

CRITICALITY HOW TO

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What is criticality?

Criticality refers to a learning objective's importance as it relates to actual job performance. Criticality is assigned in terms of the following areas: Safety, performance frequency, importance to on-the-job performance, and importance to overall course mission.

The criticality assigned to learning objectives (LOs) plays an important role in the development of instructional strategies and testing strategies. When the test plan is developed for the course (in the Tests section of the "Charting a Course" system), the criticality score will determine whether and to what extent formal testing will be conducted on a given LO.

Criticality ratings are assigned to all LOs (terminal objectives and enabling objectives). LOs are rated as high, medium, or low criticality.

High criticality indicates that the skill or knowledge is critical to safety, frequently applied in a performance setting, of high importance to job performance, or an integral part of the course mission.

Medium criticality indicates that the skill or knowledge is of secondary importance to safety, performed on an occasional basis, influences job performance, or influences ability to reach overall course mission.

Low criticality indicates that the skill or knowledge is only remotely significant in ensuring safety to personnel and equipment, is rarely applied in a performance context, has little influence on job performance, or is of minimal importance to the course mission.

(Source: NAVEDTRA 130A, Volume I, 8-3-4)

What is the criticality scoring system?

The "Charting a Course" system assigns a criticality score on the basis of the criticality ratings you assign to an LO in the areas of safety, performance frequency, importance to on-the-job performance, and importance to overall course mission. These individual ratings are then added together to arrive at an overall criticality score.

There is, however, one exception this rule. Since safety to personnel and equipment is a major consideration, a "high" ranking of an LO on the basis of safety will immediately result in the highest criticality score being assigned to that particular LO. Any LO that contains a "high" safety

ranking, therefore, will be a priority for formal assessment in the Tests Module of the “Charting a Course” system.

When assigning a criticality rating in the four areas of safety, performance frequency, importance to on-the-job-performance, and importance to overall course mission, the individual ratings are:

High = 2 points
Medium = 1 point
Low = 0 points

The “Charting a Course” system will calculate the overall score based on the individual rating in each of the four areas. The maximum overall score is 8. If a “high” ranking for safety is assigned, the overall score will be 8 regardless of the score in other areas.

How do I assign criticality ratings to my learning objectives?

Use the following steps to assign criticality ratings to each of your learning objectives (terminal objectives and enabling objectives):

1. [Rate the learning objective in terms of safety to personnel/equipment.](#)
2. [Rate the learning objective in terms of frequency of performance.](#)
3. [Rate the learning objective in terms of on-the-job performance.](#)
4. [Rate the learning objective's importance to the overall course mission.](#)
5. [Review the criticality score that “Charting a Course” has assigned the LO.](#)

1. Rate the learning objective in terms of safety to personnel/equipment.

Safety refers to possible harm to personnel or equipment. The higher the safety risk associated with the student not being able to perform the behavior specified by the LO, the higher the criticality of the LO.

- If the skill or knowledge specified by the LO is associated with **high risk or danger** to personnel or equipment, rate the LO as “High.”
- If the skill or knowledge specified by the LO is of **secondary importance** to the safety of personnel or equipment, rate the LO as “Medium.”
- If the skill or knowledge specified by the LO is associated with **low safety risk** to personnel and equipment, rate the LO as “Low.”

2. Rate the learning objective in terms of frequency of performance.

Performance frequency refers to the regularity with which the skill or knowledge specified by the LO will be used on the job. The more often the skill or knowledge is used, the higher the criticality of the LO.

- If the skill or knowledge is used **frequently**, rate the LO as “High.”
- If the task is used only **occasionally**, rate the LO as “Medium.”
- If the task is **rarely** used, rate the LO as “Low.”

3. Rate the importance of the learning objective to on-the-job performance.

Importance to on-the-job performance refers to how important the skill or knowledge is in relation to its application to actual job performance.

If the learning objective is to be taught at the Knowledge (K)-level, determine the criticality level by identifying how the knowledge is used in relation to its application to actual job performance.

- If the knowledge is **used** during job performance, rate the LO as “High.”
- If the knowledge **influences** job performance, rate the LO as “Medium.”
- If the knowledge has **little influence** on job performance, rate the LO as “Low.”

If the learning objective is to be taught at the Skill (S)-level, determine the criticality level by identifying how the skill is used in relation to its application to actual job performance.

