National Fire Academy

N0158 – Emergency Medical Services: Quality Management

Quarter:

ACE Credit: In the lower division baccalaureate/associate degree category, two semester hours in public safety management, EMS management or fire administration.
IACET Continuing Education Units: 3.4

Length of Course: 6 Days (35 hr., 10 min. contact hours, Sunday – Friday)
Prerequisite: Yes
Curriculum: Emergency Medical Services
Training Specialist: Michael Stern
Instructor:
Instructor email/phone:
Classroom: J-
Meeting Time: 8 AM – 5 PM

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Course Description (Catalog)

R0158 – “Emergency Medical Services: Quality Management.” This six-day course will provide the critical components, background and principles associated with the implementation, or enhancement, of a department’s Quality Management Program. The course teaches students how to create, implement and maintain a Quality Management Program, including historical examples, current models, and best practices of quality assurance and improvement, process improvement, data collection and analysis.
Throughout the course, students work on culminating activities relating to the development of a Quality Management Program. Students present the activity with classmates and instructors at the end of the course, allowing all students to take examples of Quality Management Programs to their departments.

**Student Qualifications (Primary and Secondary Audience)**

Individuals who have department-level quality management (quality assurance, quality improvement), oversight or supervisory responsibilities.

**Course Scope (Goal)**

This course seeks to provide a framework to improve the quality of emergency medical services (EMS) in students’ agencies.

**Course Objectives (Course Learning Outcomes – TLOs)**

After successfully completing this course, you will be able to accomplish the following:

- Orient to the course sequence and content.
- Describe the cognitive map of process improvement methodology.
- Describe the history of Quality Management (QM).
- Analyze several QM models.
- Analyze the environment as it relates to the scope of Quality Management (QM).
- Describe the attributes of a quality culture.
- Differentiate between organizational improvement and process improvement.
- Identify the goal of each step in the Define, Measure, Analyze, Improve, and Control (DMAIC) method.
- Write a performance improvement project charter.
- Document a current process.
- Analyze factors that affect output.
- Test an improvement intervention.
- Implement steps to monitor and maintain performance.
- Develop a Quality Management (QM) plan.
- Determine strategies for change management.

**Course Delivery Method**

The National Fire Academy (NFA) offers specialized training courses and advanced management programs of national impact in an academic classroom environment on campus at the National Emergency Training Center (NETC) in Emmitsburg, Maryland and through their State, local, tribal, and US territories training partners. All course materials are designed for interactive classroom environments, in either paper notebook or electronic formats.
Course Schedule

The purpose of the course schedule is to give you, at a glance, the required preparation, activities, and evaluation components of your course.

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<thead>
<tr>
<th>DAY 1</th>
<th>DAY 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 1: Introduction</td>
<td>Unit 4: Culture of Quality</td>
</tr>
<tr>
<td>Activity 1.1: Student Introductions</td>
<td>Activity 4.1: Cultural Differences</td>
</tr>
<tr>
<td><strong>Break</strong></td>
<td><strong>Break</strong></td>
</tr>
<tr>
<td>Unit 2: History and Quality Management</td>
<td>Unit 4: Culture of Quality (cont’d)</td>
</tr>
<tr>
<td>Models</td>
<td>Unit 5: Organizational Improvement</td>
</tr>
<tr>
<td>Activity 2.1: High Quality Versus Low</td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td></td>
</tr>
<tr>
<td><strong>Lunch Break</strong></td>
<td><strong>Lunch Break</strong></td>
</tr>
<tr>
<td>Unit 2: History and Quality Management</td>
<td>Unit 5: Organizational Improvement (cont’d)</td>
</tr>
<tr>
<td>Models (cont’d)</td>
<td></td>
</tr>
<tr>
<td>Activity 2.2: Using Models</td>
<td></td>
</tr>
<tr>
<td><strong>Break</strong></td>
<td><strong>Break</strong></td>
</tr>
<tr>
<td>Unit 3: Scope of Quality Management</td>
<td>Unit 5: Organizational Improvement (cont’d)</td>
</tr>
<tr>
<td>Activity 3.1: Identifying Stakeholders</td>
<td></td>
</tr>
<tr>
<td>Activity 3.2: Needs Assessment</td>
<td></td>
</tr>
</tbody>
</table>

Day 1 Evening Assignments:  
A. Needs Assessment (“Define”, U3, U7)  
B. Self-Assessment (U5)  

Day 2 Evening Assignments:  
A. Cultural Issues (U4)  
B. Reading: “Body Ritual Among the Nacirema” (U4)  
C. Activity 5.1: Web-based Injury Statistics Query and reporting System  
D. Activity 5.2: Identifying National Trends Using National EMS Information System Reports

Note: This schedule is subject to modification by the instructors and approved by the training specialist.

