

COURSE ASSESSMENT REPORT

I. Background Information

1. Course assessed:
 Course Discipline Code and Number: CNT223
 Course Title: Windows Server Networking Infrastructure Configuration
 Division/Department Codes: BCT/CISD

2. Semester assessment was conducted (check one):
 Fall 2009
 Winter 20__
 Spring/Summer 2009

3. Assessment tool(s) used: check all that apply.
 Portfolio
 Standardized test
 Other external certification/licensure exam (specify):
 Survey
 Prompt
 Departmental exam
 Capstone experience (specify):
 Other (specify):

4. Have these tools been used before?
 Yes
 No

If yes, have the tools been altered since its last administration? If so, briefly describe changes made.
 N/A

5. Indicate the number of students assessed/total number of students enrolled in the course.
 20 enrolled, 20 tested

6. Describe how students were selected for the assessment.
 All students taking the final exam took the separate assessment exam as well.

II. Results

1. Briefly describe the changes that were implemented in the course as a result of the previous assessment.
 This is the first assessment done on this course using the departmental exam.

2. List each outcome that was assessed for this report exactly as it is stated on the course master syllabus.

Outcome #1: Identify basic networking concepts including the OSI/TCP/Windows Networking Models, various IPv4 and IPv6 addressing schemes, various networking configurations which use switches and routers, and identify types of network monitoring tools.

Outcome #2: Identify basic domain name service concepts, including naming and dynamic registration, and distinguish the differences between DNS Forward, Reverse, Secondary, Delegated, Stub and Root Zone Configurations.

Outcome #3: Define the concepts behind DHCP server implementations, including DHCP options, Exclusions, Reservations, Scopes and identify the various components of a working DHCP Server.

Outcome #4: Distinguish between the various server services associated with Windows Routing, including a Windows Router, Network Address Translation Server, Remote Access Server and VPN Server and identify older Windows Services including Telnet, FTP and WINS Servers.

Outcome #5: Identify file and print server services, distinguishing the necessary security configuration steps (NTFS and share permissions), and the features associated with each, such as off-line file caching, shadow copies, backups, printer pooling, etc.

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- Briefly describe assessment results based on data collected during the course assessment, demonstrating the extent to which students are achieving each of the learning outcomes listed above. *Please attach a summary of the data collected.*

Overall Results: Average Score - 28.0 out of 36 questions for a 78.0 % Average. This meets and exceeds my expectation of having a 70% overall average for the class.

I am very pleased with the results, as this is the first time this course was taught with the new MCTS curriculum and, to be honest, there were some definite rough edges throughout the semester. The testing results included every student in the class, from the best all the way to the worst, and therefore is very representative. As far as test results go, I had a few students that regularly did very, very poorly on the course tests, and this was reflected in the assessment test as well. Having an overall average of 78%, considering the difficulty and highly technical nature of the material, shows that there was a fairly high level of understanding and retention by the students. The students were getting extra points just for taking the test (the test results had no effect on the grade), so the only "incentive" they had to do well was my urging them to do so as the results would help improve the course. In fact, I told them NOT to study for the test, as the test addressed key concepts which I hoped they would have retained without special memorization, etc. The average on this assessment test was about eight percentage points higher than the test averages for the course which was roughly around 70% overall for all four tests in the course.

Actually, since I included EVERYONE in the course in the assessment test, it is somewhat surprising that the test average for the course was lower than the assessment average, since much of the material being tested on was presented much earlier in the course – again this shows that retention of important concept material did take place.

- For each outcome assessed, indicate the standard of success used, and the percentage of students who achieved that level of success. *Please attach the rubric/scoring guide used for the assessment.*

The standard of success used was a percentage of 70% correct answers for each of the outcomes. In four of the five outcomes, this was achieved. One Outcome, Outcome #2, the average was very slightly below the desired 70% with a result of 69.1%. Note again, the overall average was 78.0% for all of the outcomes.

Looking at the success rate by student population, 16 of the 20 students taking the test scored at or above the 70% mark. Two of the remaining four scored 52%, one was at 50% and the remaining one was at 44%. These are the same four students that generally did very poorly on the tests throughout the course. This means that 80% (16/20) of the students scored over the 70% mark, ***with an overall average for those students of 84.7%***, (344 points/400 possible points). This indicates that 80% of the students retained and understood 84.7% of the course material tested – extremely successful for a new, advanced course.

