

**STUDENT LEARNING ASSESSMENT PROGRAM
SUMMARY FORM AY 2004-2005**

Degree and Program Name: Bachelor of Science in Business (B.S.B)
Major: Computer Information Systems

Submitted By: Christie L. Roszkowski
Undergraduate Coordinator, School of Business

Please complete a separate worksheet for each academic program (major, minor) at each level (undergraduate, graduate) in your department. Worksheets are due to CASA this year by **June 1**. Worksheets should be sent electronically to cskjs@eiu.edu and should also be submitted to your college dean. For information about assessment or help with your assessment plans, visit the Assessment webpage at <http://www.eiu.edu/~assess/> or contact Karla Sanders in CASA at 581-6056.

PART ONE

What are the learning objectives?	How, where, and when are they assessed?	What are the expectations?	What are the results?	Committee/ person responsible? How are results shared?
1. Understand the roles of information systems in business organizations and the relationship of information systems to the functional areas of business.				
2. Comprehend the role of networking in a business environment.				
3. Demonstrate competent programming and logic skills.	A rubric to measure student achievement of this objective is used to assess the final project in CIS 3000 (rubric attached). A comprehensive rubric that includes measurement of this objective is used to assess the final project in CIS 4000 (rubric attached). This rubric further assesses integration of basic concepts of the major.	At least 80% of the students will demonstrate satisfactory attainment of these skills in their final projects.	Based on assessment data collected since SP 03, overall expectations have been met for both CIS 3000 and CIS 4000 projects. In some areas requiring higher order application skills, students could demonstrate higher levels of competency.	Faculty teaching CIS 3000 and CIS 4000 are responsible for collecting data. Results are shared at CIS faculty meeting(s).
4. Demonstrate the ability to analyze, design, and develop data resources to achieve the goals of organizations	A comprehensive rubric that includes measurement of this objective is used to assess the final project in CIS 4000 (rubric	At least 80% of the students will demonstrate satisfactory attainment of these skills in their final projects.	Based on assessment data collected since SP 03, overall expectations have been met as demonstrated in	Faculty teaching CIS 4000 are responsible for collecting data. Results are shared at CIS faculty

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	attached). This rubric further assesses integration of basic concepts of the major.		CIS 4000 projects. During the last year, 100% of students demonstrated satisfactory achievement based on three of five criteria; 82% demonstrated satisfactory achievement on the other two criteria.	meeting(s).
5. Demonstrate the ability to analyze, design, develop, and implement business information systems.	A rubric to measure attainment of this objective is used to assess the final project in CIS 3000 (rubric attached).	At least 80% of the students will demonstrate satisfactory attainment of these skills in their final projects.	Based on assessment data collected since SP 03, overall expectations have been met as demonstrated in CIS 3000 projects. During the last year, 100% of the students demonstrated satisfactory achievement on seven of nine criteria. In the remaining two criteria, 87.5% of the students demonstrated satisfactory achievement.	Faculty teaching CIS 3000 are responsible for collecting data. Results are shared at CIS faculty meeting(s).
6. Develop technical solutions to information systems needs of an organization in a multi-platform environment (Corporate concentration only)	A rubric to measure attainment of this objective is used to assess the final project in CIS 3340 (rubric attached).	At least 80% of the students will demonstrate satisfactory attainment of these skills in their final projects.	Results not available as of report date.	Faculty teaching CIS 3340 are responsible for collecting data. Results are shared at CIS faculty meeting(s).
7. Develop technical solutions to the information systems needs of an organization using object-oriented concepts in a tiered server environment (Client-server concentration only).	A rubric to measure attainment of this objective is used to assess the final project in CIS 3900 (rubric attached).	At least 80% of the students will demonstrate satisfactory attainment of these skills in their final projects.	Results not available as of report date.	Faculty teaching CIS 3900 are responsible for collecting data. Results are shared at CIS faculty meeting(s).
8. Develop technical solutions to the information systems needs of an organization using networks, including configuration, troubleshooting, optimization, and monitoring	A rubric to measure attainment of this objective is used to assess the final project in CIS 4700 (rubric attached).	At least 80% of the students will demonstrate satisfactory attainment of these skills in their final projects.	Based on assessment data collected since SP 03, overall expectations have been met as demonstrated in CIS 4700 projects. During the last year, 100% of the	Faculty teaching CIS 4700 are responsible for collecting data. Results are shared at CIS faculty meeting(s).

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activities. (Telecommunications concentration only)			students demonstrated satisfactory achievement of five of six criteria. 93% demonstrated satisfactory achievement of the remaining criterion.	
9. Develop technical solutions to the needs of information systems users including training, documentation, and users systems management. (User systems concentration only).				

