Course: Carroll: Computer Repair & Support 1
Cyber Pathways Across Maryland SME Rubric

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Date: 09/12/2018

  This course is offered by Carroll Community College (https://www.carrollcc.edu/Programs-and-Courses/Credit-Programs/Cybersecurity/). The goal for this review is to validate that the curriculum is complete, current, and relevant to industry cybersecurity needs. Please use the comments sections for each category to explain your overall impressions, whether positive or negative.

COURSE STRUCTURE AND SYLLABUS	Y	N	N/A
Course description is factually complete and accurate		x	
Course structure includes major lessons and assignments	x		
Prerequisite requirements are included and appropriate	x		
Required facilities and equipment are included and appropriate	x		
Required course texts are listed	x		
Appropriate supplementary materials and resources are provided	x		
Course organization and design is clear, coherent, and appropriately structured	x		
Concepts and skills build logically, with appropriate transitions between course sections	x		
Learning outcomes are clearly stated, measurable, and appropriate for the level of the course	x		
Learning outcomes emphasize application of knowledge and skills	x		

Comments about the course structure and syllabus:
Summarize your impressions of the syllabus and course structure including errors, suggestions for revisions, or gaps in the curriculum in regard to industry standards and needs:

Course description states, "Students will have the opportunity to develop hardware and software troubleshooting and diagnostic skills, and will learn basic concepts of computer networking and security as well as...customer service techniques." This is likely true over the two courses of Computer Repair & Support I & II, but it is not entirely true for only this course. There is no mention of customer service skills and software troubleshooting in the materials. This course, as it should, focuses mostly on hardware, networking, hardware troubleshooting,

and security which is appropriate for preparing students toward the CompTIA Essentials exam (220-901).

Course structure is good and presents material in a logical and progressive fashion. It does lack mention of some of the newer hardware and operating systems, such as SSDs, USB-C, and Windows 8/10.

LECTURE MATERIALS: **INSTRUCTOR SLIDES OR AUDIO/VIDEO PRESENTATIONS**	Y	N	N/A
Content is accurate.			x
Materials accurately reflect course content.			x
Materials are presented in a logical order.			x
Materials reflect the major learning points and objectives for the related lesson.			x

Comments about the instructor slides or video presentations:
Summarize your impressions of the instructor slides including errors or suggestions for revisions:

There were no teaching materials or audio/video presentations included in this course for me to evaluate. There were a few handouts with a few errors; so I have included them here.

1. The "15 things" handout
    a. #1 - second sentence should read "Windows" and last sentence doesn't make sense. I believe "remember" should be "reminder."
    b. #11 - references Vista OS and at this time only 7, 8, 8.1, and 10 should be the focus as Vista is a legacy OS. It could say this functionality began with the Vista OS for a more up-to-date reference.
    c. #13 - Should be updated to include more recent Windows OSs.
2. Windows 7 God mode instructions are repeated on the sheet and there is no referenced image present. Windows 8 & 10 should be referenced here as well since they too support this feature and it is the same process.
3. Linux command sheet has some formatting errors. There is an unneeded enter between "into" and "a" in the last paragraph.

STUDENT ACTIVITIES: LABS/EXERCISES/HOMEWORK			
Activities as a whole:	Y	N	N/A
● Contribute to the achievement of the stated course objectives.	x		
● Are comprehensive enough to reinforce course objectives.	x		
● Are current.		x	
Individual activities:	Y	N	N/A
● Have a clearly explained purpose and learning goals.	x		
● Promote the achievement of their stated learning goals.	x		
● Include access to all necessary resources.		x	

Comments about student activities:

Please summarize your impressions of the student activities including errors or suggestions for revisions:

1. Windows install should address Win10 install instead of 7 or 8.x.
2. Typo in second paragraph, third sentence of Capstone Project Part 2 - "They" should be "The."
3. Lab 1 - "Identify and remove the harddrive" is listed twice and there are no reassembly instructions
4. Labs 3, 4, & 5 should mention UEFI along with BIOS as it is replacing older legacy BIOS.
5. Labs 7, 8 & 9 - "Materials needed" section at the top does not conform with the convention from other labs.
6. Lab 10 - screenshots are very blurry and should be redone.
7. Lab 12 - typo in #8 of this lab. "I" should be "is." Also, there should be some mention of drivers associated with installing a dedicated video card. Maybe this is in the book, but there is no mention of driver install in the lab.
8. Lab 17 & 19 - Duplicate "In" in #2.
9. Lab 21 - Still referencing Windows Vista under materials needed which should not be current focus. At worst, Windows 7 and at best, Windows 10.
10. Lab 27 - #3 should have them the choose "The printer I want isn't listed." Then, #4, 5, 6 & 7 are not needed. #8 should become #4 and remain the option to choose "Add a printer using TCP/IP or hostname." Next, #5 should be to enter the printer's IP address and click next. Then the rest of the instructions are correct involving drivers, naming the printer and sharing the printer.

11. Lab 31 - latest version of the GSMartControl software should be updated to 1.1.3.
12. Lab 38 is a repeat of Lab 35.5
13. Lab 39 is a repeat of Lab 25.

I found the labs contained in this course to be amply focused on the materials/mechanics that should be learned in a course such as this. However, there are some issues with outdated material in reference to OSs, software and firmware references.

EXAMS AND ASSESSMENTS	Y	N	N/A
Assessments measure the stated learning objectives.	x		
Assessments are consistent with module activities and resources.	x		
Assessments are varied	x		
Assessments are appropriate to the student work being assessed.	x		

Comments about exams and assessments:
Please summarize your impressions of the assessments and any suggestions including errors or suggestions for revisions:
1. Exam 1 - references an older chipset/CPU architecture(Northbridge & Southbridge). While this is an important structure for students to know, the newer architecture should also be integrated into this course which includes the integration of the Northbridge into the CPU and the Southbridge chipset now being called the Platform Controller Hub (PCH) in Intel via the DMI (Direct Media Interface) or the Fusion Controller Hub (FCH) in AMD via the UMI (Unified Media Interface).

I found the exams to have appropriate questions relative to the material. However, I felt like they were a little on the short side in terms of questions posed and that more questions relative to the material could be integrated.

Overall Summary:
Based on your expertise and knowledge of the course, please write a summary of your overall impressions, the strengths of the material, and your recommendations for future iterations. Please keep in mind suggestions for revisions or gaps in the curriculum in regard to industry

standards and needs. If your course is meant to prepare students for a certification exam, please indicate whether or not you feel the course will do so.

This course introduces students to various forms of computer hardware, networking, printers and troubleshooting relative to these devices/structures. There is some introduction to software at the OS level, but mainly in relation to how it interacts with the hardware, which is a good starting point. I have mentioned several areas in the above sections that need updating to keep up with the advancements of the current industry. They include:
- Use/reference of updated OSs, like Windows 8.x and 10.
- Discussion of UEFI (Unified Extensible Firmware Interface) in conjunction with BIOS.
- Integration of new CPU architecture for both Intel and AMD.
- Correction of steps for adding a printer using its IP address.
- Updates concerning hardware such as SSDs (solid state drives) and the USB-C standard.
- Introduction to virtualization technology and setting up virtual machines as that applies to hardware.