

**COMPETENCY MODEL FOR
MATERIALS TESTING ENGINEERING ASSOCIATE
CLASS CODE 7967**

The following competencies have been identified as those that best separate superior from satisfactory job performance in the class of **MATERIALS TESTING ENGINEERING ASSOCIATE**. (Numbers refers to the order of competencies in the Competency Bank.)

- 3. Judgment and Decision Making*
- 8. Safety Focus*
- 10. Physical Capability
- 20. Job Knowledge*
- 35. Teamwork*
- 37. Flexibility*
- 40. Credibility*
- 48. Shares Knowledge and Information*
- 49. Project Management*

*Needed at Job Entry

On the following pages are descriptions of each competency, including a definition, the level of the competency required for the class (*italicized*, **bolded**, and underlined), examples of behavioral indicators, and satisfactory and superior performance levels.

- 3. JUDGMENT AND DECISION MAKING** – Accurately assesses situations, seeks new information if necessary, and applies all available information to reach sound conclusions/formulate effective response.

Level of Competency Required by Job:

- Level 1: Training and guidelines needed to respond to immediate situations within very specific function are provided (or supervisor available to assist).
- Level 2: **General information and guidance to assist in responding to a variety of situations across a range of circumstances are provided.**
- Level 3: Little guidance available for responding to a wide range of complex situations with far-reaching and/or enduring consequences.

Examples of Behavioral Indicators:

- Obtains the necessary amount of relevant information.
- Effectively responds to atypical situations.
- Asks questions or otherwise obtains additional relevant information to make a decision.
- Formulates a decision and necessary actions based on available facts.
- Correctly infers appropriate response based on information provided and existing policies, personal experience, and/or consultation with others.
- Discusses conclusions/possible responses with others before taking action as necessary.
- Considers impact of decisions on all affected parties.

Performance Levels:

Satisfactory

Correctly assesses routine and unusual situations and reaches appropriate conclusions for actions needed. Obtains additional information and/or consults with others as necessary.

Superior

Evaluates new situations accurately to establish an appropriate response or plan of action. Recognizes the impact on all affected parties, as well as the possible ramifications and/or repercussions of setting a precedent.

8. SAFETY FOCUS – Performs work in a way that minimizes risk of injury to self or others.

Level of Competency Required by Job:

- Level 1: Maintain awareness of unsafe conditions and actions to avoid injury.
- Level 2: Follow safety rules/procedures; avoid known hazards in the work environment.
- Level 3: **Carefully follow safety rules and procedures and consistently use all necessary safety equipment.**

Examples of Behavioral Indicators:

- Wears seat belt.
- Ensures safe physical work environment by taking actions such as eliminating unstable stacks of materials, closing drawers so filing cabinets will not tip over, and keeping pathways clear of tripping hazards.
- Reviews safety procedures before beginning each job with known hazards.
- Follows safety procedures while performing work even when it takes more time.
- Uses safety equipment such as goggles, gloves, and earplugs as required or warranted.
- Frequently checks safety equipment for proper condition and operation.

Performance Levels:

Satisfactory

Maintains awareness of personal safety to avoid injury or property damage during all work activities.

Superior

“Safety first.” Places avoidance of injury or property damage above all other job requirements. Mentions the need to follow safe work practices to co-workers. Actively seeks ways to avoid injury.

10. PHYSICAL CAPABILITY – Strength, endurance, flexibility, and/or coordination.

Level of Competency Required by Job:

- Level 1: Sitting and/or standing for extended periods of time.
- Level 2: **Awkward body position and/or precise motions required; and/or repeated lifting, carrying, and/or manipulation of objects; and/or walking for extended periods of time.**
- Level 3: Continuous or extreme exertion of physical effort.

Examples of Behavioral Indicators:

- Sits and may occasionally stand or walk for entire workday (except breaks).
- Walks for the duration of the workday.
- Repetitive motion required to perform task.
- Repeatedly lifts and carries heavy objects.
- Exerts maximal effort for extended periods of time.

Performance Levels:

Satisfactory

Performs tasks requiring physical capability satisfactorily and without undue physical stress or harm.

