

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



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

WEB131

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

*By
Emporia State University*

January, 2017

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

Course Review for: Maine is IT
Course: YCCC: WEB131: Web Development I
Reviewed by: Anna J. Catterson, Ph.D.
Date: January 4, 2017

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	1
1.2 Learners are introduced to the purpose and structure of the course.	3	1
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		6

Comments:

1.1: After reviewing the Blackboard course WEB131; the reviewer did not find any information inside the course on how students are to get started. It is best practice to have an announcement guiding students on how to get started and where to go first. This should also be done in the course content, under your modules. A “Getting Started” module would be helpful for students so they know what steps they need to take first. It is also suggested to put the dates on each of the modules (weeks). For example, Week 1: August 15th – 19th. This will help students identify where the week falls within the course. The reviewer did find a “Getting Started” section under Week 1 but the information was related to the software Expression Web 4.0 and open Office. How will students know how to navigate the course and how to access student resources such as the library and tech support? These elements should be told to the student in a separate section called “Getting Started” unit.

1.2: The purpose and structure for the course was explained in the syllabus however, should also be placed in the “Getting Started” unit. This will follow the 3-R’s (Redundancy, Repetition and Relevancy).

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.

1.5: Technology requirements were stated in the syllabus. Microsoft Expression 4 and Open Office.

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

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

1.8: The Blackboard class lacks instruction interaction and peer-to-peer interaction. An introduction by the instructor will make the course more personable. Additional opportunities for students to discuss and share their research and their projects with the class is ideal. Currently, the default discussion board posting is being used however, there are no other opportunities for students to engage with one another. It's best practice to provide opportunities for students to engage with each other, especially in a Web Developer course. Sharing resources could be one discussion post or even a discussion board to share their projects they are working on. The reviewer found a lack of instructor presence throughout the course and one way to avoid that is to form more discussions and announcements that are personable and from the instructor. Video messages are another great way to stimulate learning.

1.9: Very little discussion and participation elements found in this course.

B. Learning Objectives & Competencies (15 points total)

2.1 The course learning objectives, or course/program competencies, describe outcomes that are measurable	3	2
2.2 The module/unit learning objectives or competencies describe outcomes that are measurable and consistent with the course-level objectives or competencies.	3	1
2.3 All learning objectives and competencies are stated clearly and written from the learner's perspective.	3	1
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		8

Comments:

2.1: While the learning outcomes are on target, they could be better defined for the learners' perspective. For example:

Instead of: "Build a simple web site that organizes information effectively."

Try: "Create a five-page website that includes a site map."

Each learning outcomes should be specific, measurable and written for the learner. With the above example, the student knows exactly how many pages are required and how to organize the site with a site map. You also know how to determine if the student has mastered this skill. The first outcome is too broad and difficult to measure, outcomes should be specific and express the desired goal. This specific goal is also tied to a Web Developer position; the job descriptions that the reviewer found include the knowledge of how to create a sitemap. Reviewer suggest expanding on these course outcomes and ensuring they are measurable.

2.2: The learning competencies could be better defined. See note from 2.1.

2.3: The objectives are discussed only at a high level. It is desirable to get as much detail as possible for learners to understand the requirements.

2.4: The course activities clearly relate to the learning objectives. Again the relationship between competencies and activities lacks detail. The reviewer noted the Assignment lists or Table of Contents. The syllabus provides a much nicer explanation of the Semester Overview. There were some in the Blackboard course and the syllabus related to the outline. Ensure that they both offer the same content. Each week with due dates and listings of projects/assignments is good – consider linking the course objective to each week for a clearer alignment of skills.

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	1
3.5 The course provides learners with multiple opportunities to track their learning progress.	2	2
<i>Total</i>		10

Comments:

3.1: The assessments align with the learning objectives. Assessments are derived from the textbook, The Web Warrior Series. Most assessments align with the course objectives but additional assessments could be developed.

