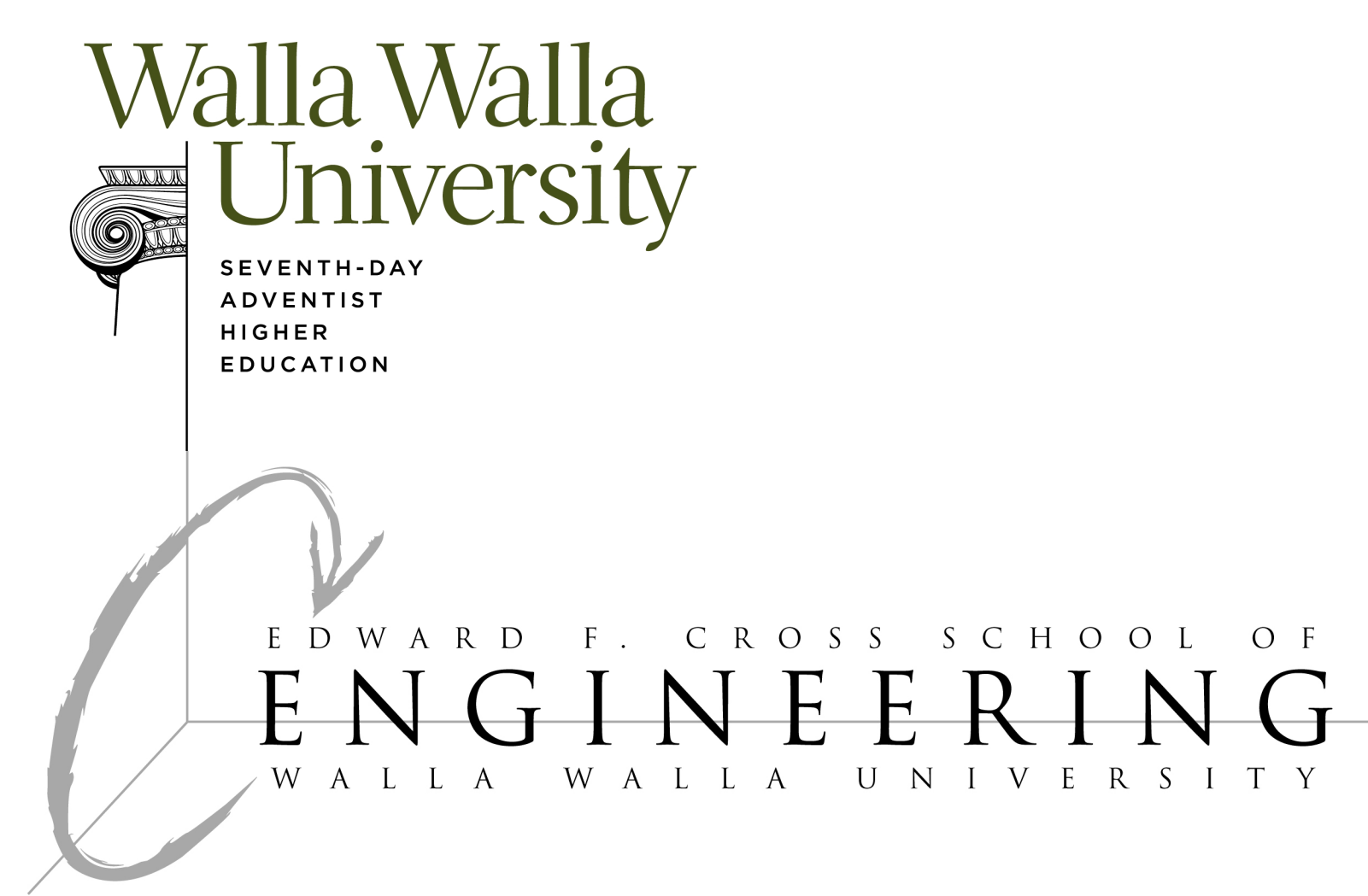


## **BOARD # 194: Mapping CATME Behaviors to ABET Outcome Five Elements**

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# Mapping CATME Behaviors to ABET Outcome Five Elements

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## Comprehensive Assessment of Team Member Effectiveness (CATME)

The National Science Foundation (NSF) funded the Comprehensive Assessment of Team Member Effectiveness (CATME) assessment tool for engineering students. Starting in 2003 Matthew Ohland led a team from multiple universities who designed CATME. A Behaviorally Anchored Rating Scale (BARS) of five factors fit the data best. The five behaviors are:

- contributing to work;
- interacting;
- keeping on track;
- expecting quality;
- knowledge, skills, and abilities.

