



Old Dominion University

Industrial Technology Student Achievement and Program Goals Report

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Industrial Technology Student Achievement and Program Goals Report

Occupational and Technical Studies B.S. - Industrial Technology 2018-2019 ED

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Occupational and Technical Studies B.S. - Industrial Technology

2018-2019
ED

Completed

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Mission Statement

The purpose of the BSIT is to students for management and supervisory positions in manufacturing and industry. Industrial technology is primarily involved with the management, operation, and maintenance of complex technological systems. Our students are prepared for advancement into management and supervisory positions in the workforce. The Association of Technology, Management, and Applied Engineering (ATMAE) describes programs similar to the BSIT as “developing technology graduates and professionals who lead, innovate, and collaborate in a dynamic workforce.”¹

The goal of the BSIT is to educate students to be competent in assessing problems and proposing solutions to improve productivity related to product specifications, materials and processes, industrial control and information systems, and manufacturing production.

Faculty from the vocational teacher preparation area in the Darden College of Education formed the industrial technology program in the late 1970s. The program was designed as an alternative for technical education students who were interested in technical fields but who did not want to be K-12 vocational education teachers. This program merged with distributive education to form the occupational and technical studies degree.

Responding to the current needs in today’s industrial world, strong industrial technology programs prepare students with a combination of specific technical competencies and business and management courses. This provides the necessary business background for advancement into management and supervisory positions along with high- function lab resources using real- world materials and equipment to provide the hands-on technical expertise

The BSIT aligns with ODU’s mission by providing a rigorous academic program that prepares graduates for a wide variety of positions in both traditional industry and innovative work in emerging fields. With world-class integrated curricula in industrial technology, industrial distribution and industrial management, students will be educated with content and competencies relevant to their life and careers and connected to the needs of business and industry.

1

GOAL

Meet Student Learning Outcomes

The goal of the Industrial Technology program is to provide our students with sufficient learning outcomes in two main areas: a) the technical area and b) management and supervision area, thus to allow them to move from a technologist position into a mid level management position. Through completion of the technical courses our students receive extensive content knowledge in the areas of manufacturing, construction, electronics, energy, power and transportation and material process. Through completion of management, supervision, accounting and marketing courses our students receive extensive content knowledge in the management and supervision area. As it can be seen from the report below the majority of the student learning outcomes had a noticeable increase when comparing the last two years. A major strength is the fact that the program is now accredited through the Association of Management, Technology and Applied Engineering Association which requires the program to follow a set of quality standards in order to maintain accreditation. One of the weaknesses is the fact that the program is now very young as it had to go through major changes in order to achieve accreditation therefore it will take a few more years to reach its full potential.

1.1

OUTCOMES

Team Work

Demonstrate an ability to function effectively individually and within a team.

Action Plan

In order to increase the ability to function effectively individually and within team the students will now receive new types of activities that require additional cooperative style of learning, Students will now be required to divide different aspects of the project with each one of them being responsible for a different component.

1.1.1

MEASURES OF OUTCOME

Final Portfolio

Final portfolio grade will demonstrate proficiency working within a team.

1.1.1.1

TARGET / BENCHMARK

Rubric element score

TARGET /
BENCHMARK

At least 85% (79 students) of students will score 4 or better on the "Working with Others" element of the portfolio rubric.

In 2018-19, 100% (93 students) students got a 4 or better on the rubric. The results have remained consistent over the last 3 years.

Please use the following prompts as a guide

1) Interpretation of results:

What are the strengths and weaknesses of student learning in this area?

For programs with both online and on-campus degree earners: how does the performance of these unique cohorts compare?

How do the results compare to previous years?

The results were very similar between face to face and online students with no significant difference.

2) Reflection on actions or changes made to improve:

Describe the actions or changes made during the year or describe changes made in previous years that impacted student learning.

Please explain why the actions or changes were made.

3) Use of results:

How is assessment information about the quality of learning shared and used for program decision making in areas such as curriculum, pedagogy, and other aspects that impact learning?

What actions do the results suggest need to be implemented?

2018-18 interpretation

We will try to maintain the high score for next year. As it can be seen from the findings a noticeable increase was observed when comparing the last two years. The specific increase is contributed to the fact the additional team activities were added in several projects.