- If the skill is **used** during job performance, rate the LO as “High.”
- If the skill **influences** job performance, rate the LO as “Medium.”
- If the skill has **little influence** on job performance, rate the LO as “Low.”

4. Rate the learning objective’s importance to the overall course mission.

Importance to overall course mission refers to how important the acquisition of the skill or knowledge is to the student’s ability to adhere to the course mission.

- If the LO is **integral** to the overall course mission, rate it as “High.”
- If the LO is **influences** the student’s ability to achieve the overall mission, rate it as “Medium.”
- If the LO has **little impact** on the overall course mission, rate it as “Low.”

5. Review the criticality score that “Charting a Course” has assigned the LO.

“Charting a Course” calculates a criticality score for each of your LOs from the individual ratings you gave for safety, performance frequency, importance to on-the-job performance, and importance to overall course mission. If you wish, you may change your individual criticality ratings and, as a result, the criticality score for the LO, you may do so.

(Source: NAVEDTRA 130A, Volume I, 8-3-4, 8-3-5)

What does a Criticality report look like?

Following is a sample Criticality report from the “Charting a Course” system. The overall criticality score and individual criticality ratings for two TOs and two EOs are provided below. Note that the criticality ratings are presented for example purposes only.

Charting a Course: Objectives Module					
CRITICALITY					
NAVY SCUBA DIVER					
A-433-0023A					
Date Modified: MM/DD/YYYY					
<u>Purpose</u>					
This report lists all of the learning objectives and their respective skill or K-level for the course. For each learning objective the individual criticality ratings (safety, frequency, on-the-job performance, and course mission) and the overall criticality score are listed. The overall criticality score is calculated from the individual criticality ratings. However, all learning objectives that have been rated as high for safety are automatically given a criticality score of 8, regardless of the other individual ratings.					
<u>No.</u>	<u>TO/EO</u>	<u>Learning Objective</u>	<u>Skill/K-Level</u>	<u>Criticality Ratings</u>	<u>Criticality Score</u>

1.0	TO	Qualify as a SCUBA diver in accordance with Navy Military Personnel Command Manual (BUPERS Manual), Article 1410380, Exhibit 6.	Skill	Safety – High Frequency – Low OJT Performance – High Course Mission – Medium	8
1.1	EO	Perform physical training with the class as a group in accordance with the Course Master Schedule, and successfully maintain diver physical qualification standards throughout the course of training in accordance with BUPERS Manual, Article 1410380, Exhibit 5.	K4: Apply	Safety – Medium Frequency – Medium OJT Performance – High Course Mission – Medium	5
1.2	EO	Identify the minimum equipment which must be worn by a Navy SCUBA diver in accordance with U. S. Navy Diving Manual, Volume 1.	Skill	Safety – High Frequency – Low OJT Performance – High Course Mission – Medium	8
2.0	TO	Plan open circuit SCUBA diving operations in accordance with U.S. Navy Diving Manual, Volume 1, NAVSEA 0994-LP-001-9010, Chapter 4.	Skill	Safety – Medium Frequency – Medium OTJ Performance – High Course Mission – High	6
2.1	EO	Identify considerations that affect dive planning in accordance with U.S. Navy diving Manual, Volume 1, NAVSEA 0994-LP-001-9010, para. 4.2.	K2: Recall	Safety – Medium Frequency – Medium OTJ Performance – Medium Course Mission – Low	3

Examples:

- **TO 1.0:** The criticality score of TO 1.0 is 8. The total score is made up of a high rating for Safety (8 points), a low rating for Frequency (0 points), a high rating for OTJ Performance (2 points), and a medium rating for Course Mission (1 point). Note that because of the high safety rating, the overall criticality score is automatically calculated at 8 (the highest possible score) even though the other ratings are 0, 2, and 1, respectively.
- **EO 1.1:** The criticality score of EO 1.1 is 5. The total score is made up of a medium rating for Safety (1 point), a medium rating for Frequency (1 point), a high rating for OTJ Performance (2 points), and a medium rating for Course Mission (1 point).

- **TO 2.0:** The criticality score of TO 2.0 is 6. The total score is made up of a medium rating for Safety (1 point), a medium rating for Frequency (1 point), a high rating for OTJ Performance (2 points), and a high rating for Course Mission (2 points).
- **EO 2.1:** The criticality score of EO 2.1 is 3. The total score is made up of a medium rating for Safety (1 point), a medium rating for Frequency (1 point), a medium rating for OTJ Performance (1 points), and a low rating for Course Mission (0 points).