

UNIVERSITY OF HAWAII-MAUI COLLEGE

ANNUAL INSTRUCTIONAL PROGRAM REVIEW 2009-2010

APPLIED BUSINESS AND INFORMATION TECHNOLOGY PROGRAM (ABIT)

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ANNUAL PROGRAM REVIEW
APPLIED BUSINESS AND INFORMATION TECHNOLOGY
2009-2010

I. Assessment of Student Learning

The program learning outcomes for the Applied Business and Information Technology (ABIT) Program are as follows:

1. Apply knowledge of essential business disciplines including accounting, economics, finance, law, management, and marketing, and use business research methods to analyze information in order to develop solid business plans and strategies, and make effective and efficient business decisions.
2. Use leadership and interpersonal skills to promote business ethics, values, and integrity related to professional activities and personal relationships.
3. Demonstrate knowledge of operating system, word processing, spreadsheet, presentation software, database management, computer troubleshooting, web development, and e-commerce.
4. Apply knowledge of graphical user interface (GUI) and event-driven programming (EDP) to designing, creating, and testing computer programs.
5. Apply knowledge of e-commerce by designing, creating, and testing appropriate e-commerce sites using development tools.
6. Apply critical thinking skills to evaluate information, solve problems, and make decisions.
7. Use information retrieval and technology.
8. Apply quantitative reasoning to enhance independent or group decision-making skills.
9. Communicate effectively with others utilizing appropriate forms of oral and written communication methods including multimedia presentations that apply information technologies and serve particular audiences and purposes.

All the program learning outcomes were assessed during the 2009-2010 academic year. Evidence was collected in spring 2010 in the ABIT Capstone course BUS 495 which assessed ALL the program learning outcomes.

II. Evidence and Results of Student Learning

The evidence used to assess the program learning outcomes was a “BUSINESS 495 – EVALUATION OF PRESENTATIONS” form submitted by external evaluators of the students’ capstone presentations(see in appendix). Registration for the BUS 495 class is opened every spring to those students who have completed all the prerequisite courses or will complete their degree requirements concurrently with BUS 495. The previously announced PLO’s are identical to the student learning outcomes (SLO’s) for the course. The PLO’s are also tied into the assessable evidence in both the Applied Business and Information Technology components of the degree program. Students must submit a project that demonstrates the use of skills and tools acquired or enhanced developed during the ABIT program. These includes strategy formulation and implementation, competitive analysis, and e-commerce as models for problem solving and decision-making in an organizational setting.

Each project individual or team is to do one of the following:

1. Find an existing business with an annual turnover of \$ 100,000 or more with considerable upside potential, and develop a plan to grow that business to double its present size over the next 3–5 years. The business could be a stand-alone company or a business unit within a larger company;
2. Present a plan for new venture creation or “startup.”
3. Present a Project Proposal of his/her choosing which will display the skills and attributes that are the SLO’s of the program.

Since there are no tests, quizzes, term papers or traditional assessment mechanisms, students begin the semester by presenting a project proposal to the dual faculty and peers which is then evaluated and critiqued as to adherence to the guidelines for Business Plan development and E-commerce support. Students must agree to a timetable at which “deliverables” i.e., Project Proposal, Quick Screen Presentation, Analysis of Competitive Environment, Technical plan, Marketing plan, Management Plan, Financial Plan, and Web and Data Base. Feed back and consultative support is provided throughout the process which is also designed to foster intergroup solidarity.

Peer group pressure has been effective in having students adhere to the guidelines although during the process the assessment is strictly anecdotal. Three weeks prior to the conclusion of the course, students present the finished project to their peers. At this stage support faculty from the accounting program or communication department are called in to offer consultation. The actual evaluations of the projects and assessment of the learning outcomes occurs on the last week of the semester.

The completed presentations are presented to invited guests comprised of stakeholders in the UHMC ABIT Program, i.e., all BUS 495 students, previous ABIT graduates, ABIT faculty, UHMC ABIT support faculty, ABIT Program Community Advisory Board, UHMC Administrators, RCUH employees, ABIT students' guests.