*The instructor who is not teaching should review student assignments throughout the day and give written feedback. Assignments should be handed in first thing in the morning of each day, and handed back to students at the end of the day.
<table>
<thead>
<tr>
<th>DAY 3</th>
<th>DAY 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 6: Introduction to the DMAIC Method</td>
<td>Unit 8: The DMAIC Method — “Measure” Phase (cont’d)</td>
</tr>
<tr>
<td></td>
<td>Activity 8.4: Build a Performance Indicator</td>
</tr>
<tr>
<td><strong>Break</strong></td>
<td><strong>Break</strong></td>
</tr>
<tr>
<td><strong>Unit 7: The DMAIC Method — “Define” Phase</strong></td>
<td>Unit 9: The DMAIC Method — “Analyze” Phase</td>
</tr>
<tr>
<td>Activity 7.1: Write a Project Charter</td>
<td>Activity 9.1: What Will Affect the Measure of CTQ?</td>
</tr>
<tr>
<td><strong>Lunch Break</strong></td>
<td><strong>Lunch Break</strong></td>
</tr>
<tr>
<td><strong>Unit 8: The DMAIC Method — “Measure” Phase</strong></td>
<td>Unit 9: The DMAIC Method — “Analyze” Phase (cont’d)</td>
</tr>
<tr>
<td>Activity 8.1: Voice of the Customer Analysis — Nominal Group Technique</td>
<td>Unit 10: The DMAIC Method — “Improve” Phase</td>
</tr>
<tr>
<td><strong>Break</strong></td>
<td><strong>Break</strong></td>
</tr>
<tr>
<td><strong>Unit 8: The DMAIC Method — “Measure” Phase (cont’d)</strong></td>
<td>Unit 10: The DMAIC Method — “Improve” Phase (cont’d)</td>
</tr>
<tr>
<td>Activity 8.2: Build a SIPOC Diagram</td>
<td>Activity 10.1: Identify a Process for Improvement Using the Five Areas of Error-Proofing</td>
</tr>
<tr>
<td>Activity 8.3: Build a Value Stream Timeline Diagram</td>
<td></td>
</tr>
</tbody>
</table>

Day 3 Evening Assignments:
A. Project Charter (“Define”, U7)

Day 4 Evening Assignments:
A. Build a Performance Indicator (“Measure”, U8)
B. Build a Cause and Effect Diagram” (Analyze”, U9)
<table>
<thead>
<tr>
<th><strong>DAY 5</strong></th>
<th><strong>DAY 6</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 10: The DMAIC Method — “Improve” Phase (cont’d)</td>
<td>Final Presentation</td>
</tr>
<tr>
<td>Activity 10.2: Improving an Emergency Medical Service Customer Experience</td>
<td></td>
</tr>
<tr>
<td><strong>Break</strong></td>
<td><strong>Break</strong></td>
</tr>
<tr>
<td>Unit 10: The DMAIC Method — “Improve” Phase (cont’d)</td>
<td>Final Presentation</td>
</tr>
<tr>
<td>Activity 10.3: Heat Exhaustion Scenario</td>
<td></td>
</tr>
<tr>
<td>Activity 10.4: Choose an Experimental Design</td>
<td></td>
</tr>
<tr>
<td><strong>Lunch Break</strong></td>
<td><strong>Lunch Break</strong></td>
</tr>
<tr>
<td>Unit 11: The DMAIC Method — “Control” Phase</td>
<td>Final Presentation</td>
</tr>
<tr>
<td>Activity 11.1: Failure Modes and Contingency Planning</td>
<td>Graduation</td>
</tr>
<tr>
<td><strong>Break</strong></td>
<td><strong>Break</strong></td>
</tr>
<tr>
<td>Unit 12: Implementing the Quality Management Plan</td>
<td></td>
</tr>
<tr>
<td>Activity 12.1: Obstacles to Implementation</td>
<td></td>
</tr>
</tbody>
</table>

Day 5 Evening Assignments:
A. Design an Intervention (“Improve”, U10)  
B. Finish preparation for Final presentation
**Course Resources (Instructional Materials)**

In order to be fully prepared, obtain a copy of the required textbooks and other instructional materials prior to the first day of class.

