

INFORMATION SHEET 1-3-2-1

(U)TESTING PLAN AND TABLE OF SPECIFICATIONS (TOS)

A. INTRODUCTION

The Testing Plan is the outline for how the training project will be assessed, and the Table of Specifications outlines how the objectives will be tested.

B. REFERENCES

1. Review (U) Navy School Testing Program Management Manual, NAVEDTRA 132 (Series)

C. INFORMATION

The testing plan provides documentation of the test procedures for a course and will be maintained current and approved by the Curriculum Control Authority (CCA). A testing plan is required for each course and is the outline for how the training project will be assessed. According to NAVEDTRA 132, "All formal and informal testing will be identified in the course's testing plan" (p. 3 -10).

In Content Planning Module (CPM), the testing plan report is created in the Projects tab under Project Management and the rest of the Testing Plan is created at the Course, Module, and Lesson levels by highlighting the Course, Module, or Lesson in the Curriculum Outline of Instruction (COI), selecting the New icon, and then choosing 'Assessment.'

The ToS is part of the Testing Plan, it provides details about the type of test, criticality of the objective being tested, number of test items, passing grade, and type of test(s) that will be employed each for each objective. The Table of Specifications is created in CPM at the section level with the objectives, in the Assessment tab.

Some of the required fields for the Testing Plan are completed in CPM, others are completed outside of CPM. There are 10 Sections in the Testing Plan. The report fields are outlined below, as well as whether they are completed within CPM:

- 1) Testing Plan Section 1 **Course Data**
  - a) Course Master Schedule (CMS) This is done in CPM and is part of the Training Course Control Document (TCCD). This is completed after the Curriculum Outline of Instruction (COI). Once the TCCD has completed, the CMS information will automatically populate in the Test Plan.
- 2) Testing Plan Section 2 **Course Roles and Responsibilities**
  - a) Done outside of CPM
- 3) Testing Plan Section 3 **Course Waivers**
  - a) Done outside of CPM

- 4) Testing Plan Section 4 **Test Development**
  - a) The publications entered into the RRL in CPM are automatically entered on this page
  
- 5) Testing Plan Section 5 **Testing Administration**
  - a) Testing Constraints: completed in Test ISD Considerations at course, module, or lesson level of the COI, depending at which level the assessment was added to the COI
  - b) Test Proctor Procedures: completed in Test Instructions at course, module, or lesson level of the COI, depending at which level the assessment was added to the COI
  - c) Test Instructions for the Examinee completed in Test Instructions at course, module, or lesson level of the COI, depending at which level the assessment was added to the COI
  
- 6) Testing Plan Section 6 **Course Tests and Test Types**
  - a) Test Schedule: completed in COI (when assessments are added at course, module, or lesson level), displays assessments that have been added. The time the assessments will take is added from the Course Master Schedule (CMS). The weight is added under Performance Requirements in the Testing Plan Matrix for each objective that is to be measured on the test. The retest, and retest criteria are added on the screen that displays when these assessments are added to the COI.
  - b) Copy of Each Test: done outside of CPM
  - c) Copy of Instructional Sheets: done outside of CPM
  - d) Statement of logic for test type selection: completed under Project Management in Testing Plan, Justification Comments
  
- 7) Testing Plan Section 7 **Grading Criteria**
  - a) Identify minimum passing grade for the course: completed under Project Management in Testing Plan, Minimum Passing Grade
  - b) If a comprehensive test is not used, Provide Rationale: completed under Project Management in Testing Plan, Test Procedure
  - c) Copy of grading checklists/Scoring Guides: done outside of CPM
  - d) Copy of answer keys: done outside of CPM
  - e) Rubrics, with discussion of rationale: done outside of CPM
  - f) Grading and weighting criteria to determine final grade: done outside of CPM
  - g) If course is SAT/UNSAT provide rationale to determine successful course completion: Done outside of CPM
  
- 8) Testing Plan Section 8 **Remediation**
  - a) Description of course remediation process: completed under Project Management in Testing Plan
  
- 9) Testing Plan Section 9 **Test and Test Item Analysis**
  - a) Test and test item analysis results: done outside of CPM
  - b) Test item bank maintenance procedures: done outside of CPM
  - c) Copy of Subject Matter Expert (SME) test critique forms: done outside of CPM
  - d) Summation of trainee test critique forms: done outside of CPM
  - e) Copies of trainee course critique forms: done outside of CPM

10) Testing Plan Section 10 **Documentation**

- a) Change Log: COI Items-Populated automatically from CPM History

**Assessment Methods**

According to NAVEDTRA 132, “There are three types of (performance)tests that can be used by curriculum developers to assess the trainee’s performance of learning objectives: product, process, and combination of product and process. Each test type has a different purpose.”