Prior to presentation of the projects, all the guests are requested to sign in and evaluate each capstone student during their 20 minute PowerPoint presentation, utilizing the *Evaluation of Presentation* form. The forms were collected at the conclusion of the event and those that were filled out by ABIT Alumni, UHMC Faculty, UHMC Administrators, ABIT Advisory Board and RCUH employees, were tabulated and analyzed for assessment purposes. Previous experience had shown that BUS 495 students were uneven and uncritical in their review of the presentations. Since all 16 questions were designed to conform to a Likert scale analysis, the responses ranged from 1 to 5 with the latter being evidence of demonstrating congruency with Program Learning Outcomes 1 through 9.

Based on a Likert scale of 1-5 (also used in the student evaluation instruments) an assumption is made that the range between 0-2.0 is an unacceptable outcome 2.0-4.0 is an average outcome, and a result of 4.0- 5 is a superior outcome. Consequently, if we accept the aforementioned assumptions, then the results of the BUS 495 assessments tells us the following:

1. One graduating student achieved an average score when looking at the scores rendered by all evaluators across 18 parameters.

2. Eight students achieved superior results when assessed on the 18 parameters representing the program learning outcomes.
3. One variable (question 15) appears to be problematical for the evaluators since it was either left blank or scored low. Another explanation may be the fact that it may be a difficult parameter to see or visualize without technical expertise. The author also noticed that the scale was only from 1-4 and may have to be corrected in the future.
4. There was no correlation with assessors' verdict regarding PLO's and whether they would invest in the project.
5. Consistent tweaking over the past 4 years of teaching the Capstone course have allowed us to draw conclusions about what works best in achieving the results that we achieved this year. To wit, while team teaching between the Business Core faculty and the IT Core faculty is desirable, sharing the classroom at the same time is counterproductive and a waste of valuable resources. The most efficient use of time is for each faculty member to teach on different days and available for consultation on the day that they do not teach. We have also discovered that the capstone has to be an hybrid structure that utilizes technology, on-line networks, seminar and consultation formats. Additionally, the technology level of graduates was not sufficiently imbued with the current technology which students may expect to encounter in the 21st century workplace.

III. Curriculum Changes

The following curriculum changes, primarily in the IT sector have been approved by the ABIT committee, the BSH Department and have been submitted to the UHMC Curriculum Committee. The ABIT Program will be requesting changes of SLO's, additions and deletions, and elective designations in the business courses during the spring 2011 semester. Complete proposals in the Appendix.

Summary of Change Requests – ABIT ICS Courses

ABIT ICS Course	Action	Reasons, with supporting standards and UH courses
ICS 319 – Operating Systems	New course. Replaces ICS 320	Introduces operating systems as a critical component of modern IT infrastructure. Knowledge of modern operating systems allows students to learn the foundation of IT systems and provides support for advanced topics in databases and web development. Critical foundation to the future ABIT capstone. Course aligns with ACM and AIS standards on IS curriculum or IS 2010.5 (IT Infrastructure). Intermediate 3xx version equivalent of existing courses in UH Manoa ICS 412 and US Hilo CS 430.
ICS 352 – Networks & Security	New course. Replaces ICS 340	Introduces networks and security as critical components of modern IT infrastructure. Knowledge of networking technology and security issues allows students to learn the foundation of IT systems and provides support for advanced topics in web development. Critical foundation to the future ABIT capstone. Course aligns with ACM and AIS standards on IS curriculum or IS 2010.5 (IT Infrastructure). Equivalent to UH Manoa's ICS 351 (Network Design and Management) and ICS 423 (Computer Security).
ICS 360 – Database Design & Development	Modified Course. Updates title, description and pre-requisites	Expands scope of current course in Database Application Design to Database Design and Development. Reflects application of database technology, which provides skills required in the ABIT capstone and IT workforce. Course aligns with ACM and AIS standards on IS curriculum or IS 2010.2 (Data and Information Management). Intermediate 3xx version equivalent to existing courses in UH Manoa ICS 421 and US Hilo CS 421.
ICS 385 – Web Development & Administration	Modified Course. Updates title, description and pre-requisites	Expands scope of current course in Electronic Commerce to general web development and site management, including but not limited to electronic commerce. Reflects changes in the IT industry where newer forms of web development exist which includes social networking and e-commerce.

