

Formal Evaluation and Subject Matter Expert Summary Report



Maine is IT!
INFORMATION TECHNOLOGY
A CONSORTIUM OF MAINE'S SEVEN COMMUNITY COLLEGES

BUS210

*Submitted to Maine is IT in fulfillment of the
TAACCCT grant requirements*

*By
Emporia State University*

EMPORIA STATE
UNIVERSITY
■ INFORMATION TECHNOLOGY

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Course Review for: Maine is IT
Course: KVCC: BUS210 - Database Design and Management
Reviewed by: Joseph Kern
Date: 2/15/16

This review is based on the Blackboard content of the BUS210 course, which includes the syllabus and class assignment/assessment materials.

Part 1: Course Review

A. Course Review & Introduction (16 points total)		
1.1 Instructions made clear how to get started and where to find various course components.	3	2
1.2 Learners are introduced to the purpose and structure of the course.	3	3
1.3 Etiquette expectations (sometimes called “netiquette”) for online discussions, email, and other forms of communication are clearly stated.	2	0
1.4 Course and or institutional policies with which the learner is expected to comply are clearly stated, or a link to current policies is provided.	2	1
1.5 Minimum technology requirements are clearly stated and instructions for use provided.	2	0
1.6 Prerequisite knowledge in the discipline and/or any required competencies are clearly stated.	1	0
1.7 Minimum technical skills expected of the learner are clearly stated.	1	0
1.8 The self-introduction by the instructor is appropriate and is available online.	1	1
1.9 Learners are asked to introduce themselves to the class.	1	0
Total		7
Comments: <p>1.1: The syllabus includes a link to help students navigate to the Blackboard, which is titled “Welcome to Database Design and Management.” It would be helpful if the opening page began with an announcement or page that gave introductory information about what the Blackboard course contains, how to access it, and generally how to get started on the right path. The class outlines show that this will be demonstrated on the first day, but having a permanent guide is recommended.</p> <p>1.2: The purpose of the course is clearly and succinctly stated in the syllabus.</p> <p>1.3: Etiquette expectations (sometimes called “netiquette”) for online discussions, email, and other forms of communication should be covered. <i>Examples include:</i></p> <ul style="list-style-type: none"> • Be sensitive to the fact that there will be cultural and linguistic backgrounds, as well as different political and religious beliefs, plus other differences in general. • Use good taste when composing your responses in Discussion Forums. Swearing and profanity is also part of being sensitive to your classmates and should be avoided. Also consider that slang can be misunderstood or misinterpreted. • Don’t use all capital letters when composing your responses as this is considered “shouting” on the Internet and is regarded as impolite or aggressive. It can also be stressful on the eye when trying to read your message. • Be respectful of your others’ views and opinions. Avoid “flaming” (publicly attacking or insulting) them as this can cause hurt feelings and decrease the chances of getting all different types of points of view. • Be careful when using acronyms. If you use an acronym it is best to spell out its meaning first, 		

then put the acronym in parentheses afterward, for example: Frequently Asked Questions (FAQs). After that you can use the acronym freely throughout your message.

- Use good grammar and spelling, and avoid using text messaging shortcuts.

1.4: Course and institutional policies adequately cover absences and late work, but important areas like academic dishonesty were not addressed. The KVCC Student Code of Conduct should be listed as a reference for students, and a hyperlink to it would support student navigation.

1.5: Required technology is not discussed in the syllabus. Even if students will just be using standard computers and basic software, this should be stated.

1.6: One prerequisite course is indicated, but no knowledge vital to the success of incoming students is listed.

1.7: Minimal skills for students entering the course are not listed.

1.8: A link within the Blackboard course leads to an instructor introduction, and one is included in the first day of class.

1.9: Nothing in the syllabus or outlines indicates that students are asked to introduce themselves.

B. Learning Objectives & Competencies (15 points total)

2.1 The course learning objectives, or course/program competencies, describe outcomes that are measurable	3	3
2.2 The module/unit learning objectives or competencies describe outcomes that are measurable and consistent with the course-level objectives or competencies.	3	0
2.3 All learning objectives and competencies are stated clearly and written from the learner's perspective.	3	3
2.4 The relationship between learning objectives or competencies and course activities is clearly stated.	3	1
2.5 The learning objectives or competencies are suited to the level of the course.	3	3
Total		13

Comments:

2.1: The course learning objectives are measurable, using action verbs that indicate what actions of students will be assessed.