Superior

Performs tasks requiring physical capability correctly with relative ease. May be asked to perform the most physically demanding tasks or be sought by co-workers for assistance.

20. JOB KNOWLEDGE – Knows information required to perform a specific job. Includes both widely available courses of study (for example, chemistry, human resources management, graphic arts) and City-specific information (parking regulation and ticketing practices; purchasing procedures; provisions of the City Charter).

Level of Competency Required by Job:

- Level 1: Knowledge is concrete, factual, and/or procedural and may be defined by the organization. Situations in which it is applied are quite consistent.
- Level 2: **Knowledge is substantive and may be defined by an external trade, field, or profession. Situations in which it is applied vary and, as such, require breadth and depth of understanding.**
- Level 3: Knowledge is abstract, conceptual, and/or complex and may be supported by a well-defined academic discipline or authoritative sources (e.g., laws, ordinances, government guidelines/regulations/codes). Situations in which it is applied may vary greatly or be novel.

Examples of Behavioral Indicators:

- Performs work correctly/avoids technical (job content related) errors.
- Answers technical questions about work accurately.
- Asks few technical questions about the performance of routine work activities.
- Offers advice (“coaching”) to new employees regarding their work.
- Develops training programs for other employees.

Performance Levels:

Satisfactory

Sufficient job knowledge to perform work correctly independently. Answers technical questions about work correctly.

Superior

Expertise in technical job information sufficient to serve as a resource to others. May develop training manuals/ programs and/or give internal and/or external presentations related to work.

Job Knowledge Areas

1. *Knowledge of physics, engineering, chemistry, and geology, as it pertains to the strength of materials and the laws of mechanics.
2. Knowledge of standards and standard testing methods of the American Society for Testing and Materials.
3. Knowledge of chemistry relating to quantitative and qualitative analysis.
4. Knowledge of types and characteristics of commonly used construction and maintenance materials.
5. Knowledge of standard sources of information pertaining to materials testing.
6. *Knowledge of laboratory testing methods and apparatuses.
7. *Ability to efficiently obtain, interpret, and manipulate information contained in personal computers and computer networks.
8. Ability to efficiently review files, plans, specifications, maps, blueprints, and other sources of information related to materials testing engineering work.
9. Knowledge of inspection and testing of materials at fabrication plants.

*Needed at Job Entry

35. TEAMWORK – Interacts effectively with others to achieve mutual objectives; readily offers assistance to others to facilitate their goal accomplishment.

Level of Competency Required by Job:

- Level 1: Work effectively as a member of a work unit or project team. Readily offer assistance to others when they have too much work or have too little.
- Level 2: **Work effectively as a team member in which different people have different roles/responsibilities and perspectives. Identify points for collaboration with co-workers; readily offer and request assistance.**
- Level 3: Work effectively as a part of an interdependent team (your work gets done only if the work of the whole team is done; evaluation of team performance is more relevant than individual performance).

Examples of Behavioral Indicators:

- Discusses work-related matters with co-workers.
- Offers and requests assistance readily.
- Offers and is receptive to suggestions.
- Identifies problems with workflow that will prevent team from accomplishing its goals.
- Provides constructive criticism and feedback to team members to improve overall functioning of team.
- Assigns credit to team for accomplishments.

Performance Levels:

Satisfactory

Cooperates with co-workers and fulfills responsibilities as a member of a project team. Maintains a focus on common objectives and offers and requests assistance readily.

Superior

Sees the team as a whole; acknowledges that performance of the team is what in reality is evaluated by others. If anyone fails, everyone on the team fails.

37. FLEXIBILITY – Changes behavior to more effectively respond to differences or changes in situations, circumstances, objectives or people.

Level of Competency Required by Job:

- Level 1: **Modify behavior as necessary to accommodate differences/changes.**
- Level 2: Initiate changed behavior when initial approach proves ineffective.
- Level 3: Perceive subtle cues/feedback to determine modifications in behavior necessary to improve effectiveness.

Examples of Behavioral Indicators:

- Adjusts speaking in terms of volume (softer/louder) and/or manner (for example, explanatory vs. directive).
- Offers a different option when the first is rejected.
- Completes work in a nonroutine manner when usual approach is inefficient or ineffective.
- Readily accepts changes in work assignments.
- Willingly works with any others as assigned or required by job duties.