		Course aligns with ACM and AIS standards on IS curriculum or IS 2010 Elective (Application Development). Equivalent to existing courses in UH Hilo - CS 201 (Web Technology II) & ICS 300 (Web Site Management).
ICS 418 – Systems Analysis & Design	New course. Replaces ICS 420	Provides students with the skills necessary to design e-commerce and web applications. Course aligns with ACM and AIS course guidelines for IS 2010.6 (Systems Analysis & Design). Based on existing courses in UH Manoa - ICS 413 (Software Engineering I) & UH Hilo CS 460 (Software Engineering I).

Summary of Change Requests –ICS Courses in Business Careers III

ICS Course	Action	Reasons, with supporting standards and UH courses
ICS 110 – Intro to Computer Programming	New, mandatory course for Business Careers III and ABIT prerequisite. Existing course regularly taught at UHMC. Replacement for BUSN110.	Introduction of basic computer programming concepts to third semester of Business Careers III AAS degree. This mandatory course provides rigor and relevance to IT profession and IT industry standards. Allows students to prepare for advanced computer programming courses in the ABIT program.
ICS 111 – Introduction to Computer Science	New, mandatory course for Business Careers III and ABIT prerequisite. Existing course regularly taught at UHMC. Replacement for BUSN151.	Introduction of basic computer science concepts to third semester of Business Careers III AAS degree. This mandatory course provides rigor and relevance to IT profession and IT industry standards. Allows students to prepare for advanced courses in IT infrastructure in the ABIT program.
ICS 200 –Web Technology	New, mandatory course for Business Careers III and ABIT prerequisite. Existing course at UH Hilo. Replacement for ICS214	Provides introduction to web design and development, a requirement for advanced topics in the ABIT program. The new course is equivalent to CS 200 course (Web Technology I) taught at UH Hilo.

IV. Analysis of the Program

Strengths and Weaknesses, Opportunities and Threats

Since ABIT has been an accredited program Since May 2007, the assessment of our strengths and Opportunities has been made possible by additional data provided by the State and the UH System in the past 12 months. In the beginning of the AY 2009-10 the continuing effects of the recessionary economic environment were reflected in additional student registrants to the school in general. A comprehensive internal recruitment program and an effective support system by faculty and counselors resulted in a growth curve in the above numbers. The State's statistics on new jobs and replacement positions, did offered an encouraging forecast for potential students. On Maui alone, the numbers of projected jobs increased from 25 to 33. Looking at other aspects of the **Demand** matrix, by fall of 2009 we witnessed the increase of the number of ABIT majors from 39 to 42. The increase may be attributable to the "in the pipeline" students, proceeding from lower division aspirant to reach the level of a declared major. Student semester hours in All Program Classes fell from 482 to 418 reflecting the registration of ABIT majors in classes required for graduation not previously taken. for all program classes fell from 173 in 2007 to 345 in the Fall of 2008. The number of classes taught remained the same at 14. In terms of demand we are in the growth stage of the product life cycle and anticipate increased rate of growth as well as absolute growth.

In terms of **Efficiency**, the average class size fell from 11.9 to 9.6 students. Our class fill rate dropped to 38% from 49% reflecting "in the pipeline" and unmet general education requirements which cannibalized our upper division class percentages. With the increase of full time faculty from 2 to 3, our majors/faculty ratio of 13.8 is down from 19.5 the previous year.

Our **Effectiveness** and the persistence of majors from 85% in 2008 to this year's 92% is a welcome indicator of increasing strength in our counseling, teaching and recruitment support services. A course completion rate of 84% is in contrast to our previous 91%.

In summary, our rate of program growth and strength is dependent on meaningful and effective recruitment in county and state, on the mainland, and internationally. Such recruitment requires familiarity with the opportunities and threats in the higher education marketplace, that has become customer driven, sensitive to digitized marketing, nuanced selling techniques and requiring the use of persuasion architecture, converging technologies, and strategic alliances. Due to the international financial uncertainty, we have witnessed an unprecedented enrollment increase in registration and attendance in the college. It will take approximately 2 years before these numbers are reflected in the

ABIT Program, since new registrants have to complete a host of lower division prerequisites. Locally focused marketing efforts have been increased by the leadership of the college administration, which has made a priority of *retention* and *persistence* goals.

