**Outcome 6.** Demonstrate knowledge and skills in using management tools to implement and evaluate safety, hygiene, and environmental programs

The assessment is performed with respect to the key abilities that the students are expected to acquire in specific courses that have been identified with respect to this outcome.

<table>
<thead>
<tr>
<th>Course</th>
<th>Key abilities</th>
<th>Performance indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAFM 501</td>
<td>Required course: safety performance drivers</td>
<td>Student will be able to describe typical industrial roles and accountability methods after successfully completing SAFM 501.</td>
</tr>
<tr>
<td>SAFM 534</td>
<td>Required course: comprehensive fire plan</td>
<td>Student will be able to describe the basic elements of fire behavior and chemistry as it relates to ignition prevention, heat transfer, fire growth, and fire dynamics after successfully completing SAFM 534.</td>
</tr>
<tr>
<td>SAFM 471</td>
<td>Elective course: comprehensive fleet management plan</td>
<td>Student will be able to identify and evaluate key risk features of a large motor fleet.</td>
</tr>
<tr>
<td>SAFM 478</td>
<td>Elective course: comprehensive wellness program</td>
<td>Student will be able to identify elements of wellness program(s), and evaluate employee progress for ERTW.</td>
</tr>
</tbody>
</table>

**Tools used:** SAFM assessment rubric; employer survey

**Data Collected:** SAFM assessment rubrics: student projects; homework; final grades
Surveys: Likert scale data

**Frequency of data collection:** SAFM Assessment rubrics: every semester
Employer survey: every third year

**Analysis Method:** Data reduced, tabulated and distributed as summaries to faculty and Visiting Committee members
Closing the loop: This outcome is subject to review based on performance criteria and metrics and specific action items are developed, if necessary, to revise the content of the courses.

Performance criteria and metrics:

a) SAFM Assessment rubrics: grades of 1-3 need no work on supporting courses
b) Employer survey: qualitative data (open-ended) written out verbatim, quantitative data tabulated
Assessment Tool:

SAFM Assessment Rubric
### Assessment Rubric
Course Objectives Against Student Learning Outcomes

**SAFM XXX: [semester, year]**

**Safety Function Integration**

<table>
<thead>
<tr>
<th>Course Objective</th>
<th>SLO</th>
<th>Quantitative Value (1-5)</th>
<th>Assessments Used (See key*)</th>
<th>Decision P: 3-5; F: 1-2</th>
<th>Remedial Action</th>
<th>Target Date for Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,2,</td>
<td></td>
<td>MQ1, P, E</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>4,6,</td>
<td></td>
<td>MQ2, P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td></td>
<td>MQ3, P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td></td>
<td>MQ4, 6, 7, 12, P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>3,6</td>
<td></td>
<td>MQ14, O</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>2,3,5,6</td>
<td></td>
<td>FQ2, 15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>1,3</td>
<td></td>
<td>FQ2, 22, 18</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

P, Pre
Key to assessment
M = Midterm exam
Q = Question
Final = Final exam
P = Project
Po = Portfolio
Pre = Presentation or oral reports
Man = Manual
E = Exercise or Abstract
C = Computation
RP = Role-Playing
FT = Field Trip
L = Lab
O = Other

**Closing the Loop:** Details of efforts to correct deficiencies (G. Winn, instructor)

**For [ semester, year] the following deficiencies were noted:**

**For [ semester, year], the following actions were taken to address deficiencies:**

Additional remedial work, if any:

Faculty discussion, if any:
<table>
<thead>
<tr>
<th>SAFM 501 Objectives</th>
<th>Safety Management Program Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Describe an organization’s safety mission</td>
<td>Outcome 1</td>
</tr>
<tr>
<td>2. Historical development of modern safety management</td>
<td>X</td>
</tr>
<tr>
<td>3. Roles of personnel involved in safety management</td>
<td>X</td>
</tr>
<tr>
<td>4. Major management theories related to safety management</td>
<td>X</td>
</tr>
<tr>
<td>5. Safety-performance drivers in the various roles in an organization</td>
<td>X</td>
</tr>
<tr>
<td>6. Models of accountability in safety management used to integrate the function</td>
<td>X</td>
</tr>
<tr>
<td>7. Measures of safety performance used to evaluate persons involved in safety-functional roles</td>
<td>X</td>
</tr>
<tr>
<td>8. Current examples of safety management and variants in industry</td>
<td>X</td>
</tr>
</tbody>
</table>

Addendum to Spring, 2011 Rubric Assessment:
Lecture notes:

Winn5012007
Rev: 82410
Assessment Tool:

SAFM Employer Survey
The Safety Management, Master of Science program at West Virginia University is conducting this survey, as part of an ongoing assessment program to evaluate its educational objectives and outcomes. We desire to continuously improve the quality of the educational experience that we provide to our students and believe your assessment of our safety management graduate can help guide us to make those improvements. Perhaps the best measure of the quality of the education and training we give our students is the evaluation of their employers/supervisors.

We request that you take the time to respond to this questionnaire. All responses are anonymous and will be held in the strictest confidence. We sincerely thank you for your time and effort in this assessment process. Please return your completed survey in the self-addressed, stamped envelope by October 15th.

Listed below are skills and abilities that we expect our graduates to possess at the time of graduation. Listed below are a series of questions addressing educational outcomes for the safety management program at West Virginia University. Please base your evaluation on the following scale.

1 = strongly disagree
2 = disagree
3 = neutral
4 = agree
5 = strongly agree

Circle your rating for each question.

If for some reason a topic does not pertain to you, leave it blank.

We are particularly interested in comments (good or bad) regarding the quality of this individual’s educational and professional training relative to graduate safety professionals from other institutions that have similar years of experience.

1. This individual has demonstrated adequate problem solving skills and abilities. (1 2 3 4 5)
2. This individual has demonstrated adequate understanding and application of safety management methodologies to successfully solve safety, health or environmental problems (1 2 3 4 5)

3. This individual has demonstrated adequate oral and written communication skills and abilities (1 2 3 4 5)

4. This individual has demonstrated adequate ability and skill to use computer hardware and software. (1 2 3 4 5)

5. This individual has demonstrated adequate ability and skill to work in project teams/groups. (1 2 3 4 5)
6. This individual has demonstrated adequate ability to work on interdisciplinary problems required.
(1 2 3 4 5) ____________________________
__________________________
__________________________
__________________________

7. This individual has demonstrated a level of understanding and awareness of ethics. (1 2 3 4 5)
__________________________
__________________________
__________________________

8. This individual has demonstrated a level of knowledge and awareness of contemporary issues affecting safety suitable for their current professional position. (1 2 3 4 5) ______
__________________________
__________________________
__________________________

9. This individual has demonstrated a level of commitment to and pursuit of self-learning/continuing education. (1 2 3 4 5) ____________________________
__________________________
__________________________
__________________________
__________________________

[survey ends]