Department/Program: <u>IDS / Information Systems</u>   Degree: <u>BSBA – Information Systems</u>

Date Submitted: <u>4/1/2008</u>

I. Working from your assessment report of last year, please discuss some changes made or strategies implemented in response to last year's results.

The results obtained last year indicated that the students overwhelmingly had achieved the requisite level of competence in the two SLOs assessed. For SLO #6.3 (Analyzing the strategic impact of organizational information systems), zero percent of the students had a score of "unsatisfactory," while for SLO #7.4 (Presenting research findings on technological issues), five percent had a score of "unsatisfactory." (It should be noted that the numbering of these SLOs has been revised based on recommendations from the SLO Committee on our last year's report, and also for consistency with the IS faculty's recent revisions of our overall vision, goals and objectives.) The decision that was made in light of the assessment results obtained last year was to continue doing what we have been doing, while also taking some additional steps to foster even higher levels of student achievement, such as making students explicitly aware of the rubrics with which their work would be evaluated.

The information systems faculty has largely embraced the culture of assessment that is developing in the College of Business Administration and as we learn more, we try to incorporate what we've learned into our assessment efforts. For example, with guidance and information from the college's assessment committee, the IS faculty has taken steps to learn how to develop more robust assessment rubrics. On February 8, we held an all-day retreat to review all aspects of our programs and curricula. Assessment was high on the agenda, and was discussed at length. Among the assessment-related items accomplished are the following: development and/or revision of program mission, goals, and objectives; refinement of student learning outcomes; and development of an assessment schedule for the stipulated SLOs. Feedback from the SLO Committee on our last year's report resulted in a change in wording of several of our goals and SLOs from "demonstrate a good understanding" to more measurable verbs such as "explain," "identify," "analyze," and "describe" (per Bloom's taxonomy). Please see Appendix A for the updated SLOs and assessment schedule.

Following our retreat, the decision was made to conduct a survey of the information systems Alumni Advisory Board, similar to one conducted in 2004 seeking their views and opinions of the information systems curriculum (the result of this survey was reported in our 2005 assessment report). This time, however, the survey would ask the alumni their views and opinions about our revised goals and learning objectives (as indicated in Appendix A), and how well they felt they attained these goals and objectives from the program.   The on-line survey instrument to be used for this purpose was designed this semester by Drs. Bruce Reinig and Theo Addo, and data is currently being collected. We expect to report on the indirect measures obtained from this survey in our next report.

II. Drawing upon the goals and objectives contained in the department/program student learning assessment plan, what was the focus of the department's student learning assessment for the past academic year?

   A.   This section should list the student learning goals and objectives that were the focus for the report year (selected from your complete set of goals and objectives).

This report is based on the 2007 calendar year, where our assessment focus was on Goal 1 (pertaining to database concepts) and Goal 4 (pertaining to programming concepts). Specifically, the following corresponding SLOs were assessed during this time period: SLO 1.1, SLO 1.2, SLO 1.3, and SLO 4.1 (please see Appendix A for detailed descriptions of these SLOs).
(It should be noted that the result of the assessment of SLO 7.4, which was conducted in early Spring 2007, was reported in last year's assessment report.)

   B.   It would also be helpful to note here the student learning goals and objectives that you intend to assess during the next year.

For the 2008 calendar year, our focus is on Goals 2 and 3, both of which deal with aspects of the Systems Development Life Cycle (SDLC). Specifically, the following SLOs will be assessed: SLO 2.1, SLO 2.2, SLO 3.1, SLO 3.2, and SLO 3.3

III. What information was collected, how much, and by whom?

   A.   This section should briefly describe the methodology used to examine the targeted goals and objectives. Please attach relevant scoring rubrics, surveys, or other materials used to examine student learning to the back of the report, as Appendices.

SLOs 1.1, 1.2, and 1.3 were assessed by Dr. Alexis Koster in his IDS 380 class of 21 students. The rubric he employed for these assessments can be found in Appendix B.

SLO 1.1 was assessed using a project which required each student to develop a conceptual design of a university library database.

SLO 1.2 was assessed using a project which required each student to create a database consisting of 7 tables for the university library using the ORACLE DBMS, accessed from the Rohan computer on campus.

SLO 1.3 was assessed via a project in which the students were required to write SQL queries to retrieve various types of information from a database. Several of the queries involved simultaneously accessing data from 2 or 3 tables.

SLO 4.1 was assessed by Dr. Theo Addo, who used a programming project assignment in his IDS 315 class of 27 students. In this project, each student developed a billing program for a movie rental company. A required part of this project was to develop a complete and accurate representation of the inherent logic of the programming application in the form of a pseudocode (this representation was to be pure logic, and completely language-independent). The rubric used for this assessment is shown in Appendix C.

IV. What conclusions were drawn on the basis of the information collected?

A.   This section should briefly describe the results (in summary form) in regard to how well students have met the targeted goals and objectives. For example, what percentage of students met the objectives? Is this a satisfactory level of performance? What areas need improvement?

