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Introduction

The purpose of mapping training courses to the National Preparedness Goal core capabilities is to better integrate training and education within the National Preparedness System. The purpose of this document is to provide the whole community with a standard approach to mapping new courses or those courses due for recertification. By aligning courses to core capabilities, the Federal Emergency Management Agency (FEMA) and its whole community partners can more effectively target their training programming and investments to better meet the capability-specific requirements of the National Preparedness enterprise and ensure that we close capability gaps across all disciplines and workforce proficiency levels.

The Nation’s approach to preparedness is grounded by two key pieces of doctrine: the National Preparedness Goal (the Goal) and the National Preparedness System (NPS). The Goal defines what it means for the whole community to be prepared for all types of disasters and emergencies. The NPS describes how the whole community can achieve the Goal across the five preparedness mission areas—Prevention, Protection, Mitigation, Response, and Recovery—by providing a consistent and reliable approach to decision making, resource allocation, and measuring progress towards a more secure and resilient nation. Components of the NPS include:

- Identifying and assessing risk;
- Estimating the level of capabilities needed to address those risks;
- Building or sustaining the required levels of capability;
- Developing and implementing plans to deliver those capabilities;
- Validating and monitoring progress; and
- Reviewing and updating efforts to promote continuous improvement.

National preparedness, as defined by the Goal, requires a workforce with the requisite knowledge and skills to address a diverse array of threats and hazards. Whether preventing cyber-attacks, protecting critical infrastructure, or responding to disaster survivors, professionals from a variety of disciplines require training and education that enhances their ability to perform critical missions.

The National Training and Education System (NTES) is a combination of programs, tools, and resources required to build and strengthen these knowledge, skills, and abilities across the whole community. By implementing a systematic and coordinated approach consistent with the NPS, the NTES promotes training and education programs that best address priority risks and build needed
capabilities. Through targeted delivery of programming, the NTES maximizes the value of training and education by continuously addressing the evolving competency and capability requirements of communities and organizations.

This document summarizes the core components of the NTES and provides a decision-making framework for the training and education community to better achieve the Goal of a secure and resilient nation.

**NTES Overview**

**Vision**

The NTES fosters an integrated and systematic approach for building training and education capacity across the whole community and all five mission areas. Four guiding principles support the achievement of this vision:

- Collect and analyze data on training and education requirements and use that analysis to inform decisions on funding, programming, and course design and delivery;
- Promote individual competency areas to build workforce capacity and ensure continual development of education programming;
- Use training and education to build and sustain capabilities that address a community or organization’s priority threats and hazards; and
- Coordinate and collaborate across the whole community to build “Communities of Practice” that share information and resources to address training and education requirements.

Through these principles, NTES enables the whole community to translate training and education needs into viable courses of action that produce successful outcomes and strengthen national preparedness.

**Core Capabilities**

The National Preparedness Goal Core Capabilities provide a common framework for describing training and education requirements. Organized by mission area, the 32 Core Capabilities define all capabilities that are necessary to prepare the Nation for incidents that pose the greatest risks. The Core Capabilities help organize national preparedness activities and greatly enhance the ability to integrate and coordinate training and education across the preparedness enterprise. Because the Core Capabilities convey a common understanding that is not exclusive to any single government or organization, they can be used by any member of the whole community.
## Core Capabilities by Mission Area

<table>
<thead>
<tr>
<th>Prevention</th>
<th>Protection</th>
<th>Mitigation</th>
<th>Response</th>
<th>Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>Planning</td>
<td>Planning</td>
<td>Planning</td>
<td>Planning</td>
</tr>
<tr>
<td>Public Information and Warning</td>
<td>Public Information and Warning</td>
<td>Public Information and Warning</td>
<td>Public Information and Warning</td>
<td>Public Information and Warning</td>
</tr>
<tr>
<td>Operational Coordination</td>
<td>Operational Coordination</td>
<td>Operational Coordination</td>
<td>Operational Coordination</td>
<td>Operational Coordination</td>
</tr>
<tr>
<td>Forensics and Attribution</td>
<td>Access Control and Identity Verification</td>
<td>Community Resilience</td>
<td>Critical Transportation</td>
<td>Economic Recovery</td>
</tr>
<tr>
<td>Intelligence and Information Sharing</td>
<td>Cybersecurity Intelligence and Information Sharing</td>
<td>Long-Term Vulnerability Reduction</td>
<td>Environmental Response/Health and Safety</td>
<td>Health and Social Services</td>
</tr>
<tr>
<td>Interdiction and Disruption</td>
<td>Risk and Disaster Resilience Assessment</td>
<td>Fatality Management Services</td>
<td>Housing</td>
<td></td>
</tr>
<tr>
<td>Screening, Search, and Detection</td>
<td>Threats and Hazard Identification</td>
<td>Fire Management and Suppression</td>
<td>Infrastructure Systems</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Infrastructure Systems</td>
<td>Natural and Cultural Resources</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mass Care Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mass Search and Rescue Operations</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>On-Scene Security and Protection</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Operational Communications</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public and Private Services and Resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public Health and Medical Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Situational Assessment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Planning, Public Information and Warning, and Operational Coordination are core capabilities common to all mission areas.
Basic Mapping Protocol Steps

1. Select the new course or existing course due for recertification course to be mapped to the National Preparedness Goal.
2. Compile the course’s Plan of Instruction / Syllabus which must consist of, at a minimum, basic course information such as Course Title, Course Number, Enabling Learning Objectives (ELO), etc. Refer to the Data Input section, Steps 1–11, for the specific requirements.
3. Select and assign specific personnel to form the mapping team, see Mapping Team Composition recommendations below.
4. Appoint a member of the mapping team as the Team Lead, who shall:
   a. Create a new mapping file for the selected course;
   b. Populate all the required fields of the mapping file with basic course information, such as Course Title, Course Description, etc. Refer to the Data Input section, Steps 1–11, for more information;
   c. Distribute the populated mapping file to other team members for data input.
5. Each team member shall then score each ELO based on Bloom’s New Taxonomy (included in the mapping tool), select a Core Capability for each ELO, and select a Mission Area for the chosen Core Capability. Refer to the Data Input Section, Steps 12–16, for more detail.
6. After each team member has completed the entire mapping process detailed in the Data Input Section Steps 12–16, the Team Lead shall gather the completed mapping files from all team members and compare responses on:
   a. Bloom’s New Taxonomy scoring on knowledge, skill, and attitude;
   b. Selected Core Capabilities; and
   c. Selected Mission Areas.
7. If or when there is disagreement in one or more of the compared fields (Bloom’s New Taxonomy scoring, section of Core Capability, and/or selection of Mission Area), the entire mapping team shall discuss their reasoning for their specific selection. The entire team shall take a vote on the proper disposition of the selected data point and a majority rule of the entire team will decide the selected new value to be used.
8. The Team Lead shall then create a master mapping file for the course and ensure the data fields properly reflect the agreed upon values for each of the compared fields.
9. The completed course mapping file shall then be routed through the proper local administrative channels for submission to FEMA for review and comment.
10. If at any time there are technical questions on the mapping tool or mapping process, email FEMA at FEMA-NTES@FEMA.DHS.GOV.
Mapping Administrative Process