V. Action Plan

It is best to begin by revisiting the **2008 – 2009 Goals**

- 1. The ABIT Committee has served its purpose, i.e., supporting the operational and educational policies and procedures during the program's initiation and journey through the accreditation processes. During this AY 2009-2010 it is the intent of the faculty that the committee be disbanded and that the ABIT Program functions in concert, administratively and educationally, with other baccalaureate programs at Maui College. Consequently, the faculty will initiate discussions for the ABIT Committee's dissolution.**

This goal is a "Work in Progress," but it has commenced in the fall of 2010 with the establishment of a Baccalaureate Committee (chaired by VCAA John Mckee) and includes ABIT, Applied Engineering and other Baccalaureate programs in the establishment process.

- 2. It is the intent of the ABIT Faculty to address the issues raised by the Curriculum Committee in its first review of the Program changes. It will consult with the constituent departments of the ABIT program, i.e., BSH, ICS, and HUM.** A full revision of the curriculum of the ABIT Program was undertaken and curriculum revisions underwent the review and approval necessary for consideration by the UHMC Curriculum Committee. The committee requested that changes be made and be revisited by the Curriculum Committee. During this time, one of the two core faculty members in the program indicated that they would not be returning in the fall of 2010 and it was decided to table the changes until that core faculty is replaced.
- 3. The ABIT faculties propose an examination of the administrative structure in which ABIT is housed. Perhaps the college faculty with Administration will create a management framework that conforms to the reality of the emerging baccalaureate environment, i.e., B.A.S. in Applied Engineering, and other proposed programs.** This has been proposed to the Administration of UHMC and is within the purview of the decision making body of the college.
- 4. Recruitment to bolster the ranks of the students enrolled in the program will continue to be a major focus of the faculty and its student counselor. It will intensify its participation at all other available venues, e.g., student fairs, student orientations, high schools, and UH Community Colleges. The faculty will also engage in internal marketing**

in the college “pitching” the program to the largest group of majors at Maui College, i.e., the liberal arts majors. The program will continue its outreach to county organizations and agencies including clubs such as Rotary, Kiwanis, and Lions. The social media phenomena present another fertile ground for recruitment purposes. The ABIT Program has its own Facebook and My Space web sites. Our intention is to raise the number of students in the ABIT program from the current 43 to 55. We have continued in the process although the movement from lower division to upper division majors will take some time to become evident.

5. **The program will continue its applied research obligations with emphasis on practical outcomes that benefit the community, county, or state environment which is its host. The Waverly literature research will be presented at a scholarly conference in New York, the obesity related research has participated in a grant application to the Centers for Disease Control and is awaiting a decision on funding so as to be able to define the scope and breadth of its endeavor. The IT Center has possibilities for new contracts and awaits approval from the research committee to recommence operations.** The 3 man ABIT Core Faculty lost 2 faculty members and consequently only the obesity project funded by the CDC is in play. The program was funded a two year project in the amount of \$ 75,000. The plan is in it' 3rd month of operation and will issue preliminary results at the end of this 2010-011 academic year.
6. **Through the UH System process the program will apply to the Board of Regents for change of status from Provisional to Permanent and support the name change of the college from Maui Community College to UH Maui, in keeping with the evolving mission of the college and its accreditation transfer from the WASC Junior to the Senior Commission.** On February of 2010 the Board of Regents did change the name of Maui Community College to the University of Hawaii-Maui College. Although completed, the change of status document elevating the ABIT Program from Provisional to Permanent has not been submitted for consideration by UHMC administration to the Board of Regents.
7. **The program will continue to serve as entrepreneurship and management community consultant to various community groups requiring such expertise, e.g., Center of Excellence in Aging with Aloha.** The ABIT Program continues to serve the community through its consultation to the Aging with Aloha Coalition and participation in the Department of Health's “Healthy Living Initiative.”
8. **The ABIT Program will explore the use of more on-line courses so as to enable our program to access to a larger student universe. This in keeping with our previously mentioned recruitment goals. We will do this in consultation with the three component departments in the course**

offerings. With the hiring of a new IT core faculty instructor, we have expanded our on-line offerings in IT.

