Workforce Education Implementation Evaluation Expert Panel Rating

Review Criteria: Relevancy to Industry

You will review the relevance of instructional materials to industry practices using this online rubric and the following materials from the scoring notebook:

- The college program's Student Learning Outcomes (SLOs)
- Each course syllabus
- Associated course chapter summaries
- Associated course key terms

Rating Scale

- All items are rated on a five-point scale from 0 to 4.
- Zero means none of the characteristics described in the question are reflected in the materials.
- Four indicates that all of the characteristics described in the question are reflected in the material.
- The NA means "Not Applicable" and DK means "Don't Know". These should only be used in rare circumstances.

*** Please select your pair number:**

- ○ 1: Pair 1
- ○ 2: Pair 2
- ○ 3: Pair 3

*** Please enter both Rater 1 and Rater 2 email addresses in the space provided.***(Please add a comma between the two emails.)*

*** Referring to your scoring notebook, please select the advanced manufacturing course you will be scoring from the following list:**

- ○ Training Course X
- ○ Course 1
- ○ Course 2
- ○ Course 3

Workforce Education Implementation Evaluation Expert Panel Rating

Critical Units for Training Course

Referring to your scoring notebook, please choose the critical unit from this course that you will be rating. A "critical unit" is one that the instructors identified as containing central content needed to pass the course.

- ○ Critical Unit 1 - (Training Unit 1)
- ○ Critical Unit 2 - (Training Unit 2)
- ○ Critical Unit 3 - (Training Unit 3)

Workforce Education Implementation Evaluation Expert Panel Rating

Materials with Workplace

Please review the syllabus, chapter summaries, and key terms for this critical unit and then enter the ratings below.

I. Alignment of Materials with Workplace

1.1. Select the rating for the materials from the following list. *(Please mark one for each row.)*

	No	Somewhat	Yes
a. Do the materials reflect accurate industry and professional practices?	○	○	○
b. Do the materials reflect current industry and professional practices?	○	○	○
c. Do the materials reflect anticipated industry and professional practices?	○	○	○
d. Do the materials reflect concepts that are essential to the industry?	○	○	○

At the bottom of this page, you will see 13 learning objectives of the college's Advanced Manufacturing program. Please skim these learning objectives and reflect on the content covered in the critical unit. Then rate their level of alignment on the critical unit on the 0-4 scale.

*** 1.2. To what extent do the learning objectives align with appropriate industry standards and practices? Use the rating as a guide for each critical unit.** *(Please mark one rating for each row.)*

0 - Materials ***do not*** align learning objectives with appropriate industry standards and practices.

1 - Materials are ***weak*** at aligning learning objectives with appropriate industry standards/practices.

2 - Materials are ***adequate*** at aligning learning objectives with appropriate industry standards/practices.

3 - Materials are ***good*** at aligning learning objectives with appropriate industry standards/practices.

4 - Materials are ***excellent*** at aligning learning objectives with appropriate industry standards/practices.

The learning objectives below are examples; enter your own program's learning objectives in each line below.

	NA/DK	0	1	2	3	4
a. Read and interpret electrical and fluid power schematics.	○	○	○	○	○	○
b. Identify industrial control components.	○	○	○	○	○	○
c. Identify components related to pneumatic and hydraulic systems.	○	○	○	○	○	○
d. Install, repair, and troubleshoot pneumatic and hydraulic systems.	○	○	○	○	○	○
e. Perform basic maintenance techniques for industrial equipment.	○	○	○	○	○	○
f. Read and interpret multi-view drawings and shop drawings.	○	○	○	○	○	○
g. Perform basic operations of machine tool technology.	○	○	○	○	○	○
h. Perform basic maintenance techniques for industrial equipment.	○	○	○	○	○	○
i. Perform basic welding techniques using various welding operations.	○	○	○	○	○	○
j. Demonstrate the knowledge necessary for the day-to-day process of maintaining and repairing modern machinery in industrial manufacturing facilities and non-manufacturing facilities.	○	○	○	○	○	○
k. Demonstrate the diagnostic skills necessary to maintain manufacturing processes.	○	○	○	○	○	○
l. Apply problem-solving techniques to diagnose the causes of malfunctions.	○	○	○	○	○	○
m. Demonstrate an understanding of the basic skills and knowledge to further enhance learning in an industrial maintenance setting.	○	○	○	○	○	○

1.3. Please summarize the reasons for your rating in the space provided.

Workforce Education Implementation Evaluation Expert Panel Rating

Technical Rigor

Now you will review the **technical** rigor of the instructional materials for this critical unit. You will use TECA rubric segments to rate the following materials, which are found in the scoring notebook.