**Required Readings**

The student must complete required readings during the course to be able to thoughtfully participate in discussions and activities.

None.

**Suggested Reading/Resources**

Suggested readings and resources are not evaluated, but may enhance the student’s understanding, serve as additional sources for citation and promote discussion of course material.

None.

**Required Resources (Course Textbook)**

Student Manual.

**Supplemental Resources (Supplemental Course Textbook)**

None.

**Grading Methodology (Evaluation Procedures)**

**Final Grade**

The student’s final grade for EMS Quality Management is comprised of evening assignments and a final project presentation.

Evening assignments: 8 assignments up to 10 points each = 80 possible total.

Final project presentation: 20 points possible total.
<table>
<thead>
<tr>
<th>Numerical Score</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-90</td>
<td>A</td>
</tr>
<tr>
<td>89-80</td>
<td>B</td>
</tr>
<tr>
<td>79-70</td>
<td>C</td>
</tr>
<tr>
<td>69 or below</td>
<td>F</td>
</tr>
</tbody>
</table>

**Evening Assignments**

All evening assignments are individual assignments. Each evening assignment should be submitted via NFA Online Mediated electronic dropbox or turned in first thing in the morning of the following day as identified by the instructors. The instructors will read and comment on students’ work during the next day’s class session. Instructors will remind students that they should upload their work onto the classroom shared drive if NFA Online Mediated is not being used. At the end of the course, students should download all of the other students’ completed projects.

Criteria used to determine scores are outlined in the rubric.

**EXAMINATION ADMINISTRATION PROCEDURES**

Students will be given exams at the end of the class, and only the instructor will grade the exams. While the exams are being graded by the instructor, students will be asked to complete end-of-course evaluations.

Exams are to be completed individually and not as a group or a group activity, unless specifically directed within the instructor guide for the specific course. Students should use pencils to complete answer sheets if bubble sheets and a scoring key overlay are being used.

There should only be one answer for any given question marked by the student. A question with multiple answers is considered incorrect. Please mark number of incorrect answers on completed exam sheets, record score (percentage), and mark the appropriate letter grade.

Transfer the letter grades to the corresponding student name on the course roster.

If a student does not obtain a passing grade on the first attempt, the instructor will provide remediation prior to a retest. Students who do no pass the first exam will be allowed to take one retest of a new exam before departing from the class. A second failure will result in a grade of “F” being recorded on the grade roster.

Once all exams have been graded, instructors should review the exam as a group.
In the event of unusual events (storm, fire response, family emergency) or early departure, the host agency or state representative may be asked to proctor the exam at a later date. The instructor is responsible to notify the Training Specialist as soon as practical of the situation and name of person responsible for the exams and testing process.

**Required Reading Assignments**

Student completion of reading assignments will be done via evaluation of their class participation and will not be a separately graded activity.

**Suggested Readings**

Suggested readings are not evaluated, but may enhance the student’s understanding and promote discussion of course material.

**Course Outline**

**Unit 1: Introduction (Day 1)**

**Objectives**

**Terminal Objectives**

The students will be able to:

1. Orient to the course sequence and content.
2. Describe the cognitive map of process improvement methodology.

**Enabling Objectives**

The students will:

1. Describe the course sequence.
2. Provide an overview of the course content.
3. Describe the five steps of the Define, Measure, Analyze, Improve, and Control (DMAIC) process.
Unit 2: History and Quality Management Models (Day 1)

Objectives

**Terminal Objectives**

The students will be able to:

1. Describe the history of Quality Management (QM).
2. Analyze several QM models.

**Enabling Objectives**

The students will:

1. Define QM terms.
2. Cite important milestones in QM history.
3. Analyze the strengths and weaknesses of the current QM models.
4. Analyze the strengths and weaknesses of the course QM model.

Unit 3: Scope of Quality Management (Day 1)

Objectives

**Terminal Objective**

The students will be able to analyze the environment as it relates to the scope of Quality Management (QM).

**Enabling Objectives**

The students will:

1. Describe the advantages of multidisciplinary collaboration.
2. Determine the organizations and agencies involved in Emergency Medical Services: Quality Management (EMS: QM).
3. Analyze the role of outside agencies.
4. Identify the impact of laws and regulations.
5. Identify the impact of labor-management organizations.
6. Identify the impact of the political structure.