1. A Product test has an observable result (something you can see, hear, or touch), for example, a test that requires the student to assemble a birdhouse following specifications.
2. A Process Test consists of step-by step procedures required to produce a product or complete a task. The process test may be employed when the emphasis is more on the steps rather than the result or product outcome. An example might be a test to determine if a student could successfully don required personal protective equipment in a specific period of time.
3. A combination Product and Process Test is concerned with both an observable result, and the step-by-step process leading to the result. Both product and process are equally important to the final result. An example would be a test where the student had to maintain a piece of equipment that had to be fully operational at all times and involved potential safety hazards. Both the process and product would be important.

The Testing Plan should describe what type of performance test(s) is/are employed in the training, as well as how they will be graded. According to NAVEDTRA 132, “All skills subjected to formal assessment (graded activity) must have rubrics developed and included in the testing plan” (p. 6-10), and “Performance tests are sample work situations designed to assess a trainee's knowledge and skill to perform a task by using actual equipment or training devices. To achieve this, test instruments (job sheets) and grading criteria tools (checklists, rubrics, and grading scales) need to be designed and developed.” The Testing Plan in CPM creates a document that outlines the tests and grading criteria. Knowledge tests should also be detailed in the Testing Plan. NAVEDTRA 132 states that “Knowledge tests will be developed using test items. Test items include: multiple choice, true or false, matching, completion, labeling, essay, and case study” (p. 5-2), and “Knowledge tests describe the expectations of the knowledge comprehension assessment, to include:

- Number of points for each knowledge check.
- Any specific identified critical item or area, critical sub item or area, or safety item missed will result in a failure” (p. 6-8)

Grading is an important piece of the Testing Plan. Grading can either be via dichotomous or percentage grading, for example, when calculating the final training grade, the student may be assigned a score of:



- pass or fail, also SAT/UNSAT, which is dichotomous grading; or,
- a percentage of 100% depending on the material that was successfully mastered by the student.

This same grading criteria shall also be applied to all tests within the training. In training that is percentage-based, each individual test can be weighted in relation to its importance to the desired training outcome. This weighting is captured in CPM in the Projects Tab, as part of the COI at the section level, in the Assessment Tab using the Criticality Index. The Criticality Index Score in CPM is an aggregate score based on three measurements:

1. Criticality (Maximum Criticality = 3)
  - 0 - Not Selected
  - 1 - Not Critical
  - 2 - Moderately Critical
  - 3 – Critical
  
2. Difficulty (Maximum Difficulty =3)
  - 0 - Not Selected
  - 1 - Easy
  - 2 - Moderately Difficult
  - 3 – Difficulty
  
3. Course Relation ((Maximum Course Relation =3)
  - 0 - Not Selected
  - 1 – Indirectly Related
  - 2 – Closely Related
  - 3 – Directly Related

If an objective was assigned a Criticality Index Score of 9, it would be a critical objective, and would require the heaviest weighting in tests. If an objective was assigned a Criticality Index Score of 3, it would not be a critical objective and may only need informal testing.

The objectives may be printed out, along with their corresponding criticality index scores, Knowledge to Skill Proficiency Level (KPL or SPL), the number of test items anticipated, and the minimum passing score in the Table of Specifications. The Table of Specifications is a simple table that indicates how the objectives will be tested. An example of a Table of Specifications taken from CPM is pictured below.

 <b>Content Planning Module - QA-5.15.4</b>							
Home	Data	OCCSTDs	JDTA	Projects	Reports	Resources	Admin
Main Design <b>ToS/Assessment Info</b>							
<b>ToS/Assessment Info</b> 							
No.	Objective Text	SPL	KPL	#Items	Index	Passing%	
1.0	DEMONSTRATE KNOWLEDGE IN WRITING ON W...		KPL1				
1.1	DESCRIBE THE PURPOSE OF WOODWORKING AS...		KPL1	1	3	75	
1.2	DESCRIBE THE BENEFITS OF WOODWORKING A...		KPL1	1	3	75	
2.0	DEMONSTRATE KNOWLEDGE IN WRITING ON W...		KPL1				
2.1	IDENTIFY WHAT TOOLS ARE REQUIRED AND THE...		KPL1	1	5	75	
2.2	IDENTIFY THE MAIN USE OF EACH TOOL AS A S...		KPL1	1	6	75	
1.0	PERFORM EACH STEP OF THE 2X4 PATIO BENCH ...		KPL1		8	100	
1.1	CONSTRUCT THE FRAME FOR THE 2X4 PATIO BE...		KPL1	1	8	100	
1.2	CONSTRUCT THE LEGS FOR THE 2X4 PATIO BEN...		KPL1	1	8	100	
1.3	CONSTRUCT THE STRETCHER FOR THE 2X4 PATI...		KPL1	1	8	100	
1.4	CONSTRUCT THE SEAT FOR THE 2X4 PATIO BEN...		KPL1	1	8	100	
1.5	CONSTRUCT THE ARMRESTS FOR THE 2X4 PATI...		KPL1	1	8	100	
1.6	CONSTRUCT THE BACKREST FOR THE 2X4 PATIO...		KPL1	1	8	100	

JOB SHEET 1-3-2-2

(U)BUILDING A TESTING PLAN, ADDING ASSESSMENTS, AND COMPLETING TABLE OF SPECIFICATIONS (TOS) IN CONTENT PLANNING MODULE (CPM)

A. INTRODUCTION

This sheet will walk you through the steps of completing the fields for the Testing Plan within CPM, adding assessments to the COI, and entering ToS data.

B. EQUIPMENT

- 1. Software
  - a. (U) CPM Website for training

C. REFERENCES

- 1. Review (U) Navy School Testing Program Management Manual, NAVEDTRA 132 (Series)

D. SAFETY PRECAUTIONS

None.

E. SELF-TEST QUESTIONS

Which chapter in NAVEDTRA 132 reviews the Testing Plan and Testing Plan Administration?

F. JOB STEPS

Step	Action	Remarks
<b>Creating the Testing Plan in CPM</b>		
1	Expand the plus (+) sign next to Project Management and <b>highlight</b> Testing Plan. <b>Click 'OK'</b> to the message that pops up.	A message will pop-up telling you, "No Testing Plan currently exists. Entering the information and clicking Save will create it!"
2	Fill in the Cover Page fields as follows: <b>Version:</b> 1 <b>Date:</b> Today's date in mm/dd/yyyy format <b>Developer:</b> Your initials. <b>Purpose:</b> The Testing Plan documents the required outcomes for the Superhero Training Course including the types of tests	This completes the Cover Page of the Testing Plan.

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	<i>that will be administered, when they will be administered, and the minimum passing grade for each. <b>Click Save.</b></i>	
3	<b>Highlight</b> the <i>Minimum Passing Grade</i> field, <b>click</b> the Edit button, and enter: <i>An average score of 80 must be attained to pass the Course.</i> <b>Click Save.</b>	Trainees must have an average score of 80 or higher in all of their graded tests to pass the training.
4	<b>Highlight</b> the <i>Justification</i> field, <b>click</b> the Edit button and enter: <i>Superheroes must be able to do their job with a high rate of success; there is little room for error.</i> <b>Save</b>	
5	<b>Highlight</b> the <i>Test Procedure</i> field, <b>click</b> the Edit button, and enter: <i>Performance tests will be administered at the end of each lesson, and a comprehensive performance test will be administered at the end of the course. These tests will assess the trainee's ability to do the performance stated in the objective, and rubrics will be used to grade their performance.</i> <b>Save.</b>	Testing instructions for both the instructor and examinee are developed later, this is an overview.
6	Skip the Matrix fields	These fields are populated after the assessments are added to the course, module, and lessons in the COI.
7	<b>Highlight</b> the <i>Remediation</i> field, <b>click</b> the Edit button, and enter: <i>Only Targeted Remediation is available if trainees have a difficult time with one area of training. Scalable and Iterative Remediation are not recommended due to the criticality of the job. Trainees will be remediated by instructors during the training as needed, providing additional practice for those that need it. However, if after the additional practice, the trainee is unable to achieve a minimum passing grade of 80 on the final exam, they will be excluded from the Superhero Rate.</i> <b>Click Save.</b>	Remediation policy overview should be established here, and what kind of remediation is allowed.
8	<b>Highlight</b> the <i>ARB</i> field, <b>click</b> the Edit button, and enter: <i>If an instructor feels a trainee needs more than targeted remediation for a specific subject, an ARB will be convened to determine if the trainee should be dropped from the program at that point.</i> <b>Save.</b>	ARB is Academic Review Board, in this case with the authority to make decisions about the possibility of advanced remediation.