Students rate themselves and their teammates from one (lowest) to five (highest) using a holistic rubric. The average peer ratings is the score. Three is a passing score. CATME also compares a student’s self-assessment with the mean assessments of their teammates. (Loughry et al., 2007; Ohland et al., 2012).

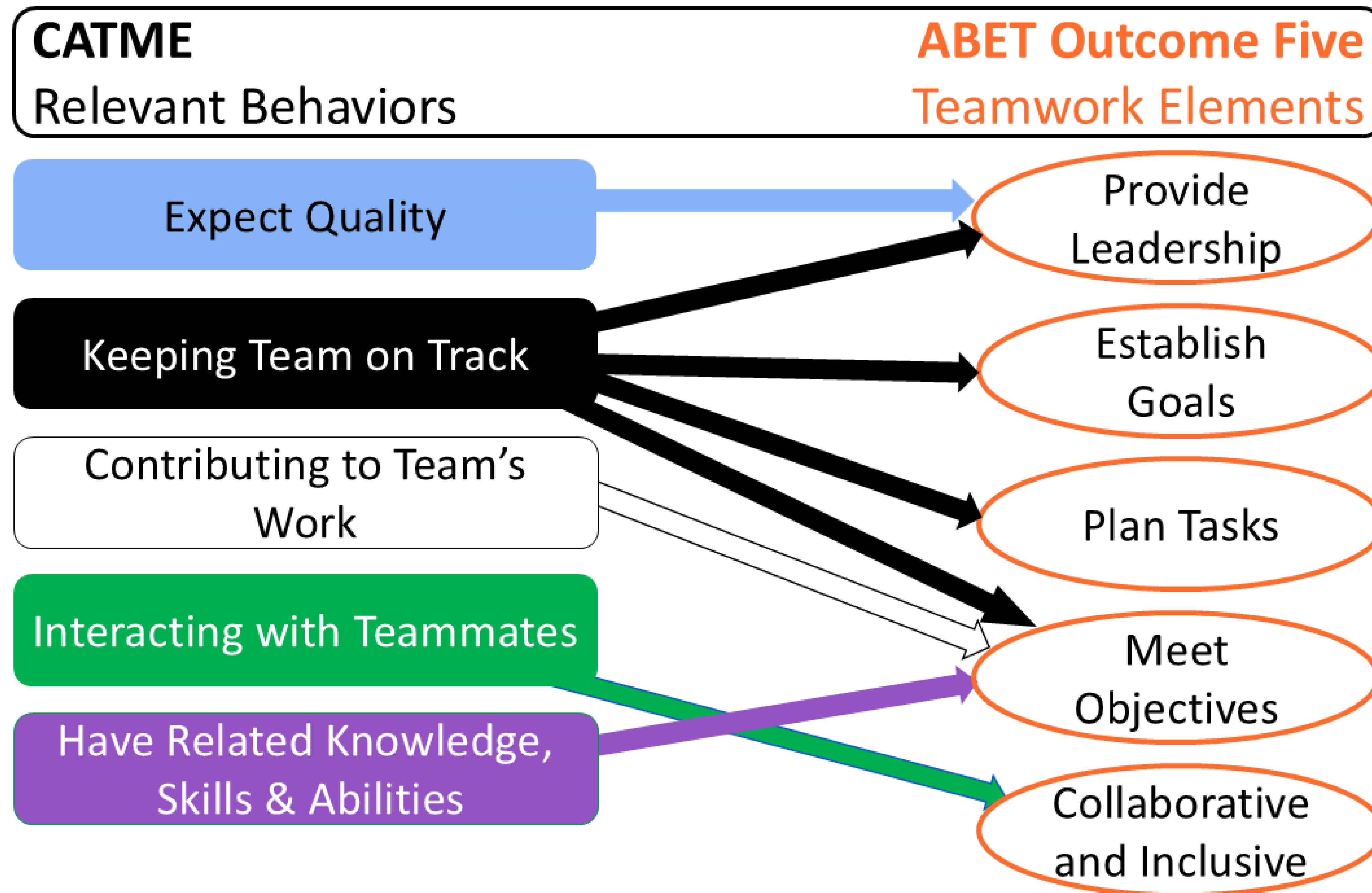
In 2012, a web-based version was published. Since then, Purdue University’s School of Engineering Education established CATME as a non-profit center (School of Engineering Education, 2024a, Ohland et al., 2012).