The results obtained from all the SLO assessments indicate that the vast majority of the students have met the targeted goals and objectives. A breakdown of the student scores for SLO 1.1 is shown below. Only 5 percent of the students received an "Unsatisfactory" score, and the mean score for the class was 3.2 out of 4, which represents an average rating of "Good," the second highest rating in the rubric used.

SLO 1.1 – Design a conceptual relational database in 3rd Normal Form

Score	No. of Students (N=21)	% of Students
4 – Very good	6	29%
3 - Good	7	33%
2 - Satisfactory	7	33%
1 - Unsatisfactory	1	5%

Mean Score: 3.2 out of 4

A breakdown of the student scores for SLO 1.2 is shown below. Ninety-one percent of the students received scores of "Satisfactory" or higher, while 9 percent received an "Unsatisfactory" score. The mean score for the class was 2.9 out of 4, which is approaching "Good."

SLO 1.2 – Build a relational database using a common DBMS package

Score	No. of Students (N=21)	% of Students
4 – Very good	6	29%
3 - Good	8	38%
2 - Satisfactory	5	24%
1 - Unsatisfactory	2	9%

Mean Score: 2.9 out of 4

A breakdown of the student scores for SLO 1.3 is shown below. Ninety percent of the students received scores of "Satisfactory" or higher, while 10 percent received an "Unsatisfactory" score. The mean score for the class was 3.1 out of 4, which represents a rating of "Good."

SLO 1.3 – Write SQL statements to query a relational database consisting of at least two tables.

Score	No. of Students (N=20)	% of Students

4 – Very good	10	50%
3 - Good	4	20%
2 - Satisfactory	4	20%
1 - Unsatisfactory	2	10%

Mean Score: 3.1 out of 4

A breakdown of the student scores for SLO 4.1 is shown below. Ninety-seven percent of the students received scores of "Satisfactory" or higher, while only 3 percent received a score of "Unsatisfactory." The mean score for the class was 3.6 out of 4, representing a rating midway between the two highest, "Excellent" and "Very Good."

SLO 4.1 – Represent program logic in the form of a flowchart or pseudocode

Score	No. of Students (N=27)	% of Students
4 – Very Good	18	67%
3 - Good	8	30%
2 - Satisfactory	0	0%
1 - Unsatisfactory	1	3%

Mean score: 3.6 out of 4

V. How will the information be used to inform decision-making, planning, and improvement?

A. This section should describe the strategies that will be implemented for program improvement as a result of the conclusions drawn from the assessment activities.

Even though the assessment results obtained for the SLOs are very encouraging, there is always room for improvement. The information will be used by the IS faculty to discuss additional actions that could be taken to improve student achievement even further. Possible options include improving teaching methods, enhancing hands-on experiences for students (SLO 1.2), and exploring the possibility of having dedicated tutors available to provide supplemental help for the students.

Report completed by: Theo Addo   _____   Date: 4/1/08_____

Appendix A

Consolidated Revised Goals and SLOs for BSBA-IS and Assessment Schedule

BS in Information Systems -- Assessment

<u>Vision Statement</u>
To develop students who can apply information systems and technologies to add value to organizations.

<u>Undergraduate IS Assessment Schedule</u>

Goals and SLOs	Point(s) of Assessment	Assessment Method	Planned Assessment Date	Assessment Completed (Y/N)
Goal 1: Explain fundamental database concepts and be able to apply it to the design and development of relational databases.				
SLO 1.1 – Design a conceptual relational database in 3rd Normal Form	IDS 380	Project	Spring 2007	Y
SLO 1.2 – Build a relational database using a common DBMS software package.	IDS 380	Project	Spring 2007	Y
SLO 1.3 – Write SQL statements to query a relational database consisting of at least two tables.	IDS 380	Project	Spring 2007	Y
Goal 2: Learn the major steps pertaining to the planning and analysis phases of the systems development life cycle (SDLC) and demonstrate the ability to produce the associated deliverables.				
SLO 2.1 – Demonstrate ability to estimate and quantify the present value of tangible and intangible costs and benefits (including strategic benefits) arising from an information system investment.	IDS 306	Exam / Assignment	Spring 2008	
SLO 2.2 – Demonstrate ability to identify information system requirements and model the functionality of a requirements-compliant system.	IDS 306	Exam / Assignment	Spring 2008	
Goal 3: Learn the major steps pertaining to the design and implementation phases of the system development life cycle (SDLC) and demonstrate ability to produce the associated deliverables.				
SLO 3.1 – Demonstrate ability to create data models to support the functionality of an information system.	IDS 406	Exam / Assignment	Spring 2008	
SLO 3.2 – Demonstrate ability to create a user-interface and architecture design to support the functionality of an information	IDS 406	Exam / Assignment	Spring 2008	

