

How do I write a testing plan?

[What is a testing plan?](#)

[How do I develop a testing plan?](#)

[What does a sample testing plan look like?](#)

What is a testing plan?

A testing program is necessary to ensure that students' achievement of the course learning objectives is measured in the most effective manner. It also assists in providing feedback to the students about their achievement of the course objectives. The testing program is outlined in a testing plan. The format and content of testing plans varies between functional commands/schoolhouses, but at minimum, a testing plan includes:

- A plan of how each learning objective will be tested
- Types of tests and methods used to determine the students' grade
- The schedule of tests administered and the learning objective each test measures
- Testing constraints
- The minimum passing grade for a course and rationale
- Grading and weighting criteria for the final course grade
- Method used to assign numerical grades to performance tests
- An explanation if a course uses SAT/UNSAT grading criteria
- Procedures for review, remediation, and retesting

(Source: NAVEDTRA 135B, Chapter 5, C-1 – C-21)

The testing plan developed in "Charting a Course" contains seven sections that can be customized according to the command/schoolhouse. These sections are

- Test Schedule
- Grades
- Purpose
- Progress
- Testing Procedures
- Review, Remediation, and Retesting
- Analysis, Modification, and Compromise

How do I develop a testing plan?

Click on the steps below to guide the development of the testing plan.

1. [Determine the test schedule and the grade weight](#) (completed in Scheduling & Grading Tab)
2. [Write the Purpose section of the testing plan](#)
3. [Write the Progress section of the testing plan](#)
4. [Write the Testing Procedures section of the testing plan](#)
5. [Write the Review, Remediation, and Retesting section of the testing plan](#)
6. [Write the Analysis, Modification, and Compromise section of the testing plan](#)

1. **Determine the test schedule and the grade weight.**

The test schedule and grade weight sections of the testing plan are written in the Scheduling and Grading Tab. When creating or revising a testing plan for a course, the test schedule and the grade weight should be determined first. The information generated in those sections is the foundation of the testing plan.

2. **Write the Purpose section of the testing plan.**

The purpose section of the testing plan is a general statement about the scope and extent of the testing program. This should include a justification for the testing program and how to interpret its results. The following areas may be included in the Purpose section:

- A brief description of the learning objectives that will be tested and how they will be tested
- A description of the intended outcome of the testing program
- An explanation of how the results should and should not be used and interpreted

3. **Write the Progress section of the testing plan.**

The Progress section describes how the student's learning will be measured throughout the course. Student progress is measured through a series of formal and informal assessments. These assessments are determined in the Assessment Analysis Tab and the Scheduling and Grading Tab, and automatically added to the testing plan. Clicking the preview/print button in the testing plan tab will display this report.

The progress section should contain brief statements about the following:

- How the **learning objectives were selected for formal and informal testing**. If criticality was used, explain how the criticality of each learning objective was determined.
- The **types of formal assessments** used in the course. The list of formal tests is generated in the Scheduling and Grading Tab and automatically appears to the right of the text entry box. This list contains all of the formal assessment types selected for the course. Additionally, if comprehensive tests will not be used in the course to test the higher level learning objectives, a justification should be outlined.
- The **minimum passing grade for each type of test**. A panel of SMEs should determine the minimum passing grade, the minimum raw score. The SMEs' decision should occur after the test items have been developed and the test has been designed. The SMEs should determine which test items show minimum acceptable performance. (Source: NAVEDTRA 135B, C-4 to C-6)
- The **types of informal assessments** used in the course. These were selected in the Assessment Analysis Tab. Click on the preview/print button to determine which informal assessments will be grade weighted.
- The **minimum passing grade for the course**. For "A" schools, the minimum passing grade is usually between 63 and 75. If the minimum passing grade is not 63, a justification for the decision is necessary. For example, if a student in a course does not receive any on-the-job training in the fleet, then it may be appropriate to have a higher minimum passing grade because the students must know the material prior to entering the fleet. However, if the students in a course do have access to on-the-job training once they are in the fleet, it may be ideal but not practical or necessary to graduate students above an average level of understanding.
- The **grading scale** for the course and a justification for the selection of the grading scale. Use Satisfactory/Unsatisfactory Grading Systems (SAT/UNSAT), when performance is either accomplished or not. In the SAT/UNSAT system, there is no barely passing or

outstanding performance. For performance testing, analyze the job sheets use to evaluate the student's performance and determine how each step or groups of steps in the process will be graded.