**Mapping Team Composition**
To ensure the highest level of quality in the mapping process, it is recommended that each mapping team consist of at least three people, composed of one instructional system designer (ISD), one course-content subject matter expert, and one project manager. The project manager should be an individual having *intermediate* or *advanced* credentials or formal education in the discipline or broad range of subject-area knowledge pertaining to the courses being evaluated. As an alternative, the project manager can be replaced with an *intermediate* or *advanced* ISD professional.

**Excel Calculations**
In MS Excel Options - Formulas submenu, if “Workbook Calculation” is not set to Automatic – it causes cells to not automatically calculate when data is entered. Either change the setting to Automatic or press F9 to manually update all fields requiring calculations.
Data Input

Course Descriptive Information
When creating a new mapping file for a new course or existing course to be submitted for re-certification, the following information must be initially entered before distributing to other mapping team members (all fields in blue on the top left corner of the “Input” tab):

**Step 1: Course Title**
Enter the current or proposed course title.

**Step 2: Course Description**
Enter the detailed course description. The box will expand to an area larger than what is seen on the screen. This information is vital to determine much of the subsequent information, so be sure to have as much information as possible to allow for proper course assessment.

**Step 3: Primary Threat Addressed in Course**
This is a drop-down combination box with a baseline set of threats and hazards listed in the Threat and Hazards Identification and Risk Assessment (THIRA) and/or the 2011 Strategic National Risk Assessment (SNRA). If your desired threat or risk is not in the current list, you will need to add to the list of threats found on the hidden “Threats” tab. Refer to Appendix C to learn how to unhide tabs.

**Step 4: Target Audience**
This heading is a drop-down combination box with 23 static target audience selections. Select the primary target audience for this course. If your desired audience is unlisted, email FEMA-NTES@FEMA.DHS.GOV for technical assistance.
**Step 5: Training Partner**
This is heading is a drop-down combination box with a baseline set of training partners. If your training partner name is not in the current list, you will need to add the name to the list of training partners found on the hidden “Training Partners” tab. See Appendix C to learn how to unhide tabs.

**Step 6: Course Number**
Enter the current number for re-certified courses or proposed course number for new course numbers.

**Step 7: Delivery Mode**
This heading is a drop-down combination box with a baseline set of delivery modes. Select the delivery mode to be used for this course.

**Step 8: Contact Hours**
Enter the number of direct instructional contact with students in hours. This will be compared to the amount of time calculated for each ELO.
**Step 9: Module Number**
Enter the value for the Module of Instruction for this ELO.

**Module Enabling Learning Objective Number**
This value will automatically update and requires no input.

**Step 10: Enabling Learning Objective**
Enter the specific ELO for the Module Number and Module ELO Number listed to the left on the same line, so the first word is the “action verb” to be assessed via Bloom’s New Taxonomy rubrics for knowledge, skill, and attitude. Refer to Steps 12-14 for more detail. If the entire line for the ELO appears red, refer to Appendix D for instructions on how to fix the issue.

**Step 11: Time**
For each Module of Instruction, using the Time Calculator (see image to the right) input the number of hours, minutes, and number of ELO in the specific Module of Instruction. The Time Calculator will calculate the average amount of time per ELO to be used in the Time field for that Module of Instruction. Re-do this calculation for each Module of Instruction.
Step 12: Knowledge – Bloom’s New Taxonomy

Once an ELO has been entered into the ELO field (Step 10), the first word will considered the “action verb” and is automatically scored using the Knowledge rubric from Bloom’s New Taxonomy. The specific action verb score is assigned via the library of action verbs found on the “Knowledge Verbs” tab. To select the calculated score, click on the Knowledge cell for the specific ELO. A drop-down list of possible scores is given, if only one score is listed, then select the assigned score. However, if there is more than one possible score, the following protocol must be used to choose the correct score:

- Review the entire ELO, Course Description, and Target Audience. The Course Description and Target Audience will provide context to the ELO and based upon this context,
- Select the best score based on the score definitions found in the Knowledge rubric on the “Knowledge” tab.

Step 13: Skill – Bloom’s New Taxonomy

Once an ELO has been entered into the ELO field (Step 10), the first word is considered the “action verb” and is automatically scored using the Skill rubric from Bloom’s New Taxonomy. The specific action verb score is assigned via library of action verbs found on the “Skill Verbs” tab. To select the calculated score, click on the Skill cell for the specific ELO. A drop-down list of possible scores is given. If only one score is listed, then select the assigned score. However, if there is more than one possible score, the following protocol must be used to choose the correct score:

- Review the entire ELO, Course Description, and Target Audience. The Course Description and Target Audience provide context to the ELO; considering this context
- Select the best score based on the score definitions found in the Skill rubric on the “Skill” tab.
Step 14: Attitudes – Bloom’s New Taxonomy

Once an ELO has been entered into the ELO field (Step 10), the first word is considered the “action verb” and is automatically scored using the Attitude and Ability rubric from Bloom’s New Taxonomy. The specific action verb score is assigned via library of action verbs found on the “AA Verbs” tab. To select the calculated score, click on the Attitude cell for the specific ELO. A drop-down list of possible scores is given. If only one score is listed, select the assigned score. However, if there is more than one possible score, the following protocol must be used to choose the correct score:

- Review the entire ELO, Course Description, and Target Audience. The Course Description and Target Audience will provide context to the ELO and based upon this context,
- Select the best score based on the score definitions found in the Attitude rubric on the “Attitudes and Ability” tab.

KSA Total & ELO Complexity

These values will automatically calculate and require no input.