2.2: No unit-level objectives were located in the course materials. There are extensive topic outlines, and each assignment begins with an overview of what students will be answering, and why. These are more than many instructors include, but it would be beneficial to specify which course objectives are being met each day and with each assignment, as this sets up not only the day's content, but also the student activities.

2.3 : Objectives are written from student perspectives.

2.4: It is clear that the content covered each day aligns with the course objectives, but the connection between the two could be stronger if clear alignment statements are made with each activity.

2.5: Objectives are appropriate for the course level.

C. Assessment & Measurement (13 points total)

3.1 The assessments measure the stated learning objectives or competencies.	3	3
3.2 The course grading policy is stated clearly.	3	3
3.3 Specific and descriptive criteria are provided for the evaluation of learners' work and are tied to the course grading policy.	3	0
3.4 The assessment instruments selected are sequenced, varied, and suited to the learner work being assessed.	2	2
3.5 The course provides learners with multiple opportunities to track their learning progress.	2	2
Total		10

Comments:

3.1: Assessments adequately measure the course objectives.

3.2: Course grading policy is clear and succinct.

3.3: No criteria are provided for the assignments and assessments. Many of the assignments could be graded on a right/wrong basis, but more complex assignments would benefit from a rubric to help students understand the points of emphasis that should be addressed in their work.

3.4: Assignments and assessments are structured to align with the course content and help develop student abilities through the course.

3.5: The nature of the work provides many opportunities for students to be shown any lack of progress that they might have.

D. Instructional Materials (13 points total)		
4.1 The instructional materials contribute to the achievement of the stated course and module/unit learning objectives or competencies.	3	3
4.2 Both the purpose of instructional materials and how the materials are to be used for learning activities are clearly explained.	3	3
4.3 All instructional materials used in the course are appropriately cited.	2	2
4.4 The instructional materials are current.	2	2
4.5 A variety of instructional materials is used in the course.	2	2
4.6 The distinction between required and optional materials is clearly explained.	1	1
Total		13
Comments: 4.1: The required textbook is referred to in multiple assignments, and it is available as a resource for open-book tests and projects, so it is utilized to contribute to student achievement. 4.2: Materials and their purposes for learning are not always explicitly described, but it is evident that the textbook will be a frequently-used reference for students. The Day 1 outline describes the use of lecture capture videos that will be posted. 4.3: Materials listed are properly cited. 4.4: The materials are current, published in 2014. 4.5: The syllabus lists multiple forms of class materials that will be used to deliver content. 4.6: No materials are shown as being optional, although the structure of the course assessments could mean that everything is technically optional if students do not want to utilize them as tools.		

E. Course Activities and Learner Interaction (11 points total)		
5.1 The learning activities promote the achievement of the stated learning objectives or competencies.	3	3
5.2 Learning activities provide opportunities for interaction that support active learning.	3	3
5.3 The instructor's plan for classroom response time and feedback on assignments is clearly stated.	3	0
5.4 The requirements for learner interaction are clearly stated.	2	1
Total		6
Comments: 5.1: Activities apply a deep evaluative approach to achieve the objectives. 5.2: Many of the assignments lend themselves to class discussions, although a short reference to discussion boards is the only indication that discussions are utilized as a class activity. The relatively active portions of class come as students create their own database components and ultimately complete an individual project. 5.3: No plan is provided for classroom response time or assignment feedback. 5.4: No requirements are listed for learner interaction in face-to-face sections, but online students are required to participate in discussions, although there are no guidelines for this participation.		

F. Course Technology (10 points total)

6.1 The tools used in the course support the learning objectives and competencies.	3	3
6.2 Course tools promote learner engagement and active learning.	3	3
6.3 Technologies required in the course are readily obtainable.	2	0
6.4 The course technologies are current.	1	1
6.5 Links are provided to privacy policies for all external tools required in the course.	1	0
Total		7

Comments:

6.1: Equipment used in the course is appropriate for supporting the objectives.

