

**Formal Evaluation and Subject Matter Expert
Summary Report**



Maine is IT!

INFORMATION TECHNOLOGY

A CONSORTIUM OF MAINE'S SEVEN COMMUNITY COLLEGES

CIS230

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

*By
Emporia State University*

**EMPORIA STATE
UNIVERSITY**
■ INFORMATION TECHNOLOGY

December 2016

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Developed by Anna J. Catterson, Ph.D., Emporia State University.

Course Review for: Maine is IT
Course: YCCC CIS 230: Desktop & Server Administration I
Reviewed by: Anna J. Catterson
Date: December 12, 2016

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	0
1.2 Learners are introduced to the purpose and structure of the course.	3	2
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	2
1.5 Minimum technology requirements are clearly stated and instructions for use provided.	2	2
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	0
1.9 Learners are asked to introduce themselves to the class.	1	0
Total		4

Comments:

1.1: A link to the LMS site was not provided. Consider adding instructions on how to access the course in the LMS. Consider adding the link to the actual course. No information provided on how the course components could be located.

1.2: The purpose and structure for the course was explained in a separate document from the course syllabus, reviewer recommends placing the course description and the course objectives on page one of the syllabus.

1.3: Etiquette expectations (sometimes called “netiquette”) for online discussions, email, and other forms of communication should be covered. Examples include:

- Be sensitive to the fact that there will be cultural and linguistic backgrounds, as well as different political and religious beliefs, plus just 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 were covered in the syllabus. Reviewer found that all policies were covered well in the syllabus. Links to student services for each policy could be an additional item added. For example, provide a link to the disability services website for more information OR provide a phone or email contact for each service.

1.5: Technology requirements were stated in the syllabus. USB flash drive was mentioned as a requirement, is cloud computing suggested or can students use the cloud to store data?

1.6: Prerequisite knowledge was not addressed in the course syllabus.

1.7: Minimum skills were not addressed in the course syllabus.

1.8: Even in a face-to-face course, it is desirable to have an instructor introduction/biography available for students to access online. A short introduction with some personal information will humanize the instructor in an online course and allow students to access the information at any time in a face-to-face course.

1.9: No discussion thread is provided for students to communicate, informally, with each other outside of the class meetings. Even in a face-to-face course, it is desirable to have a means for students to informally communicate with each other to share concerns and ask questions. See note from 1.8.

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	3
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	3
2.5 The learning objectives or competencies are suited to the level of the course.	3	3
<i>Total</i>		15

Comments:

2.1: The course objectives are measurable and are well defined. The reference at the end to the program goals exceeds the reviewer's expectations.

2.2: The learning competencies are measurable.

2.3: Yes

2.4: The course activities clearly relate to the learning objectives; the reviewer noted the assignment list. On the course schedule, reviewer recommends placing the actual course outcomes in parenthesis to the classroom assessment/project. This will help ease the assessment process at the end of the semester. The course schedule is well organized and the items in bold were a great addition.

2.5: The objectives are suited to the level of the course.

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	1
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		11

Comments:

3.1: The assessments align with the learning objectives. Labs, Reviews/Participation, First Exam, Second Exam, Third Exam are the major categories of assessment for this course.

3.2: The grading policy is stated in the syllabus. The classroom "Do's & Don'ts" were noted.

3.3: Descriptive criteria is not provided for each assessment. This criterion could include a rubric or simply a relationship to the course outcomes could be provided.

3.4: The assignments are varied and aligned with the objectives for each week. There are variations of assignments and a good variety for individualized student learning. The quizzes provided are short and concise; short quizzes are a good way to ensure student learning.

3.5: Weekly assignments are provided to measure learner progress.

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	2
4.3 All instructional materials used in the course are appropriately cited.	2	0
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		10

Comments:

4.1: The instructional materials align with the unit objectives stated in the syllabus. The Course Technology textbook does offer a companion site with study guides and student self-helps, reviewer recommends placing this information in the syllabus.

4.2: The purpose of the instructional materials and their use in the course is explained and aligns with each unit assignment.

4.3: The reviewer did not locate citations for instructional materials. Reviewer suggests providing a citation list for all external resources; this is good practice.

4.4: The instructional materials are current.

4.5: The instructional materials vary by unit and assignment.

4.6: With the exception of Attendance, there is no mention of optional materials (textbook sister site).

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	1
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	0
Total	4	

Comments:

5.1: The learning activities directly support the course/unit learning objectives.

5.2: There are opportunities for interactive learning in this course but the reviewer did not find them listed in the course syllabus. Most of the activities were focused on review questions and tests, very little interaction noted by the reviewer. The 2008 Server textbook does provide opportunities for interaction.

