. The results are displayed below in table A2.

These results indicate that students tended to be weakest in the anticipation of likely outcomes from the course of action that they chose in the process of analyzing the case, and did not do as well as they could have in the analysis and identification of alternative courses of action. This suggests a need for greater emphasis on these aspects of the problem-solving process in future classroom instruction and in the choice of case materials for student analysis throughout the business curriculum. These are important steps in planning for strategy execution.

An alternative explanation may also lie in the instructions that students were given for the assignment, which ultimately became the data for assessment. Going forward, case analysis assignments that will be the basis of assessment will need to be fully comprehensive, providing all the necessary information for a complete problem-solving process leading to an action plan, and students will need to be explicitly instructed to provide all of the elements of that process in their responses. That was not a major point of emphasis in the instructions for this particular assignment. For that reasons, while these results cannot be ignored, it may be valuable to treat them as preliminary until subsequent samples can be produced under fuller instruction conditions.

Table A2 -- Qualitative Problem-solving Spring 2009				
	Raters' Scores			Total
TRAIT(Rubric Dimension)	Below Standard	Meets Standard	Exceeds Standard	
1 - Issue Recognition (Recognizes significant issues raised by the case situation)	0 0.00%	20 76.92%	6 23.08%	26
	100%			
2 - Knowledge Application (Uses knowledge of theory and practice to interpret facts and problems.)	0 0.00%	21 80.77%	5 19.23%	26
	100%			
3 – Analysis (Uses appropriate tools and techniques to combine facts in finding alternatives.)	2 7.69%	22 84.62%	2 7.69%	26
	92.3%			
4 - Alternative Courses of Action (Is able to identify and articulate several reasonable alternatives.)	3 11.54%	22 84.62%	1 3.85%	26
	88.5%			
5 – Actions (Is able to prioritize and choose a feasible course of action that addresses the main issues of the case.)	6 23.08%	19 73.08%	1 3.85%	26
	76.9%			
6 – Consequences (Anticipates both positive and negative consequences of the chosen actions.)	17 65.38%	8 30.77%	1 3.85%	26
	34.6%			

The impact of Assurance of Learning efforts on program offerings

Several issues have arisen and been dealt with through internal review and discussion of alternatives, followed by actions to address the perceived problem. Three of these were the decision to institute the Computer Competency examination, revision of the

entry mathematics requirements, and revision of the content of the Business Law course. These changes did not come about through the formal assurance of learning process, but still affect the ultimate quality of our students' education.

In the first case, the inability of numbers of students to perform basic spreadsheet tasks in business classes such as statistics, where they are required, led to the discussion. After considering the fact that a large portion of business students were transfer students who had not taken a computer course at UH Hilo and may not have received the required instruction, and the fact that other students had developed skills far in excess of those required through individual study and practice, we decided for the lower-cost option of using the positive demonstration of skills. Students with adequate skills could demonstrate them at lower cost than taking a (for them) redundant course, and students that had not had the required training could be directed to the UH Hilo course.

In the case of the mathematics requirement, advisors noted frequent complaints form students about the difficulty of getting a seat in the one required mathematics class, MATH 115. Discussions were held with the mathematics department, and during the course of those discussions, we decided to revisit the content requirements that we were placing on the students. Out of that review, it became apparent that we could set the threshold at a slightly lower-level course, MATH 104F, which would cover all of the necessary content for the BBA curriculum. We could also allow students to meet the requirement by taking that course or any higher-level course they were qualified for – which increased the availability of classroom seats and eased scheduling for students.

With regard to the Business Law course, the program became aware of elevated numbers of students receiving grades of D, F, or W in BUS 240, the business law course. After consultation with the regular instructor of the course, the syllabus was sent to colleagues at other universities for external reviews. The consensus was that the present syllabus was not consistent with current practice in this disciplinary area, and needed to be updated. A faculty task force was convened, and over the course of spring 2009, redesigned the content and approach of the course. The revised syllabus is scheduled for implementation in fall 2009. Student performance will be tracked closely for several semesters to assess the impact of the changes in comparison with earlier rates of student success and satisfaction. All of this came about because of efforts to monitor student performance on ETS exams under PLG#1, and examination of student success rates in courses, whish is part of our normal review of the program.

Assessment of student writing has led to increased dialog with the English faculty, heightened awareness of and attention to this issue by faculty members across our curriculum, and modifications of writing assignments and the structure of classes, most notably MGT 300 and MGT 490. The preliminary indications are that improvement in performance is occurring.

Assessment of students' complex problem-solving skills under PLG#5 has led to concern that we are not emphasizing the latter stages of that process sufficiently in our

teaching. Modifications to assignment instructions are planned for fall semester to establish that faulty instructions were not the sole cause of the results observed under initial use of the rubric. Once that is established, we can focus on developing methods to insure greater practice in identification and evaluation of alternatives, along with preparation of support for choices made as part of that process.

Summary

The CoBE's Assurance of Learning processes have undergone considerable formalization over the last five years. What was previously done on an ad-hoc basis is now becoming systematized and regular, and is being codified and recorded to a much greater extent than at any previous time. One of the major benefits of the effort to do these things has been scrutiny the existing processes and efforts have undergone, and the understanding of how they all fit into the CoBE's continuous improvement efforts.

There is still disagreement among some faculty members over the precise definitions and measurements we should use, and some degree of dissatisfaction by a few members who feel that their particular point of view is not properly represented in the College's present practices. There is, however, strong consensus on the basic need for assessment and accountability, and usually strong agreement on the issues that have needed the highest priority of attention.

This is an ongoing process that will doubtless undergo frequent modification, but will continue into the future. The results we have found so far have been encouraging in many areas. The basic content knowledge is being transferred to our students, and they are able to recall and apply it satisfactorily at the end of the program. When they are motivated to do it, nearly all of our students can meet the standards we have set for them in written communication. We can see that they have learned at least the analytical stages of the problem-solving process when dealing with ambiguous qualitative data, and we hope to be able to show that they are equally adept at the later steps in that process as we refine our measurement instruments. We know that our graduates are conversant with modern business technology, and find it natural to use it in their work. As we introduce further assessment tools in the next cycle, we believe that we will observe similar results and find new suggestions for ways to improve what we offer to our students.