

Outcome H. Graduates will have the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental and societal context.

Course	Performance indicators
MAE 320, 423, 476	Awareness and understanding of global implications.
MAE 320, 423, 476	Awareness and understanding of societal implications.
MAE 320, 423, 476	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 align="center">Outcome H</p> <p>“Graduates will have the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental and societal context.”</p>		Poor	Fair	Good	Very Good	Excellent
PI1	Awareness and understanding of global implications	No notion of Global implications	Global Implications mentioned	Global implications addressed	Global implications addressed and assessed	Global implications addressed, assessed & discussed
PI2	Awareness and understanding of societal implications	No notion of societal issues	Societal issue mentioned	Societal issue addressed	Societal issue addressed and assessed	Societal issue addressed, assessed & discussed
PI3	Grade distribution	1 (F)	2 (D)	3 (C)	4 (B)	5 (A)
<p>Performance Indicator 1. (PI1). <u>“Awareness and understanding of global implications.”</u> Engineering is a global profession which requires an awareness of the global context and the impact of engineering problems and solutions. The following rubrics are used to assess this indicator:</p> <ul style="list-style-type: none"> - Poor. This rubric is used when an assignment which offers the opportunity to address global issues produces no evidence addressing global issues or the implications of engineering problems and solutions in a global context. - Fair. This rubric is used when an assignment produces some evidence addressing global issues or mentions the implications of engineering problems and solutions in a global context. - Good. This rubric is used when an assignment produces evidence of understanding of global issues and addresses engineering solutions in a global context. - Very Good. This rubric is used when an assignment produces evidence of understanding of global issues and produces engineering solutions with implications in a global context. - Excellent. This rubric is used when an assignment produces clear evidence of global issues being addressed and integrated as part of an engineering solution, and includes a narrative on implications in a global context. 						

Performance Indicator 2. (PI2). “Awareness and understanding of societal implications.” Engineering problem formulations and solutions typically have an impact on society. Engineers must be able to identify and understand impact of engineering solutions on society. The following rubrics are used to assess this indicator:

- **Poor.** This rubric is used when an assignment which offers the opportunity to address societal issues produces no evidence addressing these issues or the implications of engineering problems and solutions in a societal context.
- **Fair.** This rubric is used when an assignment produces some evidence addressing societal issues or mentions the implications of engineering problems and solutions in a societal context.
- **Good.** This rubric is used when an assignment produces evidence of understanding of societal issues and addresses engineering solutions in a societal context.
- **Very Good.** This rubric is used when an assignment produces evidence of understanding of societal issues and produces engineering solutions with implications in a societal context.
- **Excellent.** This rubric is used when an assignment produces clear evidence of societal issues being addressed and integrated as part of an engineering solution, and includes a narrative on implications in a societal context.

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