Formal Evaluation and Subject Matter Expert Summary Report

MIT606

Submitted to Maine is IT in fulfillment of the TAACCCT grant requirements
By
Emporia State University

November 2016

This workforce solution was funded by a grant awarded by the U.S. Department of Labor's Employment and Training Administration. The solution was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties or assurances of any kind, express or implied, with respect to such information on linked sites, and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership.
Developed by Anna J. Catterson, Ph.D., Emporia State University.

Course Review for: Maine is IT
Course: NMCC: MIT606 - Intro to Website Development
Reviewed by: Joseph Kern
Date: 11/1/16

EMPORIA STATE UNIVERSITY
INFORMATION TECHNOLOGY

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	**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	**0**
1.5 Minimum technology requirements are clearly stated and instructions for use provided.	2	**1**
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: No link to the LMS or instructions are given to help students access the course or its contents. Consider adding a direct course link.

1.2: The purpose of the course is clearly and succinctly stated. The weekly breakdown of both in-class and on-your-own tasks clearly conveys the course structure.

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 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 that students must follow are not included. These would include policies on absences, academic dishonesty, late work, etc. If these are not fully explained in the syllabus, a link to the policies should be provided.

1.5: The need for a flash drive is listed, but no minimum hardware or software requirements to conduct course activities are provided.

1.6: Prerequisite knowledge and competencies are not listed.

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

1.8: No introduction for the instructor or link to an online introduction is given.

1.9: Nothing in the syllabus indicates explicitly 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	**1**
2.3 All learning objectives and competencies are stated clearly and written from the learner's perspective.	3	**2**
2.4 The relationship between learning objectives or competencies and course activities is clearly stated.	3	**2**
2.5 The learning objectives or competencies are suited to the level of the course.	3	**3**
Total	**11**	

Comments:

2.1: The course learning objectives are measurable.

2.2: Weekly topics that are listed align with the course-level objectives, but these unit-level objectives are not listed to allow a determination of whether they are measureable. When listing the week's activities, consider explaining the expected student outcomes for each one.

2.3 : Course-level learning objectives and competencies are clearly stated from a student perspective, but unit-level competencies that students will accomplish are not clear. Students will learn to use HTML5, CSS, and Java, but specific skills within these are not listed. A link to information about the Microsoft MTA 98-375 exam could serve this purpose. (https://www.microsoft.com/en-us/learning/exam-98-375.aspx)

2.4: Activities listed align with the course-level objectives. From the course-level objectives and details about the 98-375 exam, it can be inferred that students will learn by building an application. If that is the over-arching activity throughout the course, it is not clearly stated within the syllabus.

2.5: Objectives are designed to align exactly with the four components of the 98-375 exam.

C. Assessment & Measurement (13 points total)

3.1 The assessments measure the stated learning objectives or competencies.	3	**2**
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**
Total	**9**	

Comments:

3.1: The only assessment listed in the syllabus is the Certification exam, presumably the Microsoft MTA 98-375. This exam adequately measures all objectives. The assessments for each unit-level objective and activity are not listed. Describing the type of assessment or general criteria for each activity would inform students of this component of the course without violating the copyright of the assessment materials, as long as no direct quotations are used.

3.2: Course grading policy is clear and succinct.

3.3: No criteria are given for unit-level evaluation or the summative Certification exam. A link to information about the exam could inform students of these criteria. (https://www.microsoft.com/en-us/learning/exam-98-375.aspx). The grading policy only reflects the summative certification exam, so in this sense, assessment criteria is directly tied to the grading policy.

3.4: The only assessment listed is the Certification exam, so the nature of assessments throughout the course is unclear. It is unknown whether they are varied, but if they align with the weekly activities, they would be considered sequenced and suited to the student work.

3.5: Each unit has multiple "Scenarios," which can reasonably be assumed to serve as assignments in which students can gauge their 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	**1**
4.2 Both the purpose of instructional materials and how the materials are to be used for learning activities are clearly explained.	3	**0**
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	**1**
4.6 The distinction between required and optional materials is clearly explained.	1	**1**
Total	**7**	

Comments:

4.1: Materials are all copyright protected and are not able to be reviewed. The table of contents for the required textbook can be viewed online @ http://www.wiley.com/WileyCDA/WileyTitle/productCd-EHEP002236,miniSiteCd-MOAC.html. The contents align with the weekly topics listed in the syllabus.

4.2: Materials and purposes for learning are not explained. As recommended in the Assessments section of this review, describing the activities conducted in each unit would provide this clarity without violating copyright rules.

4.3: The only material listed is the ISBN of the required textbook. This appears to be the only instructional material used.

4.4: The textbook was published in 2012, making it relatively current, and its listed technology applications align with those of the current certification exam.

4.5: Not able to confirm the variety of instructional materials, although the syllabus lists Lessons, Scenarios, Tutorials, and Practical hands-on activities.

4.6: As the required textbook appears to contain the entirety of the course content, the distinction between required and optional materials is adequately made.

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: Activities apply a hands-on approach to achieve the objectives.
5.2: It is not evident that learners are interacting with anything or anyone other than the content and its prescribed activities, although Lesson 1 specifies "practical hands-on" active learning tasks.
5.3: No plan is provided for classroom response time or assignment feedback.
5.4: No requirements are listed for learner interaction.

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	**1**
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	**8**	

Comments:

6.1: While the tools (hardware/software) used in the course are not specified, it is reasonable to infer that the coding tools used to completed the listed activities are appropriate for supporting the objectives.

6.2: Again, inferring that standard coding hardware/software are used, these are appropriate for engaging students in active learning tasks.