5.3: The syllabus has no statement as to a timetable for instructor feedback. Try to give students a reasonable timeline to expect feedback on assignments.

5.4: The requirements for class participation are not stated in the course syllabus. Learners should be informed of how they will interact with others in the course, especially if credit is given.

F. Course Technology (10 points total)

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

Comments:

6.1: Specific technology tools used to enhance the classroom experience was not discovered. What tools will students use to enhance their learning? This needs to be described and defined.

6.2: Reviewer did not find any tools that promote learning engagement or active learning.

6.3: No technology tools described.

6.4: N/A

6.5: Privacy policies are usually available in the software use agreement. 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. Again, no technology tools to note.

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	2
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		2

Comments:

7.1: Providing students access to technology support is very important. Don't assume that students know how to obtain support from the institution. Provide instructions/links for students to access the technology help services available to them.

7.2: The syllabus contains an excerpt from the institution website pertaining to accessibility. Consider providing a link to the site or instructions for students to access the services.

7.3: Access to the institutional academic support services is critical. Consider providing instructions/links to tutoring and other academic support services.

7.4: As with academic support, student wellness and support is also critical. Consider providing instructions/links to the institutional student support services.

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	2
8.3 The course provides alternative means of access to course materials in formats that meet the needs of diverse learners.	2	0
8.4 The course design facilitates readability.	2	2
8.5 Course multimedia facilitate ease of use.	2	2
	<i>Total</i>	9

Comments:

8.1: Make sure navigation is easy and intuitive (minimum clicks to reach destination).

8.2: If students must download/install/utilize technology other than the LMS, make sure clear instructions are provided.

8.3: Text files, audio files, video files. Consider multiple delivery systems for course materials. The Americans with Disabilities Act requires institutions to make accommodations for student who identify as having a disability. Work closely with your institution's office for disability services to identify resources to assist in making your course ADA compliant. There are two handouts for websites and videos; both are not ADA compliant. When testing with a screen reader, the JAWS software would not open a few of the links. Ensure that you follow ADA standards and avoid bold and italics, instead use strong and emphasis. Also, a few videos did not have captioning or transcription, Federal Law states we must provide reasonable accommodations; see if captioning is an option for these videos provided.

8.4: Pay special attention to fonts, text color, and background color. Most learning management systems have a default appearance that is ADA compliant. Also, be aware that screen reader software will not recognize bold or italicized fonts. Check with your office of disability services before changing the appearance of your course.

8.5: If possible, embed the media player in the page to assure ease of access. Reduce the instances of outside links to multimedia.

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.

Findings include:

Please refer to the SME report.

Part III: Creative Commons

Items Reviewed include:

- All course materials presented in Creative Commons?
- Creative Common license (including graphic) is represented on course materials.

Findings include:

The syllabus includes Creative Commons license information and the corresponding CC graphic.

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

Course: YCCC: CIS230
Course Name: Desktop & Server Administration I
Reviewed by: Anna J. Catterson, Ph.D.
Date: December 12, 2016

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 CIS230, 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 50 miles of YCCC for graduates from an AAS in Information Technology or those completing a certificate program. It was also found by this reviewer that the skills mastered in CIS230 relate to specific job openings.
2. Current job openings list openings for a Data Analyst of Quality Improvement for Southern Maine Healthcare in Biddeford, ME, Application Developer for Saco in Saco, ME and a Senior Network Support Specialist for Saco * Biddeford Savings Institution in Saco, ME. Similar job duties match the CIS230 course objectives, including:
 - Plans, develops, tests and documents computer programs, applying programming knowledge and computer system design methodologies.
 - Evaluates user requests for modifications or enhancements to existing programs; provides recommendations on best technical solution.
 - Evaluates user requests for new programs; provides recommendations on best technical solution, including alternative programs.
 - Supervises and/or performs the administration of client/server databases; including security, recovery, capacity monitoring, performance and tuning.
 - Install and configure Microsoft SQL Servers; establish and monitor maintenance procedures.
 - Design, develop, test, implement and monitor cross-application integrations.
 - Oversee writing and maintaining of department technical documentation; proofread and edit technical documentation completed by Application Developers I & II.
 - Ensures that the organization is using appropriate software technology that will help achieve the organization's strategic plan.
 - Utilizes Sweetser's ticket software to report and track open software issues through resolution and closure.
 - Provides written project status reports on a routine basis to supervisor.
 - Work some evenings and weekends when special projects require it.
 - Participate in off hours "on-call" as needed.