Step 15: Core Capability

This heading is a drop-down combination box with a list of the 32 Core Capabilities listed in the National Preparedness Goal, 2nd Edition. To select the proper Core Capability for the specific ELO, the following protocol must be used:

- Review the entire ELO, Course Description, and Target Audience. The Course Description and Target Audience provide context to the ELO; considering this context
- Use the definitions of each Core Capability from the “Core Capabilities Definitions” tab and select the best possible match from the list of Core Capabilities based upon the context given by the Course Description and Target Audience.
- If none of the Core Capabilities are a match, then select the “None” option from the drop-down list of the 32 Core Capabilities.
**Step 16: Mission Area**

This is a drop-down combination box with a list of the Mission Areas that align to the selected Core Capability from Step 15. If more than one Mission Area selection is possible, the following protocol must be used:

- Review the entire ELO, Course Description, and Target Audience. The Course Description and Target Audience provide context to the ELO; considering this context.
- Use the definitions of each Core Capability, Mission Area, and their associated Preliminary Targets listed in the “Core Capabilities Definitions” tab and determine which Preliminary Target *best* matches the intent of the ELO and select the associated Mission Area.

**Data Output**

A *Course Output Information* summary box is located on the “Input” tab and just above the data input for the ELOs. The summary box provides information about the course’s designated Course Level, Primary DHS Mission Area, and Primary and Secondary Core Capabilities. A more detailed data output on the course is found on the “Output” tab.

![Course Output Information](image)

- **Course Output Information**
  - **Course Level:** Basic
  - **Primary DHS Mission Area for this Course:** Response
  - **Primary Core Capability for this Course:** Mass Search and Rescue Operations
  - **Operational Coordination**
    - Planning
  - **Secondary Core Capabilities for this Course:**
The “Output” tab gives the Course Description Information, Course Output Information, a chart of percentage of ELOs by DHS Mission Area, and a chart showing Percentage of ELOs by Core Capability. This is to be used so that course developers can determine how the course is populated across the 32 Core Capabilities.

<table>
<thead>
<tr>
<th>Course Title:</th>
<th>Write Area Search</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Description:</td>
<td>This course is designed to provide training for search responders to effectively conduct wide area searches due to natural disasters or human-made incidents.</td>
</tr>
<tr>
<td>Primary Threat Addressed in Course:</td>
<td>All Hazards</td>
</tr>
<tr>
<td>Target Audience:</td>
<td>Emergency Medical Services</td>
</tr>
<tr>
<td>Training Partner:</td>
<td>Texas A&amp;M Engineering Extension Service (TEEX)</td>
</tr>
<tr>
<td>Course Number:</td>
<td>123.123</td>
</tr>
<tr>
<td>Delivery Mode:</td>
<td>R- Resident</td>
</tr>
<tr>
<td>Contact Hours:</td>
<td>22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Output Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Level:</td>
</tr>
<tr>
<td>Primary DHS Mission Area for this Course:</td>
</tr>
<tr>
<td>Primary Core Capability for this Course:</td>
</tr>
<tr>
<td>Operational Coordination Planning</td>
</tr>
<tr>
<td>Secondary Core Capabilities for this Course:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mission Area Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention</td>
</tr>
<tr>
<td>0%</td>
</tr>
</tbody>
</table>

Mission Area Graph Colors:
Green areas represent enabling objectives from the Primary Core Capability
Blue areas represent enabling objectives from all of the Secondary Core Capabilities (if any or made from this course)
Black areas represent enabling objectives that insufficiently address time, depth, or breadth in one or more of the three domains of learning (KSAs).

Figure 1: Output Tab – Upper Half
### Figure 3: Input Tab

<table>
<thead>
<tr>
<th>ELO #</th>
<th>Module</th>
<th>Module ELO</th>
<th>Enabling Learning Objectives (ELO)</th>
<th>Time (Hours)</th>
<th>Knowledge (0-5)</th>
<th>Skill (0-7)</th>
<th>Attitude and Ability (0-5)</th>
<th>NTA Total (0-19)</th>
<th>ELO Complexity</th>
<th>Core Capability</th>
<th>Mission Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Define wide area search.</td>
<td>0.60</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0.60</td>
<td>Mass Search and Rescue Operations</td>
<td>Response</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2</td>
<td>Describe the events that necessitate a wide area search.</td>
<td>0.60</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1.60</td>
<td>Mass Search and Rescue Operations</td>
<td>Response</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>3</td>
<td>Assess safety factors of a wide area search.</td>
<td>0.60</td>
<td>5</td>
<td>8</td>
<td>3</td>
<td>0</td>
<td>4.00</td>
<td>Mass Search and Rescue Operations</td>
<td>Response</td>
</tr>
</tbody>
</table>

For inquiries about this product, write to FEMA-NET@FEMA.DHS.GOV

MapGo Tool Version Date: November 29, 2016

Date of Course Creation / Revision: November 29, 2016

Contact Hours Calculation:

<table>
<thead>
<tr>
<th>Hours</th>
<th>Minutes</th>
<th>ELOs</th>
<th>Time / ELO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>22</td>
<td>2.00</td>
</tr>
</tbody>
</table>
Appendix A: Action Verb List

The following pages list the current performance / action verbs aligned to Bloom’s New Taxonomy and score for each level of Bloom’s New Taxonomy. The scores are listed for the Knowledge, Skill, and Attitude domains of learning that are accounted for in the mapping tool. If a new action verb needs to be added to the list, see Appendix D on how to do this.