3.2: The grading policy is stated in the syllabus. Discussions, tests, assignments, website projects were the major categories. Reviewer suggest considering a higher weight for website projects since it is the major competency listed in the objectives. Also, consider adding a category for participation.

3.3: Descriptive criteria is not provided for each assessment. Reviewer suggests adding a rubric for each assignment. While the assignment was created by the textbook, additional elements could be included and a rubric will help identify the assignment directives.

3.4: The assignments seem fairly similar, all from the textbook. The reviewer suggests supplementing this material with instructor content such as instructor-led videos for different learning styles.

3.5: Weekly assignments are provided to measure learner progress however; it is not clear how feedback will be received or given.

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	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
	<i>Total</i>	11

Comments:

4.1: The instructional materials provided related to the achievement of the module. Rubrics are strongly encouraged for each week; reviewer did not find any rubric for the assignments. This would be very helpful for the student. It is also suggested to implement various types of instruction; incorporating instructor-led videos especially relating to Chapter 3 where forms are being developed.

4.2: The purpose of the instructional materials and their use in the course is somewhat explained however a better correlation to the course outcomes could be provided.

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. There is an abundance of resources for Web Design including Open Educational Resources (OER). Reviewer recommends adding additional resources for the learners.

4.4: The instructional materials are current.

4.5: The instructional materials are similar in structure week to week, little variety. However, considering the nature of this course and the learning outcomes, this is to be expected.

4.6: Please ensure that required materials and optional materials are clearly identified. This is confusing for the learner when they are not required to purchase software however if they have a web editor they are to use it. Reviewer suggests using the same editor and software for every student; it will help with dialogue in the classroom and clarify assignment directions. Use the industry standard software recommended by the Advisory board – **highly encouraged and recommended.**

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 few opportunities for participation in this course. The participation elements were discussed in the syllabus however, the only thing mentioned was the number of times you should log in and be active including the number of hours of effort that need to be put into the course. The level of participation should also include a grading rubric so students know how they are expected to communicate to their peers and what questions to ask. Reviewer recommends supplementing the Participation section of the syllabus with clear expectations of how peers will learn with other peers.

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. (See 5.2)

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	0
6.3 Technologies required in the course are readily obtainable.	2	2
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		6

Comments:

6.1: The tools in the course support the unit objectives. The assignments clearly state what tools/applications are needed to successfully complete the work. Please be clear in what software or technology is a required purchase or optional. Reviewer suggests using the same software for ALL students to eliminate confusion and bridge communication in the course. (Note – Dreamspark will allow for this, it's a free option).

6.2: The tools do NOT promote student engagement – suggest adding assignments and projects that create engagement.

6.3: Links to the software are provided.

6.4: The course technologies are current and up-to-date for the required work.

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. You will want to include the privacy policies for all software in the course. a

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	2
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	0
8.4 The course design facilitates readability.	2	2
8.5 Course multimedia facilitate ease of use.	2	2
Total		6

Comments:

8.1: Make sure navigation is easy and intuitive (minimum clicks to reach destination). Instead of providing links to the assignments, I would recommend including a content page so nothing has to be downloaded and users don't have to exit the course. This is best practice for ADA compliancy. Another reason to use the same software is so that it will be ADA compliant.

8.2: Clear instructions should be provided on how to download the software; step-by-step tutorials need to be 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: <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: <p>The creative commons attribution and license has been added accordingly.</p>

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

Course: YCCC: WEB131
Course Name: Web Development I
Reviewed by: Anna J. Catterson, Ph.D.
Date: January 4, 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 WEB131, 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 WEB131 relate to specific job openings. There were over 12 job openings the reviewer found and evaluated for this report. Current openings include:
 - Web Developer, Madison resources in Portsmouth, NH
 - Graphic Designer/Web Team, Village Candle, Wells, ME
 - Assistant Director of Medical Student Services, University of New England, Biddeford, ME
 - Marketing Communications Manager, The baker Company, Inc., Sandord, ME
 - Applications Developer – SACO, Sweetser, Saco, ME
 - Marketing Coordinator Associate, Fluid Imaging Technologies, Inc., Scarborough, ME