6.2: While specific tools are not listed, some assignments require students to manipulate databases, presumably online or within their own systems. The tools used in these activities would promote engagement and active learning.

6.3: Unable to review this item, as technologies used to work with databases are not listed

6.4: Course technologies are current, as evidenced by the current textbook and analysis of current databases.

6.5: No links are provided in the syllabus. A review of the agreement for each application required in the course will insure that student data required for the use of the software is secure. Linking to the agreements will allow students to easily access the policies.

G. Learner Support (9 points total)

7.1 The course instructions articulate or link to a clear description of the technical support offered and how to obtain it.	3	0
7.2 Course instructions articulate or link to the institution's accessibility policies and services.	3	3
7.3 Course instructions articulate or link to an explanation of how the institution's academic support services and resources can help learners succeed in the course and how learners can obtain them.	2	0
7.4 Course instructions articulate or link to an explanation of how the institution's student support services and resources can help learners succeed in the course and how learners can obtain them.	1	0
Total		3

Comments:

7.1: No technical support information is provided in the syllabus. It is recommended that multiple channels of tech support communication be listed in the syllabus to ensure that no student is put behind due to technical difficulties.

7.2: Specific steps are listed for students needing disability accommodations. Contact information for appropriate offices and a link to the KVCC ADA Policy are provided

7.3: No academic resources are listed. If tutoring, advising, or other student services are available to support academic success, these should be listed along with links or contact information.

7.4: Other than contact information to report and address discrimination, no student support services or resources are listed. If there are services to support student life resources, such as counseling or student wellness, these should be listed along with links or contact information.

H. Accessibility and Usability (12 points total)

8.1 Course navigation facilitates ease of use.	3	3
8.2 Information is provided about the accessibility of all technologies required in the course.	3	0
8.3 The course provides alternative means of access to course materials in formats that meet the needs of diverse learners.	2	2
8.4 The course design facilitates readability.	2	2
8.5 Course multimedia facilitate ease of use.	2	2
Total		9

Comments:

8.1: Course navigation is designed to minimize the number of clicks necessary to access information.

8.2: Information regarding the accessibility of technology used is not included. This would include instructions on how to obtain and install any programs used.

8.3: The course will include videos of class lectures as they occur. The instructor should be aware that the Americans with Disabilities Act requires any videos to have captions or an accompanying transcript to meet the needs of students with hearing disabilities. Work closely with your institution's office for disability services to identify resources to assist in making your course ADA compliant.

8.4: Fonts, text color, and background color of the course falls within ADA compliance recommendations. Be aware that screen reader software will not recognize bold or italicized fonts. Check with your office of disability services before significantly changing the appearance of your course.

8.5: According to the syllabus, the multimedia used will be posted in the Blackboard course for students. When possible, embedding multimedia to play within the course LMS ensures ease of access and limits student issues that may arise when leaving the LMS to access outside resources, such as linking students to YouTube videos.

Part II: Employment Data

Stakeholder Involvement and Employment Opportunities

Items Reviewed include:

- Internships, Job Shadowing Opportunities that exist with the outcomes and objectives with this course.
- Employment opportunities for these skills.
- Outcomes/Objectives are current and relate to job market.

- See Subject Matter Expert review for specific feedback.

Part III: Creative Commons

Items Reviewed include:	
<ul style="list-style-type: none">• All course materials presented in Creative Commons?• Creative Common license (including graphic) is represented on course materials.	
Findings include:	
The syllabus and all course materials are shared with a Creative Commons 4.0 Attribution license, including corresponding CC graphic.	

Part IV: Subject Matter Expert (SME) Findings & Review

Course: KVCC: BUS210
Course Name: Database Design and Management
Reviewed by: Joseph Kern
Date: March 15, 2017

Background

Funded by a \$13 million grant from the U.S. Department of Labor, *Maine is IT!* is building new educational and career pathways in information technology at all seven of Maine's community colleges. The programs funded by the grant are designed to support Maine workers eligible for the Trade Adjustment Assistance (TAA) program, un/underemployed adults, and workforce needs in Maine's growing IT sector. They have been built to serve individuals with a range of experience, from those interested in gaining basic IT skills to IT professionals looking to advance their careers through new industry certifications.