Improvement Type

Academic Process Modifications > Improved Performance

1.2

OUTCOMES

Computer Applications

Apply a wide range of computer applications needed for effective employment in an Industrial Technology related entry position.

1.2.1

MEASURES OF OUTCOME

Final Project

Final portfolio grade will demonstrate proficiency using computers/software for the project.

1.2.1.1

TARGET / BENCHMARK

Rubric element scoreTARGET /
BENCHMARK

At least 85% (79 students) of students will score 4 or better on the "Use of Modern Engineering Tools" element of the portfolio rubric.

RESULTS /
FINDINGS

In 2018-19, the percentage of students that received a 4 has increased from 86% (86 students) last year to 93% this year.

INTERPRETATION
AND USE OF
RESULTS

Please use the following prompts as a guide

1) Interpretation of results:

What are the strengths and weaknesses of student learning in this area?

For programs with both online and on-campus degree earners: how does the performance of these unique cohorts compare?

How do the results compare to previous years?

2) Reflection on actions or changes made to improve:

Describe the actions or changes made during the year or describe changes made in previous years that impacted student learning.

Please explain why the actions or changes were made.

3) Use of results:

How is assessment information about the quality of learning shared and used for program decision making in areas such as curriculum, pedagogy, and other aspects that impact learning?

What actions do the results suggest need to be implemented?

What concrete actions will the program take to sustain or improve this outcome?

What is the timeframe of these actions?

2018-2019 Interpretation

Our goal for next year is to increase the scores to 100%. As it can be seen from the

findings a noticeable increase was observed when comparing the last two years. The specific increase is contributed to the fact that two new pieces of equipment were added in the lab. The new laser engraver and 3D printer utilize new drafting software that forces the students to learn in order to complete related projects.

1.3

OUTCOMES

Solve Problems

Students will be able to systematically identify, evaluate and solve complex technical problems.

Action Plan

In order to increase the solution of complex problems students will now receive additional activities. These activities will be identified from our Industrial partners that serve on the department's advisory board. Examples of such activities include a series of technological problems that companies are faced with during production at the local plants.

1.3.1

MEASURES OF OUTCOME

Final Portfolio

Final portfolio grade will demonstrate knowledge and skills in problem solving.

1.3.1.1

TARGET / BENCHMARK

Rubric element score

TARGET /
BENCHMARK

At least 85% (79 students) of students will score 4 or better on the "Knowledge and Application" element of the final project rubric.

RESULTS /
FINDINGS

In 2018-19, 88% (82 students) students got a 4 or better on the rubric.

INTERPRETATION
AND USE OF
RESULTS

Please use the following prompts as a guide

1) Interpretation of results:

What are the strengths and weaknesses of student learning in this area?

For programs with both online and on-campus degree earners: how does the performance of these unique cohorts compare?

How do the results compare to previous years?

2) Reflection on actions or changes made to improve:

Describe the actions or changes made during the year or describe changes made in previous years that impacted student learning.

Please explain why the actions or changes were made.

3) Use of results:

How is assessment information about the quality of learning shared and used for program decision making in areas such as curriculum, pedagogy, and other aspects that impact learning?

What actions do the results suggest need to be implemented?

What concrete actions will the program take to sustain or improve this outcome?

What is the timeframe of these actions?

The percentage has remained the same as last year. We will continue our efforts by adding additional components of knowledge and application in the STEM 231 course.

Our goal for next year is to increase the scores to 100%. As it can be seen from the findings no noticeable increase was observed when comparing the last two years.

The instructors are now working on adding new activities as a part of the final project in order to enhance the problem solving skill.

Improvement Type

Financial > Revised existing course or courses, added assignment, modified assignment, modified content of course, changed textbook, etc.

1.3.2

MEASURES OF OUTCOME

1.4

OUTCOMES

Apply Math and Science

Students will be able to apply a foundation in mathematics and science to solve practical technical and managerial problems.

Action Plan

ACTION ITEM 1	CREATED	DUE	STATUS
We have added STAT 130 back in th curriculum as students needed to increase the score in that area.	3/27/2019	4/28/2020	Planned
ACTION ITEM 2	CREATED	DUE	STATUS
	8/26/2019		

1.4.1

MEASURES OF OUTCOME

Final Portfolio

Final portfolio grade will demonstrate math/science proficiency by calculating statics and dynamics for final project.