Completing the Table of Specifications (ToS)		
9	To complete the ToS data, begin with the TO for the <i>Physical Conditioning</i> lesson by clicking on the blue Objective link	Remember, to access the objective you must be at the lesson level in the COI, which is under Curriculum Outline.
10	<b>Click</b> on the <i>Assessment</i> tab, then Edit	The Assessment tab is the third tab on the right side.
11	Fill in the Assessment fields: <ul style="list-style-type: none"> <li>• Proficiency Level: SPL3</li> <li>• Passing Criteria: 80</li> <li>• Criticality: 3</li> <li>• Difficulty: 2</li> <li>• Course Relation: 3</li> </ul>	You will notice that CPM automatically adds your criticality index dropdowns together to give a total criticality score for this objective of 8.
12	Save	If desired, now that all of the required data has been completed, this objective could be changed to ‘Complete’, but it is not necessary.
13	Move to the first section, <i>Perform Combat Simulation Training</i> , and <b>click</b> on the blue <a href="#">Objective</a> link for Perform Combat Simulation Training	This is the first Enabling Learning Objective (ELO).
14	<b>Click</b> on the <i>Assessment</i> tab, then Edit	
15	Fill in the Assessment fields: <ul style="list-style-type: none"> <li>• Proficiency Level: SPL3</li> <li>• Passing Criteria: 80</li> <li>• Test Item Type: Performance-based</li> <li>• Number of Test Items: 1</li> <li>• Criticality: 3</li> <li>• Difficulty: 3</li> <li>• Course Relation: 3</li> </ul>	This objective has a criticality rating of ‘9’, which is the highest. After entering all the Assessment data, <b>click</b> Save.
Adding Assessments to the COI		
16	<b>Highlight</b> the Lesson ‘Physical Conditioning’, and <b>click</b> on the New icon. <b>Select</b> <i>Assessment</i>	This is under Curriculum Outline, below Performance Requirements, in your COI
17	<b>Enter</b> the following: Assessment Title: Physical Conditioning Lesson Test Type: Performance Test Minimum Passing Score: 80 Retest: No Then Save	This is at the lesson level, so it is an assessment plan for the Physical Conditioning Lesson.
18	<b>Click</b> on the <i>Objectives</i> tab, then Edit.	The Objective tab is next to the Assessment Information tab on the right side.



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19	<b>Click</b> on the blue circle with the white check inside.	Right side of screen.
20	<b>Select</b> next to objective text then OK, then Save button and return to the Information tab.	We just added the objectives that this test is based upon: Perform Combat Simulation Training and Physical Conditioning Training.
21	<b>Click</b> on the blue <a href="#">Test ISD Considerations</a> link and the Edit button.	Test ISD Considerations are used to enter design information for the assessments that will be given.
22	In the text field for <i>Assessment Strategy</i> , enter: <i>The SPL for this lesson is 3, so the Sailors will be tested in a fast-paced environment to see how well they respond to cues and actions, with little time for thought. The Sailors will be put through an obstacle course for combat simulation training with trained role-playing adversaries. The Sailor will also be told to perform randomly selected physical training drills and will have to demonstrate perfect form and technique for each the first time.</i>	Copy and Paste from the Trainee Guide (TG) is suggested.
23	In the <i>ISD Comments</i> field, <b>enter</b> <i>None</i>	
24	In the <i>Test Items</i> , <b>enter</b> <i>Rubric-based performance tests</i>	Test Items could also contain the number and type of assessment items in a knowledge test, such as 10 multiple choice items.
25	In the <i>Testing Constraints</i> field, <b>enter</b> <i>Gym equipment for drills is limited to four students at a time, and there will be two obstacle courses</i>	
26	Save and close.	
27	<b>Click</b> on blue <a href="#">Test Instructions</a> link and then the Edit button	
28	In Grading Instructions, enter <i>Use the rubric to assign a score for each part of the performance test. Minimum score is 0, maximum is 100</i>	

29	<p>In Proctor Instructions, delete the existing text and enter:</p> <ol style="list-style-type: none"> <li>1. <i>Grading Instructions: The trainee will be performing Combat Simulation and Physical Conditioning The following tools and test equipment are required:</i> <ol style="list-style-type: none"> <li>a. <i>Gym Equipment-four students in rotation at each gym equipment station</i></li> <li>b. <i>Obstacle Course-two students, one per course</i></li> <li>c. <i>Stopwatch</i></li> </ol> </li> <li>2. <i>State the following special procedures to the trainee: Give trainees an overview on how the performance tests will be administered. Advise them of:</i> <ol style="list-style-type: none"> <li>a. <i>Time limits</i></li> <li>b. <i>Safety requirements</i></li> <li>c. <i>Grading criteria (provide them with copy of rubric)</i></li> <li>d. <i>Assistance is not allowed</i></li> </ol> </li> </ol>	<p>The Proctor Instructions field has default information prepopulated. This is generally used for knowledge-based tests, and we do not need it as we are only administering performance-based tests.</p>
30	<p>Under Trainee Instructions, delete the existing information and enter <i>N/A</i>, and save.</p>	<p>The Trainee Instructions field has default information prepopulated. This is generally used for knowledge-based tests, and we do not need it.</p>
31	<p>Return to the Testing Plan under Project Management, and expand the (+) next to it, then <b>highlight</b> 'Matrix'.</p>	<p>Notice that the Matrix field has now been populated with the Performance Test we just created, and the Weight field is editable.</p>
32	<p>Now, print preview your Testing Plan and ToS.</p>	<p>Go to Reports (beneath Project Management and Curriculum Outline on the left side), <b>highlight</b> the report you want to view, and <b>click</b> the Printer icon.</p>