- Assignments, with examples of student work
- Resources, such as PowerPoints for lectures and textbook chapters

Please focus on how well the materials provide an opportunity to learn core knowledge and skills for an entry-level technician. For each of these ratings, you are encouraged to talk and record your reasons for your ratings in an open-ended box in the online survey. Researchers will be recording your key points while listening to your discussions.

Rating Scale

- All items are rated on a five-point scale from 0 to 4.
- Zero means none of the characteristics described in the question are reflected in the materials.
- Four indicates that all of the characteristics described in the question are reflected in the material.
- The NA means “Not Applicable” and DK means “Don’t Know”. These should only be used in rare circumstances.

Workforce Education Implementation Evaluation Expert Panel Rating

Technical Rigor Criteria for Assignments and Resources

II. Application of Knowledge

2.1. Select the rating for the materials from the following list. *(Please mark one for each row.)*

	No	Somewhat	Yes
a. Do the materials require students to apply knowledge?	○	○	○
b. Do the materials require students to perform a task?	○	○	○

2.2. To what extent do the materials make students demonstrate the knowledge and skills associated with industry standards and practices? Use the rating as a guide for each critical unit. *(Please mark one rating for each row.)*

Likert Scale:

	NA/DK	0	1	2	3	4
Answer	○	○	○	○	○	○

0: Materials ***do not*** demonstrate knowledge and skills associated with industry standards.
1: Materials are ***weak*** at demonstrating knowledge and skills associated with industry standards.
2: Materials are ***adequate*** at demonstrating knowledge and skills associated with industry standards.
3: Materials are ***good*** at demonstrating knowledge and skills associated with industry standards.
4: Materials are ***excellent*** at demonstrating knowledge and skills associated with industry standards.

2.3. Please summarize the reasons for your rating in the space provided.

III. Realistic Use of Technology

3.1. Select the rating for the materials from the following list. *(Please mark one for each row.)*

	No	Somewhat	Yes
a. Do the materials require students to use technology (e.g., tools, equipment, software)?	○	○	○
b. Do the materials explain why technology or certain equipment is used?	○	○	○
c. Do the materials require students to fix or troubleshoot equipment?	○	○	○
d. Do the materials require students to use safety procedures?	○	○	○

3.2. To what extent do the materials use technology? That is, do the materials use technology (e.g., tools, instruments, machines, hardware, software) in the same way as it is actually used in industry practices?

Likert Scale:

	NA/DK	0	1	2	3	4
Answer	○	○	○	○	○	○

0: Materials ***do not*** use technology in a realistic way.
1: Materials are ***weak*** at using technology in a realistic way.
2: Materials are ***adequate*** at using technology in a realistic way.
3: Materials are ***good*** at using technology in a realistic way.
4: Materials are ***excellent*** at using technology in a realistic way.

3.3. Please summarize the reasons for your rating in the space provided.

<hr> **IV. Rigorous Content**

4.1. Select the rating for the materials from the following list. *(Please mark one for each row.)*

	No	Somewhat	Yes
a. Are students required to apply rigorous mathematical concepts in new ways?	○	○	○
b. Do the materials require the students to solve problems that require understanding of science content?	○	○	○
c. Do the materials require the students to think critically?	○	○	○
e. Are students asked to apply technological concepts to their work, e.g., Is there a better way to do this?	○	○	○

4.2. To what extent do the materials require students to learn rigorous content such as higher order thinking skills and in-depth understanding of the science, mathematics, engineering and technological concepts?

Likert Scale:

	NA/DK	0	1	2	3	4
Answer	○	○	○	○	○	○

0: Materials ***do not*** require students to learn rigorous content.
1: Materials are ***weak*** at requiring students to learn rigorous content.
2: Materials are ***adequate*** at requiring students to learn rigorous content.
3: Materials are ***good*** at requiring students to learn rigorous content.
4: Materials are ***excellent*** at requiring students to learn rigorous content.

4.3. Please summarize the reasons for your rating in the space provided.

Workforce Education Implementation Evaluation Expert Panel Rating

Academic Rigor Criteria for Assignments and Resources

Now you will review the **academic** rigor of the instructional materials for this critical unit.

