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The new outcomes are more straightforward, and….

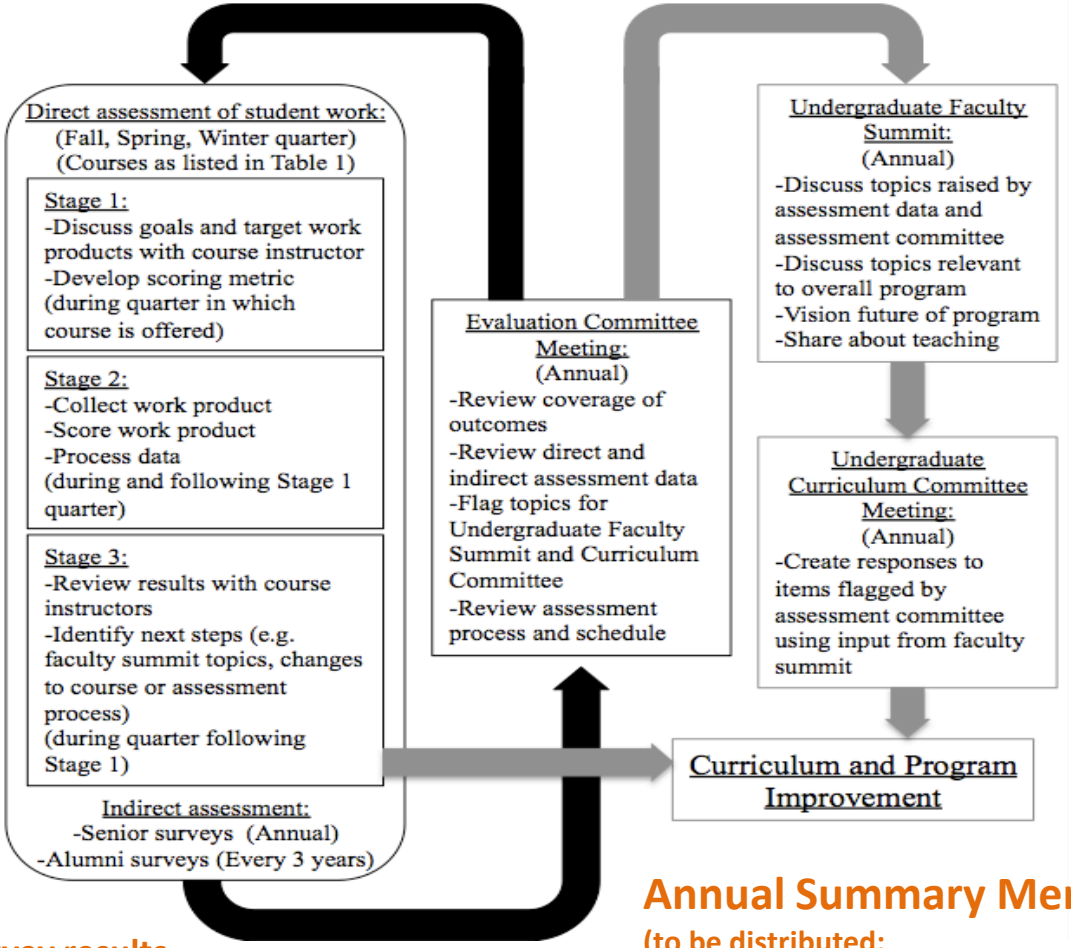
Proposed Outcome: **An ability to…**	**Current**	**Comments**
1. identify, formulate, and solve engineering problems by applying principles of engineering, science, and mathematics. [alternative wording: ***identify and analyze*** *engineering problems, using the principles of engineering, science and mathematics]*	(a), (e)	• will have many sub-goals • are these all the principles needed to solve engr. problems?
2. apply both analysis and synthesis in the engineering design process, resulting in designs that meet desired needs. [alternative wording: *apply an engineering* ***design*** *process, to create a solution that meets desired needs]*	(c)	• there may be inconsistencies in how design is defined here and in the definition section.
3. develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	(b)	• more balanced consideration of design of experiments and data analysis.

and….

Proposed Outcome: **An ability to…**	**Current**	**Comments**
4. communicate effectively with a range of audiences.	(g)	• should "range of audiences" be defined?
5. recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	(f) (h), (j)	• are the informed judgments also grounded in ethical reasoning?
6. recognize the ongoing need for additional knowledge and locate, evaluate, integrate, and apply this knowledge appropriately.	(i)	• should be it "recognize and act upon"?
7. function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty	(d)	

Continuous Improvement Process

Faculty Interviews,
Reviewing student work,
Reporting back what we see



Indirect Assessments:
Senior and Alumni Surveys
(also see ME Senior and Alumni Survey results memo)

Annual Summary Memo
(to be distributed: Memo_Continuous_Improvement, AY13-14, AY14-15)

Many thanks to Dr. Teresa Peters and KJ Chew

Areas of Questions/Concerns

1. **Engineering Analysis Seems to be left out:**

The following definitions are included in the draft

- Basic Science
- College-level Mathematics
- Engineering Science
- Engineering Design
- Teams

Areas of Questions/Concerns (continued)

2. Do engineers have a role in problem identification and formulation? *In other words, what roles could/should engineers play in helping formulate a "broader problem-solving agenda"? How does ABET intentionally (or unintentionally) represent this?*

The engineer as problem solver:
In definitions: Engineering Design is the process of devising a system, component or process to meet desired needs, within constraints….it is an iterative, creative, decision-making process in which the basic sciences, mathematics, and the engineering sciences are applied to convert resources optimally into solutions.
Outcome 2. An ability to apply both analysis and synthesis in the engineering design process, resulting in designs that meet desired needs.
Outcome 5. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
Should the engineer play an active role in problem formulation? Is this idea too constrained by Proposed Outcome 1?
Outcome 1. An ability to identify, formulate, and solve engineering problems by applying principles of engineering, science, and mathematics.