Unit 4: Culture of Quality (Day 2)

Objectives

Terminal Objective

The students will be able to describe the attributes of a quality culture.

Enabling Objectives

The students will:

1. Define the term “culture”.
2. Differentiate between organizational culture and anthropological culture.
3. Indicate how organizational culture affects Quality Management (QM).

Unit 5: Organizational Improvement (Day 2)

Objectives

Terminal Objective

The students will be able to differentiate between organizational improvement and process improvement.

Enabling Objectives

The students will:

1. Identify the three phases of organizational improvement.
2. Describe the relationship between process improvement and organizational improvement.
3. Identify tools for organizational assessment and improvement.
4. Locate State statistics on death and injury.
5. Identify common causes of death and injury.
6. Use mapping process to determine injury and death statistics.
7. Identify the National EMS Information System (NEMSIS).
8. Describe the structure of NEMSIS.
9. Conduct a query of the current NEMSIS data.

Unit 6: Introduction to the DMAIC Method (Day 3)

Objectives

Terminal Objective
The students will be able to identify the goal of each step in the Define, Measure, Analyze, Improve, and Control (DMAIC) method.

Enabling Objectives
The students will:

1. Describe the steps in the DMAIC method.
2. List the tools they will apply in the DMAIC method.

Unit 7: The DMAIC Method--“Define” Phase (Day 3)

Objectives

Terminal Objective
The students will be able to write a performance improvement project charter.

Enabling Objectives
The students will:

1. Identify a problem or improvement opportunity.
2. Break down a large problem or opportunity into smaller parts.
3. Associate a problem or improvement opportunity with one or more specific processes.
4. Identify process customers.
5. Give financial and nonfinancial examples that illustrate the idea of “return on investment”.

6. Write a problem statement.

Unit 8: The DMAIC Method--“Measure” Phase (Day 3)

Objectives

Terminal Objective

The students will be able to document a current process.

Enabling Objectives

The students will:

1. Identify customer needs.
2. Build a SIPOC diagram.
3. Build a value stream timeline.
4. Build a process performance indicator.
5. Interpret a statistical process control chart.

Unit 9: The DMAIC Method--“Analyze” Phase (Day 4)

Objectives

Terminal Objective

The students will be able to analyze factors that affect output.

Enabling Objectives

The students will:

1. Identify all factors that have an impact on performance.
2. Determine primary factors.
3. Create scatterplots.
4. Build a Pareto diagram.
5. Build a cause-and-effect diagram.

Unit 10: The DMAIC Method--“Improve” Phase (Day 4)

Objectives

Terminal Objective

The students will be able to test an improvement intervention.

Enabling Objectives

The students will:

1. Apply the basic principles of the scientific method to test changes.
2. Identify an appropriate experimental design to test an improvement intervention.
3. Determine when to use pilot testing as part of an improvement intervention.
4. Evaluate results of an improvement intervention to determine if it was effective.

Unit 11: The DMAIC Method--“Control” Phase (Day 5)

Objectives

Terminal Objective

The students will be able to implement steps to monitor and maintain performance.

Enabling Objectives

The students will:

1. Identify mechanisms for ongoing monitoring of performance.
2. Discuss the need for contingency plans in the event that performance deteriorates.
3. Define what should be archived for future reference.
Unit 12: Implementing the Quality Management Plan (Day 5)

Objectives

Terminal Objectives

The students will be able to:

1. Develop a Quality Management (QM) plan.
2. Determine strategies for change management.

Enabling Objectives

The students will:

1. Identify obstacles to implementing processes.
2. Discuss strategies for marketing/selling their QM plans.
3. Describe future directions that have an impact on QM.
4. Cite key principles for catalyzing changes in their QM programs.
Policies

Class Attendance and Cancellation Policy

Attendance

- You are required to attend all sessions of the course. If you do not, you may not receive a certificate.

- If you need to depart the training facility early and miss any portion of the course, you must make the request in writing to the sponsoring agency (e.g., State training director, etc.). The State training director may waive the attendance requirement in order to accommodate you with extraordinary circumstances as long as you complete all course requirements.

Course Failure

You can reapply for the failed course or any other NFA course and go through the random selection process. You don’t have to successfully complete the failed course before attending another NFA course.

Student Code of Conduct Policy

Students, instructors and staff are expected to treat each other with respect at all times. Inappropriate behavior will not be tolerated.