V. Instructional Strategies

5.1. Select the rating for the materials from the following list. *(Please mark one for each row.)*

	No	Somewhat	Yes
a. Would you know how to use these materials to teach?	○	○	○
b. Do the materials seem adaptable to other situations (e.g., grade, student population or content standard)?	○	○	○
c. Can the activities be used by individuals as well as small groups and large groups of students?	○	○	○
d. Can information be investigated in alternative ways?	○	○	○
e. Can information be presented in alternative ways?	○	○	○

5.2. To what extent do the materials support instructional strategies that actively engage all learners?

Likert Scale:

	NA/DK	0	1	2	3	4
Answer	○	○	○	○	○	○

0: Materials ***do not*** support effective instructional strategies that actively engage all learners.
1: Materials are ***weak*** at supporting effective instructional strategies that actively engage all learners.
2: Materials are ***adequate*** at supporting effective instructional strategies that actively engage all learners.
3: Materials are ***good*** at supporting effective instructional strategies that actively engage all learners.
4: Materials are ***excellent*** at supporting effective instructional strategies that actively engage all learners.

5.3. Please summarize the reasons for your rating in the space provided.

<hr> **VI. Problem Solving**

6.1. Select the rating for the materials from the following list. *(Please mark one for each row.)*

	No	Somewhat	Yes
a. Are students required to recognize particular types of problems?	○	○	○
b. Do the materials contain activities that require students to perform multiple steps before arriving at a solution?	○	○	○
c. Do the materials contain activities that require students to collect information or data before making a decision?	○	○	○
d. Are there activities that require students to consider constraints, risks, or alternatives before making a decision?	○	○	○

6.2. To what extent do the materials develop problem solving and critical thinking skills? That is, do the materials encourage students to learn how to approach problems, to think both creatively and analytically, and to make knowledge based decisions?

Likert Scale:

	NA/DK	0	1	2	3	4
Answer	○	○	○	○	○	○

0: Materials ***do not*** develop problem solving and critical thinking skills.
1: Materials are ***weak*** at developing problem solving and critical thinking skills.
2: Materials are ***adequate*** at developing problem solving and critical thinking skills.
3: Materials are ***good*** at developing problem solving and critical thinking skills.
4: Materials are ***excellent*** at developing problem solving and critical thinking skills.

6.3. Please summarize the reasons for your rating in the space provided.

<hr> **VII. Integration of General Education Content**

7.1. Select the rating for the materials from the following list. *(Please mark one for each row.)*

	No	Somewhat	Yes
a. Do the materials require students to locate, understand and interpret written information in professional documents, manuals, web sites or books?	○	○	○
b. Are students required to communicate technical concepts verbally, in writing or in visual aides such as charts or graphs?	○	○	○

7.2. To what extent do the materials integrate general education skills such as English, technology, and written and oral communication?

Likert Scale:

	NA/DK	0	1	2	3	4
Answer	○	○	○	○	○	○

0: Materials ***do not*** integrate general education skills.
1: Materials are ***weak*** at integrating general education skills.
2: Materials are ***adequate*** at integrating general education skills.
3: Materials are ***good*** at integrating general education skills.
4: Materials are ***excellent*** at integrating general education skills.

7.3. Please summarize the reasons for your rating in the space provided.

<hr> **VIII. Personal Qualities**

8.1. Select the rating for the materials from the following list. *(Please mark one for each row.)*

	No	Somewhat	Yes
a. Do the materials require students to coordinate their efforts with others?	○	○	○
b. Are there activities or assessments that require students to meet deadlines?	○	○	○
c. Are there opportunities for students to demonstrate individual responsibility?	○	○	○
d. Do the materials contain activities that require students to manage their own behaviors?	○	○	○
e. Do the materials contain activities that require students to set their own levels of personal performance?	○	○	○

8.2. How well do the materials develop personal qualities required for professional employment? These might include character traits, behaviors and attitudes that are needed for personal growth and professional development such as responsibility, self-management and integrity.

Likert Scale:

	NA/DK	0	1	2	3	4
Answer	○	○	○	○	○	○

0: Materials ***do not*** develop personal qualities needed for professional employment.
1: Materials are ***weak*** at developing personal qualities needed for professional employment.
2: Materials are ***adequate*** at developing personal qualities needed for professional employment.
3: Materials are ***good*** at developing personal qualities needed for professional employment.
4: Materials are ***excellent*** at developing personal qualities needed for professional employment.

8.3. Please summarize the reasons for your rating in the space provided.

<hr> **IX. Diversity**

9.1. Select the rating for the materials from the following list. *(Please mark one for each row.)*

	No	Somewhat	Yes
a. Do the materials include examples from a variety of types of workplaces and settings?	○	○	○
b. Do the materials encourage students to understand how to work with people from different backgrounds?	○	○	○
c. Do the materials reflect the growing diversity of the workforce?	○	○	○
d. Do the materials include references that broaden the students' awareness of different cultural and socioeconomic groups?	○	○	○

9.2. To what extent do the materials reflect different work experiences, workers of different backgrounds, and diverse social settings?