Use a numerical grading scale when there are degrees in performance. Numerical grading scales are used for knowledge and performance tests. The numerical grading system is used to provide everyone with the same interpretation of the grades. The grades do not represent a percentage, but rather a placement on a scale. The following table shows the common Navy numerical scale and interpretation.

Common Navy Numerical Scale	Common Navy Interpretation
90 – 100	Superior understanding: Graduates in this category are able to perform quickly and efficiently with little or no supervision.
80 – 89	Above average understanding: Graduates in this category are able to perform efficiently with little supervision.
70 – 79	Average understanding: Graduates in this category are able to complete assignments with minor errors. Supervision is required.
63 – 69	Minimum understanding: Graduates in this category normally require additional instruction along with increased supervision.
0 – 62	Inferior understanding: Students in this category are unable to meet standards.

(Source: NAVEDTRA 135B, C-3 – C-4)

4. **Write the Testing Procedures section of the testing plan.** The testing procedures describe how the tests will be given to the students (open book, closed books, with a job sheet). This includes the required resources, instructions, and constraints for giving the test. Write testing procedures for each assessment type selected for grade weight in the Scheduling and Grading Tab. In general, the testing procedures should contain:

- The **procedures** (equipment, personnel, checklists, assessment instruments) for giving the assessment and the procedures for all items used to administer the assessment.
- The **precautions** to minimize the possibility of test compromise.
- Explanations of the constraints and the action that should be taken to eliminate the constraint. **Constraints** are any situation that prevents the testing of the objectives as stated. Testing constraints may be limited manpower, limited equipment, limited space, and/or limited time.

The Testing Procedures section is divided into six areas:

- [Knowledge progress and constraints](#)
- [Performance progress and constraints](#)
- [Practical work and constraints](#)

- [Homework and constraints](#)
- [Quizzes and constraints](#)
- [Question and answer and constraints](#)

The **knowledge progress and constraints** area contains information about the following:

- Whether the test will be administered in or out of class
- Whether the test will be open or closed book
- Instruction for administering alternative forms of the test
- Type of questions presented on the test
- Method the test will be administered (paper and pencil, computer based)
- Resources required to administer the test (slides, audio recordings used during test)
- Instructions for setting up equipment (if required)
- Instructions for test administrators or proctors
- Instructions for students
- Time limit to take test
- Grading procedures
- Type and method of feedback provided to students
- Instructions for maintaining test security and preventing test compromise

The **performance progress and constraints** area contains information about the following:

- Whether the on-the-job performance will be as a member of a team.
- Whether the student will be able to use a Job Sheet in the work environment, they should be able to use the Job Sheet on the performance test
- Explanations of situations that would prevent test administration and alternative testing arrangements
- Instructions for safety
- Instructions for setting up the equipment
- Instructions for the providing assistance and what to do when the student does not know what to do
- Instructions for using knowledge test-items during the performance test
- The time limit
- Type and method of feedback provided to students
- Instructions for maintaining test security and preventing test compromise
- Grading procedures for product testing
- Grading procedures for process testing

(Source: NAVEDTRA 130A, 8-4-3, 8-A-6-3 to 8-A-6-4)

The **practical work and constraints** area contains information about:

- Where the practical work take place (in-class, lab)
- Description of the final product
- Is the practical work performed in teams or individually
- Equipment required for the practical work
- Safety instructions
- Instructions for setting up the equipment
- Instructions for the instructor on how to conduct the practical work
- Instructions for the student
- The time limit (if required)
- Resources available to student during the practical work
- How the practical work will be graded
- Type and method of feedback provided to student

- If the practical work is grade weighted

The **homework and constraints** area may contain information about:

- The purpose of the homework
- Instructions for the homework
- Description of the required work and final product
- Is the homework performed in teams or as individuals
- Resources that are available to the student
- The time limit (if required)
- How the homework will be graded
- Type and method of feedback provided to student
- If the homework is grade weighted

The **quizzes and constraints** area may contain information about:

- If it will be performance or knowledge
- If it will be open or closed book
- Type of questions presented in the quiz
- Quiz type to be administered (paper and pencil, computer based)
- Resources required to administer the quiz (slides, audio recordings used during quiz)
- Safety instructions
- Instructions for setting up equipment
- Instructions for administering the quiz
- Instructions to the student
- The time limit
- Type and method of feedback provided to the student
- Instructions for maintaining test security and preventing test compromise
- If the quiz is grade weighted

The **question and answer and constraints** area may contain information about:

- If the questions and answer is grade weighted
- Open or closed book
- Instructions for asking questions and providing feedback
- Instructions if the noise level is too high for asking questions
- Instructions if grade weighted and too many students in the class and/or not enough time to ask all the students.