Sources of Action Verbs


Bloom’s Taxonomy of Learning Domains (http://www.nwlink.com/~donclark/hrd/bloom.html)
<table>
<thead>
<tr>
<th>Score</th>
<th>Level</th>
<th>Definition and Example(s)</th>
<th>Verbs</th>
<th>Instruction</th>
<th>Level</th>
<th>Definition and Example(s)</th>
<th>Verbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Remembering (Fact Learning)</td>
<td><strong>Definitions:</strong> 1. Recall data or information. 2. The learning of verbal or symbolic information. (e.g., names, formulas, facts). 3. Recall or remember previously learned information without necessarily understanding, using, or changing it.</td>
<td>Advise</td>
<td>Instruct</td>
<td>Know</td>
<td><strong>Level</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Examples:</strong> Recite a policy. Quote prices from memory to a customer. Knows the safety rules.</td>
<td>Answer</td>
<td>Know</td>
<td>Label</td>
<td><strong>Definition and Example(s)</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Brief</td>
<td>Label</td>
<td>List</td>
<td><strong>Verbs</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Calculate</td>
<td>Mark</td>
<td>Mark</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Count</td>
<td>Match</td>
<td>Match</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Define</td>
<td>Name</td>
<td>Name</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Describe</td>
<td>Outline</td>
<td>Outline</td>
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<td></td>
<td></td>
<td></td>
<td>Draw</td>
<td>Point</td>
<td>Point</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elaborate</td>
<td>Quote</td>
<td>Quote</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Enumerate</td>
<td>Read</td>
<td>Read</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Express</td>
<td>Recall</td>
<td>Recall</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Identify</td>
<td>Recite</td>
<td>Recite</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Inform</td>
<td>Recognize</td>
<td>Recognize</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Comprehending (Rule Learning)</td>
<td><strong>Definitions:</strong> 1. Understand the meaning, translation, interpolation, and interpretation of instructions and problems. State a problem in one's own words. 2. Learn to use two or more facts in a manner that will provide regularity of behavior in an infinite variation of situations.</td>
<td></td>
<td></td>
<td></td>
<td><strong>Instruction</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Examples:</strong> Rewrites the principles of test writing. Explain in one's own words the steps for performing a complex task. Translates an equation into a computer spreadsheet.</td>
<td>Distinguish</td>
<td>Interpolate</td>
<td>Interpolate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Encrypt</td>
<td>Interpret</td>
<td>Interpret</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Estimate</td>
<td>Measure</td>
<td>Measure</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Evaluate</td>
<td>Outline</td>
<td>Outline</td>
<td></td>
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<td>Applying (Procedure Learning)</td>
<td><strong>Definitions:</strong>&lt;br&gt;1. Use a concept in a new situation or unprompted use of an abstraction. Applies what was learned in the classroom to novel situations in the work place.&lt;br&gt;2. Learn to perform step-by-step actions in the proper sequence.&lt;br&gt;3. Apply knowledge and concepts learned to solve new, concrete, or abstract problems in the work place.&lt;br&gt;&lt;br&gt;<strong>Examples:</strong> Use a manual to calculate an employee’s vacation time. Apply laws of statistics to evaluate the reliability of a written test.</td>
<td>Administer&lt;br&gt;Apply&lt;br&gt;Calculate&lt;br&gt;Change&lt;br&gt;Chart&lt;br&gt;Check&lt;br&gt;Collect&lt;br&gt;Complete&lt;br&gt;Compute&lt;br&gt;Condense&lt;br&gt;Construct&lt;br&gt;Control&lt;br&gt;Delete&lt;br&gt;Demonstrate&lt;br&gt;Deploy&lt;br&gt;Determine</td>
<td>Discover&lt;br&gt;Edit&lt;br&gt;Examine&lt;br&gt;Execute&lt;br&gt;Find&lt;br&gt;Inform&lt;br&gt;Initiate&lt;br&gt;Instruct&lt;br&gt;Implement&lt;br&gt;Manipulate&lt;br&gt;Modify&lt;br&gt;Navigate&lt;br&gt;Operate&lt;br&gt;Pause&lt;br&gt;Predict</td>
<td>Prepare&lt;br&gt;Present&lt;br&gt;Produce&lt;br&gt;Relate&lt;br&gt;Report&lt;br&gt;Resume&lt;br&gt;Set up&lt;br&gt;Show&lt;br&gt;Solve&lt;br&gt;Start&lt;br&gt;Stop&lt;br&gt;Teach&lt;br&gt;Transfer&lt;br&gt;Use&lt;br&gt;Utilize</td>
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<td>Analyzing (Discrimination Learning)</td>
<td><strong>Definitions:</strong>&lt;br&gt;1. Separate material or concepts into component parts so that its organizational structure may be understood. Distinguishes between facts and inferences.&lt;br&gt;2. Learn to group similar and dissimilar items according to their distinct characteristics.&lt;br&gt;3. Break problems, materials, or concepts into component parts to understand structural relationships and abstract organizational principles.&lt;br&gt;&lt;br&gt;<strong>Examples:</strong> Troubleshoot a piece of equipment by using logical deduction. Recognize logical fallacies in reasoning. Gathers information from a department and selects the required tasks for training.</td>
<td>Allocate&lt;br&gt;Analyze&lt;br&gt;Arrange&lt;br&gt;Assign&lt;br&gt;Break down&lt;br&gt;Categorize&lt;br&gt;Classify&lt;br&gt;Collate&lt;br&gt;Compare&lt;br&gt;Confirm&lt;br&gt;Consolidate&lt;br&gt;Contrast&lt;br&gt;Correlate&lt;br&gt;Cross-check&lt;br&gt;Deconstruct&lt;br&gt;Designate&lt;br&gt;Diagram&lt;br&gt;Differentiate&lt;br&gt;Distinguish&lt;br&gt;Discriminate</td>
<td>Distribute&lt;br&gt;Distinguish&lt;br&gt;Divide&lt;br&gt;Eliminate&lt;br&gt;Examine&lt;br&gt;Extract&lt;br&gt;Finalize&lt;br&gt;Focus&lt;br&gt;Group&lt;br&gt;Identify&lt;br&gt;Illustrate&lt;br&gt;Infer&lt;br&gt;Isolate&lt;br&gt;Label&lt;br&gt;Level&lt;br&gt;Match&lt;br&gt;Order&lt;br&gt;Organize&lt;br&gt;Outline</td>