Overall Remarks and Reviewer Summary

In reviewing BUS210 several processes and data collections tools were noted and identified. This reviewer took in account the Dynamic Skills Audit conducted in 2014-2015. Both qualitative and quantitative data was identified in the report that provides the key elements:

1. Career opportunities do exist within 10 miles of KVCC for graduates from an AAS in Applied Electronics & Computer Technology.
2. Current job openings list specific duties that relate the Database Design and Management course, BUS210.
3. The current Advisory Board indicates that BUS210 contributes to the labor market data.

There are several current job openings available within 10-25 miles of KVCC for database developers and administrators, most requiring at least 2 years of development experience (as of 3/15/17). An ETL Developer position at the Collaborative Consulting IT firm in Waterville, ME would require at least a 2-year degree in a computer science field, 2 years of development experience, and knowledge of the applications covered in BUS210. A JAVA/.NET developer is wanted at the same firm, with similar experience and knowledge requirements.

The Dynamic Skills Audit outlined the following process, which this reviewer took into consideration when compiling this the formal SME report:

1. Local industry needs were assessed through the program Advisory Board. Minutes from those Advisory Board meetings were reviewed and suggestions from the partnerships were adopted into this summary.
2. Burning Glass data was reviewed to identify themes and trends in the current job market. The Burning Glass report helped identify skills demanded by employers to curriculum outcomes and learning objectives.

A formal SME was conducted with the above reports and compiled in the next section of this report.

A. Program and Course Overview and Objectives

Items Reviewed include:

- Dynamic Skills Audit Summary Report (Academic Years 2014-2015)
- Burning Glass Labor Market Data reports (Compilation)
- Advisory Board Minutes

Findings include:

The BUS210 course learning outcomes and objectives align with the program mission and goals. This reviewer found that the BUS210 course has listed measurable outcomes which can be stacked and latticed with other coursework. The industry sector for BUS210 has been categorized as: *NAICS 51821, Data Processing, Hosting, and Related Services*. (See: <http://www.epipeline.com/mktng/nl-articles/naics-code-518210-2010.html#link01>) The reviewer finds that this classification is correct.

Those completing this course would enter the Bureau of Labor Statistics occupation classification of *SOC: 15-1140 Database and Systems Administrators and Network Architects*. (See: <https://www.bls.gov/soc/2010/soc151140.htm>)

The NCES CIP (Classification of Instructional Programs) is referenced as: *15.0802: Data Modeling/Warehouseing and Database Administration*. (See: <https://nces.ed.gov/ipeds/cipcode/cipdetail.aspx?y=55&cipid=87255>)

This is also an accurate classification.

This course was designed for 2nd-year community college students or equivalent. One prerequisite is specified.

Listed course objectives include competencies dealing with the functions of:

- Database Systems
- Data Models
- The Relational Database Model
- Entity Relationship Modeling
- Advanced Data Modeling
- Normalization of Database Tables
- Introduction to Structured Query Language
- Advanced SQL
- Database Design
- Transaction Management and Concurrency Control
- Databased Performance Tuning and Query Optimization
- Distributed Database Management Systems
- Business Intelligence and Data Warehouses
- Database Connectivity and Web Technologies
- Database Administration and Security

The content of these course objectives aligns with the topics listed in the course syllabus and textbook table of contents. This alignment also correlates to items found within the Dynamic Skills Audit and Burning Glass baseline skills as listed in the labor market data.

Specific review standards are listed in the table referenced below:

Table: Standard Reviewed Standards for Course Outcomes

Standard Reviewed	N/A	Satisfactory	Not Satisfactory
A.1 The learning outcomes are clearly stated and mapped to specific objectives and/or assignments.			X
A.2 Prerequisites and/or any required competencies are clearly stated.			X
A.3 Learning objectives for each course describe outcomes that are measurable.		X	
A.4 Learning objectives are appropriately designed for the level of each of the course.		X	
A.5 Instruction, activities, and assignments in courses are scaffolded from course to course, and throughout the program.		X	

A.1 - BUS210 articulates specific learning outcomes for the course. For many of these, the link between the outcome and activity is self-explanatory, but most are not explicitly tied to specific assignments or course activities.