1.4.1.1

TARGET / BENCHMARK

Rubric element score

TARGET /
BENCHMARK

At least 82% (76 students) of students will score 4 or better on the "combines math and or scientific principles" element of the portfolio rubric.

RESULTS /
FINDINGS

In 2018-19, 84% (78 students) of students scored 4 or better on the "combines math and or scientific principles" element of the portfolio rubric.

INTERPRETATION
AND USE OF
RESULTS

Please use the following prompts as a guide

1) Interpretation of results:

What are the strengths and weaknesses of student learning in this area?

For programs with both online and on-campus degree earners: how does the performance of these unique cohorts compare?

How do the results compare to previous years?

2) Reflection on actions or changes made to improve:

Describe the actions or changes made during the year or describe changes made in previous years that impacted student learning.

Please explain why the actions or changes were made.

3) Use of results:

How is assessment information about the quality of learning shared and used for

program decision making in areas such as curriculum, pedagogy, and other aspects that impact learning?

What actions do the results suggest need to be implemented?

What concrete actions will the program take to sustain or improve this outcome?

What is the timeframe of these actions?

2017-2018 Interpretation (*please update for 18-19 above*)

As compared to the previous year were we achieved 83%, this year we were able to increase the percentage to 86%.

Our goal for next year is to increase the scores to 100%.

New material will be introduced to the students that contains additional mathematical and scientific principles. As it can be seen from the findings a noticeable increase was observed when comparing the last two years. The specific increase is contributed to the fact the new activities that utilize math and science components were added in several projects.

Improvement Type

Academic Process Modifications > Improved Performance

1.5

OUTCOMES

Communicate Effectively

Effectively perform written and oral communications.

Action Plan

ACTION ITEM 1	CREATED	DUE	STATUS
New project activities required additional cooperative exercises that will promote the specific type of learning.	3/27/2019	4/24/2019	Planned

1.5.1

MEASURES OF OUTCOME

Final Portfolio

Final portfolio grade will demonstrate proficiency in written and oral communications with the final project and presentation.

1.5.1.1

TARGET / BENCHMARK

Rubric element score

TARGET /
BENCHMARK

At least 95% (86 students) of students will score 4 or better on the "Working with Others" element of the portfolio rubric.

RESULTS /
FINDINGS

In 2018-19, 90% (83 students) of students will score 4 or better on the "Working with Others" element of the portfolio rubric.

INTERPRETATION
AND USE OF
RESULTS

Please use the following prompts as a guide

1) Interpretation of results:

What are the strengths and weaknesses of student learning in this area?

For programs with both online and on-campus degree earners: how does the performance of these unique cohorts compare?

How do the results compare to previous years?

2) Reflection on actions or changes made to improve:

Describe the actions or changes made during the year or describe changes made in previous years that impacted student learning.

Please explain why the actions or changes were made.

3) Use of results:

How is assessment information about the quality of learning shared and used for program decision making in areas such as curriculum, pedagogy, and other aspects that impact learning?

What actions do the results suggest need to be implemented?

What concrete actions will the program take to sustain or improve this outcome?

What is the timeframe of these actions?

2018-19 interpretation

Compared to last year we have seen a slight increase in the results. Student achievement increased from 85% to 89%.

Our goal for next year is to increase the scores to 100%. As it can be seen from the findings a slight increase was observed when comparing the last two years. The specific increase is contributed to the fact the additional team activities were added in several projects.

Improvement Type

Financial > Revised existing course or courses, added assignment, modified assignment, modified content of course, changed textbook, etc.

1.6 OUTCOMES
Management Skills

Demonstrate a wide range of management skills related to a job area related to Industrial Technology.

Action Plan

ACTION ITEM 1	CREATED	DUE	STATUS
We will give students more due dates to complete work.	3/27/2019	4/24/2019	Planned

1.6.1 MEASURES OF OUTCOME
Final Portfolio

Final portfolio grade will demonstrate proficiency in management skills through teamwork and time management.

1.6.1.1 TARGET / BENCHMARK
Rubric element score

TARGET / BENCHMARK	At least 90% (86 students) of students will score 4 or better on the "Management" element of the portfolio rubric.
RESULTS / FINDINGS	In 2018-19, 80% (75 students) of students will score 4 or better on the "Management" element of the portfolio rubric.
INTERPRETATION AND USE OF RESULTS	*Please use the following prompts as a guide* 1) Interpretation of results:

What are the strengths and weaknesses of student learning in this area?
For programs with both online and on-campus degree earners: how does the performance of these unique cohorts compare?
How do the results compare to previous years?