<td>Prioritize&lt;br&gt;Rank&lt;br&gt;Realign&lt;br&gt;Redistribute&lt;br&gt;Reexamine&lt;br&gt;Relate&lt;br&gt;Reorganize&lt;br&gt;Resolve&lt;br&gt;Restate&lt;br&gt;Schedule&lt;br&gt;Select&lt;br&gt;Separate&lt;br&gt;Sort&lt;br&gt;Subdivide&lt;br&gt;Task&lt;br&gt;Template&lt;br&gt;Transform&lt;br&gt;Translate&lt;br&gt;Tune</td>
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<td>Evaluating</td>
<td><strong>Definitions:</strong> 1. Make judgments about the value of ideas or materials. 2. Use definite criteria to make assessments and/or value judgements to choose between different applications of concepts, ideas, methods, or materials to achieve a given purpose. <strong>Examples:</strong> Select the most effective solution. Hire the most qualified candidate. Explain and justify a new budget.</td>
<td>Appraise Approve Assess Compare Conclude Contrast Criticize Critique Decide</td>
<td>Determine Defend Describe Discriminate Evaluate Explain Grade Interpret Judge</td>
<td>Justify Measure Rank Rate Recommend Relate Select Support Test</td>
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<td>6</td>
<td>Creating (Problem Solving)</td>
<td><strong>Definitions:</strong> 1. Build a structure or pattern from diverse elements. Put parts together to form a whole, with emphasis on creating a new meaning or structure. 2. Learn to synthesize lower knowledge for the resolution problems. 3. Combine components or elements together in structures or patterns to create new concepts, meanings, objects, or wholes. <strong>Examples:</strong> Write a company operations or process manual. Design a machine to perform a specific task. Integrates training from several sources to solve a problem. Revises and process to improve the outcome.</td>
<td>Adapt Analyze Annotate Apply Arrange Assemble Build Categorize Change Combine Compile Compose Conclude Construct Conclu</td>
<td>Diagram Discover Draft Effect Explain Extend Facilitate Find Formulate Generalize Generate Hypothesize Illustrate Incorporate Infer Integrate Investigate Locate Manipulate \</td>
<td>Predict Prepare Produce Project Propose Rearrange Reconstruct Relate Reorganize Resolve Restructure Revise Rewrite Search Solve Structure Substitute Summarize Synthesize Synthesize Tell Triage Use War game Write</td>
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<td>Perception (Encoding)</td>
<td>1. The ability to use sensory cues to guide motor activity. This ranges from sensory stimulation, through cue selection, to translation. 2. The perception of sensory stimuli that translate into physical performance. <strong>Examples:</strong> Detect non-verbal communication cues. Estimate where a ball will land after it is thrown and then moving to the correct location to catch the ball. Adjust heat of stove to correct temperature by smell and taste of food. Adjust the height of the forks on a forklift by comparing where the forks are in relation to the pallet.</td>
<td>Choose</td>
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<td>Differentiate</td>
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<td>Distinguish</td>
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<td>Set (Gross Motor Skills)</td>
<td>1. Readiness to act. It includes mental, physical, and emotional sets. These three sets are dispositions that predetermine a person's response to different situations (sometimes called mindsets). 2. Learns manual dexterity in the performance of physical skills. <strong>Examples:</strong> Knows and acts upon a sequence of steps in a manufacturing process. Recognize one's abilities and limitations. Shows desire to learn a new process (motivation). NOTE: This subdivision of Psychomotor is closely related with the “Responding to phenomena” subdivision of the Affective domain.</td>
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<td>Guided Response (Readiness)</td>
<td>1. The early stages in learning a complex skill that includes imitation and trial and error. Adequacy of performance is achieved by practicing. 2. Learning to have readiness to take a particular action. <strong>Examples:</strong> Performs a mathematical equation as demonstrated. Follows instructions to build a model. Responds hand-signals of instructor while learning to operate a forklift.</td>
<td>Able</td>
<td>Follow</td>
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<td>Assist</td>
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<td>Challenge</td>
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<td>Mechanism (Basic proficiency)</td>
<td>1. This is the intermediate stage in learning a complex skill. Learned responses have become habitual and the movements can be performed with some confidence and proficiency.</td>
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<td>Fit</td>
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<td>Activate</td>
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<td>Actuate</td>
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<td>Grind</td>
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<td>2. Learning to perform a complex physical skill with confidence and proficiency.</td>
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<td>Examples: Use a personal computer. Repair a leaking faucet. Drive a car.</td>
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<td>Align</td>
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| 5     | Complex Overt Response (Expert; Continuous Movement) | **Definitions:** 1. The skillful performance of motor acts that involve complex movement patterns. Proficiency is indicated by a quick, accurate, and highly coordinated performance, requiring a minimum of energy. This category includes performing without hesitation, and automatic performance. For example, players are often utter sounds of satisfaction or expletives as soon as they hit a tennis ball or throw a football, because they can tell by the feel of the act what the result will produce. 2. Learning to track, make compensatory movements based on feedback. | Exchange  
Establish  
Evacuate  
Fasten  
Fill out  
Fire  
Publish  
Raise  
Range  
Reach  
Unload  
Utilize  
Write  
Zero  
Advance  
Assemble  
Build  
Calibrate  
Construct  
Control  
Dismantle  
Display  
Fasten  
Fix  |

