Assessment Basics
Continuous Improvement

• Continuous Improvement is one of the overarching requirements for ABET accreditation.

• ABET wants programs to continuously assess its ability to produce graduates that are ready to enter the profession according to the needs of their constituents.

• Based on results of the assessment, the program is expected to take action that will continuously improve it.
When is Assessment Required

Criterion 4, Continuous Improvement, requires the program to demonstrate the degree to which:

- Students attain Student Outcomes

The focus must be on performance of the subjects and evidence must come from examination or observation of the performance
Assessment Processes

- Must be sustainable *(keep it simple!)*
- Do not assess in every course in which an outcome is covered
- Must be accomplished on a routine basis so that it becomes part of the culture
- Requires leadership emphasis
- Choose the right things to assess
- Report the results so that they can be used to motivate improvement in the program
Anatomy of an Outcome

PEO

Enables attainment

Outcome

Enables measurement

Performance Indicator

Performance Indicator

Performance Indicator

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Performance Indicator

- Performance indicators (PI) break an outcome into specific components to better define and enable measurement.
- They also provide finer granularity to determine specific areas in need of strengthening.
- The curriculum enables students to attain the PI, which in turn assures attainment of outcomes.
- When writing a PI, a question to ask is, “If the assessment results show a weakness, would I know what needs to be fixed?”
- PI are not required by the criteria, but significantly enhance the validity of your assessment.
The Performance Indicator represents a key measurable part of an Outcome. Together, they define the Outcome.
Performance Indicator Example

EX. Outcome 6. Ability to Develop and Conduct Experiments

Possible Performance Indicators:
1. Selects from a number of possible experimental approaches in a given field
2. Selects appropriate data collection techniques from a number of possible candidates
3. Experienced in conducting experiments
4. Presents and interprets data
Ability to Measure

- Each Performance Indicator should be stated in measurable terms.
- Appropriate assessment tools are then selected to evaluate each Performance Indicators (some tools can assess more than one PI)
- Use multiple assessment tools to assess attainment when possible.
Use of Grades

• Grades for courses are generally not accepted as adequate evidence of performance against an outcome. The course may cover topics not associated with an outcome and the single course grade does not contain the fidelity to demonstrate attainment of a particular outcome.

• Grades on test/ homework problems, reports, papers, projects that are directly related to a particular outcome would be considered adequate evidence of performance.
Frequency of Assessment

- The program has some latitude in determining the frequency of assessment.
- Outcomes: every 1-2 years
- The key is to establish a process and follow it. You don't want so much time to pass between assessments that something could go wrong and you not know it.
Sampling

• Sampling is allowed to determine the degree to which Outcomes are attained.

• It is not required to assess all students every year to determine attainment.

• Try to make it as easy on the faculty as possible. Choose when, where and how many to assess.

• You also do not need to do assessment in every course that covers an outcome.
Summary

- Develop a sustainable process
- Make it a complete process
- Ensure that the results of the process will be useful to motivate improvements to the program
- Make it part of the program culture
- Execute it continuously