system.				
SLO 3.3 – Identify and evaluate alternative conversion and migration strategies for implementing an information system in an organization.	IDS 406	Exam / Assignment	Spring 2008	
Goal 4: Acquire fundamental working ability of a computer programming language, and be able to use it to write programs to solve common business problems.				
SLO 4.1 – Represent program logic in the form of a flowchart or pseudocode.	IDS 315	Project	Fall 2007	Y
SLO 4.2 – Develop a fully functional computer program from given specifications.	IDS 315	Project	Fall 2009	
SLO 4.3 – Use the logic of selection (decision) in procedures such as data validation.	IDS 315	Exam / Assignment	Fall 2009	
SLO 4.4 – Use the logic of iteration (looping) to process lists and arrays.	IDS 315	Exam / Assignment	Fall 2009	
Goal 5: Explain fundamental capability (both theoretical and practical) of data communications, computer networking, and related hardware concepts.				
SLO 5.1 – Identify fundamental issues of networking, including networking devices, transmission media, and various interfaces.	IDS 483	Exam / Assignment	Spring 2009	
SLO 5.2 – Explain standard architectures (TCP/IP, OSI, and Hybrid) in terms of layer functions and PDUs.	IDS 483	Exam / Assignment	Spring 2009	
SLO 5.3 – Explain the Internet protocol (IP) and transport layer protocols (TCP & UDP) and associated concepts including IP addressing.	IDS 483	Exam / Assignment	Spring 2009	
SLO 5.4 – Describe Ethernet (802.3) and Wireless (802.11) LAN standards.	IDS 483	Exam / Assignment	Spring 2009	
Goal 6: Acquire ability of contemporary information systems issues, including the use of information technology for competitive advantage.				
SLO 6.1 – Analyze information systems management issues or information technology trends.	IDS 492	Assignment	Spring 2010	
SLO 6.2 – Identify and describe opportunities and challenges facing information systems executives in today's global economy.	IDS 492	Exam	Fall 2010	
SLO 6.3 – Analyze the strategic impact of an organization's current information systems portfolio vis-à-vis the information systems under development	IDS 492	Exam question	Summer 2006	Y
Goal 7: Demonstrate competence in communicating technical information effectively to both technical and non-technical audiences.				

SLO 7.1 – Create and deliver a structured walkthrough presentation that communicates the results of the analysis and design phases of the SDLC to a non-technical audience.	IDS 306 / IDS 406	Presentation	Spring 2011	
SLO 7.2 – Construct and articulate an appropriate framework for exposing the inter-relationships in the analysis- and design-phase deliverables.	IDS 306 / IDS 406	Presentation	Spring 2011	
SLO 7.3 – Present, explain and defend the analysis- and design-phase deliverables to an audience.	IDS 306 / IDS 406	Presentation	Spring 2011	
SLO 7.4 – Present research findings geared towards a managerial audience on technological issues, including specific technologies and/or technological trends.	IDS 492	Presentation	Spring 2007	Y

Appendix B

Rubric used for Assessing SLOs 1.1, 1.2, and 1.3

SLO	4 – Very Good	3 - Good	2 - Satisfactory	1 - Unsatisfactory
SLO 1.1	Design shows complete and accurate knowledge of relations and normalization to 3NF.	Design demonstrates significant knowledge of relations and normalization.	Design demonstrates satisfactory knowledge of relations and normalization.	Design demonstrates minimal or complete lack of knowledge of relations and normalization.
SLO 1.2	Students show a complete understanding of the creation of relational tables, including the choice and specification of attributes, types, primary key and foreign keys.	Students show a significant knowledge of the creation of relational tables. The attribute types are not always specified in the best way.	Students show a satisfactory knowledge of the creation of relational tables. There are problems in the identification and specification of foreign keys and some primary keys.	Students demonstrate minimal knowledge of the creation of relational tables. Many attributes are missing, primary keys and foreign keys are not specified or incorrectly specified.
SLO 1.3	The students use SQL commands that show a complete mastery of the subset of the SQL language expected for this class.	The students use SQL commands that show a significant knowledge of the subset of the SQL language expected for this class. SQL commands chosen work, but are sometimes overly complex.	The students use SQL commands that show a satisfactory knowledge of the subset of the SQL language expected for this class. The most advanced features are not correctly understood.	The students demonstrate minimal or lack of knowledge of SQL. SQL commands are incorrectly written, resulting in incorrect processing of data.

Appendix C

Rubric used for Assessing SLO 4.1

	4 – Very Good	3 - Good	2 - Satisfactory	1 - Unsatisfactory
Accuracy of logic (90%)	Complete and accurate representation of logic	Only minor error(s) in logic representation	Predominantly accurate logic representation but with some error(s)	Mostly inaccurate representation of the logic;
Use of appropriate pseudocode conventions (10%)	Very little or no error in use of pseudocode conventions	Minor error(s) in use of pseudocode conventions	Some error(s) in use of pseudocode conventions	Major errors in use of pseudocode conventions