program's mission statement, objectives and program outcomes are located at www.oit.edu/provost/learningoutcomes/cset/swae.

Bachelor Program Mission

The mis

Software Engineering Technology baccalaureate graduates will have demonstrated:

a. an ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities;

b. an ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies;

c. an ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes;

d. an ability to design systems, components, or processes for broadly

II. To enable our students to create, develop and apply knowledge within a technical software environment.

III. To provide government and high tech industry employers with entry level graduates in computer programming and related professions.

Associate Program Educational Objectives

The Program Educational Objectives of OIT's Software Engineering Technology program are to produce graduates that:

A. Assist in solving computer systems problems using their knowledge of computer programming.

B. Regularly engage in learning and applying state-of-the-art hardware and software technologies to the solution of computer systems problems

C. Will communicate effectively and successfully in the workplace.

Associate Program Outcomes

Software Engineering Technology associates graduates will have demonstrated:

a. an ability to apply the knowledge, techniques, skills, and modern tools of the discipline to narrowly defined engineering technology activities;

b. an ability to apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require limited application of principles but extensive practical knowledge;

c. an ability to conduct standard tests and measurements, and to conduct, analyze, and interpret experiments;

d. an ability to function effectively as a member of a technical team;

e. an ability to identify, analyze, and solve narrowly defined engineering technology problems;

f. an ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature;

g. an understanding of the need for and an ability to engage in self-directed continuing professional development;

h. an understanding of and a commitment to address professional and ethical responsibilities, including a respect for diversity; and

i. a commitment to quality, timeliness, and continuous improvement.

Associate Degree Assessment Cycle

Table 3-2 Assessment plan for the new Student Learning Outcomes

I) an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity	ANTH 452 Globalization	CST 120	Senior Exit Survey Phil
K) a commitment to quality, timeliness, and continuous improvement	CST 336 Todd Breedlove Gant charts developed across all three quarters	CST 422 Calvin Caldwell Project plans developed and maintained throughout the quarter	Senior Exit Survey Phil

Wilsonville:

Wilsonville Assess 15-16	Direct 1	Direct 2	Indirect
A: an ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities	CST 126 winter Database using pointer Assgnmnt#1 PE3 Phong	CST 422 Winter Senior Project Sherry	Senior Exit Survey Phil
D: an ability to design systems, components, or processes for broadly -defined engineering technology problems appropriate to program educational objectives	CST 130 Winter Grade Quiz on Logic Design Phong	CST 407** Fall Observe on Check-off and Hand-in work of Caesar Assignment Phong DONE	Senior Exit Survey Phil
I: an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity	CST 120 Spring Paper on Ethics Phong	CST 407** Fall Paper on Ethics Phong DONE	Senior Exit Survey Phil
K: a commitment to quality, timeliness, and continuous improvement	None. No need in lower level class	CST 432 Spring Senior Project Sherry	Senior Exit Survey Phil

** Will become CYB 427 Crypto I when Dual in Cybersecurity begins.

ASSESSMENT RESULTS

Klamath Falls Campus

A) an ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities

Rubric:

CST 422

Assessment method: Design documents and project reports were analyzed to determine the student's proficiency.

Criterion	Average	Meets	Does not meet
Applies Knowledge	3.3	21	3
Selects Tools	3.3	20	4

Analysis and Actions

The majority of our students met these criteria. No action is required.

Exit Survey

Last year's graduating class responded to an exit survey. On one of the questions, the students were asked to rate their

	complete the project.			
Generate a implementable solution for each of the identified critical design elements	Student has a reasonable chance of implementing the entire design within the project timeline with minimal changes to the design.	There are some aspects of the design that may need to be reworked or re-scoped for the project to be completed.	Project design requires significant rework in order to be implementable.	Project can't be implemented as designed.

CST 316

Assessment activity: Design documents developed over throughout the course were analyzed to determine if students meet the criteria.

Criteria	Average	Meets	Does not meet
Identify critical elements ementab	2.7	5	2
Design Spec.	2.9	4	3
Generate implementable solution	2.9	4	3

Note: This class is group based and this assessment was applied to groups rather than individuals.

Analysis and activity:

Too many of our student failed to meETBT1 0 0 1 128.42 360.19 /P AMCID 2858C128.42 360.19 Tm( )]TJE192

Exit Survey

Last year's graduating class responded to an exit survey. On one of the questions, the students were asked to rate their proficiency using quantitative/numerical to solve problems, evaluate claims, and support decisions. The results are as follows:

High proficiency	14
Proficiency	14
Some proficiency	1
No/limited proficiency	2

Based on these survey responses, our students meet this criterion. No action is required.