5. **Write the Review, Remediation, and Retesting section of the testing plan.**

Review, remediation, and retesting occurs when an objective and/or test is failed.

Remediation is not used for disciplinary purposes, but for motivating and assisting the student in the learning process.

The **review** area is for the specific procedures for reviewing the test with the students after the test has been graded. Review allows the student to see and learn from the mistakes they make on a test. Through review, the students are made aware of what items were missed and why they were missed. List general statements as to how each missed item will be reviewed without compromising the test. Depending on the time available and other circumstances, all missed items should be reviewed with the individual student or as a class. In general, if an item is missed by a large amount of students, review the item with the whole class. If only one or two students miss an item, then review the item with the individual student.

The **formal remediation criteria and procedures/informal remediation criteria and procedures** area is for listing all methods used to re-teach failed assessments and/or failed objectives from the assessment. Remediation aids the students in achieving objectives by providing additional instructional study time. It is not a form of punishment. Remediation is necessary because the student cannot learn the material in the normal class time. These remediation methods include instructor tutoring, peer tutoring, seminars, labs, self-study, videotapes, audiotapes, and the Learning Resource Center (LRC). The LRC may contain alternative information. Include a statement detailing if the remediation is being done for all failed objectives or for only critical objectives. Remediation should occur outside of the normal training day. If that is not possible, include a brief statement explaining why.

- **Mandatory remediation** should be assigned when there is a poor performance on a performance test, when the passing grade on a progress test or a within-course comprehensive test is not achieved, when the critical learning objectives are failed although the test has been passed, and/or the student clearly does not understand the objective.
- When a **test is failed**, the remediation should be formal and structured. Formal and structured remediation requires written guidelines for the student. These guidelines should be specific to the student's area of remediation. Also, formal and structured remediation involves direct supervision and an active involvement by the remedial instructors.
- When a **test is passed but a learning objective is failed**, remediation may depend on the criticality and the amount of items missed for the learning objective. For example, if a student performed poorly on a non-critical learning objective by missing one of two items, remediation may only require a brief, unstructured, one-on-one session with the instructor. In another instance, if the student performs poorly on a very critical item, a more formal and structured remediation may be necessary.

The **Retest** area is for the listing of the procedures (formal, informal, oral) used in reassessing the student after remediation. Retesting should occur as soon as possible after the remediation. The retest may be written or oral. Include a justification if a retest will not be given. The following are examples of when students might or might not be retested.

Examples:

- If the student fails to meet the minimum passing grade for a test, a student can be retested on the entire test or the portion of the test that was missed. If the student passes the retested material, the student's new grade will be the minimum passing grade for the test.
- If the student meets the minimum passing grade but fails one or more critical and/or non-critical learning objectives, the student may be retested on those learning objectives. If the student passes the learning objectives, they retain the original test score. For performance tests, it may be impossible to only test the failed learning objectives, so a complete retest may be given.

Refer to NAVEDTRA 135B, C-8 to C-12 and 3-5-1 for more detailed methods of remediation and retesting.

6. **Write the Analysis, Modification, and Compromise section of the testing plan.**
This section deals with the review and revision of the entire course.

- The **test analysis schedule** area is for the plan and the schedule for the periodic review and evaluation of each test used in the course. A test analysis is important to make sure that the tests and the items on the tests have ideally assessed the learning objectives in the course.
- The **test modification schedule and members** area is for writing a plan for assembling a test review board. Additionally, this plan should contain the procedures that the review board will follow to determine the schedule and circumstances for modification of each test.
- The **test compromise procedures** area is for the actions that will be taken when a test is compromised. Test compromise is the unauthorized disclosure of a test and/or answers to a test. It is important that compromised test items are marked in some way, so they are not used on any tests until all the classes onboard at the time have graduated. Note that test compromise is different than cheating, because cheating is a discipline problem and not an academic problem.