Writing Expectations

Student writing will conform to the generally accepted academic standards for college papers. Papers will reflect the original work of the student and give appropriate credit through citations for ideas belonging to other authors, publications or organizations. Student written work should be free of grammatical and syntax errors, free of profanity or obscene language or ideas, and reflect critical thinking related to the course subject matter.

Citation and Reference Style

Attention Please: Students will follow the APA, Sixth Edition as the sole citation and reference style used in written work submitted as part of coursework to NFA. Assignments completed in a narrative essay, composition format, abstract, and discussion posts must follow the citation style cited in the APA, Sixth Edition.

Late Assignments

All assignments must be turned in by the established deadline. Late submissions could result in a 10 percent decrease in grade.
**Disclaimer Statement**

Course content may vary from the outline to meet the needs of this particular group.

**Grading**

Please review the following rubrics that explain how grades will be awarded.

Students who do not complete the entire course will be awarded an Incomplete (I) grade. In accordance with National Fire Academy academic policies, an Incomplete (I) grade must be removed by the end of the next semester following the course, or it automatically becomes a Failing (F) grade.

[https://www.usfa.fema.gov/training/nfa/admissions/student_policies.html](https://www.usfa.fema.gov/training/nfa/admissions/student_policies.html)

**Academic Honesty**

Students are expected to exhibit exemplary ethical behavior and conduct as part of the NFA community and society as a whole. Acts of academic dishonesty including cheating, plagiarism, deliberate falsification, and other unethical behaviors will not be tolerated.

Students are expected to report academic misconduct when they witness a violation. All cases of academic misconduct shall be reported by the instructor to the State training director or host agency and to the NFA Training Specialist.

If a student is found to have engaged in misconduct and the allegations are upheld, the penalties may include, but are not limited to one or a combination of the following:

- expulsion,
- exclusion from future classes for a specified period; depending on the severity it could range from 1-10 years, and/or
- forfeiture of certificate for course(s) enrolled in at NETC.

Refer to NFA-specific Standard Operating Procedure 700.1 – *Academic Code of Conduct and Ethics* for more information.
## Grading Rubrics

Criteria used to determine scores are outlined in the rubric below:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Excellent</th>
<th>Marginal</th>
<th>Poor</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Points 8-10</strong></td>
<td><strong>Points 4-7</strong></td>
<td><strong>Points 1-3</strong></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td>Timely and Thorough</td>
<td>• On time submission.</td>
<td>• On time submission.</td>
<td>• Late submission or not turned in.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Followed all directions.</td>
<td>• Followed most directions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demonstration of Knowledge</td>
<td>• Assignment clearly demonstrate that readings/assignments were understood and well incorporated into responses. Correctly used terminology and concepts from course materials and lecture. Displayed thinking on one of the highest levels: critical, evaluative, integrative, scientific, etc.</td>
<td>• Assignment indicated a basic understanding of readings and assignments.</td>
<td>• Lacked basic comprehension of subject matter.</td>
<td></td>
</tr>
<tr>
<td>Writing</td>
<td>• No errors, or minor errors, in punctuation, grammar, and spelling.</td>
<td>• Few errors, in punctuation, grammar, and spelling.</td>
<td>• Numerous errors, in punctuation, grammar, and spelling.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Utilized professional writing skills.</td>
<td>• Utilized professional writing skills.</td>
<td>• Failed to utilize professional writing skills.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Used and maintained a positive and constructive tone throughout assignment.</td>
<td>• Used a positive and constructive tone somewhere in the assignment.</td>
<td>• Failed to use a positive and constructive tone in the assignment.</td>
<td></td>
</tr>
</tbody>
</table>
The final project presentations are scored as follows based on Assignment 8:

<table>
<thead>
<tr>
<th>Content Area</th>
<th>Good Points 3-4</th>
<th>Satisfactory Points 1-2</th>
<th>Unsatisfactory Points 0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Define</strong></td>
<td>• Thoroughly identified a problem or improvement opportunity. Thoroughly broke down a large problem or opportunity into smaller parts. Associate a problem or improvement opportunity with specific processes. Gave financial and nonfinancial examples that illustrate the idea of &quot;return on investment.&quot; Provided a clear problem statement.</td>
<td>• Identified a problem or improvement opportunity. Broke down part of a problem or opportunity into smaller parts. Associate a problem or improvement opportunity with specific processes. Gave financial or nonfinancial examples that illustrate the idea of &quot;return on investment.&quot; Provided a problem statement.</td>
<td>• Failed to identify a problem or improvement opportunity. Did not break down part of a problem or opportunity into smaller parts. Did not discuss specific processes. Gave no financial or nonfinancial examples that illustrate the idea of &quot;return on investment.&quot; Did not provide a problem statement.</td>
</tr>
<tr>
<td><strong>Measure</strong></td>
<td>• Identify customer needs. Illustrated a process performance indicator. Effectively discussed and interpreted a statistical process control chart.</td>
<td>• Identify customer needs. Illustrated a process performance indicator.</td>
<td>• Failed to identify customer needs. Failed to show a process performance indicator.</td>
</tr>
<tr>
<td><strong>Analyze</strong></td>
<td>• Identified all factors that have an impact on performance. Determined all primary factors. Included scatterplots, Pareto diagram or a cause-and-effect diagram.</td>
<td>• Identified some factors that have an impact on performance. Determined most primary factors.</td>
<td>• Failed to identify factors that have an impact on performance. Failed to determine primary factors.</td>
</tr>
</tbody>
</table>
| Improve | • Applied the principles of the scientific method to test changes.  
• Used an appropriate experimental design to test an improvement intervention.  
• Correctly determined how to implement pilot testing as part of an improvement intervention.  
• Evaluated results of an improvement intervention.  
| • Applied some of the principles of the scientific method to test changes.  
• Used an experimental design to test an improvement intervention.  
• Discussed how to implement pilot testing as part of an improvement intervention.  
| • Did not apply any of the principles of the scientific method to test changes.  
• Did not use any experimental design to test an improvement intervention.  |
| Control | • Identified mechanisms for ongoing monitoring of performance.  
• Discussed the need for contingency plans in the event that performance deteriorates.  
• Defined what should be archived for future reference.  
| • Identified mechanisms for ongoing monitoring of performance.  
• Discussed the need for contingency plans in the event that performance deteriorates.  
| • Failed to identify any mechanisms for ongoing monitoring of performance.  
• Failed to discuss the need for contingency plans in the event that performance deteriorates.  |

**Total**

Instructors will share grade sheets, including any comments/recommendations, with the student after completion of the presentation and grading.

All students' projects will be electronically provided on the shared drive or copied for each student and provided to them at the end of the class.

Note: Use the included Final Project Gradesheet for official record keeping of students' scores. Turn the Final Project Gradesheet pages and Grading Sheet in to the Training Specialist at the conclusion of the course.
# FINAL PROJECT GRADESHEET

**Student Name:**

**Course Date:**

<table>
<thead>
<tr>
<th>Meets expectations</th>
<th>Minor recommendations</th>
<th>Significant recommendations</th>
<th>Incomplete</th>
<th>Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

## Technical Content

1. The student presented a problem definition.

2. The student presented a measurement process.

3. The student presented an analysis process.

4. The student presented an improvement process.

5. The student presented a control process.

### Presentation Time (minutes)

<table>
<thead>
<tr>
<th>4 to 6</th>
<th>3 or 7</th>
<th>2 or 8</th>
<th>1 or 9</th>
<th>0 or over 9</th>
</tr>
</thead>
</table>

The student’s presentation was 4 to 6 minutes.

**Final Grade:** (Total points x2)

Comments/Recommendations:

(continue on reverse if necessary)

**Instructor:** ________________  **Instructor:** ________________
## EMS Quality Management Gradesheet

<table>
<thead>
<tr>
<th>Assignment:</th>
<th>Precourse</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>Course Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student:</td>
<td>Problem Statement</td>
<td>Needs Assessment</td>
<td>Self Assessment (optional)</td>
<td>Cultural Issues</td>
<td>Project Charter</td>
<td>Performance Indicator</td>
<td>Cause-Effect Diagram</td>
<td>Intervention Design</td>
<td>Final Project Presentation</td>
<td>Final Grade</td>
</tr>
</tbody>
</table>

### Assignment Points Key:

- **10**: On time; assignment questions/tasks addressed with appropriate thoroughness and depth.
- **8**: On time; assignment questions/tasks addressed with moderate depth and thoroughness.
- **6**: Late; or assignment questions/tasks addressed with appropriate or moderate depth and thoroughness.
- **3**: Late; and/or assignment questions/tasks addressed with minimal depth or thoroughness.
- **1**: Late and incomplete.
- **0**: Assignment not turned in.

**Final Grade = Assignment total points + Final Project points**

Instructor: __________________  Instructor: __________________