- The Maine is IT! Advisory board contributed to the findings and indicated the importance of soft skills. Stated in the 2015 YCCC Advisory Board minutes “Soft skills such as analytic and critical thinking, oral and written communication and presentation skills were noted as very desirable qualities in new hires. Industry partners believed they are an integral part of any degree program.” (YCCC-Advisory-Board-Minutes, 2015) These soft skills that were addressed relate to the course learning objectives and the requirements for the specific jobs found (12/12/16).

The reviewer suggests consideration of additional written and oral communication assessments in the CIS230 course. The reviewer found no direct assessments that tie to the soft skills that the Advisory Board finds to be an important component in this particular degree program.

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. Again, the Advisory Board committee has identified key soft skills that should be incorporated into the assessments and/or course outcomes and should also be considered as a direct tie to the program outcomes.

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 CIS230 course objectives are clearly written, defined and are measurable. The correlate with the program goals. The correlation at the end of each objective was a best practice identified by this reviewer. This course does present several opportunities for interaction among peers. For example:

Demonstrate an installation of an operating system onto an empty system. This course objective could be further expanded on to include group projects or include an opportunity for students to create a video of them demonstrating the process, whereas soft skills could be practiced. Most all of the course objectives could include active learning.

The reviewer did not find any direct assessments that practice active learning; it is suggested to add these assignments to get the hands-on experiences the job requirements state.

The industry sector for CIS230 has been categorized as: *541519 Other computer related services*. (See: https://www.census.gov/svsd/www/services/sas/sas_summary/54summary.htm#sectordescription) The reviewer finds that this classification is correct.

Those completing this course would enter the Bureau of Labor Statistics occupation classification **15-1199** Computer Occupations, All Other: All computer occupations not listed separately. Excludes "Computer and Information Systems Managers" (11-3021), "Computer Hardware Engineers" (17-2061), "Electrical and Electronics Engineers" (17-2070), "Computer Science Teachers, Postsecondary" (25-1021), "Multimedia Artists and Animators" (27-1014), "Graphic Designers" (27-1024), "Computer Operators" (43-9011), and "Computer, Automated Teller, and Office Machine Repairs" (49-2011).

The NCES CIP (Classification of Instructional Programs) is referenced as: *11: Computer and Information Sciences and Support Services*. (See: <http://nces.ed.gov/ipeds/cipcode/cipdetail.aspx?y=55&cip=11>) This is also an accurate classification.

This course was designed for 1st-year community college students or equivalent. There are no course prerequisites listed, and the exam-preparation materials provided from Microsoft begin at a very basic level. Students will format the user interface by using CSS. Students will code by using JavaScript.

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 – CIS230 articulates specific learning outcomes for the course, and those outcomes also align with the topics of weekly activities. Reviewer recommends adding additional activities to encourage group work or active learning assessments.

A.2 – Previous skills and knowledge are not stated. This is an introductory course, so no prerequisite skills may be applicable, but it is recommended that this be stated more clearly in the syllabus.

A.3 – Yes.

A.4 - Learning objectives are appropriate for an introductory course.

A.5 – Activities appear to be scaffolded through the course, building pieces of a project each week, although this is only inferred by the reviewer and not explicitly stated.

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 1 st 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.

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 Desktop and Server management field.

B.3 - Activities and instruction defined in the course table of contents should apply more active learning experiences for students.

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:

Textbook contents aligned with course objectives; Course Technology has provided some good engagement activities in the textbook. The reviewer recommends applying a few of those strategies to the curriculum.

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			X
C.4 The instructional materials are appropriately designed for the level of the course.		X	

C.1 – The topics covered with the course materials clearly align with course learning objectives.

C.2 - Placing the description on the first page of the course syllabus is suggested.

C.3 –The technology content varies throughout the course, which would lead to a variety of activities. However, the reviewer only noted a few activities which, all seemed to be based off of review questions. Reviewer recommends adding additional activities to help with interactive elements.

C.4 – Because the materials align with appropriate course outcomes, they are 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:

The grading scale is appropriate for this course, 20% is the total accumulation of each category (Labs, Reviews, First Exam, Second Exam, Third Exam. The exams make up 60% of the total grade of the student; this seems high for a hands-on course that could have the potential of offering many interactive, active-learning experiences for students. The Dynamic Skills Audit did reflect a need for hands-on training and additional internships in this area; this is something the reviewer would consider adopting.

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 – Yes, see notes relating to additional activities that could be applied.

D.3 – No criteria or guidance is given to let students know how their work throughout the course would be evaluated to provide feedback on their progress.

D.4 – The sequence of the assignments is clear, as they follow the progression of the course to build toward its outcomes. The variety of each assessment is adequate, as each activity may be procedurally-identical, although each will involve a unique technology application. It is reasonable to assume that each week's scenario activity involves creating something with that unit's listed technology, which would make each assignment appropriate to the content.