**Examples:** Maneuvers a car into a tight parallel parking spot. Operates a computer quickly and accurately. Displays competence while playing the piano.  
**NOTE:** The Key Words are largely the same as Mechanism (4) but will have adverbs or adjectives that indicate that the performance is quicker, better, more accurate, etc. |

| 6     | Adaptation | **Definitions:** 1. Skills are well developed and the individual can modify movement patterns to fit special requirements. 2. Learning to modify a complex physical skill to accommodate a new situation.  
Examples: Responds effectively to unexpected experiences. Modifies instruction to meet the needs of the learners. Perform a task with a machine that it was not originally intended to do (machine is not damaged and there is no danger in performing the new task). | Acclimatize  
Accommodate  
Adapt  
Alter  
Ambush  
Attack  
Bypass  
Change  
Conduct  
Deploy  
Direct  
Draw  
Evade  
Infiltrate  
Lay  
Lead  
Load  
Map  
Neutralize  
Occupy  
Orient  
Pack  
Patrol  
Prevent  
Program  
Protect  |

Queue  
Rearrange  
Reconcile  
Recover  
Reduce  
Relieve  
Reorganize  
Revise  
Suppress  
Tailor  
Temper  
Train  
Vary |
<table>
<thead>
<tr>
<th>Score</th>
<th>Level</th>
<th>Definition and Example(s)</th>
<th>Verbs</th>
<th>Verbs</th>
<th>Verbs</th>
<th>Verbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Origination</td>
<td><strong>Definitions:</strong> 1. Creating new movement patterns to fit a particular situation or specific problem. Learning outcomes emphasize creativity based upon highly developed skills. 2. Learning to create a new complex physical skill to accommodate a new situation. <strong>Examples:</strong> Constructs a new theory. Develops a new and comprehensive training programming. Creates a new gymnastic routine.</td>
<td>Arrange</td>
<td>Construct</td>
<td>Initiate</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Build</td>
<td>Contrive</td>
<td>Invent</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cause</td>
<td>Correct</td>
<td>Make</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Combine</td>
<td>Create</td>
<td>Originate</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Compose</td>
<td>Design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Score</td>
<td>Level</td>
<td>Definition and Example(s)</td>
<td>Verbs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>-------</td>
<td>--------------------------</td>
<td>-------</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **1** | Receiving (Perception; Situation Awareness) | **Definitions:** 1. Awareness, willingness to hear, selected attention. 2. Learning and demonstrating the ability to perceive the normal, abnormal, and emergency condition cues associated with the performance of an operational procedure. Situational Awareness of operational condition cues. **Examples:** Listen to others with respect. Listen for and remember the name of newly introduced people. | Ask  
Attend closely  
Choose  
Describe  
Erect  
Follow  
Give  
Hold  
Identify |
|       |       |                          | Listen  
Listen attentively  
Locate  
Monitor  
Name  
Observe  
Perceive  
Point to  
Recognize |
|       |       |                          | Reconnoiter  
Reply  
Select  
Show awareness  
Show sensitivity  
Sit  
Use  
Wait |
| **2** | Responding (Interpreting) | **Definitions:** 1. Active participation on the part of the learners. Attends and reacts to a particular phenomenon. Learning outcomes may emphasize compliance in responding, willingness to respond, or satisfaction in responding (motivation). 2. Learning and demonstrating mental preparedness to encode operational cues as indicators of normal, abnormal and emergency conditions associated with the performance of an operational procedure. **Examples:** Participates in class discussions. Gives a presentation. Questions new ideals, concepts, models, etc. in order to fully understand them. Know the safety rules and practices them. | Accomplish  
Achieve  
Acknowledge  
Aid  
Announce  
Answer  
Ask  
Assist  
Communicate  
Complete  
Comply  
Conform  
Demonstrate |
|       |       |                          | Describe  
Discuss  
Encode  
Execute  
Give  
Greet  
Help  
Indicate  
Interpret  
Label  
Notify  
Obey rules  
Perform |
|       |       |                          | Practice  
Present  
React  
Read  
Recite  
Report  
Request  
Respond  
Resume  
Select  
Show  
Tell  
Write |
<table>
<thead>
<tr>
<th>Score</th>
<th>Level</th>
<th>Definition and Example(s)</th>
<th>Verbs</th>
</tr>
</thead>
</table>
| 3     | Valuing (Judgement) | **Definitions:** 1. The worth or value a person attaches to a particular object, phenomenon, or behavior. This ranges from simple acceptance to the more complex state of commitment. Valuing is based on the internalization of a set of specified values, while clues to these values are expressed in the learner's overt behavior and are often identifiable. 2. Learning and demonstrating the ability to judge the worth or quality of normal, abnormal, and emergency cues associated with the performance of an operational procedure. **Examples:** Demonstrates belief in the democratic process. Is sensitive towards individual and cultural differences (value diversity). Shows the ability to solve problems. Proposes a plan to social improvement and follows through with commitment. Informs management on matters that one feels strongly about. | Alert  
Appreciate  
Approve  
Assess  
Authenticate  
Believe  
Cancel  
Choose  
Complete  
Demonstrate  
Differentiate |
| 4     | Organization (Competence; application of resource management strategies and tactics) | **Definitions:** 1. Organizes values into priorities by contrasting different values, resolving conflicts between them, and creating a unique value system. The emphasis is on comparing, relating, and synthesizing values. 2. Learning and demonstrating the mental preparedness to make decisions by using prioritized strategies and tactics in response to normal, abnormal, and emergency condition cues associated with the performance of an operational procedure. **Examples:** Recognizes the need for balance between freedom and responsible behavior. Accepts responsibility for one's behavior. Explains the role of systematic planning in solving problems. Accepts professional ethical standards. Creates a life plan in harmony with abilities, interests, and beliefs. Prioritizes time effectively to meet the needs of the organization, family, and self. | Adhere  
Allow  
Alter  
Arrange  
Assume  
Combine  
Command  
Compare  
Complete  | Coordinate  
Defend  
Enforce  
Ensure  
Explain  
Formulate  
Generalize  
Identify  
Influence |
|       |       |                           | Explain  
Follow  
Form  
Initiate  
Invite  
Join  
Judge  
Justify  
Prioritize  
Propose  
Qualify  | Read  
Reassess  
Report  
Review  
Select  
Share  
Study  
Validate  
Verify  
Work  |
<table>
<thead>
<tr>
<th>Score</th>
<th>Level</th>
<th>Definition and Example(s)</th>
<th>Verbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Internalizing Values/Characterization (Innovation; Generation of new resource management strategies and tactics)</td>
<td><strong>Definitions:</strong>&lt;br&gt;1. Has a value system that controls their behavior. The behavior is pervasive, consistent, predictable, and most importantly, characteristic of the learner. Instructional objectives are concerned with the student's general patterns of adjustment (personal, social, emotional).&lt;br&gt;2. Learning and demonstrating the mental preparedness to make decisions by generating the results expected upon completion of a prioritized strategies or tactics in response to normal, abnormal, and emergency cues associated with the performance of an operational procedure, and the ability to generate new prioritized strategies and tactics in response to abnormal or emergency cues.&lt;br&gt;&lt;br&gt;<strong>Examples:</strong> Shows self-reliance when working independently. Cooperates in group activities (displays teamwork). Uses an objective approach in problem solving. Displays a professional commitment to ethical practice on a daily basis. Revises judgments and changes behavior in light of new evidence. Values people for what they are, not how they look.</td>
<td>Act  &lt;br&gt;Conceive  &lt;br&gt;Conjecture  &lt;br&gt;Develop  &lt;br&gt;Devise  &lt;br&gt;Discriminate  &lt;br&gt;Display  &lt;br&gt;Formulate</td>
</tr>
</tbody>
</table>
Appendix B: Tool Development Information

Intended Audience for Appendix B

This appendix is meant as a technical guide to provide detailed information on how the various calculations are carried out and not meant for use during the course mapping process.

General Rules for entire tool

1. Each of the tabs is protected and there is no password to unlock the tabs for editing.
2. Data validation of terms used for all drop down combo boxes are found on the “Lexicon” tab.
3. Operational definitions of terms for delivery mode are found on the “Delivery Mode” tab.
4. Operational definitions of the FEMA Core Capabilities are found on the “Core Capabilities Definitions” tab.
5. Several tabs are hidden but can be easily unhidden, see Appendix C to learn how to unhide tabs.
6. The spectrum for values of KSA Total assigned to the Course Level is on the “CalRefs” tab and listed below in the “Rules for Calculation of Course Level” section.