## ABET Teamwork Student Outcomes

The engineering accrediting body, ABET, began using Student Outcomes in 1998, with compliance required beginning in 2001 (Prados et al., 2005). Teamwork, specifically, “an ability to function on multi-disciplinary teams” (Lo, 2000, p. 3) was included. This was the requirement in effect when CATME was developed.

In 2018, revised Student Outcomes changed the teamwork description to “an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives” (ABET Engineering Accreditation Commission, 2018, p. 6). This is the current teamwork student outcome.

Many engineering schools use CATME to assess their students’ teamwork skills for ABET accreditation (e.g. Beigpourian et al., 2019; Brawner et al., 2018; Lucietto & Berry, 2017). This raises the question – how do the ABET teamwork student outcome elements correspond to the CATME behaviors? To answer this question, I developed the crosswalk shown below. Institutions developing assessment programs for ABET Outcome 5 Teamwork can use this crosswalk to show their program is meeting the requirement.



## References

ABET Engineering Accreditation Commission. (2018). Criteria for accrediting engineering programs, 2019 – 2020. ABET. <https://www.abet.org/accreditation/accreditation-criteria/criteria-for-accrediting-engineering-programs-2019-2020/>

Beigpourian, B., Ferguson, D. M., Berry, F. C., Ohland, M. W., & Wei, S. (2019). Using CATME to document and improve the effectiveness of teamwork in capstone courses. *2019 ASEE Annual Conference & Exposition*.

Brawner, C. E., Murch, O. W., Ferguson, D. M., & Ohland, M. W. (2018). Comparing Peer-to-Peer Written Comments and Teamwork Peer Evaluations. *2018 ASEE Annual Conference & Exposition*.

Lo, K. C. K. (2000, August). Engineering program accreditation: ABET engineering criteria 2000. *ICEE 2000 Proceedings*. International Conference on Engineering Education for the Year 2000, Taipei and Tainan, Taiwan.

Loughry, M. L., Ohland, M. W., & DeWayne Moore, D. (2007). Development of a theory-based assessment of team member effectiveness. *Educational and Psychological Measurement*, 67(3), 505–524.

Lucietto, A., & Berry, F. (2017). *Use of CATME Peer Review Measurement Tool to Assess Team Work Skills*. Polytechnic Institute Summit. <https://docs.lib.purdue.edu/polytechsummit/2017/appres/8/>

Ohland, M. W., Loughry, M. L., Woehr, D. J., Bullard, L. G., Felder, R. M., Finelli, C. J., Layton, R. A., Pomeranz, H. R., & Schmucker, D. G. (2012). The Comprehensive Assessment of Team Member Effectiveness: Development of a Behaviorally Anchored Rating Scale for Self- and Peer Evaluation. *Academy of Management Learning & Education*, 11(4), 609–630.

Prados, J. W., Peterson, G. D., & Lattuca, L. R. (2005). Quality Assurance of Engineering Education through Accreditation: The Impact of Engineering Criteria 2000 and Its Global Influence. *Journal of Engineering Education*, 94(1), 165–184. <https://doi.org/10.1002/j.2168-9830.2005.tb00836.x>

School of Engineering Education. (2024). *About CATME* [Purdue University]. CATME. <https://info.catme.org>