PART TWO

Describe what your program’s assessment accomplishments since your last report was submitted. Discuss ways in which you have responded to the CASA Director’s comments on last year’s report or simply describe what assessment work was initiated, continued, or completed.

- Assessment data collected in CIS 4700 indicated overall satisfactory achievement of the objectives; however, scores in several areas clustered at the mid and lower levels of satisfactory performance. As a result, the faculty have selected a new textbook that will facilitate better explanation and comprehension of these areas.
- In addition to reviewing the literature and contacting colleagues, the faculty reviewed the website identified by the Director in the comments to last year’s reports in an effort to find a standardized exam to measures learning objectives #1 and #2. Because they have been unable to find an exam, the faculty will develop their own methods for assessment, probably through common exam questions and/or assignments in CIS core classes.
- Based on limited assessment data available, the faculty have made some textbook changes and have “tweaked” project assignments in an effort to improve student learning.

PART THREE

Summarize changes and improvements in **curriculum, instruction, and learning** that have resulted from the implementation of your assessment program. How have you used the data? What have you learned? In light of what you have learned through your assessment efforts this year and in past years, what are your plans for the future?

As discussed in last year's report, only limited assessment data are available to evaluate academic aspects of the major. Further, as explained last year's reports, external factors (including industry changes and changes in the economy) affecting enrollment have required curriculum revisions not resulting from learning assessment. The information technology discipline continues to be in a state of flux. Enrollments in the EIU program have declined – apparently reflecting a national trend – making it difficult to sustain the four concentrations. During this academic year, the CIS faculty have done extensive assessment of the program including literature review, discussions with industry representatives and alumni, and focus groups with students. Based on these data, the CIS faculty have proposed substantial revision of the major and elimination of the concentrations. As part of this revision, the faculty reviewed this assessment plan. Objectives 1-5 probably will not be revised significantly; however, the other learning objectives may be. The CIS faculty have scheduled a half-day retreat devoted to curriculum and assessment on June 16, 2005.

Assessment Rubric for CIS 4000 Database Project

Criteria	Level of Comprehensiveness				
	0	1	2	3	4
Application of Data Modeling and Normalization	Incorrect Entity Relationship Diagram; no application of normalization principles	Minimal Entity Relationship Diagram with incorrect resolution of many-to-many relationships; minimal cardinality and connectivity principles applied; normalized to at least First Normal Form	Entity Relationship Diagram with resolution of many-to-many relationships; some cardinality and connectivity principles applied; some errors in normalization but understanding of normalization demonstrated	Entity Relationship Diagram with correct cardinality and connectivity applied. Third Normal Form principles applied	Demonstrates full understanding of Entity Relationship Diagram, including unary and recursive relationships. Demonstrates full understanding of normalization principles.
Application of Relational Principles and Structured Query Language	Violates principles of relational design; inability to write simple SQL DDL and DML statements	Shows minimal understanding of relational principles; can write simple SQL DDL and DML statements	Shows understanding of relational principles and can apply the principles to table design; can write SQL DDL and DML statements involving more than one table.	Shows understanding of relational principles and can apply the principles to table and view design. Can write complex SQL DDL and DML statements involving multiple tables, including joins, unions, and intersections.	Shows full understanding of relational principles and can apply the principles to table, view, and index design. Can write complex SQL DDL and DML statements, including all types of joins, unions, intersections, and complex subqueries.
Application of Principles of User Interface Design	Demonstrates little or no understanding of interface design principles in forms, reports and graphics; does not apply template design to the project.	Demonstrates minimal understanding of interface design principles in forms, reports, and graphics; templates not consistently applied. Minimal GUIs and menus with nonworking items. Graphics inconsistently used.	Demonstrates understanding of interface design principles with minimal template application. Forms, reports, and graphics work consistently with database. Working GUIs and menus. Graphics applied.	Demonstrates understanding of interface design principles with complete template application in forms, reports, and graphics. Working GUIs and menus with graphics form integrated project. Demonstrates understanding of multiple breaks and groupings in reports.	Demonstrates full understanding of interface design principles with sophisticated templates. A range of GUIs used with full drop-down menus. Various graphic formats applied. Full range of forms and reports models applied.