6.3: Without knowing the specific hardware/software being used, no conclusion can be made regarding the obtainability of the course's tools, but many coding programs and platforms are readily available.

6.4: The Certification exam is still available online from Microsoft, and the textbook was published in 2012, so it is reasonable to conclude that the technology used in this course is current.

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	**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: 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: A general ADA compliance statement is made, along with a statement directing any student with special needs to contact the correct NMCC office, with the contact information provided. No listing of broader policies is included. It is recommended that a link to NMCC's disability services information be included.

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	**0**
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	**0**
8.5 Course multimedia facilitate ease of use.	2	**0**
Total	**0**	

Comments:

8.1: Unable to review this item. Course navigation should be 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: Unable to review this item. In addition to varying the modality of content through text, audio, and video instruction, 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. For videos, a transcript or videos that are captioned are required as an effective means of communication.
8.4: Unable to review this item. 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: Unable to review this item. When possible, embedding multimedia within the course LMS ensures ease of access and limits student issues that may arise when leaving the LMS to access outside resources.

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: • All course materials presented in Creative Commons? • Creative Common license (including graphic) is represented on course materials.
Findings include: The syllabus indicates that all course materials other than the syllabus are subject to a copyright held by Microsoft, and thus, may not be shared in Creative Commons. The syllabus includes Creative Commons license information and the corresponding CC graphic.

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

Course: NMCC: MIT606
Course Name: Intro to Website Development
Reviewed by: Joseph Kern
Date: November 1, 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 MIT606 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 NMCC 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 MIT606 relate to specific job openings.
2. Current job openings list specific duties that relate the Open Source Web Development course, MIT606.
3. The MIT606 course is a certification course only. The current Advisory Board indicates it contributes to the labor market data. The listed certification exam is the 98-375 HTML5 Application Development Fundamentals exam from Microsoft. (https://www.microsoft.com/en-us/learning/exam-98-375.aspx) "Candidates for this exam are seeking to prove core HTML5 client application development skills that will run on today's touch-enabled devices (PCs, tablets, and phones). Although HTML is often thought of as a web technology that is rendered in a browser to produce a UI, this exam focuses on using HTML5, CSS3, and JavaScript to develop client applications."

There are several current job openings available for HTML website development (as of 11/1/16) within a 50-mile radius of NMCC. A Frontend Developer is currently being sought with a leading software development company, King. Job description calls for "We are looking for an experienced frontend developer with strong JavaScript/TypeScript, HTML, CSS and React/Angular skills to join our Business Performance team in Stockholm. The ideal applicant will be a natural problem solver, proficient in developing user interfaces, dashboards and real time applications that are used by our analytics department."

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 MIT606 course learning outcomes and objectives align with the program mission and goals. This reviewer found that the MIT606 course has listed measurable outcomes which can be stacked and latticed with other coursework. The industry sector for MIT606 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 of *SOC:15-1134 Web Developers.* (See: http://www.bls.gov/soc/2010/soc150000.htm#15-1100)

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.

Listed course objectives include:

1. Students will manage the application life cycle.
2. Students will build the user interface by using HTML5.
3. Students will format the user interface by using CSS.
4. Students will code by using JavaScript.

The over-arching course outcome will be for students to create and deploy a complete HTML web application.

The content of these course objectives aligns with the topics listed in the course syllabus, the required textbook, and the listed certification exam. 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- MIT606 articulates specific learning outcomes for the course, and it can be seen that aspects of the course objectives align with the topics of most weekly activities, but there is no explicit connection between the broader course outcomes and the course learning activities. Activity-level objectives are not listed, so it is unclear how each unit contributes to the whole course.
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 measurable.
A.4 - Learning objectives are appropriate for an introductory course. They align with the requirements of the certification exam.
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.

****Reviewer Note:** While the course outcomes are clearly stated and contain very specific measurable measures, it would also be recommended to include the program mission or goals in the course syllabus for clear assessment measuring. A deeper assessment could possibly be conducted that would match the course learning outcomes to specific program outcomes (or certificate). This would illustrate a direct impact on student learning.

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 1st year college students should possess.		X	
B.2 Core course competencies are relevant to **industry and employer**s.		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 are derived directly from the current certification exam.
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 real-world application in programming and coding languages that are beneficial to students seeking employment in this field.

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:

Instructional materials were not made available for review due to the copyright held by the publisher, although the contents of the required textbook were reviewed online at http://www.wiley.com/WileyCDA/WileyTitle/productCd-EHEP002236,miniSiteCd-MOAC.html. Textbook contents aligned with course objectives, although the learning activities listed in the syllabus were not described or correlated with unit-level objectives. Unit-level objectives and activity descriptions should be added to clearly show students the purpose of each assignment.

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 and the certification exam.

C.2 – Explanations are not given to clarify how the materials will be used and what types of activities will be performed by students in each "scenario" assignment.

C.3 – Without seeing the course materials, this reviewer is unable to determine their variety regarding perspective and approach. The technology content varies throughout the course, which would lead to a variety of activities, but the presentation of content and performance of lab experiences may occur identically and unvaried throughout the course.

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 only graded assessment of this zero-credit, pass/fail course is done through a certification exam. There are "On your own" scenarios listed in the syllabus. These can be assumed to serve as assignments for each unit, and they appear to align with the course outcomes, but no details are given regarding how these will be evaluated to measure progress and help students learn.

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 – The certification exam upon which the course grade will be based is consistent with course activities and resources.
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. The listed Scenario activities are not even labeled as "assignments." Especially if these activities will not contribute to the final grade, the purpose for each one should be made clear to students. Describing what will be done in each assignment and how it contributes to the course outcomes will serve this purpose and motivate students to complete these ungraded activities.
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.