I) an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity

We did not receive any data from the ANTH 452 course on the performance of our students in this area. The other class we planned on assessing in was CST 120. This was not done for the following reasons:

1. This was a new course this year. We put all our effort into making the course as profitable for students as possible in its start-up year, and thus we did not take the time to do an assessment suitable for this outcome (we focused on near-term program objectives instead of this program-wide objective).
2. Since this is a freshmen class, the data obtained from a program-wide assessment in this class would not be reflective of the final outcomes for our students. We plan to move assessment of this outcome to another course.

Exit Survey

Last year's graduating class responded to an exit survey. One question asked the students to rate their proficiency in making ethical judgments. Another asked students to rate their proficiency in understanding diverse perspectives. The results are as follows:

Category	High proficiency	Proficiency	Some proficiency	No/Limited proficiency
Make ethical judgments	18	8	4	1
Understand diverse perspectives	10	16	3	2

While the data say that our students meet this criterion, there is room for improvement. The new essential studies program that will begin implementation next year should address these issues. Instead of making program changes based on this survey, we will wait and see the impact of the essential studies program.

K) a commitment to quality, timeliness, and continuous improvement

Rubric:

Knowledge	12	2	3	0	82
Techniques	10	4	3	0	82
Skills	10	4	3	0	82
Tools	NA	NA	NA	NA	NA

Analysis and Actions

Most students understood the goal of the activity and conducted the usability testing correctly (82% proficiency). There are not major concerns with anyone not be able to apply what's required. A few students were not as thorough and thus produced questionable results. No action is required.

ABET D: an ability to design systems, components, or processes for broadly defined engineering technology problems appropriate to program educational objectives

Direct Assessment- Data Collection Date: Winter 2016
Coordinator: Phong Nguyen

Assessment Method: Students in CST 130 are given an assembly program to write. The program involves inputting two numbers and depending on the values of the numbers, output the sum or product of the two numbers.

SUMMARY
Numbers provided are percentages out of 18 students

Performance Criteria	Limited or No Proficiency	Some Proficiency	Proficiency	High Proficiency	% Proficient or Highly Proficient
Used all appropriate semantics of MARIE		1	8	9	94
Used correct SKIPCOND and JUMP instructions to affect "if" and "while"		2	9	7	89
Understand where to place instructions and data			5	13	100

Evaluation (3/18/2016): Out of 18 students, over 89% achieved proficiency or high proficiency. MARIE is an introductory pedagogic architecture. As such its assembly language programming is informative at this level, freshman/second quarter. As students move on to an actual assembly class, MIPS architecture and assembly are used. Given this assessment, the process is working.

Follow-up: No need to change the assessment.

ABET D: an ability to design systems, components, or processes for broadly -defined engineering technology problems appropriate to program educational objectives

Direct Assessment- Data Collection Date: Fall 2015
Coordinator: Phong Nguyen

Assessment Method: Students in CST 407/ CYB 417 (Class is also for Proposed Dual in

Assessment Method: Students in CST 407/ CYB 417 (Class is also for Proposed Dual in Cybersecurity) were also given a scenario containing an ethical problem and asked to evaluate the ethical issues, parties involved, analyze possible approaches, and choose and discuss an approach. The student papers were graded by Professor Nguyen using the OIT Ethics rubric and the following scale: Limited or No proficiency, Some Proficiency, Proficiency and High Proficiency. The total number of students in this assessment is 20. A summary of the grades is provided below.

SUMMARY
Numbers provided are percentages out of 20 students

Performance Criteria	Limited or No Proficiency	Some Proficiency	Proficiency	High Proficiency	% Proficient or Highly Proficient

1. As a department, we changed our program student learning outcomes
2. As a university, we changed from ISLOs to ESLOs
3. As a department, we changed what courses we assess and the rubrics we use to do the assessment.

Because of these changes, it is difficult to draw conclusions based on longitudinal data from previous assessments. Some of the changes we made will streamline the assessment process thus making it possible to assess some outcomes more often. So although we can't meaningfully close the loop from previous assessments, we feel that we are in a better position to make program improvements going forward.

Summary of plans moving forward

On the Klamath Falls campus, we intend to reassess Outcomes A and D next year to determine if the course work and projects students encounter during their junior year address the problem solving short comings we detected in this round of assessments. If not, we will have to address problem solving during the first two years of our curriculum.

On the Klamath Falls campus, we also need to reassess Outcome I because we did not collect sufficient data this year.

Appendix A
Course Mapping Matrices

Next year we anticipate the university switching to a new essential studies program. The assignment of courses to Essential Student Learning Outcomes will have to be re-evaluated based on that new program. Instead of placing a matrix here showing the mapping, we will wait until next fall so that we can align with the new essential studies program once it is finalized.