

(a) Apply knowledge of math, science, and engineering

Previous Curriculum Action Review Summary

- The Curriculum Action calling for the introduction of a new textbook for MATH 373 was completed in 2007.

Curriculum Review Summary

- The scores for Outcome (a) remained the same for 2007 as for 2006.
- New program faculty could benefit from mentoring and better integration with experienced faculty more familiar with the interfaces within the curriculum. Faculty training and mentoring could have significant affects on student performance.

<i>Code</i>	<i>Curriculum Action Title</i>	<i>Curriculum Action Brief Description</i>
A	New Faculty Curriculum Mentoring and Training	New faculty mentoring and training for the classroom and curriculum interfaces is needed.

Previous Assessment Process Action Review Summary

- The 2006 Assessment Process Actions Needed called for the development and implimentation of a Local Senior Exit Exam, now termed the Local Exam given to all seniors as they near graduation (usually during their last few weeks of course work). This action was completed during the year and is used for many Outcomes including Outcome (a). It is an excellent objective measurement.

Assessment Process Review Summary

- The drop in scores from 2005 and 2006 may be related to different reviewers as faculty turnovers occur. Faculty training in the Continuous Improvement Process is essential and should continue with renewed emphasis.

<i>Code</i>	<i>Assessment Process Action Title</i>	<i>Assessment Process Action Brief Description</i>
A	New Faculty Continuous Process Training	New faculty will be trained in the program's Continuous Improvement assessment processes and practices.

(b) Design and conduct experiments analyze and interpret data and information

Previous Curriculum Action Review Summary

- Introduce questions related to Outcome (b) into Senior Survey.

Curriculum Review Summary

- More SPC assignments were introduced into the curriculum.
- Senior Survey questions were added.
- No actions needed.

<i>Code</i>	<i>Curriculum Action Title</i>	<i>Curriculum Action Brief Description</i>
N		

Previous Assessment Process Action Review Summary

- No actions needed.

Assessment Process Review Summary

- Process seems satisfactory.
- No assessment actions needed.
- It is noted that very few instruments are used for Outcome (b) in odd years.

<i>Code</i>	<i>Assessment Process Action Title</i>	<i>Assessment Process Action Brief Description</i>
W	Few instruments in odd years.	More instruments may be needed to assess Outcome (b) in odd years.

(c) Optimally select material and design materials treatment and production processes

Previous Curriculum Action Review Summary

There were no Curriculum Actions for Outcome (c) in 2007.

Curriculum Review Summary

- Student performance is essentially unchanged.
- As noted for other outcomes, there is a general need for the new faculty to be trained in the Continuous Improvement Process and mentored in the curriculum interfaces. Variations in either of these items could explain the noted recent declines in outcome scores and so are noted here and in the Assessment Process review.

<i>Code</i>	<i>Curriculum Action Title</i>	<i>Curriculum Action Brief Description</i>
-------------	--------------------------------	--

Previous Assessment Process Action Review Summary

- The 2006 Assessment Process Actions Needed called for the development and implimentation of a Local Senior Exit Exam, now termed the Local Exam given to all seniors as they near graduation (usually during their last few weeks of course work). This action was completed during the year and is used for many Outcomes including Outcome (a). It is an excellent objective measurement.

- As noted for other outcomes, there is a general need for the new faculty to be trained in the Continuous Improvement Process and mentored in the curriculum interfaces. Variations in either of these items could explain the noted declines in outcome scores and so are noted here and in the Assessment Process review.

Assessment Process Review Summary

- Assessment triangulation was achieved for Outcome (c) assessment. There is some concern by some faculty members that the program may become too reliant on the Senior Exit Exam (Local Exam).

- Training of new faculty in the Continuous Improvement Process is needed to provide for the consistent scoring via metrics.

<i>Code</i>	<i>Assessment Process Action Title</i>	<i>Assessment Process Action Brief Description</i>
A	New Faculty Continuous Process Training	New faculty will be trained in the program's Continuous Improvement Process and practices.

(d) Function well on teams

Previous Curriculum Action Review Summary

- There were no Curriculum Actions Needed for 2007 for Outcome (d)

Curriculum Review Summary

- The drop in Outcome (d) assessment scores from 2005 and 2006 may be related to different reviewers as faculty turnovers occur. These scores are mostly determined by student input so are not as sensitive to faculty input and training as are other outcomes.
- Nevertheless, faculty training in the Continuous Improvement Process is essential and should continue.
- The new Senior Exit Exam is attempts to use several metrics to assess Outcome (d).

<i>Code</i>	<i>Curriculum Action Title</i>	<i>Curriculum Action Brief Description</i>
A	New Faculty Continuous Process Training	New faculty will be trained in the program's Continuous Improvement assessment processes and practices.

Previous Assessment Process Action Review Summary

- The 2006 Assessment Process Actions Needed called for the development and implementation of a Local Senior Exit Exam, now termed the Local Exam given to all seniors as they near graduation (usually during their last few weeks of course work). This action was completed during the year and is used for many Outcomes including Outcome (d). It is an excellent objective measurement.
- As noted for other outcomes, there is a general need for the new faculty to be trained in the Continuous Improvement Process and mentored in the curriculum interfaces. Variations in either of these items could explain the noted declines in outcome scores and so are noted here and in the Assessment Process review.

Assessment Process Review Summary

- The drop in scores from 2005 and 2006 may be related to different reviewers as faculty turnovers occur. Faculty training in the Continuous Improvement Process is essential and should continue with renewed emphasis.

<i>Code</i>	<i>Assessment Process Action Title</i>	<i>Assessment Process Action Brief Description</i>
A	New Faculty Continuous Process Training	New faculty will be trained in the program's Continuous Improvement assessment processes and practices.

(e) Identify, formulate, and solve engineering problems

Previous Curriculum Action Review Summary

- No Curriculum Actions were identified for Outcome (e) for 2007.

Curriculum Review Summary

- Students continue to perform well solving engineering problems.
- The senior class of 2007 had a very high GPA. It is noted to watch performance for next year.

<i>Code</i>	<i>Curriculum Action Title</i>	<i>Curriculum Action Brief Description</i>
W	High GPA of 2007 Class	* Watch student performance in Outcome (e) in 2008.

Previous Assessment Process Action Review Summary

- No actions were proposed for 200

Assessment Process Review Summary

- Assessment process appears adequate.
- In 2005, it was noted that only a small number of instruments were used in odd years. This has been addressed by adding questions to the Local Exam.

<i>Code</i>	<i>Assessment Process Action Title</i>	<i>Assessment Process Action Brief Description</i>
N		

(f) Know professional and ethical responsibilities and practices

Previous Curriculum Action Review Summary

No items specific to Curriculum Action Review for ABET criterion (f) were noted.

Curriculum Review Summary

The student's performance was split between areas in which said students performed exceedingly well and those in which they performed adequately.

<i>Code</i>	<i>Curriculum Action Title</i>	<i>Curriculum Action Brief Description</i>
N		

Previous Assessment Process Action Review Summary

No items specific to Assessment Process Action Review for ABET criterion (f) were noted.

Assessment Process Review Summary

The number of assessment instruments are now plentiful, but the split in the scores indicates that more direct assessment of ethics may be desirable.

<i>Code</i>	<i>Assessment Process Action Title</i>	<i>Assessment Process Action Brief Description</i>
N		

(g) Communicate effectively

Previous Curriculum Action Review Summary

- No Action needed.

Curriculum Review Summary

- There are little differences among instruments, performance criteria and instrument assessors. Overall, it appears that the curriculum is performing very well.

<i>Code</i>	<i>Curriculum Action Title</i>	<i>Curriculum Action Brief Description</i>
N	No action required.	

Previous Assessment Process Action Review Summary

- No previous actions were required from the previous review cycle.

Assessment Process Review Summary

- This Outcome utilized eight different instruments, and thus, is very robust in terms of the amount of data collected. The data is consistent with previous years' data for this outcome.

<i>Code</i>	<i>Assessment Process Action Title</i>	<i>Assessment Process Action Brief Description</i>
N	No action required.	

(h) Know engineering's global societal context

Previous Curriculum Action Review Summary

No Curriculum Action Review actions were suggested for outcome (h).

- A Curriculum Action Review watch item was given in 2006 regarding student performance.

Curriculum Review Summary

During 2007, the global and societal context students assessed were not quite up to the level desired. This was true in the previous year also, indicating this area may need some curricular work.

- A watch item is felt to be necessary as new faculty have recently been hired and as these faculty begin to understand the what is required in Outcome (h) the student's understanding of global and societal context should improve.

<i>Code</i>	<i>Curriculum Action Title</i>	<i>Curriculum Action Brief Description</i>
W	Student Performance	Student performance has not been subpar, but has been less than desired for three years.

Previous Assessment Process Action Review Summary

No Assessment Process Action Items were given for 2007. An Assessment Process Action watch was given related to student performance.

Assessment Process Review Summary

- The student performance watch item will be carried over, as this issue has yet to be resolved fully.
- The local exam was given for the first time. The results will need to be watched to ensure that the exam adequately assesses ABET Outcome (h).

<i>Code</i>	<i>Assessment Process Action Title</i>	<i>Assessment Process Action Brief Description</i>
W	Local Exam	Correspondence of Local Exam results with other Assessment instruments.

(i) Engage in life-long learning

Previous Curriculum Action Review Summary

No action needed.

Curriculum Review Summary

The scores remain comparatively high.

<i>Code</i>	<i>Curriculum Action Title</i>	<i>Curriculum Action Brief Description</i>
N		

Previous Assessment Process Action Review Summary

Seek Training on Cognitive Assessment for life-long Learning – Our program is too dependent on Dr. Kellogg's assessment service for outcome (i). We need to obtain training.

Assessment Process Review Summary

Nothing to report. In general the assessment for life-long learning is sufficient.

<i>Code</i>	<i>Assessment Process Action Title</i>	<i>Assessment Process Action Brief Description</i>
N		

(j) Know contemporary issues

Previous Curriculum Action Review Summary

- Improve instruction on Outcome (j) is warranted.

Curriculum Review Summary

- Three instruments were available for assessment. Two different assessors were utilized and two different curricular instruments were used.

<i>Code</i>	<i>Curriculum Action Title</i>	<i>Curriculum Action Brief Description</i>
W	Evaluate curricular instruments	* The use of the Local Exam and the Senior Survey appear to have brought stability to the instrument inventory, but this needs continued monitoring. * The metrics from this outcome (3.69 average) seem to indicate adequate student performance.

Previous Assessment Process Action Review Summary

- Action is continuing to be assessed. Use of MET 321 during this cycle should improve the robustness of the assessment.

Assessment Process Review Summary

- Triangulation of this outcome was realized. There was little variation in the data across the three instruments that were utilized. As noted above an increase in the number of instruments utilized would help improve the diversity of the data collected for this outcome.

<i>Code</i>	<i>Assessment Process Action Title</i>	<i>Assessment Process Action Brief Description</i>
N	No action required.	

(k) Use engineering techniques, skills, and tools

Previous Curriculum Action Review Summary

No action needed.

Curriculum Review Summary

The outcome review scores increased slightly and the range remained about the same. It is recommended that methods of instruction and/or student design projects be studied to determine the increase in scores.

<i>Code</i>	<i>Curriculum Action Title</i>	<i>Curriculum Action Brief Description</i>
N		

Previous Assessment Process Action Review Summary

No actions needed.

Assessment Process Review Summary

No actions.

<i>Code</i>	<i>Assessment Process Action Title</i>	<i>Assessment Process Action Brief Description</i>
N		