2) Reflection on actions or changes made to improve:

Describe the actions or changes made during the year or describe changes made in previous years that impacted student learning.

Please explain why the actions or changes were made.

3) Use of results:

How is assessment information about the quality of learning shared and used for program decision making in areas such as curriculum, pedagogy, and other aspects that impact learning?

What actions do the results suggest need to be implemented?

What concrete actions will the program take to sustain or improve this outcome?

What is the timeframe of these actions?

2018-19 interpretation

We have seen a slight increase from last year. The rate has moved from 73% to 78% of students got a 4 or better on the rubric.

Our goal for next year is to increase the scores to 100%. We will give students more due dates to complete work. As it can be seen from the findings a slight increase was observed when comparing the last two years. The specific increase is contributed to the fact that a new management course HMSV 339 was added to the overall IT curriculum.

Introduction of new material as a part of the final project enhances the management component in the activities.

1.7

OUTCOMES

Basic Engineering Concepts

Students will be able to understand basic engineering concepts and terms, such as systems,

constraints, and trade-offs.

Action Plan

ACTION ITEM 1	CREATED	DUE	STATUS
We have decided to add additional engineering design concepts in the STEM 221 course to allow an increase. Our goal for next year is to increase the scores to 100%.	3/27/2019		Planned

1.7.1

MEASURES OF OUTCOME

Final Project

Final portfolio grade will demonstrate proficiency of engineering content found in the project.

1.7.1.1

TARGET / BENCHMARK

Rubric element score

TARGET /
BENCHMARK

At least 90% (86 students) of students will score 4 or better on the "Engineering Problem Solving" element of the final project rubric.

RESULTS /
FINDINGS

In 2018-19, 86% (80 students) of students scored 4 or better on the "Engineering Problem Solving" element of the final project rubric.

INTERPRETATION
AND USE OF
RESULTS

Please use the following prompts as a guide

1) Interpretation of results:

What are the strengths and weaknesses of student learning in this area?

For programs with both online and on-campus degree earners: how does the performance of these unique cohorts compare?

How do the results compare to previous years?

2) Reflection on actions or changes made to improve:

Describe the actions or changes made during the year or describe changes made in previous years that impacted student learning.

Please explain why the actions or changes were made.

3) Use of results:

How is assessment information about the quality of learning shared and used for

program decision making in areas such as curriculum, pedagogy, and other aspects that impact learning?

What actions do the results suggest need to be implemented?

What concrete actions will the program take to sustain or improve this outcome?

What is the timeframe of these actions?

2018-19 interpatation

The percentage, 86% has increased from last year. We have decided to add additional engineering design concepts in the STEM 221 course to allow an increase. As it can be seen from the findings a noticeable increase was observed when comparing the last two years. The specific increase is contributed to the fact the additional engineering content was added in several activities. Examples include the addition of statics and dynamics theory in the Industrial Design course, STEM 382.

Our goal for next year is to increase the scores to 100%.

Improvement Type

Academic Process Modifications > Improved Performance

1.8

OUTCOMES

Collect and Analyze Data

Students will be able to collect and analyze data to develop a solution and complete a project.

Action Plan

ACTION ITEM 1	CREATED	DUE	STATUS
16-17: Additional sources will be introduced to the student during the next year cycle to enhance the specific aspect. This will include additional software, guest speakers, fieldtrips trips.	3/27/2019		Planned
ACTION ITEM 2	CREATED	DUE	STATUS
17-18: Additional sources will be introduced to the student during the next year cycle to enhance the specific aspect. This will include	3/27/2019		Planned

additional software, guest speakers, fieldtrips
trips.

1.8.1

MEASURES OF OUTCOME

Final Portfolio

Final portfolio grade will demonstrate ability to collect and analyze data to develop a solution for a problem.

1.8.1.1

TARGET / BENCHMARK

Rubric element score

TARGET /
BENCHMARK

At least 95% of students will score 4 or better on the "Quality of Sources" element of the portfolio rubric.

RESULTS /
FINDINGS

In 2018-19, 90% (86 students) students got a 4 or better on the rubric.