A.2 – One prerequisite course is listed, but previous skills and knowledge are not stated.

A.3 - Course objectives are measurable.

A.4 - Learning objectives are appropriate for a 2nd-year course.

A.5 – Activities appear to be scaffolded through the course, building in complexity throughout the course, ending in a self-determined, independent student project. The course's objectives fill an industry need within the program.

B. Relevancy

Items Reviewed include:

- Dynamic Skills Audit Summary Report (Academic Years 2014-2015)
- Burning Glass Labor Market Data reports (Compilation)
- Advisory Board Minutes

Findings include:

Course competencies are relevant to students, industry, and employers. Strong evidence was found in the Dynamic Skills Audit Summary Report. Direct ties were found through interviews with stakeholders and in Advisory Board minutes.

The table that follows is a clear matrix of how the course outcomes are relevant to students, industry, and employers:

Table: Matrix of evidence-based skills mapped to students, industry, and employers

Standard Reviewed	N/A	Satisfactory	Not Satisfactory
B.1 Course competencies represent industry's expectation of the overarching knowledge, skills, and abilities that 2 nd year college students should possess.		X	
B.2 Core course competencies are relevant to industry and employers .		X	
B.3 Instruction, activities, and assignment in individual courses are relevant and engaging to students .		X	

B.1 - Course objectives align with industry expectations at the appropriate skill level, as they correspond to entry-level job requirements.

B.2 - Core competencies are relevant to industry and employers, as verified using the Burning Glass labor market data (<http://burning-glass.com/research/coding-skills/>) and the Dynamic Skills Audit Summary. Student learning objectives align with the competencies expected of new hires in the web development field and those listed by the Advisory Board.

B.3 - Activities and instruction defined in the course outline offer deep levels of analysis and development of databases, moving well beyond basic knowledge and theory.

C. Resources & Materials

Items Reviewed include:

- Dynamic Skills Audit Summary Report (Academic Years 2014-2015)
- Burning Glass Labor Market Data reports (Compilation)
- Advisory Board Minutes

Findings include:

Table: Instructional materials and their direct link to course outcomes

Standard Reviewed	N/A	Satisfactory	Not Satisfactory
C.1 The instructional materials contribute to the achievement of the stated course learning objectives.		X	
C.2 The purpose of the instructional materials is clearly explained.		X	
C.3 The instructional materials present a variety of perspectives and approaches on the course content.		X	
C.4 The instructional materials are appropriately designed for the level of the course.		X	

C.1 – The course's textbook is used as a guide throughout the course, and lecture materials and videos will be available for students to utilize.

C.2 – Multiple assignments and assessments refer to the textbook, making it clear that it will be used as a reference tools to complete these.

C.3 – The textbooks contents are not available for review, but from the assignments and assessments provided, it is clear that the nature of the course activities allows students to provide multiple perspectives and approaches when analyzing databases.

C.4 – The materials align with appropriate course outcomes and require students to cognitively engage with the content, making them a good fit for the level of course.

D. Assessment & Measurement

Items Reviewed include:

- Dynamic Skills Audit Summary Report (Academic Years 2014-2015)
- Burning Glass Labor Market Data reports (Compilation)
- Advisory Board Minutes

Findings include:

Table: Measurement of effective learning

Standard Reviewed	N/A	Satisfactory	Not Satisfactory
D.1 The course evaluation/criteria/course grading policy is stated clearly on each syllabus.		X	
D.2 Course-level assessments (those that can be delivered) measure the stated learning objectives and are consistent with course activities and resources.		X	
D.3 Specific and descriptive criteria are provided for the evaluation of students' work and participation and are tied to the course grading policy.			X
D.4 The assessment instruments (that can be delivered) are sequenced, varied, and appropriate to the content being assessed.		X	

D.1 – The grading policy is clearly stated.

D.2 – Assessments align with objectives, activities, and available resources.

D.3 – Few specific details are provided to explain how assessments are graded. This is especially important when open-ended student projects are used to assess student learning. Participation guidelines are provided, but participation is not a part of the calculated grade.

D.4 –The progression of assignments creates an appropriate sequence that builds skills throughout the course. Variety comes from the different topics, as well as the opportunity for students to create their own projects.