All of these openings had direct job responsibilities related to course outcomes. Requirements included:

- a) Analysis, requirements gathering, design of technical specifications, coding, testing and support of new and existing database driven web applications
- b) Implementing and designing CSS, SQL Connectors using ADO, DAO, ADO.NET, HTML, JavaScript, DHTML, VSS
- c) Planning and delivering software platforms used across multiple products and organizational units
- d) Deep expertise and hands on experience with Web Applications and programming languages such as HTML, CSS, JavaScript, JQuery and API's
- e) **Provide frequent communication to colleagues and leadership***
- f) Strong grasp of security principles
- g) Problem solving abilities and outstanding communication skills

***Item e), from above, is a direct relation to the reviewers suggestion of increased communication in the course.**

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 also identified soft skills that could be incorporated in this course including increased communication and participation among students.

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:

While the learning outcomes are on target, they could be better defined for the learners' perspective. For example:

Instead of: "Build a simple web site that organizes information effectively."

Try: "Create a five-page website that includes a site map."

Each learning outcomes should be specific, measurable and written for the learner. With the above example, the student knows exactly how many pages are required and how to organize the site with a site map. You also know how to determine if the student has mastered this skill. The first outcome is too broad and difficult to measure, outcomes should be specific and express the desired goal. This specific goal is also tied to a Web Developer position; the job descriptions that the reviewer found include the knowledge of how to create a sitemap. Reviewer suggest expanding on these course outcomes and ensuring they are measurable.

- The industry sector for WEB131 has been categorized as: *54151, Computer Systems Design and Related Services*. (See: <http://naics-codes.findthedata.com/1/615/Computer-Systems-Design-and-Related-Services>) The reviewer finds that this classification is correct.
- Those completing this course would enter the Bureau of Labor Statistics occupation classification of *15-1134.00-Web Developers*. (See: <https://www.onetonline.org/link/summary/15-1134.00>) This is defined as:
Design, create, and modify Web sites. Analyze user needs to implement Web site content, graphics, performance, and capacity. May integrate Web sites with other computer applications. May convert written, graphic, audio, and video components to compatible Web formats by using software designed to facilitate the creation of Web and multimedia content.
- The NCES CIP (Classification of Instructional Programs) is referenced as: *11.0801 Web Page, Digital/Multimedia and Information Resources Design*. (See: <https://nces.ed.gov/ipeds/cipcode/cipdetail.aspx?y=55&cipid=87254>); this is also an accurate classification.

This course was designed for 1st-year community college students or equivalent.

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– WEB131 does have targeted course outcomes, however, a matrix that identifies how the course assessments map to course objectives would be more clear.

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 - Course objectives are NOT measurable, be specific in each outcome.

A.4 - Learning objectives are appropriate for an introductory course. It is suggested to revise the outcomes to make them more measurable.

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. The skills mastered in this course serve as prerequisites to other computer science courses offered in the program. 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 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 Web Design field.

B.3 - Activities and instruction defined in the course table of contents are engaging, however, learners need to know what type of engagement and interaction will be expected of them. It is best practice to place this into the course syllabus.

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. Unit-level objectives and activity descriptions should be added to clearly show students the purpose of each assignment. The textbook is a good reference however reviewer suggest giving other resources including OER and/or instructor-led materials as supplemental materials.

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 – A better explanation would be suggested. Rubrics are strongly encouraged.

C.3 –The technology content varies throughout the course, which would lead to a variety of activities.

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

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 – Several course-level assessments that can be measured.

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. Suggest stating communication policies in the syllabus.

D.4 – The sequence of the assignments is clear, as they follow the progression of the course to build toward its outcomes however that may need to be further explained to the learner. The reviewer was able to download Chapter 1-6 and follow along with the textbook to see how each lesson builds upon itself, but the typical student may not understand that. An instructor-led video or Getting Started unit would help identify.