Likert Scale:

	NA/DK	0	1	2	3	4
Answer	○	○	○	○	○	○

0: Materials ***do not*** reflect diverse work experiences, different backgrounds, or social settings.
1: Materials are ***weak*** at reflecting diverse work experiences, different backgrounds, or social settings.
2: Materials are ***adequate*** at reflecting diverse work experiences, different backgrounds, or social settings.
3: Materials are ***good*** at reflecting perspectives of different diverse work experiences, different backgrounds, or social settings.
4: Materials are ***excellent*** at reflecting perspectives of different diverse work experiences, different backgrounds, or social settings.

9.3. Please summarize the reasons for your rating in the space provided.

Workforce Education Implementation Evaluation Expert Panel Rating

Technical Rigor Criteria for Assessments

Now you will review the **technical** rigor of the assessments for this critical unit. You will use TECA rubric segments to rate the following materials, which are found in the scoring notebook.

- Assessments, such as quizzes, midterms, project rubrics, and final exams

Workforce Education Implementation Evaluation Expert Panel Rating

Technical Rigor Criteria for Assessments

Please focus on how well the assessment materials assess students on important industry knowledge and skills. For each of these ratings, you are encouraged to talk and record their reasons for their ratings in an open-ended box in the online survey. Researchers will be recording key points while listening to your discussions.

X. Quality Performance

10.1. Select the rating for the materials from the following list. *(Please mark one for each row.)*

	No	Somewhat	Yes
a. Do the materials provide a variety of examples of professional work?	○	○	○
b. Do the materials contrast high and low quality work?	○	○	○
c. Do the materials discuss specific quality standards or guidelines?	○	○	○

10.2. To what extent do the materials help the learner to distinguish the difference between high quality and poor quality performance?

Likert Scale:

	NA/DK	0	1	2	3	4
Answer	○	○	○	○	○	○

0: Materials ***do not*** distinguish between low quality and high quality performance.
1: Materials are ***weak*** at distinguishing between low quality and high quality performance.
2: Materials are ***adequate*** at distinguishing between low quality and high quality performance.
3: Materials are ***good*** at distinguishing between low quality and high quality performance.
4: Materials are ***excellent*** at distinguishing between low quality and high quality performance.

10.3. Please summarize the reasons for your rating in the space provided.

Workforce Education Implementation Evaluation Expert Panel Rating

Academic Rigor Criteria for Assessments

Now you will review the **academic** rigor of the assessments for this critical unit.

XI. Assessment

11.1. Select the rating for the materials from the following list. *(Please mark one for each row.)*

	No	Somewhat	Yes
a. Are the assessments closely aligned with the learning objectives?	○	○	○
b. Do the required activities and assessments have more than one correct answer?	○	○	○
c. Do the assessments provide feedback to the student and an opportunity to improve performance?	○	○	○
d. Do the assessments integrate specific professional or industry skills?	○	○	○
e. Do the assessments allow students to demonstrate their understanding and abilities in different ways?	○	○	○
f. Do the assessments have activities that use real world situations?	○	○	○
g. Do the assessments provide feedback to the instructor that could be used to improve the materials?	○	○	○

11.2. To what extent do the assessments or required activities measure the adequacy of the student's knowledge and skills required in the workplace?

Likert Scale:

	NA/DK	0	1	2	3	4
Answer	○	○	○	○	○	○

0: The assessments ***do not*** measure the knowledge and skills required in the workplace.
1: Assessments are ***weak*** at measuring the knowledge and skills required in the workplace.
2: Assessments are ***adequate*** at measuring the knowledge and skills required in the workplace.
3: Assessments are ***good*** at measuring the knowledge and skills required in the workplace.
4: Assessments are ***excellent*** at measuring the knowledge and skills required in the workplace.

11.3. Please summarize the reasons for your rating in the space provided.

Workforce Education Implementation Evaluation Expert Panel Rating

Holistic Ratings

The following items are holistic ratings.

- These are broad and are meant to capture the general quality of the materials.
- These questions are to be answered by all the reviewers.

XII. Industry Standards & Practices:

12.1. Materials should clearly reflect learning objectives that are based on current business, industry and technology standards and practices.