What does a sample Testing Plan look like?

The following is an example of a testing plan created in “Charting a Course.”

Charting a Course: Tests Module

TESTING PLAN

COURSE TITLE

A-XXX-XXX

Modified Date: 07/09/2002

Purpose

This testing plan establishes procedures to use when evaluating the students' performance in attaining course objectives. The learning objectives of this course leads to basic level skills in XYZ. The scores in this course are to be used to evaluate student performance within the course and should not be used for assessing student performance outside the course.

Progress

Test Types used in the course:

- Knowledge Progress Test
- Performance Progress Test
- Pretest Test
- Comprehensive Test

Progress and Within-course Comprehensive Tests are both knowledge and performance. Lesson Topics are logically grouped and make up a unit. Instruction is presented at the lesson topic level.

Tests are as follows:

Physical Screening Test – A physical fitness test administered on the second day of the course.

Unit 1 Progress Test – A knowledge test administered at the 3rd period of Unit 1.

Unit 2 Progress Test – A knowledge test administered at the end of the first section of Unit 2.

Physical Fitness Test – A physical fitness test administered in the second week of training.

Unit 2 Progress Test – A knowledge test administered at the end of Unit 2.

Within-course Comprehensive Test 1 – A knowledge test administered at the end of Unit 2.

Within-course Comprehensive Test 2 – A performance test administered at the end of Unit 2.

Unit 3 Progress Test – A two-part knowledge test administered at the end of Unit 3.

Within-course Comprehensive Tests 3 and 4 – Knowledge tests administered at the end of Unit 3.

Within-course Comprehensive Test 5 – A performance test administered at the end of Unit 3.

Unit 8 Progress Test – Performance test for charging SCUBA cylinders.

Performance Test Numerical Grade:

The standard for performance test grades is pass/fail or a minimum of 80 points out of a possible 100. Practical work grades are based on laboratory sessions in which students complete job sheets. The instructor will observe and grade the laboratory sessions. All critical steps must be performed without error.

Minimum Passing Grade:

The minimum passing grade for the U.S. Navy SCUBA Diver Course is 80. Evaluation of the course objectives and the inherent dangers of diving operations require the minimum passing grade be set above the average level of understanding.

Final Grade:

A final course grade reflects the student's scores on progress tests and comprehensive tests. Scores for practical work are not averaged since it is graded on a pass/fail basis and students must pass all such work to graduate. Knowledge progress tests and the knowledge components of comprehensive tests add a maximum of 10 points each to the final grade of 80. Physical fitness testing is not assigned a grade since it is a course prerequisite.

Test Schedule

<u>Test No.</u> xxx-xxx	<u>Test Name</u>	<u>Test Type</u>	<u>Test Given After</u> Unit 0 Lesson x	<u>Learning Objectives</u> X
xxx-xxx	Physical Screening Test	Pretest	Unit 0 Lesson x	X
xxx-xxx	Unit 1 Progress Test	Knowledge Progress	Unit 1 Lesson x	X
xxx-xxx	Unit 2 Progress Test	Knowledge Progress	Unit 2 Lesson x	X
xxx-xxx	Physical Fitness Test	Performance Progress	Unit 0 Lesson x	X
xxx-xxx	Unit 2 Progress Test	Performance Progress	Unit 2 Lesson x	X
xxx-xxx	Within-course Comprehensive Test 1	Comprehensive	Unit 2 Lesson x	X
xxx-xxx	Within-course Comprehensive Test 2	Comprehensive	Unit 2 Lesson x	X

