

**Outcome G.** Graduates will have an ability to communicate effectively.

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.

Course	Performance indicators
ENGR 102, MAE 434, 475	Effectiveness of written-graphical communication.
ENGR 102, MAE 434, 475	Effectiveness of oral-graphical communication
ENGR 102, MAE 434, 475	Grade distribution.

Tools used: Course assessment by faculty, Alumni survey, Employer survey.

Data Collection: The data are collected every semester based on the course offerings.

Frequency of data collection: The data are collected every time courses are taught.

Data Analysis: The data obtained are analyzed every year.

Closing the loop: This outcome is subject to review every year based on performance criteria and metrics and specific action items are developed, if necessary, to revise the content of the courses. The analyzed data are presented separately to the following groups in meetings.

- a) Feedback to students on all assignments

b) Feedback to faculty, particular from majors.

Outcome and Performance Indicator		Performance Indicator Rubric				
<p><b>Outcome G</b> “Graduates will have an ability to communicate effectively.”</p>		<b>Poor</b>	<b>Fair</b>	<b>Good</b>	<b>Very Good</b>	<b>Excellent</b>
PI1	Effectiveness of written-graphical communication	No write up organization poor expression	Poor write up organization and barely acceptable expression	Some organization acceptable expression	Clear organization and acceptable expression	Clear organization and clear objective expression
PI2	Effectiveness of oral-graphical communication	Unprepared oral presentation	Unorganized oral presentation	Somewhat organized but marginal delivery of presentation	Organized and clear delivery of presentation	Organized and clear presentation and clear graphics.
PI3	Grade distribution	1 (F)	2 (D)	3 (C)	4 (B)	5 (A)
<p><b>Performance Indicator 1. (PI1).</b> “<u>Effectiveness of written communication.</u>” Engineering professional practice requires effective written and graphical descriptions for reports of projects, designs, and results of testing and processes. The following rubrics are used to assess this indicator:</p> <ul style="list-style-type: none"> <li>- <b>Poor.</b> This rubric is used when reports or documents related to specific engineering assignments are unorganized and/or poorly written with poor expression of graphical descriptions.</li> <li>- <b>Fair.</b> This rubric is used when reports or documents related to specific engineering assignments are barely acceptable but lack quality in organization and expression.</li> <li>- <b>Good.</b> This rubric is used when reports or documents related to specific engineering assignments are acceptable in organization and expression.</li> <li>- <b>Very Good.</b> This rubric is used when reports or documents related to specific engineering assignments are well written, well organized and provide descriptions with clear expression.</li> <li>- <b>Excellent.</b> This rubric is used when reports or documents are very well written, organized, provide descriptions with clear expression and professionally presented.</li> </ul> <p><b>Performance Indicator 2. (PI2).</b> “<u>Effectiveness of oral-graphical communication.</u>” Engineering professional practice often requires effective oral and graphical communication to present projects, designs, and results of testing and processes. The following rubrics are used to assess this indicator:</p> <ul style="list-style-type: none"> <li>- <b>Poor.</b> This rubric is used when reports or documents related to specific engineering assignments do not provide evidence of an oral or graphical presentation.</li> </ul>						

- **Fair.** This rubric is used when reports or documents related to specific engineering assignments provide evidence of an oral or graphical presentation without details on its organization and few visual elements.
- **Good.** This rubric is used when reports or documents provide evidence of an oral or graphical presentation with appropriate organization and quality visuals.
- **Very Good.** This rubric is used when reports or documents provide evidence of well-organized oral and graphical presentation with appropriate quality visuals elements.
- **Excellent.** This rubric is used when in addition to the previous rubric; there is evidence of presentation clarity and effectiveness.

**Performance Indicator 3. (PI3).** Grade distribution from class on applicable assignments or exercises. A, B, C, D ,F