- 9. Although it appears that grant money is available to provide our students with computer hardware and software, we will prepare an annual budget which reflects the desire to distribute laptop computers to all ABIT students, in keeping with the recommendations of the Seton Hall University proposals.** We did purchase 39 laptop computers for use by ABIT students and are in the process of developing policies and procedures for their distribution.
- 10. We will enlarge the pool of appropriate adjunct lecturers so as to be ready to cope with increasing enrollments envisioned in the next 24 months.** We have increased the pool of lecturers in both business and IT.
- 11. We will fund and develop an alumni tracking software utilizing the services of ABIT students. After testing, the software will be made available to the rest of the college for use in tracking the alumni of other programs.** Currently have a student helper who is working on this project.
- 12. We will aggressively pursue the use of all available modalities in advising students in the appropriate courses placement, insuring their persistence in the program and consistently tracking their progress. We will work in close consultation amongst faculty and the Program counselor as we improve on our retention and persistence rates.** We have put a great effort in a coordinated effort with our own counselor and the feeder programs in the high schools and lower division programs at UHMC.
- 13. In the coming year we will demonstrate the fruits of our applied research agenda and present updates and their relevance to the community in college and public forums. This is contingent of approval of the research projects by the Research Committee.** We will be reporting on the efforts and effects of the aforementioned, applied research program of Dr. Boritzer.
- 14. Continue the pursuit of offering an Advanced Entrepreneurship and Advanced IT certificate programs to provide opportunities for professionals who wish to increase their repertoire of entrepreneurial skills. Plan to particularly target working professional in Accounting, Medicine, Dentistry, Engineering, and Architecture. This will focus on the adult lifelong learner segment of our community.** Although previously turned down, we will continue this effort.
- 15. Further develop and maintain the program's Advisory Board membership and integrate their advice and support into the program's mission.** This past year we increased our Advisory Board membership by two.

16. Budget and fund the ABIT Study Center in Kalama Bldg so as to provide equipment and furniture for use by ABIT project groups and other four year baccalaureate students. This was implemented in spring Of 2010 and it's utilization by students and seminars is an established fact.

V. Resource Implications

In physical terms the there are no required changes in the program as a result of the anticipated plans. In human terms the only incremental cost to the current projections is the employment of two part student helpers to assist in student recruitment, web site management, information analysis, query tracking activities and server maintenance. **ABIT funds are based on the previous year's tuition revenues and this year the budget limit is \$ 117,050.**

Budget for next year

Estimated resources for the development of the **ABIT Program** and the projected budget for **AY 2010 - 2011**:

Hardware:

Scanner for ABIT Cafe - \$ 300
Desktop PC (2) – \$ 2,400
Portable Projector: \$ 1,200
Laptops for Faculty: \$ 4,000
Miscellaneous Electronics: \$ 3,000
Total: \$10,900

Software:

Windows 7 upgrades
Camtasia
PP Presentations
Microsoft Office
Adobe CS5
Miscellaneous Licenses
Total: \$ 12,000

Annual Subscriptions and Memberships-
Total: \$ 2,500

Media:

Research and Library Books - \$ 5000
Videos - \$ 4500 (films library)
Clipart - \$ 150
Total: \$ 10,650

Consumables:

Office supplies - \$ 9,000
Brochures- \$ 10,000
Total: \$ 19,000

Conferences and Faculty Development:

Seminars in Assessment - \$ 7000
Hawaii International Business
Conference - \$ 1000
Total: \$ 8,000

Marketing:

Purchased Research – \$4500
Travel, Fair Participation in Neighbor
Islands - \$ 7500
Total: \$ 12,000

Instructional Services:

**Full time faculty – Paid directly by
legislatively mandated funds**

Adjunct Lecturers– \$ 10,000
Faculty Research Costs - \$ 10,000
ABIT Clerical Support - \$ 2000

Student manpower (tracking ABIT graduates, recruitment, web support) – \$ 20,000

Total: \$ 42,000

Grand Total: \$ 117,050

VII. Appendices

- Institutional Data

College: University of Hawaii Maui College
Program: Applied Business and Information Tech

Part I: Program Quantitative Indicators

Overall Program Health: Cautionary

Demand Indicators		Academic Year			Demand Health Call
			08-09	09-10	
1	New & Replacement Positions (State)		207	307	Cautionary
2	New & Replacement Positions (County Prorated)		25	33	
3	Number of Majors		39	42	
4	SSH Program Majors in Program Classes		345	282	
5	SSH Non-Majors in Program Classes		137	136	
6	SSH in All Program Classes		482	418	
7	FTE Enrollment in Program Classes		16	14	
8	Total Number of Classes Taught		14	14	