Likert Scale:

	NA/DK	0	1	2	3	4
Answer	○	○	○	○	○	○

0: The materials ***do not*** reflect any industry standards and practices.
1: The materials are ***weak*** at reflecting industry standards and practices.
2: The materials are ***adequate*** at reflecting industry standards and practices.
3: The materials are ***good*** at reflecting industry standards and practices.
4: The materials are ***excellent*** at reflecting industry standards and practices.

12.2. Please summarize the reasons for your rating in the space provided.

<hr> **XIII. Real World Curriculum:**

13.1. Materials should engage learners in ways to help them understand the reality of the profession they seek. Instruction should be related to workplace needs. Materials should use tasks that are real activities that people perform while "on the job".

Likert Scale:

	NA/DK	0	1	2	3	4
Answer	○	○	○	○	○	○

0: The materials ***do not*** engage the learner in real world tasks.
1: The materials are ***weak*** at engaging the learner in real world tasks.
2: The materials are ***adequate*** at engaging the learner in real world tasks.
3: The materials are ***good*** at engaging the learner in real world tasks.
4: The materials are ***excellent*** at engaging the learner in real world tasks.

13.2. Please summarize the reasons for your rating in the space provided.

<hr> **XIV. Workplace Competencies:**

14.1. How well do the materials enable students to develop the high performance skills needed to succeed in a high performance workplace? The Secretary's Commission on Achieving Necessary Skills (SCANS) was appointed by the Secretary of Labor to determine the skills people need to succeed in the world of work. According to the SCANS Report high performance workers need a solid foundation in basic literacy (reading, writing, listening and speaking), computational skills, applying technology, and understanding social organizational and technological systems. They also need thinking skills to put knowledge and resources to work and the personal qualities that make them dedicated, reliable and able to work with others.

Likert Scale:

	NA/DK	0	1	2	3	4
Answer	○	○	○	○	○	○

0: The materials ***do not*** develop workplace skills.
1: The materials are ***weak*** at developing workplace skills.
2: The materials are ***adequate*** at developing workplace skills.
3: The materials are ***good*** at developing workplace skills.
4: The materials are ***excellent*** at developing workplace skills.

14.2. Please summarize the reasons for your rating in the space provided.

<hr> **XV. Access to In Depth Understanding:**

15.1. How well do the materials allow all learners to acquire in depth understanding? Such practices include instructional strategies that actively engage students and allow them to learn in ways consistent with their preferences. The materials also require students to synthesize, generalize and evaluate information and to develop complex understandings of the content by exploring connections and relationships. In addition, materials that allow access to in-depth understanding are also well organized, easy to follow and contain assessments and activities that are aligned with the content.

Likert Scale:

	NA/DK	0	1	2	3	4
Answer	○	○	○	○	○	○

0: The materials ***do not*** support in depth understanding.
1: The materials are ***weak*** at supporting in depth understanding.
2: The materials are ***adequate*** at supporting in depth understanding.
3: The materials are ***good*** at supporting in depth understanding.
4: The materials are ***excellent*** at supporting in depth understanding.

15.2. Please summarize the reasons for your rating in the space provided.

Workforce Education Implementation Evaluation Expert Panel Rating

Overall Ratings

The following items are an overall rating.

- This is a summary assessment of the effectiveness of the materials in helping students learn the knowledge and skills and/or practices needed to be successful in the technical workplace.
- Reviewers are asked to provide both a rating and the evidence to support the rating.
- This question is to be answered by all reviewers.

XVI. Please rate the effectiveness of the materials in having students learn the knowledge and skills or practices needed to be successful in the technical workplace. Select the description that best characterizes your overall assessment. *This rating is not intended to be an average of all the previous ratings, but your overall judgment of quality and likely impact of the materials. Please describe the evidence that supports your rating in the space provided.*

16.1. To what extent will the materials help students learn the knowledge and skills or practices needed to be successful in the technical workplace?

Likert Scale:

	NA/DK	0	1	2	3	4
Answer	○	○	○	○	○	○

0: The materials ***will not*** help students learn knowledge and skills or practices needed to be successful in the technical workplace.
1: The materials ***will be weak*** at helping students learn knowledge and skills or practices needed to be successful in the technical workplace.
2: The materials ***will be adequate*** at helping students learn knowledge and skills or practices needed to be successful in the technical workplace.
3: The materials ***will be good*** at helping students learn knowledge and skills or practices needed to be successful in the technical workplace.
4: The materials ***will be excellent*** at helping students learn knowledge and skills or practices needed to be successful in the technical workplace.

16.2. Please summarize the reasons for your rating in the space provided.

Workforce Education Implementation Evaluation Expert Panel Rating

Other Topics/Comments

17. Are there any additional topics you would like to address?

18. Please provide any overall comments you have here.