xxx-xxx	Unit 3 Progress Test	Knowledge Progress	Unit 3 Lesson x	X
xxx-xxx	Within-course Comprehensive Tests 3 and 4	Comprehensive	Unit 3 Lesson x	X
xxx-xxx	Within-course Comprehensive Test 5	Comprehensive	Unit 3 Lesson x	X
xxx-xxx	Unit 8 Progress Test	Performance Progress	Unit 8 Lesson x	X
<u>Grade Weight</u>				
<u>Formal Assessments</u>				
<u>Test No.</u> xxx-xxx	<u>Test Name</u> Within-Course Comprehensive Test 1	<u>Test Type</u> Comprehensive	<u>Lessons Covered</u> X	<u>Grade Weight</u> XX
xxx-xxx	Unit 2 Progress Test	Performance Progress	X	XX
xxx-xxx	Within-course Comprehensive Test 2	Comprehensive	X	XX
xxx-xxx	Unit 3 Progress Test	Knowledge Progress	X	XX
xxx-xxx	Physical Fitness Test	Performance Progress	X	XX
xxx-xxx	Physical Screening Test	Unit	X	XX
xxx-xxx	Within-course Comprehensive Tests 3 and 4	Comprehensive	X	XX
xxx-xxx	Unit 1 Progress Test	Knowledge Progress	X	XX

xxx-xxx	Within-course Comprehensive Test 5	Comprehensive	X	XX
xxx-xxx	Unit 8 Progress Test	Performance Progress	X	XX
xxx-xxx	Physical Fitness Test	Performance Progress	X	XX
xxx-xxx	Unit 2 Progress Test	Knowledge Progress	X	XX
			Subtotal =	.70

Informal Assessments

<u>Assessment Type</u>	<u>Grade Weight</u>	
Homework	XX	
Quiz	XX	
Practical Work	XX	
Question and Answer	XX	
Subtotal =		.30
Total Weight =		1.00

Testing Procedures

Knowledge Progress and Constraints

Knowledge tests are administered to the entire class. Normally, this consists of written and/or oral examinations. Results of the tests are used to diagnose problem areas of the class as a whole and specific problems of the individual trainee prior to continuing with the course. (Source: NAVEDTRA 130A, Vol II. Page A-8-6)

Performance Progress and Constraints

Performance tests are administered to the entire class. Normally, this consists of job sheets which require trainees to accurately perform the steps in the process. Instructors evaluate the decisions and behaviors of the trainee. Failure to meet the standard constitutes failure of the test. The instructor will provide specific feedback to the trainee as to his/her performance on the first test to allow the trainee to correct any problems. Additional practice may be required for the trainee prior to retaking the test.

Practical Work and Constraints

Practical work will be performed in the lab during each afternoon session. Lab reports will be completed by the team. Each individual's participation in the lab must be indicated in the report. Lab reports may be completed at the end of the lab session or over night. They must be submitted to the instructor the following morning after the lab.

Homework and Constraints

Written homework assignments will be assigned each Friday and will be submitted to the instructor the following Thursday. All reports must be completed individually and are to be word-processed.

Quizzes and Constraints

Quizzes will be administered closed book during each morning session based on the prior day's assigned reading.

Question and Answer and Constraints

Questions and Answer sessions will be conducted during each lecture.

Review, Remediation, and Retesting

Review

Answers to all progress test items are available to the students during the examination review while the instructor provides explanations for the correct responses. Specific problem areas that the general class experiences will be explained at this time.

Formal Remediation Criteria and Procedures

Remediation for students is initially performed at the class level. Students who score below the minimum passing score on any test will be subject to instructor oral remediation and night study. Night study will be required as well for any failed objective.

Informal Remediation Criteria and Procedures

Outside class study groups are to be encouraged. LRC offers study rooms study groups can reserve either for a single session or regular meetings. Lab is open until 23:30 for team practice. Students must see the lab monitor to check in the lab after class hours.

Retesting

Students subject to formal remediation will be retested the day following the remediation session. Students who fail the retake of both knowledge and performance tests will be recommended for an Academic Review Board (ARB).

Analysis, Modification, and Compromise

Test Analysis Schedule

Tests will be submitted to STASS after each administration. Review and interpretation of test results will occur within one week of the administration of the test.

Test Modification Schedule and Members

Tests review board will meet the week after the end of each administration of the course. The tests will be reviewed based on the item analysis results and feedback from students within the course. New forms of the tests will be created during this time. At least 50% of the new test forms must contain items not on the most recent test. No item flagged as compromised is permitted to be on a new test form.

Test Compromise Procedures

If an item is suspected of compromised it will be flagged in the item bank. This item will not be permitted to be placed on any new forms of the test. An investigation report detailing the suspicion of compromise and results must be completed and filed with the item.