Breakdown by Outcome:

Outcome #1

Questions 1 through 5 represented Outcome #1. Total Questions: 5
80 correct answers out of 100 questions for a **80% average**. This was above the expected 70% average for the students achieving this outcome. 14 of the 20 (70%) students taking the test exceeded 70% for this outcome.
Individual questions not achieving a 50% success rate: None

Outcome #2

Questions 6 through 10 represented Outcome #2. Total Questions: 6
83 correct answers out of 120 questions for a **69.1% average**. This was slightly below the expected 70% average for the students achieving this outcome. 11 of the 20 (55%) students taking the test exceeded 70% for this outcome.
Individual questions not achieving a 50% success rate: None

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Outcome #3

Questions 12 through 21 represented Outcome #3. Total Questions: 10
 152 correct answers out of 200 questions for an **76.0% average**. This was considerably above the expected 70% average for the students achieving this outcome. 15 of the 20 students (75%) taking the test exceeded 70% for this outcome.

Individual questions not achieving a 50% success rate: None

Outcome #4

Questions 22 through 29 represented Outcome #4. Total Questions: 8
 120 correct answers out of 160 questions for a **75% Average**. This was considerably above the expected 70% average for the students achieving this outcome. 12 of 20 (60%) students taking the test exceeded 70% for this outcome – the 60% is deceiving and will be discussed below – it is tied very closely with has to do with the one question not achieving a 50% success rate in this outcome.

Individual questions not achieving a 50% Success Rate: One – Again, this will be discussed below.

Outcome #5

Questions 30 through 36 represented Outcome #5. Total Questions: 7
 125 correct answers out of 140 questions for a **89.2% average**. This was above the expected 70% average for the students achieving this outcome. 19 of 20 (95%) students taking the test exceeded 70% for this outcome.
 Individual questions not achieving a 50% success rate: None.

5. Describe the areas of strength and weakness in students' achievement of the learning outcomes shown in assessment results.

Strengths: The overall average for a great majority of the students show that, overall, most of the material was presented well in both the lecture and lab projects, and the retention rate was fairly high in a vast majority of the students – 16 out of 20 exceeded 70% overall.

Weaknesses:

Outcome #2

The only outcome not achieving a 70% success rate was Outcome #2 – slightly below 70% (69.1%) with only 55% of the students scoring above 70%. This outcome dealt with the concepts behind DHCP – Dynamic Host Configuration Protocol. There were no questions missed more than 50% of the time in this category, although four of the six were missed a lot. Part of the problem with this Outcome resulted from my splitting DHCP into two parts – two lectures and two labs – right in the middle of presenting it. Originally the materials given to the students had the basic and advanced concepts, (advanced included Superscopes and DHCP Relay Agents), together in one lecture and one lab. In the middle of presenting this material, (remember, this is the first semester of this new course and I was continually “adjusting” things), I split up it up into two lectures and two lab projects in the hopes of taking the advanced material more slowly. However, I did this after giving the original single lecture. This change probably did more to confuse the students rather than clarify the material for them. The course test covering this material also was slightly below 70% as well, which would be an indicator that my analysis is correct.

Outcome #4 and the single question missed more than 50%

Outcome #4, which had an overall average of 75%, (above our 70% goal), still had only 12 of 20 (60%) students exceeding 70%. This did not seem consistent, but is explained when looking at the only question in the test missed by over 50% of the students (established as one of our Rubric goals) - 12 of 20 people missed it.

However 12 out of 20 only gave one of two answers required for this question. Therefore this 60% is deceiving since 12 of the 20 people answering this one question didn't realize there were two answers, and ***10 of the 12 had chosen one of the two correct responses.*** Based on the rest of the overall test scores for these 10 people, it is very likely that they would have gotten the other one right if they had realized there were two answers. Taking this into account actually raises the number of students exceeding the outcome requirement of 70% to fifteen with the overall percentage of students exceeding 70% to 75% for this outcome.

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III. Changes influenced by assessment results

1. If weaknesses were found (see above) or students did not meet expectations, describe the action that will be taken to address these weaknesses.