INTERPRETATION
AND USE OF
RESULTS

Please use the following prompts as a guide

1) Interpretation of results:

What are the strengths and weaknesses of student learning in this area?

For programs with both online and on-campus degree earners: how does the performance of these unique cohorts compare?

How do the results compare to previous years?

2) Reflection on actions or changes made to improve:

Describe the actions or changes made during the year or describe changes made in previous years that impacted student learning.

Please explain why the actions or changes were made.

3) Use of results:

How is assessment information about the quality of learning shared and used for program decision making in areas such as curriculum, pedagogy, and other aspects that impact learning?

What actions do the results suggest need to be implemented?

What concrete actions will the program take to sustain or improve this outcome?

What is the timeframe of these actions?

2018-19 interpretation

This is 4% higher than last year.

Our goal for next year is to increase the scores to 100%.(93 students). As it can be seen from the findings a noticeable increase was observed when comparing the last two years. The specific increase is contributed to the fact that a descriptive statistics survey creation and dissemination it has now been added to STEM 221: Industrial Materials and STEM 231: Material Process courses.

Improvement Type

Academic Process Modifications > Improved Performance

1.9

OUTCOMES

Follow Safe Practices

Students will be able to follow safe practices and procedures in the use of contemporary tools, instruments, and machines, used in processing Industrial materials.

Action Plan

1.9.1

MEASURES OF OUTCOME

Safety Rules

The absence of incidents will demonstrate that students respectfully and carefully observe safety rules and procedures.

1.9.1.1

TARGET / BENCHMARK

Safe Lab Practices and Procedures

TARGET /
BENCHMARK

At least 100% of students will demonstrate safe lab practices and procedures.

RESULTS /
FINDINGS

In 2018-19, 100% (96 students) students demonstrate safe lab practices and procedures.

INTERPRETATION
AND USE OF
RESULTS

Please use the following prompts as a guide

1) Interpretation of results:

What are the strengths and weaknesses of student learning in this area?

For programs with both online and on-campus degree earners: how does the performance of these unique cohorts compare?

How do the results compare to previous years?

2) Reflection on actions or changes made to improve:

Describe the actions or changes made during the year or describe changes made in previous years that impacted student learning.

Please explain why the actions or changes were made.

3) Use of results:

How is assessment information about the quality of learning shared and used for program decision making in areas such as curriculum, pedagogy, and other aspects that impact learning?

What actions do the results suggest need to be implemented?

What concrete actions will the program take to sustain or improve this outcome?

What is the timeframe of these actions?

We will maintain the high score for next year. In addition we have added a safety test that every student has to complete prior to using any equipment.

2

GOAL

Meet Program Outcomes

(Program outcomes reflect the services a program provides or delineate programmatic student achievement areas (e.g., retention and graduation rates). Program outcomes should reflect areas in which the program both wants to and can improve. They are distinct from program requirements that all students must meet in order to graduate. A good program outcome: 1) Addresses a specific action, behavior, or achievement, 2) is narrowly focused and measurable, 3) is achievable or can be improved upon if not achieved, 4) is related to the mission of the program.)

2.1

OUTCOMES

Accreditation

Maintain accreditation through the Association of Technology, Management and Applied

Action Plan

2.1.1 MEASURES OF OUTCOME Complete and Submit Self Study

2.1.1.1 TARGET / BENCHMARK completion

TARGET /
BENCHMARK

Maintain ATMAE accreditation

RESULTS /
FINDINGS

In 2018-19, Completed and submitted self study, in order to maintain our accreditation with ATMAE

INTERPRETATION
AND USE OF
RESULTS

Please use the following prompts as a guide

1) Interpretation of results:

What are the strengths and weaknesses of student learning in this area?

For programs with both online and on-campus degree earners: how does the performance of these unique cohorts compare?

How do the results compare to previous years?

2) Reflection on actions or changes made to improve:

Describe the actions or changes made during the year or describe changes made in previous years that impacted student learning.

Please explain why the actions or changes were made.

3) Use of results:

How is assessment information about the quality of learning shared and used for program decision making in areas such as curriculum, pedagogy, and other aspects that impact learning?

What actions do the results suggest need to be implemented?

What concrete actions will the program take to sustain or improve this outcome?

What is the timeframe of these actions?

