

**College or Unit Level Annual Assessment Report
Template and Guidelines**
(Rev. April 18, 2017)

College or Unit Name: College of Technology

Report Year: 2016-17

Submitted by: Mary L. Brake (I) Associate Dean

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For the link to the College of Technology assessment go to:

<http://webstage.emich.edu/cot-assessment/index.php>

1. **Description of Council/Committee** – College of Technology Assessment Committee (COTAC) consisted of one administrator and a faculty member from each of the four schools:

Mary L. Brake (I) Associate Dean, Chair
Dorothy McAllen, School of Technology and Professional Services Management
Emad Tanbour, School of Engineering Technology
Phil Cardon, School of Visual and Built Environment
Bilquis Ferdousi, School of Information Security and Applied Computing

In addition to the committee members, the School Directors were instrumental in making sure that all programs achieved the goals set up by the committee.

2. **Assessment Goals**

- a. Establish a committee of faculty to help the program coordinators (PCs) learn how to assess student learning outcomes and to make sure that faculty think carefully about their curriculum and the ties to student learning outcomes (operational).
- b. Set up a COT website with a portal for PCs to upload their reports (operational).
- c. Have programs list *all* of their SLOs in their reports, replacing the college SLOs of a couple of years ago (operational).
- d. Have PCs upload their SLOs and when possible, their curriculum maps for review by the COTAC and eventually their final reports (operational).
- e. COTAC give feedback on draft reports (operational).
- f. Faculty on COTAC give one-on-one help to PCs who are not familiar with assessment (operational).
- g. Achieve 100% participation (operational).

3. **Summary of Accomplishments**

The College of Arts and Sciences allowed COT to copy their website and Institutional Research and Information Management (IRIM) set up the portal for uploading reports. Faculty representatives were elected by their respective schools. The College of Technology Assessment Committee (COTAC) met approximately once a month during the school year starting in November. Initially, COTAC requested each program coordinator (PC) in their respective school to test the website and portal by uploading the draft of the program

assessment reports. Specifically we asked PCs to include *all* of their SLOs in their report and when possible, generate a curriculum map (Goal a). A few years ago, the previous Dean came up with college level SLOs, which many programs found difficult to assess. Since some programs have accreditation and others are aspiring to achieve outside accreditation, it made more sense to let each program pick their SLOs. We achieved 100% participation (Goal g).

At the college assessment meetings, the COTAC would go over the draft assessment reports and take notes on how the assessment could be improved. The committee members then returned the feedback to the PCs in their Schools. The committee did its best to emphasize that assessment in and of itself is important but that 'closing the loop' is equally important (Goal e). This was a problem in the past. We called it a 'Plan of Action' as this was easier for faculty unfamiliar with assessment to understand. All program coordinators uploaded their report to the website, although some had difficulties and the committee members helped them (Goal e). Committee members and in some cases, school directors, gave faculty one-on-one help in figuring out the curriculum map, how to put together a meaningful rubric, and how to close the loop (Goal f). Everyone uploaded a report (Goal b, c, d and g).

We have 100% participation for the first time in several years (Goal g). The reports were much better than in the past and everyone included some form of 'closing the loop', even if they called it something else, like plan of action. Some programs still need help in understanding how to do meaningful assessment, but the degree of improvement compared to last year was huge. Having all program coordinators think about assessment has been an important step in getting faculty to think about outside accreditation, particularly those program that can be accredited by ABET.

4. **Examples.** Provide 2-3 descriptive examples from your unit's activities that highlight how you (1) assessed student learning and, (2) "closed the loop."
 - We reorganized how assessment was achieved in the College of Technology. We put together a committee of representatives from each school and created a web portal to make it easier for program coordinators to upload their reports, including their draft reports. This made it much easier for all the committee members to read the reports and give feedback. By requesting that all PCs list student learning outcomes (SLOs) and when possible, put together a curriculum map, faculty had to think about relevant SLOs and how they fit into the curriculum. We encouraged them to do the best they could this year and then refine their list of SLOs next year. Dr. Suleiman Ashur, the Director of the School of Visual and Built Environments came up with a template for his faculty and helped them with assessment. (He is a recent hire and he has a lot of experience with ABET accreditation.)
 - An example of closing the loop using direct assessment is illustrated in the Mechanical Engineering Technology (MET) program. MET has been regularly assessing their student learning outcomes as part of the process of maintaining their ABET accreditation. In an assessment from this year, they assessed a "broadly defined engineering technology problem" on an exam in a senior level course, Kinematics of Machines. Based upon assessment from three years ago, the faculty assessment team was not sure that the poor performance in this particular class was due to lack of interest on students' part or due to a pedagogical misalignment.

This past fall, two sections of the course were taught; one using the method that had been used for years and the second using a computer software tool, specifically computer aided engineering (CAE) modeling. Anecdotally the faculty member who used CAE found the students to be quite enthusiastic about learning the material. When the results of one exam were quantitatively assessed, the students' performance went from an average of 38% proficiency (in the previous assessment) to 78% proficiency.

The faculty decided that students need be exposed to three pedagogical approaches: graphical, analytical (traditional) and CAE. In the next assessment cycle, the student work will be assessed to better understand which approach best aligns with the learning styles of the MET student body. This approach will also be used to assess another senior level course (Machine Design) so that the ability to solve broadly defined engineering technology problems from two different thematic areas, structural analysis and dynamics analysis, can be assessed.

5. **Closing the Loop: Over Time Analysis.** The College of Technology has experienced growing pains as it has learned to assess student learning outcomes in all 23 programs. This year all programs participated and everyone attempted to 'close the loop' or come up with an action plan as it was more commonly called. The improved reports can be attributed to two changes in this year's assessment process: a committee of faculty and administrators working with faculty and a website with an electronic portal for faculty to upload their reports. So we are 'closing the loop' on the assessment process itself.
6. **Next Year's Goals.** During the next academic year (2017-18) the College of Technology will focus on continuing to improve the assessment process. This means the assessment committee will meet more often and will work with faculty earlier in the academic year. Also, additional members, for example Dr. Suleiman Ashur, will be included in the assessment committee, to take advantage of their expertise.

Next year all programs will be required to refine their SLOs. The committee will review the SLOs of each program without outside accreditation. We will encourage all programs to put together a curriculum map. We will hold a seminar for all program coordinators to discuss why curriculum maps are important and to have the committee members and program coordinators (PCs) give feedback on each other's curriculum maps.

Another goal is to have PCs come up with a plan (e.g. timeline) for assessing their student learning outcomes. Programs that have ABET accreditation (currently only one, Mechanical Engineering Technology but several others are working on ABET accreditation) have to develop an assessment timeline. The College of Technology Assessment Committee (COTAC) will work with all programs to help them develop a SLO assessment timeline.

The COTAC will work on plans for connecting SLO assessment and program assessment. In other words, can SLO assessment be tied to graduate rate, a decrease in time to graduation and/or retention rates? Several programs are close (for example Paralegal and Mechanical Engineering Technology) to looking at their assessment of SLOs in light of overall student success, so we will start with those programs to serve as examples for the other programs.

7. **Provide the Template used for Reporting.** Finally, please provide a copy of a representative template that you used for programs to report their assessment findings.

Program Annual Assessment Report

Program Name:

Report Year: 2016 - 2017

Submitted on (date):

List of Student Learning Outcomes

Curriculum Map

Student Learning Outcome Assessed this year:

Method of Assessment: include rubrics and results

Assessment Findings:

Plan of Action: