San Diego State University

Detailed Assessment Report
2016-2017 CBA Management Information Systems, BS
As of: 5/12/2017 11:31 AM PST

Program Mission

To develop students who can apply information systems and technologies to add value to organizations.

Program Learning Goals

PLG 1: Analyze stakeholder information requirements and design, develop, and implement information systems
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PLG 2: Communicate organizational and technical concepts to technical and non-technical stakeholders
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PLG 3: Use data to support evidence-based reasoning
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Degree Learning Outcomes / Objectives, with Any Associations and Related Measures, Benchmarks, Findings, and Closes the Loop

DLO 1: Design and construct capabilities to optimize the use and management of information
DLO 1: Design and construct capabilities to optimize the use and management of information

Related Measures

M 2: Design Project
Individual students in MIS 380 (Data Management Systems) are asked to construct a project that both demonstrates their ability to design and construct capabilities to optimize the use and management of information (DLO 1) and asks them to use models and other IS design artifacts to deepen understanding of problems and solutions (DLO 4). Projects are rated using two holistic rubrics, one that measures each DLO.

DLO #1: Design and construct capabilities to optimize the use and management of information

- Exceeds Expectations: Students show a complete understanding of the creation of a relational database, including the choice and specification of attributes, types, primary key and foreign keys of tables.
- Meets Expectations: Students show a satisfactory knowledge of the creation of relational a relational database. There are problems in the identification and specification of foreign keys and some primary keys.
- Below Expectations: Students demonstrate minimal knowledge of the creation of a relational database. Many attributes are missing, primary keys and foreign keys are not specified or incorrectly specified.

DLO #4: Use models and other IS design artifacts to deepen understanding of problems and solutions.

- Exceeds Expectations: Design demonstrates significant knowledge of the conceptual design of a database from information requirements, using the entity-relationship approach.
- Meets Expectations: Design demonstrates satisfactory knowledge of the conceptual design of a database. Some Information requirements are misunderstood at times.
- Below Expectations: Design demonstrates minimal or complete lack of knowledge of the conceptual design of a database. Information requirements are often misunderstood.

Source of Evidence: Project, either individual or group

Benchmarks:
70% of students will meet or exceed expectations.

Finding (2016-2017) - Benchmarks: Met
A total of 57 students completed the project. 39 students (68.4%) exceeded expectations, 10 students (17.5%) met expectations, 8 students (14%) fell below expectations.

DLO 2: Create software programs to solve common business problems
DLO 2: Create software programs to solve common business problems

DLO 3: Interconnect, manage, and safeguard information system assets
DLO 3: Interconnect, manage, and safeguard information system assets

DLO 4: Use models and other IS design artifacts to deepen understanding of problems and solutions
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Related Measures

M 2: Design Project
Individual students in MIS 380 (Data Management Systems) are asked to construct a project that both demonstrates their ability to design and construct capabilities to optimize the use and management of information (DLO 1) and asks them to use models and other IS design artifacts to deepen understanding of problems and solutions (DLO 4). Projects are rated using two holistic rubrics, one that measures each DLO.

DLO #1: **Design and construct capabilities to optimize the use and management of information**

- <u>Exceeds Expectations</u>: Students show a complete understanding of the creation of a relational database, including the choice and specification of attributes, types, primary key and foreign keys of tables.
- <u>Meets Expectations</u>: Students show a satisfactory knowledge of the creation of relational a relational database.There are problems in the identification and specification of foreign keys and some primary keys.
- <u>Below Expectations</u>: Students demonstrate minimal knowledge of the creation of a relational database. Many attributes are missing, primary keys and foreign keys are not specified or incorrectly specified.

DLO #4: **Use models and other IS design artifacts to deepen understanding of problems and solutions.**

- <u>Exceeds Expectations</u>: Design demonstrates significant knowledge of the conceptual design of a database from information requirements, using the entity-relationship approach.
- <u>Meets Expectations</u>: Design demonstrates satisfactory knowledge of the conceptual design of a database. Some Information requirements are misunderstood at times.
- <u>Below Expectations</u>: Design demonstrates minimal or complete lack of knowledge of the conceptual design of a database. Information requirements are often misunderstood.

Source of Evidence: Project, either individual or group

Benchmarks:
70% of students will meet or exceed expectations.

Finding (2016-2017) - Benchmarks: <u>Met</u>
A total of 57 students completed the project. 21 students (36.8%) exceeded expectations, 34 students (59.7%) met expectations, 2 students (3.5%) fell below expectations.

DLO 5: Prepare and defend both written and oral professional-quality proposals and reports for IS-related topics
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DLO 6: Apply collaboration and leadership techniques in an IS setting
DLO 6: Apply collaboration and leadership techniques in an IS setting

DLO 7: Integrate data from a variety of systems and data structures
DLO 7: Integrate data from a variety of systems and data structures

DLO 8: Analyze data to discover meaningful relationships and trends
DLO 8: Analyze data to discover meaningful relationships and trends

Related Measures

M 3: Exam Questions in MIS 301
Students in MIS 301 (Statistical Analysis for Business) answered questions that map to the student learning outcome on two mid-terms and the final exam.

Source of Evidence: Standardized test of subject matter knowledge

Benchmarks:
70% of students should answer enough questions correctly to meet or exceed expectations where, on a 10-point scale, 1-5 does not meet expectations, 6-8 meets expectations, and 9-10 exceeds expectations.

Finding (2016-2017) - Benchmarks: <u>Met</u>
Responses to questions in six categories combined to measure the overall objective.

	1-5	6-8	9-10
1. Use data from a sample to make inferences about a population.	2(8%)	7(27%)	17(65%)
2. Apply probability theory in decision making situations.	4(15%)	12(46%)	10(38%)
3. Formulate hypotheses for decision making and research.	9(35%)	13(50%)	4(15%)
4. Analyze data using appropriate statistical techniques.	7(27%)	11(42%)	8(31%)
5. Interpret the results of statistical analysis.	1(4%)	10(38%)	15(58%)
6. Use data analytic software to create visualizations and summary reports of data.	2(8%)	11(42%)	13(50%)
Overall	1(4%)	18(69%)	7(27%)

Hence overall, 96% of students met or exceeded expectations.

However, in comparing the six categories, we see that students were good at making statistical inferences and interpreting the results, but not good at formulating hypotheses. Based on this more detailed view, faculty in MKT 301 plan to provide more class exercises on formulating hypotheses and encourae students to discuss and to share their questions and frequent mistakes in class.

Details of Closes the Loop for This Cycle (by Established cycle, then alpha)

More use case scenarios
More practice should be devoted to constructing good "use" scenarios, and understanding how that framework should be used to conduct the walkthrough presentation.
Established in Cycle: 2011-2012
Implementation Status: Planned
Priority: High

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More hands-on assignments

 Provide more hands-on exercises and assignments using network simulation software such as Packet Tracer to help students retain what they learn.

Established in Cycle: 2012 - 2013
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More in-class practice and assignments

Provide more in-class practice and graded assignments on cost-benefit analysis.

Established in Cycle: 2012 - 2013
Implementation Status: Planned
Priority: High

More in-class practice and assignments

Provide more in-class practice and graded assignments on system modeling.

Established in Cycle: 2012 - 2013
Implementation Status: Planned
Priority: High

More in-class practice and assignments on cost-benefit analysis & system modeling

Provide more in-class practice and graded assignments on cost-benefit analysis and system modeling.

Established in Cycle: 2012 - 2013
Implementation Status: Planned
Priority: High

More practice in structured walkthrough of SDLC analysis phase

Provide more in-class practice and graded assignments on structured walkthrough of the Analysis phase of the SDLC.

Established in Cycle: 2012 - 2013
Implementation Status: Planned
Priority: High

Provide more class exercises and a quiz

Even though the majority of students obtained the highest score possible, further improvement can be made by providing more class exercises on this type of project and one quiz before the project is due.

Established in Cycle: 2012 - 2013
Implementation Status: Planned
Priority: High

Provide more class exercises, explain Normalization more explicitly, & require students to discuss projects

Even though the benchmark was met, no student attained the highest score. For further improvement, more class exercises on this type of project will be provided and students will be required to individually discuss their projects at mid-point. The concept of Database Normalization--including the differences between 1st, 2nd, and 3rd Normal Forms, as well as the conversion of a table that is in 1st or 2nd Normal Form to 3rd Normal Form--will be explained more explicitly. Questions will be assigned to specifically test students' knowledge of normalization, with a stronger focus of testing individual knowledge of the concept.

Established in Cycle: 2012 - 2013
Implementation Status: Planned
Priority: High

Require milestones for students

Even though the vast majority if students (83%) scored very high (scores of 3 and 4), improvement can be made by requiring students to reach specific milestones during the work of this project.

Established in Cycle: 2012 - 2013
Implementation Status: Planned
Priority: High