2018-19 Interpretation

The goal for last year was for the Industrial technology program to maintain accreditation through the Association of Technology, Management and Applied Engineering, ATMAE. The follow up report has been completed and submitted. Our goal was achieved and we are now working on a continuing improvement plan in order to maintain our accreditation for the years to come.

2.2

OUTCOMES

Increase student enrollment from TCC and TNCC - Articulation Agreement

Over the last year (2018-2019), the IT program was able to establish a unique articulation agreement with Thomas Nelson Community College. This articulation is in addition to the one that we established last year with Tidewater Community College. The uniqueness of this new articulation agreement is the fact that the students are now receiving credit for experiential learning. The transfer agreement gives the students credit for 24 credit hours of technical electives, under the condition that the students have satisfied the following criteria: a minimum of one working year in the industry, a letter of reference from their supervisor, completion of the gateway course; coo-created and coo-taught by faculty at ODU, TCC and TNCC, received a passing grade on the final exam of the Gateway course. It took many hours of meetings and discussion in order to satisfy the demands of ODU, TCC and TNCC but it was all worth it. The Industrial technology program currently has about 110 students. Several organizations including the Virginia Natural Gas, Coast Guard and BAE have expressed their interest and are in support of the agreement. The estimate for the next two years is the addition of 200 students. We will continue replicating the innovative articulation agreement with additional community colleges.

Action Plan

The program outcome and measure were created this year to reflect opportunities and interests of the program. Data will be collected in future assessment cycles.

ACTION ITEM 1	CREATED	DUE	STATUS
Add program outcome related to articulate agreement and measure	3/27/2019		Complete
ACTION ITEM 2	CREATED	DUE	STATUS
Track progress and establish a data collection system for this initiative	3/27/2019		In Progress

MEASURES OF OUTCOME
2.2.1

Number of students participating in the articulation agreement

24 TCC 6 TNCC

TARGET / BENCHMARK
2.2.1.1
enrollments

TARGET /
BENCHMARK

200 students participating in the program within 2 years (2018-2020)

RESULTS /
FINDINGS

This is a new program outcome and measure. Data will be collected in 2019-2020.

INTERPRETATION
AND USE OF
RESULTS

Please use the following prompts as a guide

1) Interpretation of results:

What are the strengths and weaknesses of student learning in this area?

For programs with both online and on-campus degree earners: how does the performance of these unique cohorts compare?

How do the results compare to previous years?

2) Reflection on actions or changes made to improve:

Describe the actions or changes made during the year or describe changes made in previous years that impacted student learning.

Please explain why the actions or changes were made.

3) Use of results:

How is assessment information about the quality of learning shared and used for program decision making in areas such as curriculum, pedagogy, and other aspects that impact learning?

What actions do the results suggest need to be implemented?

What concrete actions will the program take to sustain or improve this outcome?

What is the timeframe of these actions?

OUTCOMES
2.3
Find Employment

Students will find employment in a position related to his or her field of study.

Action Plan

2.3.1

MEASURES OF OUTCOME

Alumni Survey

Alumni survey will indicate employment in the industry. An exit survey was implemented and being used for our graduates.

2.3.1.1

TARGET / BENCHMARK

Survey

TARGET /
BENCHMARK

At least 80% of the students will find employment after graduation.

RESULTS /
FINDINGS

In 2018-19, Currently 100% (93 students) of our graduates have gained employment upon graduation.

INTERPRETATION
AND USE OF
RESULTS

Please use the following prompts as a guide

1) Interpretation of results:

What are the strengths and weaknesses of student learning in this area?

For programs with both online and on-campus degree earners: how does the performance of these unique cohorts compare?

How do the results compare to previous years?

2) Reflection on actions or changes made to improve:

Describe the actions or changes made during the year or describe changes made in previous years that impacted student learning.

Please explain why the actions or changes were made.

3) Use of results:


How is assessment information about the quality of learning shared and used for program decision making in areas such as curriculum, pedagogy, and other aspects that impact learning?

What actions do the results suggest need to be implemented?

What concrete actions will the program take to sustain or improve this outcome?

What is the timeframe of these actions?

Project Attachments (3)

ATTACHMENTS	FILE SIZE
 2017-2018 Assessment Feedback for Occupational and Technical Studies BS - Industrial Technology.docx	22KB
 Occupational and Technical Studies B.S. - Industrial Technology 2017-18.pdf	110KB
 ODU Progress Report _9_2_19.doc	186KB