

DMACC Essential Learning Outcomes

Outcome 1: Discipline Knowledge

In order to excel within a discipline, students must acquire knowledge foundational to the subject matter. Students can be assessed on a segment of discipline knowledge appropriate to study within a single course or an entire program. Discipline knowledge includes the following:

- terminology
- knowledge of processes, procedures, skills, and techniques
- facts and information
- knowledge of history, cultures, and the arts
- concepts, laws, principles, and ideas
- strategic knowledge
- self-knowledge, or metacognitive awareness of oneself or one's knowledge base

Measurable Verbs: Course-level assessments that measure discipline knowledge will often correlate to Bloom's Taxonomy verbs at Levels 1-3 and will ask students to **remember**, **understand**, and/or **apply** knowledge (See "Bloom's Taxonomy Verbs" for more options). However, instructors often ask students to **analyze** (Level 4) or **evaluate** (Level 6) discipline knowledge and sometimes to **construct** (Level 5) something new with knowledge gained.

Outcome 2: Critical Thinking

Critical thinking is the process of analyzing complex information in order to reach sound, well-supported conclusions. This form of analysis can be applied to readings, data, situations, objects, or interactions with others. Critical thinking is always discipline-specific, and will vary in appearance and application. Instructors and students should ask, "What are the important processes and patterns of thought that a skilled practitioner in this discipline should demonstrate?" Critical thinking includes the following processes:

- analyzing
- arguing
- assessing
- comparing and contrasting
- constructing
- critiquing
- designing
- diagnosing
- distinguishing
- evaluating
- examining
- interpreting
- inventing
- judging
- producing

Measurable Verbs: In addition to the verbs listed above, course-level assessments that measure critical thinking will ask students to **analyze, interpret, and assess** (Bloom's Taxonomy Levels 4 and 6) complex information and **produce** (Level 5) conclusions with supporting evidence.

Outcome 3: Communication Skills

Clear, effective, and persuasive communication is vital to all disciplines. Students should learn practical skills in writing, speaking, and visual communication. Though assignments will be discipline-specific, students should be assessed primarily on communication skills for this outcome. Communication includes the following:

- writing assignments
- Journalism
- writing for electronic media
- foreign languages
- speeches, debates, and presentations
- non-verbal communication
- visual depictions of information
- Graphic Design and visual arts

Measurable Verbs: Course-level assessments that measure communication skills will ask students to **produce** (Level 5) college-level written, oral, and visual messages while **demonstrating** (Level 3) strong technical and persuasive skills. Additionally, students may be asked to **summarize** (Level 2), **analyze** (Level 4) or **evaluate** (Level 6) course content in writing assignments or speeches.

Outcome 4: Problem-Solving

Problem-solving is the process of defining, identifying, and analyzing an unresolved issue before applying a successful solution. Though critical thinking is involved, problem-solving assessments are often more focused on realized outcomes and finished products.

Problem-solving assessments are likely to be found in the following:

- quantitative problems
- laboratory experiments
- complex, open-ended problems
- simulations
- group work
- hands-on assignments
- diagnostic work
- assignments asking for real-world solutions
- assignments asking for inventiveness

Measurable Verbs: Course-level assessments that measure problem-solving will ask students to **analyze** problems (**Level 4**), **generate** solutions (Level 5), and **evaluate** (Level 6) strategies for achieving a desired goal.

Outcome 5: Collaboration

While collaborative coursework is capable of measuring student work related to critical thinking, problem-solving, and any other outcome imaginable, educators can directly assess the skills and attitudes necessary for strong collaborative work.

The following guidelines should be used to assess collaboration:

- Collaboration skills should be assessed on an individual basis, not by assessing the group's results as a whole.
- Instructors can use direct observation, feedback from other group members, and/or student reflection as part of the evaluation.
- A rubric with a range of qualities should be used, including effort, interaction with others, quantity and quality of contributions, and time management skills.
- Instructors should consider how students foster a positive and productive team environment.

Measurable Verbs: Course-level assessments that measure collaboration will ask students to **demonstrate** (Level 3) teamwork skills, **create** (Level 5) a respectful and constructive environment with others, and **evaluate** (Level 6) their own collaboration skills.

Bloom's Taxonomy Verbs

Course competencies at DMACC are written and organized according to Bloom's Taxonomy. Each competency begins with a verb classified according to the following list. For more information, visit the DMACC Curriculum Commission webpage.

Level 1: Count, Define, Describe, Enumerate, Find, Identify, Know, Label, List, Match, Name, Read, Recall, Recite, Record, Remember, Reproduce, Select, Sequence, State, View, Write

Level 2: Classify, Cite, Comprehend, Conclude, Describe, Discuss, Estimate, Explain, Generalize, Give examples, Illustrate, Interpret, Locate, Make sense of, Paraphrase, Predict, Report, Restate, Review, Summarize, Trace, Understand

Level 3: Apply, Assess, Change, Chart, Choose, Compute, Construct, Demonstrate, Determine, Develop, Establish, Instruct, Predict, Prepare, Produce, Relate, Report, Select, Show, Solve, Use

Level 4: Analyze, Break down, Characterize, Classify, Compare, Contrast, Correlate, Diagram, Differentiate, Discriminate, Distinguish, Examine, Illustrate, Infer, Limit, Outline, Point out, Prioritize, Relate, Separate, Subdivide

Level 5: Adapt, Categorize, Compose, Construct, Create, Design, Formulate, Generate, Incorporate, Integrate, Invent, Modify, Organize, Perform, Produce, Propose, Reinforce, Reorganize, Rewrite, Structure, Synthesize

Level 6: Appraise, Argue, Assess, Choose, Compare and Contrast, Conclude, Critique, Decide, Defend, Evaluate, Interpret, Judge, Justify, Predict, Prioritize, Prove, Rank, Rate, Reframe, Support