Rules of Selection of Primary and Secondary Core Capabilities

1. Each course objective will be mapped to the one Core Capability to which it most closely aligns. Objectives that do not map to a Core Capability should be marked “None” on the mapping tool.
2. The “None” Core Capability is eliminated from consideration as a designated Primary or Secondary Core Capability.
3. To be considered a primary or secondary Core Capability, the percent of Enabling Learning Objectives in any one Core Capability must equal to or greater than 15% of the total number of Enabling Learning Objectives (ELO) for the course.
4. The primary Core Capability (black ball icon) is the one Core Capability that meets operational definitions #1 and #2 above and has the highest “Average ELO Complex Ratio” score.
5. All secondary Core Capabilities (green ball icon) must meet the operational definitions #1 and #2, above. Additionally, all secondary Core Capabilities must be equal to or greater than 2.5 multiplied times the primary Core Capability “Average ELO Complex Ratio” value.
6. Any Core Capability in which its “Average ELO Complex Ratio” multiplied by 3.5 is equal to or greater than the primary Core Capability “Average ELO Complex Ratio” value will be indicated with a yellow ball icon. This core capability should be looked at by course designers to consider additional ELO or increase the complexity of the current ELO so that the core capability can be approved as a secondary core capability for mapping purposes.

Visit five minute lessons (https://fiveminutelessons.com/) for the Excel equation that generates the list of Secondary Core Capabilities listed in the summary box, on the “Graph – Core Capabilities” tab.
Rules for Calculation of Course Level

1. The primary and secondary Core Capabilities KSA Total scores are summed.
2. The value from step 1 is divided by the total number of ELOs for the primary and secondary Core Capabilities.
3. The course level is based on the value from step 2, in relation to the table below.

<table>
<thead>
<tr>
<th>Course Level</th>
<th>Lower Limit</th>
<th>Upper Limit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Basic</td>
<td>1</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>2. Intermediate</td>
<td>6.01</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>3. Advanced</td>
<td>12.01</td>
<td>18</td>
<td>3</td>
</tr>
<tr>
<td>4. Executive</td>
<td>Assigned by NTED to Executive level audience courses – regardless of content level</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Specific Equations across Worksheets

1. Knowledge, Skill, and Attitude (KSA) Total – “Input” tab

   The values for Knowledge, Skill, and Attitude are summed for a maximum score of 18.

2. The Complexity of each Enabling Learning Objective – “Input” tab

   The values are calculated by multiplying the amount of time for the Enabling Learning Objective and the Knowledge, Skill, and Attitudes (KSA) Total score.

   \[ ELO\ Complexity = (Time \times KSA\ Total) \]

3. Number of ELOs by CC – “Data” tab

   Uses a COUNTIF command, the Data tab calculates the number (if any) of core capabilities chosen for the ELO in the “Input” tab’s “Core Capability” column.

4. Percent of ELO by CC – “Data” tab

   Divides the value in the “Number of ELOs by CC” column, by the total number of ELOs for the course.

5. ELO Complexity by CC – “Data” tab

   Uses a SUMIF command, the Data tab sums the values of all the matching Core Capability’s “Complexity of ELO” values, from the “Input” tab.
6. Percent of Class Time by CC – “Data” tab

   Uses a SUMIF command, sums the values of all the matching Core Capability’s “time” values from the “Input” tab, divided by the “Contact Hours Sum Check” value, from the “Input” tab.

7. Weighted Average ELO Complexity – “Data” tab

   \[
   \frac{(\text{ELO Complexity by CC} \times \text{Number of ELOs by CC})}{\text{(Total Number of Enabling Learning Objectives)}}
   \]

8. Mission Area – “Input” tab

   The National Preparedness Goal (https://www.fema.gov/national-preparedness-goal) defines the Mission Area that is assigned to each Core Capability.

9. Value of None CC Weighted Complexity – “Data” tab

   The INDEX MATCH command finds and copies the value of the “Weighted Average ELO Complexity” for the “None” Core Capability.


10. Max Complexity Value – “Data” tab

    Uses MAX command, determines the maximum value of from the “Weighted Average ELO Complexity” column.

    If MAX value is equal to the “Value of None CC Weighted Complexity” column, this tab finds the next largest value of the “Weighted Average ELO Complexity” column, using the LARGE command.

    Thus, eliminating the “None” Core Capability from consideration as the maximum value, so it will not be assigned as the primary Core Capability and course subject.

11. Less Than 15% – “Data” tab

    Conducts a conditional IF-THEN analysis to determine if the “Percent of ELO by CC” column is less than 15% of the entire course content. If the condition is true, a value of one is given; if the condition is false, a value of zero is given.

12. Greater Than 15% – “Data” tab

    Conducts a conditional IF-THEN analysis to determine if the “Percent of ELO by CC” column is greater than 15% of the entire course content. If the condition is true, a value of one is given; if the condition is false, a value of zero is given.
13. None Rule – “Data” tab

Conducts a conditional IF-THEN analysis to determine if the row is the “None” Core Capability row. If the value is true, a value of zero is given; if the value is false, a value of one is given.

14. 2.5x Rule – “Data” tab

Conducts a conditional IF-THEN analysis to determine if the row’s value for the “Weighted Average ELO by CC” is equal to or greater than 2.5 times the value found in the “Max Complexity Value” column. If the value is true, a value of one is given; if the value is false, a value of zero is given.

15. 3.5x Rule – “Data” tab

Conducts a conditional IF-THEN analysis to determine if the row’s value for the “Weighted Average ELO by CC” is equal to or greater than 3.5 times the value found in the “Max Complexity Value” column. If the value is true, a value of one is given; if the value is false, a value of zero is given.

16. Mapped CC – “Data” tab

Conducts a conditional IF-THEN analysis to determine if a Core Capability is mapped to this course. If the “None Rule,” “Greater Than 25%,” and “2.5x Rule” values are equal to one, then that specific Core Capability is mapped to the course.

17. Primary CC – “Data” tab

Conducts a conditional IF-THEN analysis to determine if a Core Capability is mapped as the Primary Core Capability to this course. If the “Mapped CC” value is equal to one and the “Weighted Average ELO Complexity,” and “Max Complexity Value” columns are equal to each other, then a value of three is given. Otherwise, a value of zero is given.

18. Secondary CC – “Data” tab

Conducts a conditional IF-THEN analysis to determine if a Core Capability is mapped as a Secondary Core Capability to this course. If the “Mapped CC” value is equal to one and the “Primary CC” value is equal to zero, then a value of one is given. Otherwise, a value of negative one is given.