Criteria	Level of Comprehensiveness				
	0	1	2	3	4
Use of Programming Logic Constructs	Demonstrates little or no understanding of programming constructs and Oracle PL/SQL.	Demonstrates minimal understanding of programming constructs and Oracle PL/SQL; modules do not perform consistently; GUI triggers not correctly configured; little or no error trapping.	Demonstrates understanding of programming constructs and Oracle PL/SQL; modules perform consistently; GUI triggers configured correctly; minimal error trapping.	Demonstrates understanding of programming constructs and Oracle PL/SQL; demonstrates ability to create program blocks and GUI triggers with use wide range of Oracle functions and procedures; error trapping consistent with module development.	Demonstrates full understanding of programming constructs and Oracle PL/SQL; demonstrates ability to create sophisticated program blocks with integrated SQL code. Triggers show full knowledge of Oracle functions and procedures. Full error trapping.
Integration of Multiple Programs from within main application; use of global program registries	Demonstrates little or no understanding of program integration; inability to create working project	Demonstrates minimal understanding of program integration; global registry not set correctly; project connections not set correctly; one or more of compiled modules fails.	Demonstrates understanding of program integration with global and user registries configured correctly. Project components compile correctly. Demonstrates use of multiple form application with global project paths.	Demonstrates development of integrated database application with splash screen and timer, module navigation through multiple forms. Modules call programs from within programs using both data and control blocks.	Demonstrates full understanding of integrated application with custom interfaces, sophisticated navigation tools, alerts and messages, and the use of data and control blocks from within modules.

**CIS 3000 Information Systems Design and Development
Final Project Assessment Rubric**

Criteria	1 Not Competent	2 Minimally Competent	3 Competent	4 Highly Competent
Objectives				
Project Management				
Data Flow Diagrams				
Logic Modeling				
Entity Relationship Diagrams				
Input/Output Design				
Database Design				
Pseudocode				
Visual Basic Development				
Testing, implementation				

CIS 3340 File Organization and Management Methods

Project Assessment Rubric

Criteria	1 Not Competent	2 Minimally Competent	3 Competent	4 Highly Competent
Language Fundamentals (sequence, selection, iterative)				
Table Processing				
Rewriting sequential files (changing the existing file)				
Creating a new version of a sequential file (add, changes and deletes)				
Indexed Files Concepts including alternate indices				
Accessing information in indexed files by primary key and alternate indices				
Changing/Adding/Deleting information indexing files				

**CIS 3340 Java Programming
Project Assessment Rubric**

Criteria	1 Not Competent	2 Minimally Competent	3 Competent	4 Highly Competent
Object Oriented Design/Objects & Classes				
Language Fundamentals (sequence, selection, iterative)				
Arrays				
Input/Output				
Layout Managers				
Graphics				
Event Handling				

Assessment Rubric for CIS 4700 Final Projects

Criteria	Level of Comprehensiveness				
	0	1	2	3	4
Application of Internetwork Routing Concepts	Incorrect or complete absence of routing in network design	Design limited to simple static routing where dynamic routing should be present	Design with appropriate static and dynamic routing, but not optimized	Design containing optimized static and dynamic routing	Design demonstrates complete understanding of routing concepts, including static and dynamic routing, route optimization and router placement
Application of IP addressing	Design violates basic principles of IP addressing	Design correctly implements IP addressing, but fails to make best use of addresses and results in address wasting	Design correctly implements IP addressing and makes good use of available addresses, but does not address all potential routing issues	Design shows understanding of IP addressing, makes good use of addresses and addresses most potential routing issues	Design shows complete command of IP addressing concepts, makes best use of available addresses with little or no waste, and addresses all potential routing issues.
Application of subnet and supernet concepts in network design	Design does not utilize subnet and supernet concepts	Design superficially uses subnetting, but it is not used appropriately. Design does not include any supernetting.	Design uses subnetting appropriately, but does not use supernetting.	Design uses subnetting and supernetting appropriately and in a technically feasible manner, but design is not optimized for best address use.	Design demonstrates complete command of subnetting and supernetting concepts, using them appropriately and in a thoroughly optimized fashion.
Use and application of TCP/IP diagnostic methodologies and tools	Project demonstrates little or no understanding of diagnostic methodologies	Project uses one or more diagnostic tools, but application of the tools is not always appropriate for the scenario	Project uses diagnostic tools that are appropriate for the problem, but fails to solve the problem through misinterpretation of results	Project demonstrates appropriate and thorough use of diagnostic tools and interpretation of results is generally, but not always, correct.	Project demonstrates thorough grasp of appropriate diagnostic tools and techniques, with correct application and interpretation of results leading to a correct overall analysis.

Criteria	Level of Comprehensiveness				
	0	1	2	3	4
Application of principles of network design	Design does not follow generally accepted design principles.	Design follows one or more principles, but is incomplete and non workable	Design follows most principles but has flaws which would generally render the overall design unacceptable if not corrected	Design follows all principles but contains minor flaws or design anomalies. Demonstrates good, but not complete, grasp of design principles and network structures.	Design follows all principles and contains no flaws or anomalies. Design demonstrates a command of design principles and network structures.
Knowledge of basic and advanced networking concepts	Score of 59% or lower on CIS 4700 final examination	Score of 60-69% on CIS 4700 final examination	Score of 70-79% on CIS 4700 final examination	Score of 80-89% on CIS 4700 final examination	Score of 90% or higher on CIS 4700 final examination