Performance Levels:

Satisfactory

Changes approach or objective when directed to do so. Recognizes failure of initial approach to achieve objective and tries a different one.

Superior

Identifies opportunities to improve performance by changing the goal or personal behavior to reach the goal. Supports changes imposed by others..

40. CREDIBILITY – Is truthful and sincere; objectively and clearly provides all pertinent information rather than being vague, omitting negative information or only stating what listeners “want to hear.”

Level of Competency Required by Job:

- Level 1: Freely and openly share accurate job-related information with coworkers.
- Level 2: **Provide complete, accurate information to other City employees and members of the public.**
- Level 3: Represent department to the Mayors’ Office, City Council, City Commissions, and/or department heads, and/or to external organizations, professional associations, and/or the media.

Examples of Behavioral Indicators:

- Admits mistakes.
- Information provided is consistent (not contradictory or stating different things to different people).
- Answers questions directly and thoroughly.
- Shares credit for achievements.
- Acts in the best interest of the organization, not self interest.

Performance Levels:

Satisfactory

“Tells the complete story” from the onset. Is forthcoming with full information when questioned. Statements are consistent. Readily admits mistakes and gives credit to others.

Superior

Information provided is complete and accurate, and includes any negative information or information contrary to self interest. Does not attempt to be vague or put a “spin” on negative information to make it appear more positive.

48. SHARES KNOWLEDGE AND INFORMATION – Conveys all information relevant to each involved party in a thorough and timely manner.

Level of Competency Required by Job:

- Level 1: Provide job-related information as it becomes available to others who are likely to need it or to whom it might be helpful.
- Level 2: **Keep all involved parties informed of work/project progress and other new information. Tailors content, level of detail, and timing of information provided to the perspective of each recipient.**
- Level 3: Recognize different needs for different information and provide all affected parties with a description of the “big picture” as well as the breadth and detail of information relevant to their perspective.

Examples of Behavioral Indicators:

- Provides thorough explanations with all relevant details.
- Uses multiple means of communicating (e.g., e-mail, telephone, meetings).
- Provides status reports of work/project progress to all involved parties.
- Informs others of changes at the earliest feasible time.
- Uses multiple addressees and “copies” others so all parties see exactly the same information and know who already has been informed.
- Draws from job knowledge and work experience to provide thorough descriptions and explanations.

Performance Levels:

Satisfactory

Readily communicates new, job-related information to all employees to whom it is relevant. Provides a level of detail and explanation appropriate to the recipient.

Superior

Ensures that all involved parties are provided the maximum amount of information feasible in as timely a manner as possible to facilitate work/project status. Shares knowledge and experience to serve as a mentor and coach to others.

49. PROJECT MANAGEMENT – Anticipates and plans for all aspects of a multi-faceted, discrete endeavor to ensure resources are available and actions are taken at proper times for successful completion.

Level of Competency Required by Job:

- Level 1: **Plan, coordinate, and oversee accomplishment of multi-step projects involving other employees.**
- Level 2: Design, plan, coordinate, and manage large, multi-faceted projects involving employees from various segments of the organization representing different perspectives.
- Level 3: Design, plan, secure approval and resources, and manages largescale, complex projects involving many employees representing a large number of diverse segments of the organization and perspectives, which may at times be in conflict.

Examples of Behavioral Indicators:

- Establishes project plans that gain management acceptance.
- Establishes realistic timeline and estimates of resources needed.
- Assembles appropriate team with complementary skills to efficiently execute all portions of a project.
- Secures necessary resources for successful project completion.
- Clearly designates roles/responsibilities/accountability.
- Addresses failure to perform or other problems in a timely and effective manner to minimize negative impact.

Performance Levels:

Satisfactory

Establishes acceptable project plan; assembles team with required skills; establishes personal responsibility/accountability. Ensures the necessary time and resources are available.

Superior

Designs efficient project plan to maximize benefits and minimize use of resources. Designates precise mix of people to best accomplish the project. Completes on time, with resources allocated.