19. Flag CC – “Data” tab

Conducts a conditional IF-THEN analysis to determine if a Core Capability is mapped as a Secondary Core Capability to this course. If the “None Rule” and the “3.5x Rule” values are equal to one, then a value of one is given. Otherwise, a value of zero is given.
20. CC Icon Alert – “Data” tab

Uses a SUM command to add the values from the “Primary CC,” “Secondary CC,” and “Flag CC” columns.

A value of three equals Primary Core Capability and Course Subject and is represented by a black ball icon on the table of Core Capabilities, in the “Graph – Core Capability” tab.

A value of one equals Secondary Core Capability and is represented by a green ball icon on the table of Core Capabilities, in the “Graph – Core Capability” tab.

A value of zero equals a Flag Core Capability and is represented by a yellow ball icon on the table of Core Capabilities, in the “Graph – Core Capability” tab.

A value of negative one means that the Core Capability is not mapped to this course.

21. Number of Mapped ELOs – “Data” tab

Uses a SUMIF command to:

a) Conducts an IF-THEN analysis of “Mapped CC” column, if the value equals one then,

b) Sum the values from the “Number of ELOs by CC” column for all Core Capabilities meeting the condition in the IF-THEN step above.

22. CC Avg KSA – “Data” tab

Uses a SUMIF command to:

Find all of the Core Capabilities in the “Input” tab that match the value in the “Data” tab “Core Capability” column.

Sums all of the “Total KSA” values in the “Input” tab for each of the matching Core Capability.

Divides the SUM by the “Number of ELOs by CC” value in the “Data” tab.

23. Weighted Average KSA of Mapped Core Capabilities – “Data” tab

Uses a SUMPRODUCT command to multiple the value of the “Number of ELOs by CC,” “Mapped CC,” and “CC Avg KSA” columns.

The SUMPRODUCT value is then divided by the “Number of Mapped ELOs” to produce a weighted average.
24. Course Level by CC – “Data” tab

Uses a VLOOKUP command on the “CC Avg KSA” value to assign the “Course Level” for each core capability.

<table>
<thead>
<tr>
<th>Course Level</th>
<th>Lower Limit</th>
<th>Upper Limit</th>
<th>Level</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>6</td>
<td>1. Basic</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>6.01</td>
<td>12</td>
<td>2. Intermediate</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>12.01</td>
<td>18</td>
<td>3. Advanced</td>
<td>3</td>
</tr>
</tbody>
</table>

Assigned by NTE to Executive level audience courses – regardless of content level |

| 4. Executive | 4 |

25. Course Subject – “Data” tab

Uses an INDEX MATCH command to:

INDEX all of the “Core Capabilities” and MATCH the value from the “Weighted Average ELO Complexity” column to the “Core Capability” value.

26. Course Level – “Data” tab

Uses a VLOOKUP command on the “Weighted Average KSA of Mapped Core Capabilities” value to assign the “Course Level” for the course.

<table>
<thead>
<tr>
<th>Course Level</th>
<th>Lower Limit</th>
<th>Upper Limit</th>
<th>Level</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>6</td>
<td>1. Basic</td>
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<td></td>
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<td>2</td>
</tr>
<tr>
<td></td>
<td>12.01</td>
<td>18</td>
<td>3. Advanced</td>
<td>3</td>
</tr>
</tbody>
</table>

Assigned by NTED to Executive level audience courses – regardless of content level |

| 4. Executive | 4 |
27. Draft National Course Number – “Data” tab

Uses a VLOOKUP command for the value in the “Course Subject” column to find the two-letter course subject abbreviation from the “Lexicon” tab.

Uses a CONCATENATE command to put the values from the VLOOKUP above, “Course Level,” and the value found in the “Delivery Mode (NCN)” from the “Input” tab.
Appendix C: How to Unhide Tabs (Worksheets) in MS Excel

To unhide a worksheet go to the Home tab, click on Format in the Cells group, and then under Visibility select Hide & Unhide, then Unhide Sheet.

Or, you can right-click on any visible tab, and select Unhide.
In the **Unhide** pop-up window, select the worksheet to unhide and click “OK.” *Note: Although you can hide multiple sheets at once, you can only unhide one sheet at a time.*
Adding Actions Verbs to Library

Appendix D: Adding Actions Verbs to Library

<table>
<thead>
<tr>
<th></th>
<th>3</th>
<th>1</th>
<th>Identify and discuss key principles and processes for maintaining team accountability.</th>
<th>1.80</th>
<th>1</th>
<th>1</th>
<th>1</th>
<th>3</th>
<th>1.40</th>
<th>Planning</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>5</td>
<td>2</td>
<td>Articulate the importance of team accountability.</td>
<td>1.85</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>5</td>
<td>3</td>
<td>Identify search skills supporting wide area search.</td>
<td>1.85</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>8.40</td>
<td>Mass Search and Rescue Operations</td>
<td>Response</td>
</tr>
</tbody>
</table>

If the entire line appears red (as per the example above), this is an indication that the “action verb” used for this ELO is not in the current action verb library and must be added.

**Step 1:** Ensure the first word in the ELO is the intended “action verb” and not an adverb or other non- “action verb.” If the first word is not the intended “action verb,” then delete the word(s) from the ELO in the mapping file so that the first word is the desired “action verb” to be used for assessment via Bloom’s New Taxonomy.

**Step 2:** If the line is still red, then the entire mapping team must articulate what are the possible scores for the most common uses of the “action verb.” Each possible score must be assessed via the Knowledge, Skill, and Attitude rubrics provided on the respective “Knowledge,” “Skill,” and “Attitude” tabs.

**Step 3:** A majority vote of the entire team decides the final scores on each rubric.

**Step 4:** Add the new “action verb” to each of the “Knowledge Verbs,” “Skill Verbs,” and “AA Verbs” tabs at the decided upon score values.

- Find the first entry under each scoring column that says “[BLANK]” and replace with the new “action verb.” Be advised, **DO NOT** have any blank spaces before or after the new “action verb” as this will cause calculation problems.

**Step 5:** Save the mapping file and write to FEMA at FEMA-NTES@FEMA.DHS.GOV and send a detail account of which “action verbs” and scores where assigned so that they can be reviewed by the FEMA staff and updated in the master mapping file template.
Recommended Readings

Appendix E: Recommended Readings

Bloom’s Taxonomy


Federal Publications