Efficiency Indicators		Academic Year			Efficiency Health Call
			08-09	09-10	
9	Average Class Size		11.9	9.6	Cautionary
10	Fill Rate		49%	38%	

11	FTE BOR Appointed Faculty		2	3
12	Majors to FTE BOR Appointed Faculty		19.5	13.8
13	Majors to Analytic FTE Faculty		24.5	26.1
13a	Analytic FTE Faculty		1.6	1.6
14	Overall Program Budget Allocation		Not Yet Reported	Not Yet Reported
14a	General Funded Budget Allocation		Not Yet Reported	Not Yet Reported
14b	Special/Federal Budget Allocation		Not Yet Reported	Not Yet Reported
15	Cost per SSH		Not Yet Reported	Not Yet Reported
16	Number of Low-Enrolled (<10) Classes		4	8

Effectiveness Indicators		Academic Year			Effectiveness Health Call
			08-09	09-10	
17	Successful Completion (Equivalent C or Higher)		91%	84%	Healthy
18	Withdrawals (Grade = W)		1	7	
19	Persistence (Fall to Spring)		85%	92%	
20	Unduplicated Degrees/Certificates Awarded		2	9	
20a	Degrees Awarded		2	9	
20b	Certificates of Achievement Awarded		0	0	
20c	Academic Subject Certificates Awarded		0	0	
20d	Other Certificates Awarded		0	0	
21	Transfers to UH 4-yr		2	1	
21a	Transfers with credential from program		0	0	
21b	Transfers without credential from program		2	1	

Distance Education: Completely On-line Classes		Academic Year			
			08-09	09-10	
22	Number of Distance Education Classes Taught		5	5	
23	Enrollment Distance Education Classes		64	48	

24	Fill Rate		43%	37%
25	Successful Completion (Equivalent C or Higher)		95%	77%
26	Withdrawals (Grade = W)		1	3
27	Persistence (Fall to Spring Not Limited to Distance Education)		97%	83%

- **Program map (course alignment grid) for selected Business Courses)**

	BUS 320	BUS 420	MGT 310	MGT 400	MKT 300	MKT 400
PLO 1	3					
PLO 2	3					
PLO 3	2					
PLO 4	0					
PLO 5	0					
PLO 6	3					
PLO 7	3					
PLO 8	3					
PLO 9	3					

- **Assessment Plan Timetable**

	SP 2010	F 2010	S 2011	F 2011	S 2012	F 2012
PLO 1						
PLO 2						
PLO 3						
PLO 4						
PLO 5						
PLO 6						
PLO 7						
PLO 8						
PLO 9						

Program Assessment Rubric for BUS 495 ABIT Capstone				
PLO:	Exceeds	Meets	Needs Improvement	No Proficiency

Apply knowledge of essential business disciplines including accounting, economics, finance, law, management, and marketing, and use business research methods to analyze information in order to develop solid business plans and strategies, and make effective and efficient business decisions.	8	1		
Use leadership and interpersonal skills to promote business ethics, values, and integrity related to professional activities and personal relationships.	8	1		
Demonstrate knowledge of operating system, word processing, spreadsheet, presentation software, database management, computer troubleshooting, web development, and e-commerce.troubleshooting, web development, and e-commerce.troubleshooting, web development, and e-commerce..	8	1		
Apply knowledge of graphical user interface (GUI) and event-driven programming (EDP) to designing, creating, and testing computer programs.	8	1		
Apply knowledge of e-commerce by designing, creating, and testg appropriate e-commerce sites using development tools.	8	1		
Apply critical thinking skills to evaluate information, solve problems, and make decisions.	8	1		
Program graduates are able to apply critical reasoning skills to identify and implement solutions to better address the challenges of work and life.	8	1		
Program graduates are able to apply critical reasoning skills to identify and implement solutions to better address the challenges of work and life.	8	1		
Use information retrieval and technology.	8	1		
Apply quantitative reasoning to enhance independent or group decision-making skills.	8	1		
Communicate effectively with others utilizing appropriate forms of oral and written communication methods including multimedia presentations that apply information technologies and serve particular audiences and purposes.	8	1		
Average PLO Scores for the course	8	1	0	