Outcome #2

This outcome has the lowest average, barely below 70% that we set as our standard of success and had only 55% of the students reaching the 70% mark. I do feel that splitting the concepts of DHCP into two parts was and is absolutely essential (although doing that in the middle of presenting the material was NOT a good idea), and I have now redone the separate lectures and separate lab projects for each of the two sections. I have added more explanation in both the basic section as well as the advanced section in my lectures and have added additional lab project work to really emphasize the important concepts associated with DHCP. As part of all of the changes, I have reorganized the material, particularly the lectures, so that the material “flows” better – in other words, they are organized now so that one concept leads into another, rather than jumping back and forth between unrelated materials.

Outcome #4 and the Question missed by more than 50% of the people.

Concerning Outcome #4, and the question missed by more than 50% of the people, when using this question again (it is a VERY GOOD concept question), I intend to make it VERY clear that there are two answers to it. Even though I did indicate two answers, obviously this was not enough. Believe me, I will indicate it in a much clearer manner next time. Again, the overall results for outcome #4 were above the 70% indicated as a success rate, and with the change in the question, I firmly believe the number of people obtaining over 70% for this outcome would have exceeded the 70% mark as I indicated above.

2. Identify intended changes that will be instituted based on results of this assessment activity (check all that apply). Please describe changes and give rationale for change.

a. Outcomes/Assessments on the Master Syllabus
Change/rationale:

b. Objectives/Evaluation on the Master Syllabus
Change/rationale:

c. Course pre-requisites on the Master Syllabus
Change/rationale:

d. 1st Day Handouts
Change/rationale:

e. Course assignments
Change/rationale: Lab projects have been modified as explained above in preceding section.

f. Course materials (check all that apply)
 Textbook
 Handouts
 Other:

Change/rationale: Lecture notes have been modified as outlined under improvements above.

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- g. [X] Instructional methods

Change/rationale: As explained in the preceding section, by splitting up the lecture and lab materials into two parts, and reorganizing the material in each, students will have more additional time to work with and grasp the concepts behind the Dynamic Host Configuration Protocol.

- h. [X] Individual lessons & activities

Change/rationale: Why this is repeated I do not know – under Course Assignments above I have stated that Lab projects have been modified as explained in the preceding section.

- i. [X] Review of the Most Missed Questions (less than 50% of the class had the correct answer).

Again, the problem with the question lies with the students understanding that there were TWO answers to it, not a single one. This has been addressed.

- 3. What is the timeline for implementing these actions?

These changes have already been implemented and will be tested in the Winter semester of 2010..

IV. Future plans

- 1. Describe the extent to which the assessment tools used were effective in measuring student achievement of learning outcomes for this course.

I feel my assessment tool and method of applying it, was effective in measuring whether the students had grasped and retained what I believe are the key concepts of the course expressed in my course outcomes. In particular, the instructions I gave to not study for the assessment, and that taking the test would only affect their grade positively, whether or not they did well on it, gave me an excellent indication of how much they had learned. Again, they had no reason to personally care about the results of this test, yet overall they did exceptionally well with the very complex material covered in this course and certainly exceeded my expectations. None of the students "rushed through" this assessment test – they all took as much time with it as they took on their actual final exam, giving me the indication that they did care and what they had answered is actually what they had retained from the course. Since the test was designed and written around the concepts expressed in the course outcomes, I feel that using this type of assessment tool was successful.

- 2. If the assessment tools were not effective, describe the changes that will be made for future assessments. Not Applicable.

- 3. Which outcomes from the master syllabus have been addressed in this report?

All _XXXXX_ Selected _____

If "All", provide the report date for the next full review:

Every three years, which would be the Spring/Summer of 2012 – I would like to do these more often, however due to the extremely complex Curriculum and Assessment Process used at this school, and the number of courses that have to be processed by myself; it is an impossibility to do it at any greater frequency.

If "Selected", provide the report date for remaining outcomes: Not Applicable.

Submitted by:

Print: William Reichert Faculty/Preparer Signature [Signature] Date: 1/02/10
Print: GARY DOWNEN Department Chair Signature [Signature] Date: 1/5/10
Print: ROSEMARY WILSON Dean/Administrator Signature [Signature] Date: 1/5/10

leaved 1/2/10 sj RUBRIC: (Directly from Syllabus)